Integrating the Healthcare Enterprise

IHE Quality, Research and Public Health Technical Framework Supplement

Birth and Fetal Death Reporting-Enhanced (BFDR-E)

For review and comment only.

DO NOT implement this public comment version.

HL7® FHIR® R4

Using Resources at FMM Level 2-5

Revision 4.0 – Draft for Public Comment

Date: July 23, 2021

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Please verify you have the most recent version of this document. See here for Trial Implementation and Final Text versions and here for Public Comment versions.

Foreword

This is a supplement to the IHE Quality, Research and Public Health (QRPH) Technical Framework. Each supplement undergoes a process of public comment and trial implementation before being incorporated into the volumes of the Technical Frameworks.

This supplement is published on July 23, 2021 for Public Comment. Comments are invited and can be submitted at https://www.ihe.net/QRPH_Public_Comments. In order to be considered in development of the Trial Implementation version of the supplement, comments must be received by August 22, 2021.

"Boxed" instructions like the sample below indicate to the Volume Editor how to integrate the relevant section(s) into the relevant Technical Framework volume.

Amend Section X.X by the following:

Where the amendment adds text, make the added text **bold underline**. Where the amendment removes text, make the removed text **~~bold strikethrough~~**. When entire new sections are added, introduce with editor's instructions to "add new text" or similar, which for readability are not bolded or underlined.

General information about IHE can be found at www.ihe.net.

Information about the IHE QRPH domain can be found at http://www.ihe.net/IHE_Domains.

Information about the organization of IHE Technical Frameworks and Supplements and the process used to create them can be found at http://www.ihe.net/IHE_Process and http://www.ihe.net/Profiles.

The current version of the IHE QRPH Technical Framework can be found at http://www.ihe.net/Technical_Frameworks.

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Introduction to this Supplement

Whenever possible, IHE profiles are based on established and stable underlying standards. However, if an IHE domain determines that an emerging standard has high likelihood of industry adoption, and the standard offers significant benefits for the use cases it is attempting to address, the domain may develop IHE profiles based on such a standard. During Trial Implementation, the IHE domain will update and republish the IHE profile as the underlying standard evolves.

Product implementations and site deployments may need to be updated in order for them to remain interoperable and conformant with an updated IHE profile.

This BFDR-E Profile incorporates content from Release 4 of the HL7® FHIR® specification. HL7 describes FHIR Change Management and Versioning at https://www.hl7.org/fhir/versions.html.

HL7 provides a rating of the maturity of FHIR content based on the FHIR Maturity Model (FMM): level 0 (draft) through N (Normative). See http://hl7.org/fhir/versions.html#maturity.

The FMM levels for FHIR content used in this profile are:

FHIR Resource Name	FMM Level
Composition	2
MedicationAdministration	2
Procedure	3
Observation	5
Condition	3
Encounter	2
Patient	5
Coverage	2

This supplement references the following documents[3]. The reader should review these documents as needed:

1. PCC Technical Framework, Volume 1

[3] The first six documents can be located on the IHE Website at http://www.ihe.net/Technical_Frameworks. The remaining documents can be obtained from their respective publishers.

2. PCC Technical Framework, Volume 2
3. PCC Technical Framework Supplement: CDA Content Modules
4. IT Infrastructure Technical Framework Volume 1
5. IT Infrastructure Technical Framework Volume 2
6. IT Infrastructure Technical Framework Volume 3
7. HL7 and other standards documents referenced in Volume 1 and Volume 2
8. Birth Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Live Birth (4/2004; 3/2005; Updated 7/2012)
9. Natality 2003 Revision – File In-Processing Documentation (14 Dec 2010)
10. Fetal Death Edit Specifications for the 2003 Revision of the U.S. Standard Report of Fetal Death.
11. International Classification of Diseases, Tenth Revision (ICD-10)
12. Reference: Making Every Baby Count Audit and review of stillbirths and neonatal deaths http://apps.who.int/iris/bitstream/10665/249523/1/9789241511223-eng.pdf?ua=1

    12.1 This document contains WHO statistics for prenatal data, labor and delivery data, and some newborn data, the latter being focused on stillborn and newborn deaths.

Open Issues and Questions

Item Count	Issue Description	Status
1	Failed External cephalic Version – mapping to CDA output is listed as 'Pending' due to underlying HL7 Specification – missing. Profiling deferred pending HL7 resolution of the modelling.	Further discussion with HL7 pending.
2	Addition of FHIR resources is deferred at this time	Will revisit pending additional work in this area.
3	Consider a Data Consumer Option or binding for Content Creator when adding FHIR to this profile.	
4	The HL7 CDA IG for Birth and Fetal Death Reporting will be updated to align with in-progress updates to the v2.6 messaging implementation guide. Mapping of new attributes included in the messaging guide have not yet been mapped to the CDA mapping in volume 3.	This mapping will be updated once the underlying HL7 CDA IG is updated with this content.
5	NCHS will be updating the references and links for newly released Edit Specifications and forms for Birth and Fetal Death Reporting.	Awaiting link update content from NCHS
6	NCHS will be reviewing the recently deleted items.	Updates to content may be applied for deleted items.

Item Count	Issue Description	Status
7	Referencing the Child's record in FHIR mapping should be reviewed in public comment.	Pending public comment review and feedback
8	Observations for the Fetus in FHIR may need to be expressed as observations for the mother as there may be no record for the fetus created.	Pending public comment review and feedback. If observations are needed for the mother's record, then we will need to request LOINC Codes
9	Father's Education Level is not available through link.RelatedPerson which is the mechanism for FHIR to reference the father of the child.	May be considered for extensions to RelatedPerson.
10	All FHIR Mappings need to be reviewed for replicating structure definitions to remove US-CORE for Volume3	Pending public comment review and feedback
11	*Method of Delivery Trial Labor Finding (NCHS)* Has not value set to link to at this time. Use "90306000 Trial labor (finding)" from SNOMED-CT	Pending public comment review and feedback
12	Need to find a way to represent Logic for **$VitalSignsResultUnits** in Mother's Pre-pregnancy Weight	Pending public comment review and feedback
13	**$BabyFacilityLocation** in Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b) "This derivation rule is subject to Realm specificity. For example, in the US, a value set lookup using the code from CNTYO." Needs to be reviewed.	Pending public comment review and feedback
14	In the 6.6.1.1.127 INFT_DRG Risk Factors in this Pregnancy table **Example** – "OBX|19|CWE|73775-9^Risk factors in this pregnancy^LN|| 445151000124101^ Fertility enhancing drug therapy^SNM|||||F" Value no longer exists, in SNOMED	Pending public comment review and feedback
15	6.6.1.1.150 HISTOP Was a Histological Placental Examination Performed "**$EventOutcomesObservationValue"** Previous logic may have included this value set: *(Histological Placental Examination Performed (NCHS))*Logic update may be needed.	Pending public comment review and feedback
16	Naming of the Observation - Mother Received WIC Foodis US centric, will have to be renamed for this IHE profile to fully adhere to international terminology	Pending public comment review and feedback
17	Add Manual Assisted Ventilation with OID	CDC Verifying

Closed Issues

Item	Issue Description	Status
1	Do we continue to offer grouping guidance?	No required grouping

Item	Issue Description	Status
2	We will need to review whether both XPHR and MS are both appropriate for this profile or whether we need to limit to MS to capture the required attributes for the U.S. death report. Also, the HL7 Continuity of Care Document (CCD).	Considerations deferred. Continue with LDS. Pre-population using currently CCDA will remain out of scope pending IHE harmonization efforts. CCDA Refactoring impact on XPHR, MS, CCD references.
3	We will need to review whether both XPHR and MS are both appropriate for this profile or whether we need to limit to MS to capture the required attributes for the U.S. death report. Also, the HL7 Continuity of Care Document (CCD).	Considerations deferred. Continue with LDS. Pre-population using currently CCDA will remain out of scope pending IHE harmonization efforts. CCDA Refactoring impact on XPHR, MS, CCD references.
4	The 'Save Form For Continued Editing' Option on the Form Manager has no specific strategies identified.	George Cole confirmed this is intended and supported functionality for RFD.
5	Review representation of RFD pre-pop options with 2 CDA pre-pop documents (LDS and LDHP) and content constrained by this profile	Can be done, but committee selected to update LDS-VR rather than use 2 pre-pop documents basted on implementer feedback
6	TEMPLATE OPEN ISSUE: The template does not really support the need to specify the mappings for the form receiver message exporter, form receiver CDA exporter, and the Pre-population requirements for the Form Manager. These have been reflected together as sub-sections to 6.3.1.D.4 Data Element Requirement Mappings.	Resolved: Referred to documentation.
7	Template Issue: Where should the list of data elements be specified in this new template? In the past, they were included in X.6 Content Module in some profiles. We have tentatively included a new Section X.7 Data Requirements until this issue has been resolved.	Added a reference to the Appendix in X.7 as follows: This profile defines specific data element content. These data elements are used to create the HL7 CDA Birth and Fetal Death Reporting Document, generate the HL7 BFDR-E Message, or populate a form defined to gather the required structured data, such as the US BFDR-E Form. That set of data elements in the form are identified and defined in Appendix B.
8	Should there be only one option, the LDS-VR Option' – this had been considered but we want to be able to offer a lower participation threshold where possible – the pre-pop Option may need to be renamed, but it supports the LDS or the LDS-VR document.	Resolved.
9	The use of Null flavors for unknown is under review by HL7. This is slated for discussion in May HL7. This also impacts the output mapping to CDA documents as we are 'silent' on how to handle the 'N' status of each observation.	This has been resolved in the HL7 IG and does not need to be further constrained. Clarified the mapping in handling UNKNOWN.

Item	Issue Description	Status
10	Review of Birth vs FDeath Forms to assess any impact on logic in using numbers as a reference. Some information is needed in one form vs the other, and there may be differences in the information captured on the form for similar concepts. There are differences in the form numbers between the 2 documents, so any reference to the form numbers needs to be handled separately between birth and fetal death.	Added 2 tables to volume 4 to clarify the mapping to the two US forms.
11	HL7 CDA document is missing specification of UCUM units for some metrics. No profiling added pending HL7 resolution of this issue.	HL7 spec already references the data type PQ, so no change needed.
12	PPO: DEPRECATED. Sample forms do not reflect that this is removed at this time	Removed forms from Vol 1 Appendix A.1 and A.2 for the BC and FD to replace with NCHS web links to these forms. Also, need guidance from DVS to include language that indicates removed items from form
13	International considerations for form options currently identified as US Form Option on form manager	No change needed. BFDR-E Form Manager has already been generalized to Form Pre-pop Option
14	Need to post sample CDA documents for BFDR-Birth and BFDR-FD	No change to profile. Update FTP site with samples from CDA IG.
15	Fever Greater Than 100.4 (NCHS) value set - This is not likely to be present on a problem list and instead will be represented in discrete data if the temperature was taken	Decided to limit prepopulation for this item when fever greater than 100.4 is on the problem list and chorioamnionitis.
16	Timing and capture of chromosomal/congenital conditions is not necessarily conducive to clinical workflow (e.g., suspected is not usually documented in the record). Review of systems is probably correct, but missing symptoms or other observations that would specifically put this into a status of ‘suspected’	We are looking for a finding in the general appearance section.
17	The finalized and published HL7 CDA STU documents are expected to be available to HL7 members early June 2014, and to non-members by early September 2014.	All of the HL7 VR related standards have been published as STUs and are posted on the HL7 STU comments website.
18	The number of fetal deaths in the delivery (FDTH) is not currently mapped to the HL7 CDA Fetal Death Document. There is currently no attribute in the CDA given that there is no request for this information on the forms used as a basis for this work.	Included the mapping for FDTH for consistency with the HL7 CDA IG

IHE Technical Frameworks General Introduction

The IHE Technical Framework General Introduction is shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to this document where appropriate.

9 Copyright Licenses

IHE technical documents refer to, and make use of, a number of standards developed and published by several standards development organizations. Please refer to the IHE Technical Frameworks General Introduction, Chapter 9 - Copyright Licenses for copyright license information for frequently referenced base standards. Information pertaining to the use of IHE International copyrighted materials is also available there.

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IHE Technical Frameworks General Introduction Appendices

The IHE Technical Framework General Introduction Appendices are components shared by all of the IHE domain technical frameworks. Each technical framework volume contains links to these documents where appropriate.

*Update the following appendices to the General Introduction as indicated below. Note that these are **not** appendices to this domain's Technical Framework (TF-1, TF-2, TF-3 or TF-4) but rather, they are appendices to the IHE Technical Frameworks General Introduction located here.*

Appendix A – Actors

*Add the following **new or modified** actors to the IHE Technical Frameworks General Introduction Appendix A:*

Actor	Definition
Data Consumer	The Data Consumer is responsible for initiating a query to a Data Responder for resource information, and receiving the result of the query.
Data Responder	The Data Responder is responsible for receiving a query and supplying the corresponding resource information.
Form Receiver Document Exporter	This Form Receiver Document Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to create a document, and shares that newly created document with a Content Consumer.
Form Processor Document Exporter	This Form Processor Document Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to create a document, and shares that newly created document with a Content Consumer.
Form Receiver Message Exporter	This Form Receiver Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 message, and sends that message to an Information Recipient.
Form Processor Message Exporter	This Form Processor Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 message, and sends that message to an Information Recipient.

Appendix B – Transactions

475 *Add the following **new or modified** transactions to the IHE Technical Frameworks General Introduction Appendix B:*

Transaction	Definition
BFDRQuery [QRPH-46]	This transaction connects a Data Consumer to a Data Responder to allow query/retrieve of birth or fetal death reporting related health information.

Appendix D – Glossary

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*Add the following **new or modified** glossary terms to the IHE Technical Frameworks General Introduction Appendix D:*

Glossary Term	Definition
Apgar score	Apgar score is a systematic measure for evaluating the physical condition of the infant at specific intervals following birth. It is a score that assesses the general physical condition of a newborn or infant by assigning a value of 0, 1, or 2 to each of five criteria: heart rate, respiratory effort, muscle tone, skin color, and response to stimuli. The five scores are added together, with a perfect score being 10. Apgar scores are usually evaluated at one minute and five minutes after birth. If the 5 minute Apgar score is < 6 then additional Apgar scores at 10 minutes are required.
Antibiotic	Antibiotic is a chemotherapeutic agent that inhibits or abolishes the growth of micro-organisms, such as bacteria, fungi, or protozoans.
Anorexia	Anorexia nervosa is a psychiatric illness that describes an eating disorder characterized by extremely low body weight and body image distortion with an obsessive fear of gaining weight.
Asthma	Asthma is a chronic (long-lasting) inflammatory disease of the airways. In those susceptible to asthma, this inflammation causes the airways to narrow periodically; this, in turn, produces wheezing and breathlessness, sometimes to the point where the patient gasps for air.
Breech presentation	Breech presentation is a presentation of the fetal buttocks or feet in labor; the feet may be alongside the buttocks (complete breech presentation); the legs may be extended against the trunk and the feet lying against the face (frank breech presentation); or one or both feet or knees may be prolapsed into the maternal vagina (incomplete breech presentation).
Cesarean section	Cesarean section, or C-section, is an extraction of the fetus, placenta, and membranes through an incision in the maternal abdominal and uterine walls.
Cephalic presentation	Cephalic presentation is the presentation of part of the fetus, listed as vertex, occiput anterior (OA), occiput posterior (OP).

Glossary Term	Definition
Cerebral palsy	Cerebral palsy describes a group of permanent disorders of the development of movement and posture, causing activity limitation, that are attributed to nonprogressive disturbances that occurred in the developing fetal or infant brain. The motor disorders of cerebral palsy are often accompanied by disturbances of sensation, perception, cognition, communication, and behavior, by epilepsy, and by secondary musculoskeletal problems.
Chromosome abnormalities	Chromosome abnormalities consist of any change occurring in the structure or number of any of the chromosomes of a given species. In humans, a number of physical disabilities and disorders are directly associated with aberrations of both the autosomes and the sex chromosomes, including Down, Turner's, and Kleinfelter's syndromes.
Cleft lip	Cleft lip with or without cleft palate is the incomplete closure of the lip. It may be unilateral, bilateral, or median.
Cleft palate	Cleft palate is an incomplete fusion of the palatal shelves. It may be limited to the soft palate or may extend into the hard palate.
Congenital heart defect	Congenital heart defect (CHD) is a defect in the structure of the heart and great vessels of a newborn. Obstruction defects. CHD can be classified as: Obstruction defects occur when heart valves, arteries, or veins are abnormally narrow or blocked. Septal defects, for defects concerning the separation between left heart and right heart. Cyanotic defects, including persistent truncus arteriosus, total anomalous pulmonary venous connection, tetralogy of Fallot, transposition of the great vessels, and tricuspid atresia.
Congenital hip dysplasia	Congenital hip dysplasia is a hip joint malformation present at birth, thought to have a genetic component Clinical Hip dislocation, asymmetry of legs and fat folds; congenital hip dislocation may be asymptomatic and must be diagnosed by physical examination.
Cystic fibrosis	Cystic fibrosis (CF) is an inherited disease that affects the lungs, digestive system, sweat glands, and male fertility. Its name derives from the fibrous scar tissue that develops in the pancreas, one of the principal organs affected by the disease.
Down syndrome	Down syndrome or trisomy 21 is a genetic disorder caused by the presence of all or part of an extra 21st chromosome.
Eczema	Eczema is an acute or chronic noncontagious inflammation of the skin, characterized chiefly by redness, itching, and the outbreak of lesions that may discharge serous matter and become encrusted and scaly.
Endocrine disorder	Endocrine system is an integrated system of small organs which involve the release of extracellular signaling molecules known as hormones. Hypofunction of endocrine glands can occur as result of loss of reserve, hyposecretion, agenesis, atrophy or active destruction. Hyperfunction can occur as result of hypersecretion, loss of suppression, hyperplastic or neoplastic change, or hyperstimulation.
Epidural anesthesia	Epidural anesthesia is a regional anesthetic that is administered to the mother to control the pain of labor. It includes delivery of the agent into a limited space with the distribution of the analgesic effect limited to the lower body.
Esophageal atresia	Congenital esophageal atresia (EA) represents a failure of the esophagus to develop as a continuous passage. Instead, it ends as a blind pouch.
Food allergies	Food allergies are the body's abnormal responses to harmless foods; the reactions are caused by the immune system's reaction to some food proteins.

Glossary Term	Definition
Gastroesophageal reflux	Gastroesophageal reflux is the reflux of the stomach and duodenal contents into the esophagus.
Gastroschisis	Gastroschisis is an abnormality of the anterior abdominal wall, lateral to the umbilicus, resulting in herniation of the abdominal contents directly into the amniotic cavity. It is differentiated from omphalocele by the location of the defect and the absence of a protective membrane.
General anesthesia	General anesthesia is the induction of a state of unconsciousness with the absence of pain sensation over the entire body, through the administration of anesthetic drugs. It is used during certain medical and surgical procedures.
Genitourinary tract	Genitourinary tract is the organ system of all the reproductive organs and the urinary system. These are often considered together due to their common embryological origin.
Gestational age (weeks of amenorrhea)	One measure of gestational age is the number of completed weeks elapsed between the first day of the last normal menstrual period and the date of delivery. Gestational age can also be measured based on ultrasound early in pregnancy.
Gestational diabetes	Gestational diabetes – glucose intolerance requiring treatment - is a condition that occurs during pregnancy. Like other forms of diabetes, gestational diabetes involves a defect in the way the body processes and uses sugars (glucose) in the diet.
Heart malformation	Heart malformation or congenital heart defect (CHD) is a defect in the structure of the heart and great vessels of a newborn. Most heart defects either obstruct blood flow in the heart or vessels near it or cause blood to flow through the heart in an abnormal pattern, although other defects affecting heart rhythm can also occur.
Hemoglobin disease	Hemoglobin is produced by genes that control the expression of the hemoglobin protein. Defects in these genes can produce abnormal hemoglobins and anemia, which are conditions termed "hemoglobinopathies". Abnormal hemoglobins appear in one of three basic circumstances: Structural defects in the hemoglobin molecule. Diminished production of one of the two subunits of the hemoglobin molecule. Abnormal associations of otherwise normal subunits.
Hydrocephalus	Hydrocephalus is the abnormal accumulation of cerebrospinal fluid (CSF) in the ventricles, or cavities, of the brain. This may cause increased intracranial pressure inside the skull and progressive enlargement of the head, convulsion, and mental disability.
Immunoglobulin	Immunoglobulin is a concentrated preparation of gamma globulins, predominantly IgG, from a large pool of human donors; used for passive immunization against measles, hepatitis A, and varicella and for replacement therapy in patients with immunoglobulin deficiencies.
Induction of labor	Induction of labor is the initiation of uterine contractions by medical and/or surgical means for the purpose of delivery before the spontaneous onset of labor (i.e., before labor has begun).
In-utero transfer	An in-utero transfer consists in transferring, while the fetus is still in-utero, of the high-risks pregnant mother to another specialized birthing facility. Conversely, post-natal transfers are transfers that occur after the delivery.
Intra-uterine growth retardation (IUGR)	Intrauterine growth retardation (IUGR) occurs when the unborn baby is at or below the 10th weight percentile for his or her age (in weeks).
Intubation	Tracheal intubation is the placement of a flexible plastic tube into the trachea to protect the patient's airway and provide a means of mechanical ventilation.
Meningomyelocele	Meningomyelocele is a herniation of the meninges and spinal cord tissue.

Glossary Term	Definition
Neural tube defects	Neural tube defect will occur in human embryos if there is an interference with the closure of the neural tube.
Nuchal translucency scan	Nuchal translucency scan is an ultrasonographic prenatal screening scan to help identify higher risks of Down syndrome in a fetus. The scan is carried out at 11-13 weeks pregnancy and assesses the amount of fluid behind the neck of the fetus. Fetuses at risk of Down tend to have a higher amount of fluid around the neck.
Omphalocele	Omphalocele is a defect in the anterior abdominal wall, accompanied by herniation of some abdominal organs through a widened umbilical ring into the umbilical stalk
Pre-eclampsia	Pre-eclampsia is a disorder occurring during late pregnancy or immediately following parturition, characterized by hypertension, edema, and proteinuria. Also called toxemia of pregnancy.
Preterm birth	Preterm birth is a live birth of less than 37 completed weeks of gestation.
Premature labor	Premature labor describes the contractions of the uterus less than 37 weeks in a pregnancy.
Presentation	Presentation is the part of the fetus lying over the pelvic inlet; the presenting body part of the fetus.
Polymalformative syndrome	Polymalformative syndrome is set of non-random birth defects deriving from the same cause. It involves multiple systems of the organism (eyes, ears, central nervous system, heart, musculoskeletal...). Its screening, mostly by clinical examination means, is systematically made at birth.
Spina bifida	Spina bifida is a herniation of the meninges and/or spinal cord tissue through a bony defect of spine closure.
Spinal anesthesia	Spinal anesthesia or sub-arachnoidal block is a form of regional anesthesia involving the injection of local anesthetic into the cerebrospinal fluid.
Fetal death	Fetal death is a 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 the voluntary muscles. Heartbeats are to be distinguished from fleeting respiratory efforts or gasps.
Metabolism disorder	Metabolism disorders are disorders that affect chemical processes that take place in living organisms, resulting in growth, generation of energy, elimination of wastes, and other body functions as they relate to the distribution of nutrients in the blood after digestion.
Ultrasound	Ultrasound study is a radiologic study using sound waves used in the assessment of gestational age, size, growth, anatomy, and blood flow of a fetus or in the assessment of maternal anatomy and blood flow.
Vaginal birth/spontaneous	Vaginal birth/spontaneous birth is the delivery of the entire fetus through the vagina by the natural force of labor with or without manual assistance from the delivery attendant.
Vaginal birth with forceps	Vaginal birth with forceps is the delivery of the fetal head through the vagina by the application of obstetrical forceps to the fetal head.
Vaginal birth with vacuum	Vaginal birth with vacuum is the delivery of the fetal head through the vagina by the application of a vacuum cup or ventouse to the fetal head.
Vertex Presentation	Vertex presentation is the presentation of the upper or back part of the infant's head

Volume 1 - Profiles

Domain-specific additions

None

Add new Section X

X Birth and Fetal Death Reporting-Enhanced (BFDR-E) Profile

The Birth and Fetal Death Reporting-Enhanced (BFDR-E) Profile provides a means to capture and communicate information needed to report births and fetal deaths for vital registration purposes. BFDR-E builds upon the earlier Birth and Fetal Death Reporting (BFDR) Profile that utilizes actors and transactions defined in the ITI Retrieve Form for Data Capture (RFD) Profile or the Mobile Retrieve Form for Data Capture (mRFD) Profile to capture structured data using digital forms.

BFDR-E defines a specialized Labor and Delivery Summary (LDS-VR) CDA document. The LDS-VR document is used to prepopulate an electronic form (worksheet) that collects the information needed for submission to vital records according to specified pre-population rules. BFDR-E supports pre-population of the worksheet form using either the specialized LDS-VR document or a more general Labor and Delivery Summary (LDS) document that does not conform to all the further constraints of an LDS-VR document. Use of the LDS-VR Pre-population Option optimizes the initial Birth and Fetal Death Report form data population.

BFDR-E also defines a FHIR query and associated pre-population rules to be used with mRFD to pre-populate the provider report form.

BFDR-E further defines a mechanism to transform form submission data and record it in a FHIR document designed to exchange the information in a standard format. BFDR-E defines Form Receiver Document Exporter and Form Processor Document Exporter Actors to perform the transform on the form submission data and share that document with a Content Consumer. BFDR-E defines the IHE BFDR Document Template which adapts the HL7 BFDR FHIR document to support standard interchange of the information gathered from the form.

BFDR-E also defines a mechanism to transform form submission data and transmit it as a standard HL7 v2 message. The BFDRFeed [QRPH-37] transaction adapts the HL7 V2.6 BFDR Message for this purpose. BFDR-E defines the BFDRFeed transaction to transmit this message.

X.1 BFDR-E Actors, Transactions, and Content Modules

This section defines the actors, transactions, and/or content modules in this profile. General definitions of actors are given in the Technical Frameworks General Introduction Appendix A at http://www.ihe.net/Technical_Frameworks.

The BFDR-E Profile defines three ways to exchange data required for birth and fetal death reporting in an electronic form. First, creation of a BFDR Provider Live Birth FHIR Report Document and a BFDR Provider Fetal Death Report Document is supported. Second, communication of the BFDR content in an HL7 message is supported. Third, a form-based data collection method is supported using RFD transactions and pre-population from a Labor and Delivery Summary Document (LDS) to supplement human data entry. A specialized LDS-VR document is specified to maximize the number of data elements that can be prepopulated in the form so as to minimize the amount of human data entry required. The form data may be used directly by a birth reporting system, or there may be further processing of the form data to produce standard birth and fetal death content in the BFDR Birth FHIR Document, the BFDR Fetal Death FHIR Document, or the BFDR message format.

Figure X.1-1 shows the actors directly involved in the BFDR-E Profile and the relevant transactions between them.

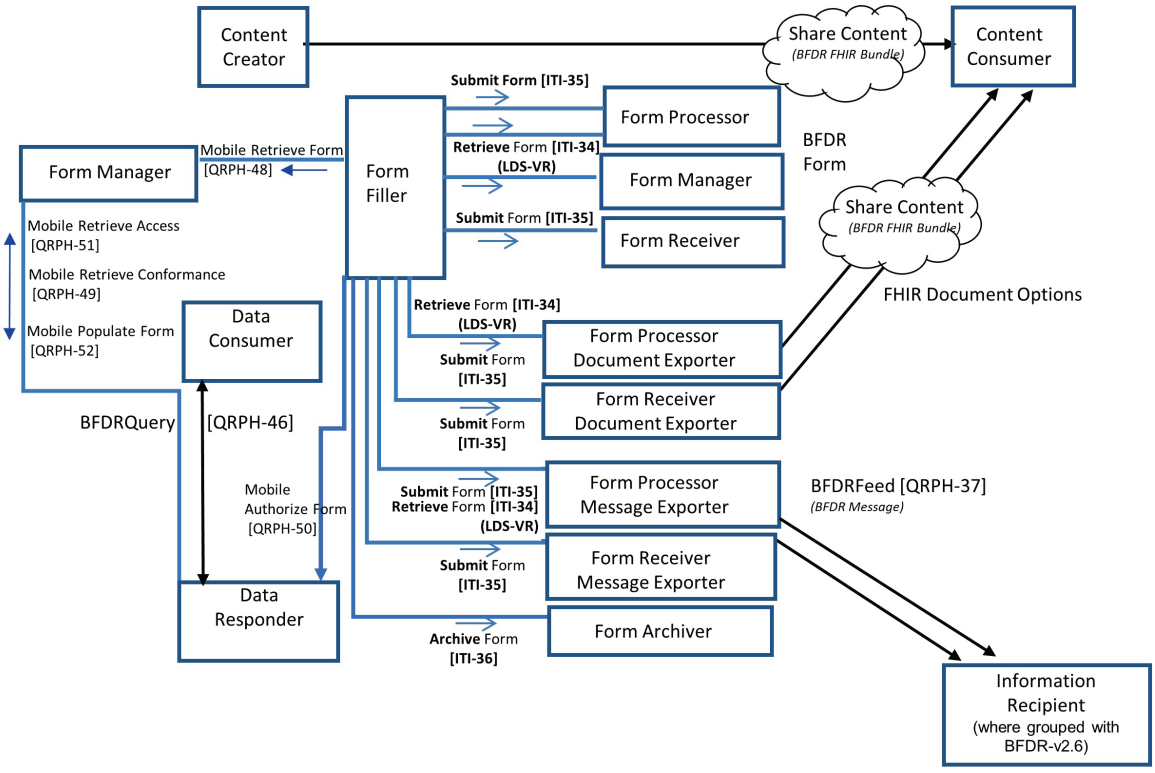


Figure X.1-1: BFDR-E Actor Diagram

535 **Table X.1-1: BFDR-E Profile - Actors and Transactions**

Actors (see Note 1 and Note 2)	Transactions	Optionality	TF Reference
Form Filler	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	Archive Form [ITI-36]	O	ITI TF-2b: 3.36
	Mobile Retrieve form (Request) [QRPH-48]	C Note1	QRPH TF-2: 3.48.4.1
	Mobile Authorize Form [QRPH-50]	C Note1	QRPH TF-2: 3.50.4.1
Form Manager	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	Mobile Populate Form (Request) [QRPH-52	C Note2	QRPH TF-2: 3.52.4.1
	Mobile Retrieve Access Token (Request) [QRPH51]	C Note2	QRPH TF-2: 3.51.4.1
	Mobile Retrieve Form (Response) [QRPH-48]	C Note2	QRPH TF-2: 3.48.4.1
	Mobile Retrieve Capability (Request) [QRPH-49]	C Note2	QRPH TF-2: 3.49.4.1
Form Processor	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Receiver	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Receiver Document Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
Form Processor Document Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
Form Receiver Message Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	BFDRFeed [QRPH-37]	R	QRPH TF 2: 3.37
Form Processor Message Exporter	Submit Form [ITI-35]	R	ITI TF-2b: 3.35
	Retrieve Form [ITI-34]	R	ITI TF-2b: 3.34
	BFDRFeed [QRPH-37]	R	QRPH TF 2: 3.37
Form Archiver	Archive Form [ITI-36]	R	ITI TF-2b: 3.36
Data Consumer	BFDRQuery [QRPH-46]	R	QRPH TF 2: 3.46
Data Responder	BFDRQuery [QRPH-46]	R	QRPH TF 2: 3.46
	Mobile Populate Form (Response) [QRPH-52]	R	QRPH TF-2: 3.52.4.2
	Mobile Authorize Form (Response) [QRPH-50]	O	QRPH TF-2: 3.50.4.1

Actors (see Note 1 and Note 2)	Transactions	Optionality	TF Reference
	Mobile Retrieve Access Token (Response) [QRPH-51]	O	QRPH TF-2: 3.51.4.1
	Mobile Retrieve Capability (Response)[QRPH-49]	O	QRPH TF-2: 3.49.4.1
Content Creator	NA	NA	NA
Content Consumer	NA	NA	NA

Note 1: The Form Filler must support at least one of RFD or mRFD. If the Form Filler supports RFD, it SHALL support Retrieve Form [ITI-34] and Submit Form [ITI-35]. If the Form Filler supports mRFD, it SHALL support Mobile Retrieve form (Request) [QRPH-48] and Mobile Authorize Form [QRPH-50]

Note 2: The Form Manager must support at least one of RFD or mRFD. If the Form Filler supports RFD, it SHALL support Retrieve Form [ITI-34]. If the Form Filler supports mRFD, it SHALL support Mobile Populate Form (Request) [QRPH-52], Mobile Retrieve Access Token (Request) [QRPH51], Mobile Retrieve Form (Response) [QRPH-48], and Mobile Retrieve Capability (Request)[QRPH-49]

Table X.1-2: BFDR-E Profile - Actors and Content Modules

Actors	Content Modules	Optionality	Reference
Content Creator	BFDR FHIR Document Provider Live Birth Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
	BFDR FHIR Document Provider Fetal Death Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
Form Receiver Document Exporter	BFDR FHIR Document Provider Live Birth Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
	BFDR FHIR Document Provider Fetal Death Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
Form Processor Document Exporter	BFDR FHIR Document Provider Live Birth Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
	BFDR FHIR Document Provider Fetal Death Report Composition Bundle	C Note 1	QRPH TF-3: 6.6.2
Content Consumer	BFDR Fetal Birth Document (for live births) (1.3.6.1.4.1.19376.1.7.3.1.1.19.2)	R	QRPH TF-3: 6.3.1.D1.5
	BFDR Fetal Death Document (for fetal death) (1.3.6.1.4.1.19376.1.7.3.1.1.19.3)	R	QRPH TF-3: 6.3.1.D2.5

Actors	Content Modules	Optionality	Reference
Form Filler with Pre-Pop Option	LDS Document (1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2)	R	PCC Labor and Delivery Profiles Trial Implementation Supplement, Vol 3, Sec 6.3.1.B
Form Filler with LDS-VR Pre-Pop Option	LDS-VR Document (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1)	R	QRPH TF-3: 6.3.1.D3.5
Form Manager	LDS Document (1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2)	R	PCC Labor and Delivery Profiles Trial Implementation Supplement, Vol 3, Sec 6.3.1.B
	LDS-VR Document (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1)	R	QRPH TF-3: 6.3.1.D3.5
Form Processor	LDS Document (1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2)	R	PCC Labor and Delivery Profiles Trial Implementation Supplement, Vol 3, Sec 6.3.1.B
	LDS-VR Document (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1)	R	QRPH TF-3: 6.3.1.D3.5

X.1.1 Actor Descriptions and Actor Profile Requirements

X.1.1.1 Content Creator

The Content Creator SHALL be able to create both a valid BFDR Provider Live Birth Composition Bundle and a valid BFDR Provider Fetal Death Composition Bundle.

Detailed rules for the BFDR Provider Live Birth Composition Bundle are fully defined in QRPH TF-3: 6.6.2, and detailed rules for the BFDR Provider Fetal Death Composition Bundle are fully defined QRPH TF-3: 6.6.2.

X.1.1.2 Content Consumer

The Content Consumer SHALL consume both a valid BFDR Provider Live Birth Composition Bundle and a valid BFDR Provider Fetal Death Composition Bundle Detailed rules for the BFDR Provider Live Birth Composition Bundle are fully defined in QRPH TF-3: 6.6.2, and detailed rules for the BFDR Provider Fetal Death Composition Bundle are fully defined QRPH TF-3: 6.6.2.

The Content Consumer SHALL implement the Discrete Data Import Option when consuming a QRPH IHE BFDR Provider Live Birth Document or IHE BFDR Provider Fetal Death Document.

X.1.1.3 Form Filler

The Form Filler is defined in the ITI Retrieve Form for Data Capture (RFD) Profile and in the QRPH Retrieve Form for Data Capture (mRFD).

The Form Filler SHALL support XHTML of the Retrieve Form [ITI-34] transaction.

The form is presented when a certifier is ready to enter birth or fetal death information for the purpose of completing the vital records information.

The Form Filler SHALL support at least one of two possible pre-population options: The LDS Pre-pop Option or the LDS-VR Pre-pop Option.

- A Form Filler implementing the Pre-Pop Option SHALL supply a valid LDS Document (1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2) as the pre-prop document for the Retrieve Form [ITI-34] transaction.
- A Form Filler implementing the LDS-VR Pre-pop Option SHALL supply a valid LDS-VR Document (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1) as the pre-prop document for the Retrieve Form [ITI-34] transaction.

The Form Filler SHALL encode the prepopData parameter of the Retrieve Form [ITI-34] transaction using the XML content of the pre-pop document.

The Form Filler MAY support the Archive Form Option to support recording of the form submission data at an alternate actor identified by the Form Filler.

In order to support the need to save a form for editing at a later time, the Form Filler SHALL be able to request a form for the same patient multiple times. (Further guidance on the workflow requirements to support this capability is outside the scope of this profile.)

X.1.1.4 Form Manager

The Form Manager SHALL support all the requirements defined for the Form Manager in ITI RFD [ITI TF-1:17] and in the QRPH Retrieve Form for Data Capture (mRFD).

The Form Manager SHALL support XHTML of the Retrieve Form [ITI-34] transaction.

A Form Manager in the BFDR-E Profile SHALL accept pre-pop data in the form of content defined by the IHE PCC LDS document template (Template id 1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2) or the IHE QRPH LDS-VR document template (Template id 1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1) and return a form that has been appropriately pre-populated based on the pre-population rules specified in QRPH TF-3: 6.3.1.D3.4 Data Element Requirement Mappings for Form Pre-Population.

The system fulfilling this role in the BFDR Profile implementing mRFD SHALL gather the Querypopulation data using the Query for Birth Reporting Data (BFDRQuery) [QRPH-47] message to the Data Responder to retrieve the Birth or Fetal Death Reporting data to populate the form. If a form is requested for the same birth or fetal death then the Form Manager shall supply the previously populated and saved form.

X.1.1.5 Form Receiver

The Form Receiver is defined in ITI RFD [ITI TF-1:17].

The Form Receiver SHALL receive the populated form from the Form Filler when the form is submitted. No further requirements are placed on the Form Receiver within the scope of this profile.

X.1.1.6 Form Processor

The Form Processor is defined in ITI RFD [ITI TF-1:17].

The Form Processor SHALL support XHTML of the Retrieve Form [ITI-34] transaction.

A Form Processor in the BFDR-E Profile SHALL accept pre-pop data in the form of content defined by the IHE PCC LDS Profile (1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2 or the IHE QRPH (LDS-VR) (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1) and return a form that has been appropriately pre-populated based on the mapping rules specified in QRPH TF-3: 6.3.1.D2.4 Data Element Requirement Mappings for Form Pre-Population.

If the same request is submitted for the same birth or fetal death then the Form Processor shall supply the previously populated and saved form.

The Form Processor SHALL receive the populated form from the Form Filler when the form is submitted. No further requirements are placed on the Form Processor within the scope of this profile.

Note: This actor is not used for mRFD (see Form Manager).

X.1.1.7 Form Receiver Document Exporter

The Form Receiver Document Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to create a FHIR document, and shares that newly created FHIR document with a Content Consumer. For BFDR, this transforms that data to create the BFDR Provider Live Birth Report FHIR Document Content defined in QRPH TF-3: 6.6.2 or the BFDR Provider Fetal Death ReportFHIR defined in QRPH TF-3: 6.6.2, and shares that newly created BFDR document with a Content Consumer. Specification of the transformation rules from the US BFDR Form to the FHIR document content is defined in QRPH TF-3: 6.6.1 Form Data Element.

X.1.1.8 Form Processor Document Exporter

The Form Processor Document Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to create a FHIR document, and shares that newly created FHIR document with a Content Consumer. For BFDR, this transforms that data to create the BFDR Provider Live Birth Report FHIR Document Content defined in QRPH TF-3: 6.6.2 or the BFDR Provider Fetal Death Report FHIR Document Content defined in QRPH TF-3: 6.6.2, and shares that newly created BFDR document with a Content Consumer. Specification of the

transformation rules from the US BFDR Form to the FHIR content is defined in QRPH TF-3: 6.6.1 Form Data Element Mappings.

X.1.1.9 Form Receiver Message Exporter

The Form Receiver Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 message, and sends that message to an Information Recipient. For BFDR, this transforms that data to be in compliance with the requirements of the BFDRFeed [QRPH-37] transaction and sends that data to an Information Recipient. Detailed rules for the BFDRFeed [QRPH-37] transaction are fully defined in QRPH TF-2: 3.37. Transformation rules from the form to the message content are fully specified in QRPH TF-3: 6.6.1 Form Data Element Mappings.

X.1.1.10 Form Processor Message Exporter

The Form Processor Message Exporter receives data submitted through the Submit Form [ITI-35] transaction, transforms that data to an HL7 message, and sends that message to an Information Recipient. For BFDR, this transforms that data to be in compliance with the requirements of the BFDRFeed [QRPH-37] transaction and sends that data to an Information Recipient. Detailed rules for the BFDRFeed [QRPH-37] transaction are fully defined in QRPH TF-2: 3.37. Transformation rules from the form to the message content are fully specified in QRPH TF-3: 6.6.1 Form Data Element Mappings.

X.1.1.11 Form Archiver

The actions of the Form Archiver are defined in ITI RFD [ITI TF-1:17].

The Form Archiver MAY be leveraged to support traceability of the form data used to create submitted documents. No further refinements of that document are stated by this profile.

X.1.1.12 Data Consumer

The Data Consumer is responsible for initiating a query using the BFDRQuery [QRPH-46] message to the Data Responder to retrieve the Birth and Fetal Death Reporting data.

X.1.1.13 Data Responder

The Data Responder is responsible for responding to a BFDRQuery [QRPH-46] message to the Data Consumer to provide the Birth and Fetal Death Reporting data.

X.2 BFDR-E Actor Options

Options that may be selected for each actor in this profile, if any, are listed in Table X.2-1. Dependencies between options when applicable are specified in notes.

Table X.2-1: BFDR-E - Actors and Options

Actor	Option Name	TF Reference
Content Creator	Antepartum Import	QRPH TF-1: X.2.4
Content Consumer	View	PCC TF-2: 3.1.1
	Document Import	PCC TF-2: 3.1.2
	Discrete Data Import	PCC TF-2: 3.1.4
Form Filler	LDS Pre-Pop Note 1	QRPH TF-1: X.2.1
	LDS-VR Pre-Pop Note 1	QRPH TF-1: X.2.2
	Archive Form	QRPH TF-1: X.2.3
Form Manager	None	--
Form Processor	None	--
Form Receiver	None	--
Form Receiver Document Exporter	None	--
Form Processor Document Exporter	None	--
Form Receiver Message Exporter Form Processor Message Exporter	Provider Supplied Live Birth Reporting Option Note 2V	QRPH TF-1: X.2.5
	Provider Supplied Mother's Live Birth Information Option Note 2	QRPH TF-1: X.2.6
	Provider Supplied Facility's Live Birth Information Option Note 2	QRPH TF-1: X.2.7
	Provider Supplied Fetal Death Reporting Option	QRPH TF-1: X.2.8
	Fetal Death Facility's Information Option	QRPH TF-1: X.2.9
	Fetal Death Mother's Information Option	QRPH TF-1: X.2.10
	Jurisdiction Live Birth Reporting Option	QRPH TF-1: X.2.11
	Jurisdiction Fetal Death Reporting Option	QRPH TF-1: X.2.12
Form Archiver	None	--
Data Consumer	None	
Data Responder	None	

Note 1: At least one of these options SHALL be supported.

Note 2: At least one of these birth reporting options SHALL be supported

X.2.1 LDS Pre-Pop Option

This option defines the document submission requirements placed on Form Fillers for providing pre-pop data to the Form Manager. The Form Filler's support for the LDS Pre-Pop Option

determines how pre-population data is handled when the Form Filler retrieves the form using the Retrieve Form [ITI-34] transaction:

If the Form Filler supports the LDS Pre-Pop Option, the value of the pre-pop Data parameter in the Retrieve Form Request (see ITI TF-2b: 3.34.4.1.2) shall be a well-formed xml document as defined in the PCC Labor and Delivery Summary (LDS) Content Profile (see Labor and Delivery Profiles Trial Implementation Supplement, 6.3.1.B Labor and Delivery Summary 1.3.6.1.4.1.19376.1.5.3.1.1.21.1.2).

X.2.2 LDS-VR Pre-Pop Option

This option defines the document submission requirements placed on Form Fillers for providing pre-pop data to the Form Manager, describing specific content and vocabulary constraints to the PCC LDS that will optimize the ability to process the clinical content to fill in the BFDR Form. The Form Filler's support for the LDS-VR Pre-Pop Option determines how pre-population data is handled when the Form Filler retrieves the form using the Retrieve Form [ITI-34] transaction.

If the Form Filler supports the LDS-VR Pre-Pop Option, the value of the pre-pop Data parameter in the Retrieve Form Request (see ITI TF-2b: 3.34.4.1.2) shall be a well-formed xml document as defined in the PCC Labor and Delivery Summary (LDS) Content Profile (see PCC Labor and Delivery Profiles Trial Implementation Supplement, Section Y.7) as constrained by QRPH TF-3: 6.3.1.A for the specification of the LDS content required as and LDS-VR Document (1.3.6.1.4.1.19376.1.7.3.1.1.19.1.1).

X.2.3 Archive Form Option

If the Form Filler supports the Archive Form Option, it shall implement the Archive Form [ITI-36] transaction.

X.2.4 Antepartum Import Option

This option defines the discrete data import requirements placed on Content Creators for incorporating information from the antepartum setting in the LDS or LDS-VR.

A Content Creator that supports the Antepartum Import Option SHALL support the Content Consumer of the IHE PCC Antepartum Summary (APS) Profile with the Discrete Data Import Option for those attributes specified by this option. Detailed discrete data import rules for the information that will support the pre-pop attributes are fully defined in QRPH TF-3: 6.6.4 Discrete Data Import Element Mappings to LDS-VR Content Document.

X.2.5 Provider Supplied Live Birth Reporting Option

This option is intended to support communications from the system collecting the worksheet information from the facility (e.g., Electronic Health Record) to a jurisdictional vital records office for a live birth. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the

Provider Supplied Live Birth Reporting Option (PSLBI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.38.4.1

X.2.6 Provider Supplied Mother's Live Birth Information Option

This option is intended to support communications from the system collecting the worksheet information from the mother (e.g., Personal Health Record, Patient Portal) to a jurisdictional vital records office for a live birth. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Provider Supplied Mother's Live Birth Information Option (PSMLBI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1

X.2.7 Provider Supplied Facility's Live Birth Information Option

This option is intended to support communications from the provider to the jurisdictional vital records office for both the facility's work sheet and the mother's live birth information. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Provider Supplied Facility's Live Birth Information Option (PSFLBI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1

X.2.8 Provider Supplied Fetal Death Reporting Option

This option is intended to support communications from the provider to the jurisdictional vital records office for both the facility's work sheet and the mother's information for a fetal death. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Provider Supplied Fetal Death Reporting Option (PSFDI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1

X.2.9 Fetal Death Facility's Information Option

This option is intended to support communications from the system collecting the worksheet information from the facility (e.g., Electronic Health Record) to a jurisdictional vital records office for a fetal death. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Fetal Death Facility's Information Option (PSFFDI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1

X.2.10 Fetal Death Mother's Information Option

This option is intended to support communications from the system collecting the worksheet information from the mother (e.g., Personal Health Record, Patient Portal) to a jurisdictional vital records office for a fetal death. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Fetal Death Mother's Information Option (PSMFDI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1

X.2.11 Jurisdiction Live Birth Reporting Option

This option is intended to support communications from the jurisdictional vital records office to a national statistics agency for a live birth. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Jurisdiction Live Birth Reporting Option (JLBI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1.

X.2.12 Jurisdiction Fetal Death Reporting Option

This option is intended to support communications from the jurisdictional vital records office to a national statistics agency for a fetal death. The Form Receiver Message Exporter, the Information Source, and the Information Recipients implementing this option shall support the content defined for the Jurisdiction Fetal Death Reporting Option (JFDI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1.

X.2.13 Void Certificate Reporting Option

This option is intended to support instructions from the jurisdictional vital records office to a national statistics agency to void a previously recorded live birth certificate or fetal death report. The Information Source, and the Information Recipients implementing this option shall support the content defined for the Void Certificate Reporting Option (JVFDI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1.

X.2.14 Coded Cause of Death Reporting Option

This option is intended to support communications from a national statistics agency to the jurisdictional vital records office. The Information Source and the Information Recipients shall support the content defined for the Coded Cause of Death Reporting Option (CCOFD) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.37.4.1.

Actors that support this option are able to send or receive coded cause of death information.

X.2.15 Coded Race/Ethnicity Reporting Option

This option is intended to support communications from the national statistics agency to a jurisdictional vital records office. The Information Source and the Information Recipients shall support the content defined for the Coded Race/Ethnicity Reporting Option (CREI) in the BFDRFeed [QRPH-37] transaction, see QRPH TF-2: 3.38.4.1.

Actors that support this option are able to send or receive race and ethnicity information.

In some jurisdictions, it is prohibited to send race and/or ethnicity. Use of this option may be constrained by national extension.

X.3 BFDR-E Required Actor Groupings

An actor from this profile (Column 1) shall implement all of the required transactions and/or content modules in this profile ***in addition to*** all of the transactions required for the grouped actor (Column 2).

Section X.5 describes some optional groupings that may be of interest for security considerations and Section X.6 describes some optional groupings in other related profiles.

Table X.3-1: BFDR-E - Required Actor Groupings

BFDR-e Actor	Actor to be grouped with	Reference	Content Bindings Reference
Content Creator with Antepartum Import Option	PCC APS Content Consumer with Discrete Data Import Option	QRPH TF-1: X.2.4	PCC TF Antepartum Profiles Trial Implementation Supplement, Vol 1, Sec X PCC TF-2: 3.1.4 Note 1
Content Consumer	None	--	--
Form Filler	None	--	--
Form Manager	None	--	--
Form Processor	None	--	--
Form Receiver	None	--	--
Form Receiver Document Exporter	None	--	--
Form Processor Document Exporter	None		
Form Receiver Message Exporter	None	--	--
Form Processor Message Exporter	None		
Form Archiver	None	--	--
Data Consumer	None	--	--
Data Responder	None	--	--

Note 1: A Content Creator supporting the Antepartum Import Option SHALL be grouped with the APS Content Consumer with the Discrete Data Import Option for those attributes specified by the Antepartum Import Option; see QRPH TF-1: X.2.4.

X.4 BFDR-E Overview

Vital Records birth certificates and fetal death reports include important demographic, medical and key information about the antepartum period, the labor and delivery process and the newborn/fetal death. Much of the medical and health information collected for the birth certificate and fetal death report can be pre-populated with information already available in the Electronic Health Record (EMR). A responsible Health Care Provider (HCP) or designated representative must review and complete the information to ensure data quality for vital

registration purposes. These data may then be used by public health agencies to track maternal and infant health to target interventions for at risk populations.

The national statistics agencies have a long and enduring history that serves to provide essential data on births and deaths. Within the United States, for instance, this is the oldest and most successful example of inter-governmental data sharing in Public Health. Currently, these data typically are gathered by hospital personnel from the hospital's medical records using paper worksheets. The process of capturing Vital Records information manually is duplicative, labor-intensive, costly, and can be error prone. As a result, the timeliness and quality of these data are adversely affected.

X.4.1 Concepts

Some jurisdictions have established detailed specifications for collecting and reporting the items on the Certificate of Live Birth and the Report of Fetal Death. It is critical that all vital registration areas follow these standards to promote uniformity in data collection across registration areas.

Additionally, standard worksheets are used to enhance the collection of quality, reliable data. Forms for the "mother's live birth information for Child's Birth Certificate" have been established by some jurisdictions to identify information to be collected directly from the mother. The "Facility Worksheet for the Live Birth Certificate" identifies information for which the best sources are the mother's and infant's medical records. The use of separate worksheets promotes standardized collection. The "Patient's Worksheet for the Report of Fetal Death" and the "Facility Worksheet for the Report of Fetal Death" have also been established for the purpose of reporting fetal death information.

The hospital is responsible for completing the Record of Live Birth in the jurisdiction's Electronic Birth Registration System (EBRS). Information collected from the mother on the mother's live birth information must be data entered into the EBRS. Facility Worksheet data transmitted electronically into the EBRS from the EMR must be reviewed for completeness and accuracy. The birth records specialist plays an essential role in gathering the information and ensuring that all information is complete before transmission to the vital registration system at the states/jurisdictional vital record offices. Select birth data may be transmitted later to public health authorities as allowed by individual state statute and other vital records stakeholders.

Example Forms:

- Facility Worksheet (https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016.pdf)
- U.S. Standard Certificate of Live Birth (http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf)
- https:/www.cdc.gov/nchs/data/dvs/FDEATH11-03finalACC.pdf
- Mother's Worksheet for Child's Birth Certificate
- Patient's worksheet for the report of fetal death

In the following use cases, the birth information specialist (BIS) will review and complete the Facilities Worksheet using information that has already been prepopulated by the EMR system. The mother also completes the Mother' Worksheet for Child's Birth Certificate and/or the Patient's Worksheet for the Report of Fetal Death. The BIS verifies the accuracy of the information and submits the form. This may be constrained in the US Extension to support only the forms for data submission for specific jurisdictional implementations. The form is received by a system that is configured to transform the facilities worksheet information into a standard FHIR document or HL7 message, depending upon the input format preferred by the vital registration system of the jurisdiction. The information is communicated to the vital registration system where further vital registration functions are addressed to formalize the birth certificate or fetal death report. The use case will also support the option for the FHIR document or HL7 message to be generated directly by a system, without using form-based collection.

X.4.2 Use Cases

X.4.2.1 Use Case #1: Forms Data Capture with Messaging

The Forms Data Capture with Messaging use case uses Retrieve Form for Data Capture (RFD) to present Facilities Worksheet for pre-population, and the Form Receiver system transforms the information into a BFDRFeed [QRPH-37] message to transmit the information to Public Health EBRS.

X.4.2.1.1 Use Case Description

When the delivery has been documented in the system, a Labor and Delivery Summary document (LDS, LDS-VR) is created with Vital Record Birth and Fetal Death Reporting Content requirements. This summary document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture (RFD) Form Manager. The RFD Form Receiver provides the content to the EBRS by way of a transform to the corresponding BFDRFeed [QRPH-37] message.

X.4.2.1.2 Processing Steps

X.4.2.1.2.1 Pre-conditions

A delivery has been documented in the EMR system.

X.4.2.1.2.2 Main Flow

This flow captures the EBRS information using forms provided by public health and transmits the data that is captured to public health using HL7 Messaging (BFDRFeed [QRPH-37]).

X.4.2.1.2.3 Post-conditions

The EBRS has received the data.

X.4.2.1.3 Process Flow

The process flow of this use case is defined by ITI RFD. Please refer to ITI TF-1:17 for a description of the process flow for RFD. The Form Filler may be implemented by the birthing facility or by the child's clinician in instances of home birth etc. The process flow for the BFDR-E is described below.

The provider EMR presents the Facilities Worksheet providing an LDS or LDS-VR document for Pre-population by the Form Manager. The birth information specialist completes the form, verifies the accuracy of all information, and submits the form. The birth information specialist may also interview the mother for completion of the mother's information to complete the reporting for the birth or fetal death. The Form Receiver Message Exporter transforms the information from the form into an HL7 BFDRFeed [QRPH-37] message and transmits that message to the EBRS system using the BFDRFeed [QRPH-37] transaction using the provider to jurisdiction reporting options for Report Jurisdiction Fetal Death. The National Statistics Agency returns coded cause of fetal death and Coded Race / Ethnicity Option for the fetal death to the jurisdiction EBRS. Due to paper jam damage of the printed official certificate that bears the death report number, the jurisdictional vital records office sends a Void Certificate Reporting message to the national statistics agency to void the submission. The fetal death registration will subsequently be transmitted with a new fetal death report number using the same transaction series between the originating jurisdictional vital records office and the National Statistics Agency.

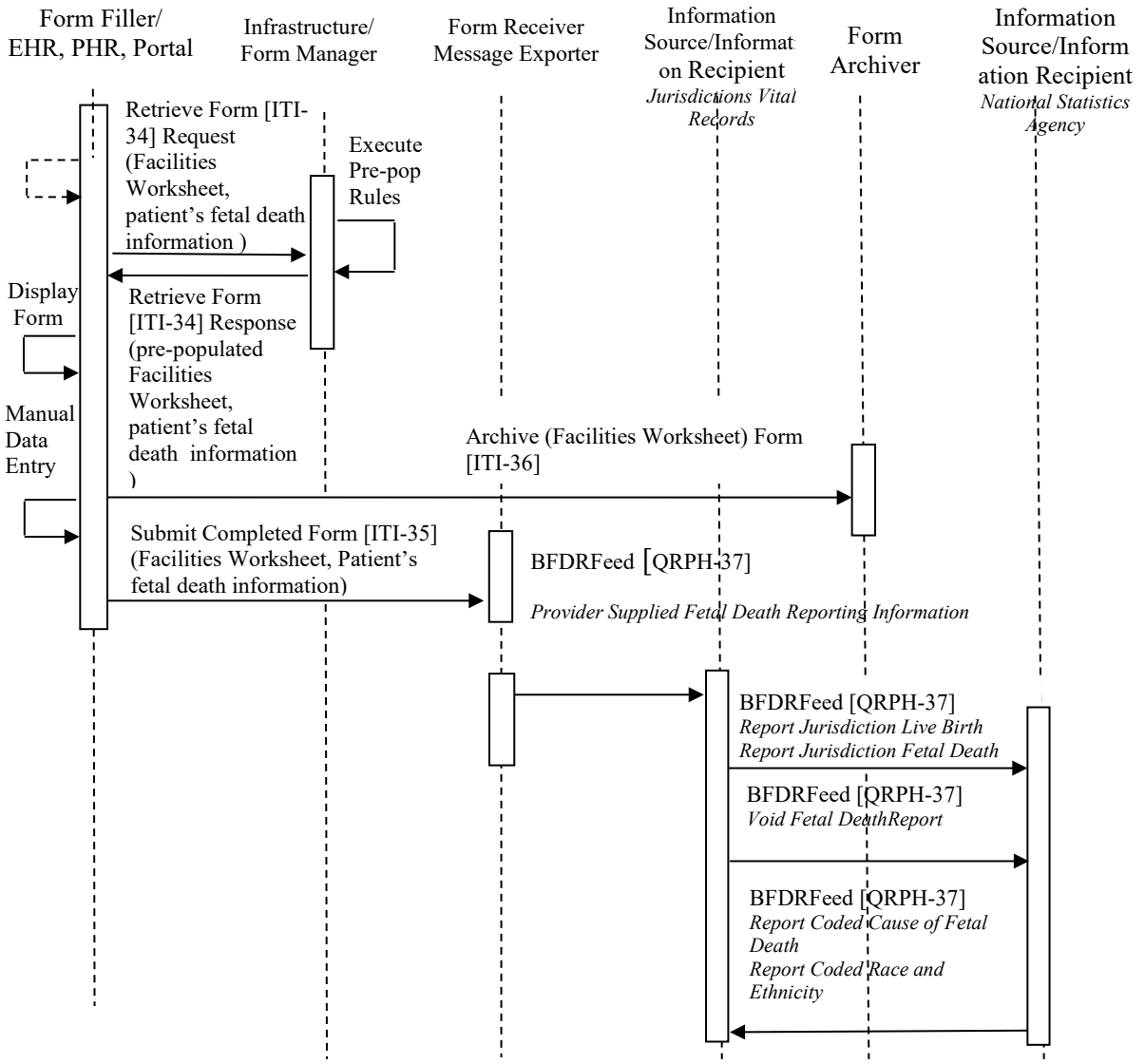


Figure X.4.2.1.3-1: Use Case 1 - Forms Data Capture with Messaging

X.4.2.2 Use Case #2: Forms Data Capture with Document Submission

The Forms Data Capture with Document Submission use case uses Retrieve Form for Data Capture (RFD) to present the Facilities Worksheet for pre-population, and the Form Receiver system transforms the information into a BFDR Birth FHIR Document or a BFDR Fetal Death FHIR Document to transmit the information to Public Health.

X.4.2.2.1 Use Case Description

When the delivery has been documented in the system, a Labor and Delivery Summary document (LDS, LDS-VR) is created with Vital Record Birth and Fetal Death Reporting Content requirements. This summary document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture (RFD) Forms Manager. The RFD Form Receiver provides the content to the EBRS by way of a transform to the corresponding BFDR Birth FHIR Document or the BFDR Fetal Death FHIR Document.

X.4.2.2.2 Processing Steps

X.4.2.2.2.1 Pre-conditions

A delivery has been documented in the EMR system.

X.4.2.2.2.2 Main Flow

This flow captures the EBRS information using forms provided by public health and transmits the data that is captured to public health using the BFDR Birth FHIR Document or the BFDR Fetal Death FHIR Document.

X.4.2.2.2.3 Post-conditions

The EBRS has received the data.

X.4.2.2.3 Process Flow

The process flow of this use case is defined by ITI mRFD. Please refer to ITI TF-1:17 for a description of the process flow for mRFD. The Form Filler may be implemented by the birthing facility or by the child's clinician in instances of home birth etc. The process flow for the BFDR-E is described below.

The provider EMR presents the Facilities Worksheet providing an LDS or LDS-VR document for Pre-population by the Form Manager. The birth information specialist completes the form, verifies the accuracy of all information, and submits the form. The RFD Form Receiver provides the content to the EBRS by way of a transform to the corresponding BFDR Provider Live Birth Report FHIR Document or the BFDR Provider Fetal Death Report FHIR Document.

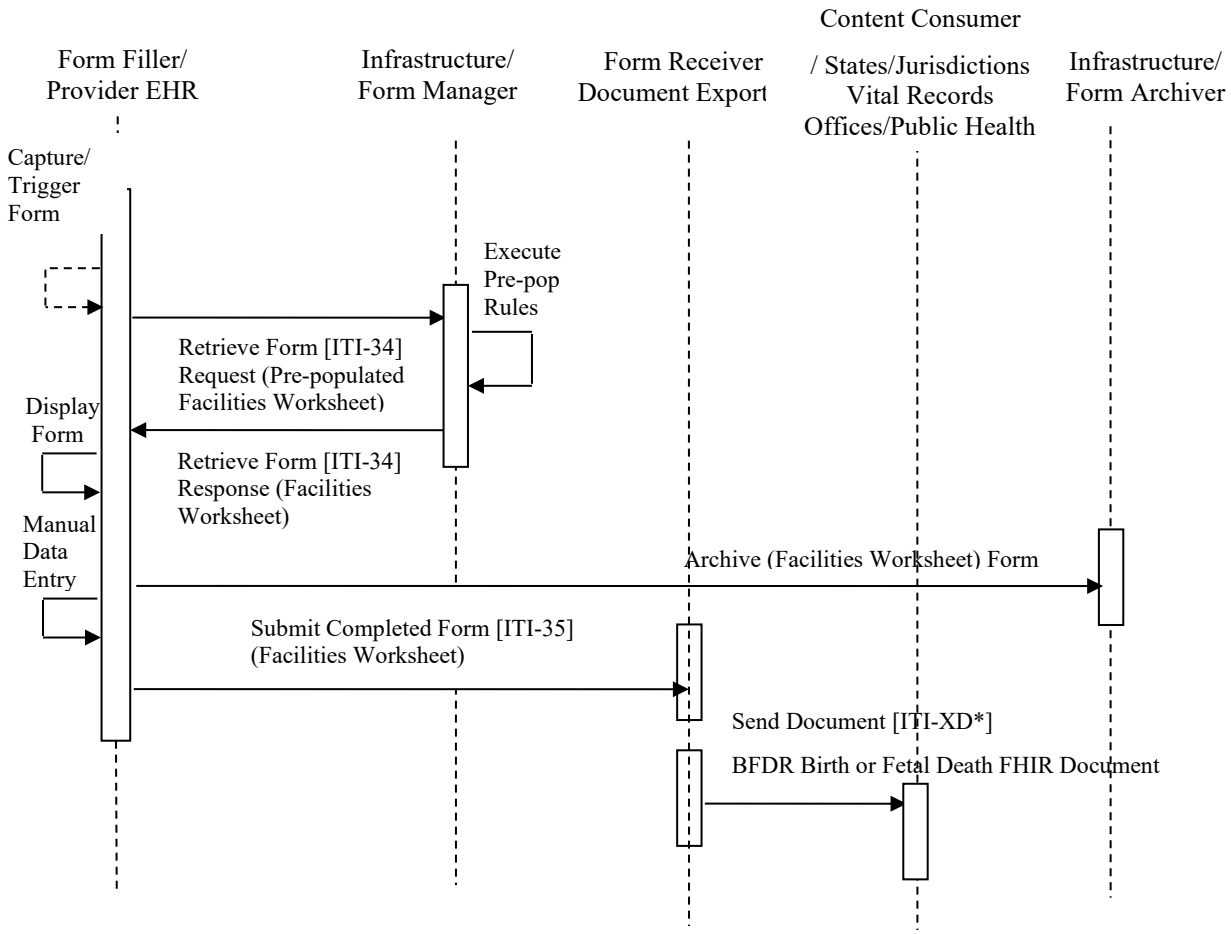


Figure X.4.2.2.3-1: Use Case 2- Forms Data Capture with Document Submission

X.4.2.3 Use Case #3: Native Forms Data Capture

The birth information specialist logs into the EMR and accesses the record of a newborn patient to begin the process of completing information required for birth and fetal death reporting. The EMR presents a form to the BIS that contains some data that has been pre-populated. She reviews the form, completes the remaining items, and verifies that the record is complete and accurate before submitting to transmit the data electronically into the EBRS. The EBRS record is saved, additional EBRS processing completed, and the record is filed electronically by the EBRS with the state vital statistics office.

X.4.2.3.1 Use Case Description

When the delivery has been documented in the system, a Labor and Delivery Summary document (LDS, LDS-VR) is created with Vital Record Birth and Fetal Death Reporting Content

requirements. This document is provided as pre-population data to a public health IHE ITI Retrieve Form for Data Capture Forms Processor. The RFD Form Processor information is consumed directly by the EBRS.

X.4.2.3.2 Processing Steps

X.4.2.3.2.1 Pre-conditions

A delivery has been documented in the EMR system.

X.4.2.3.2.2 Main Flow

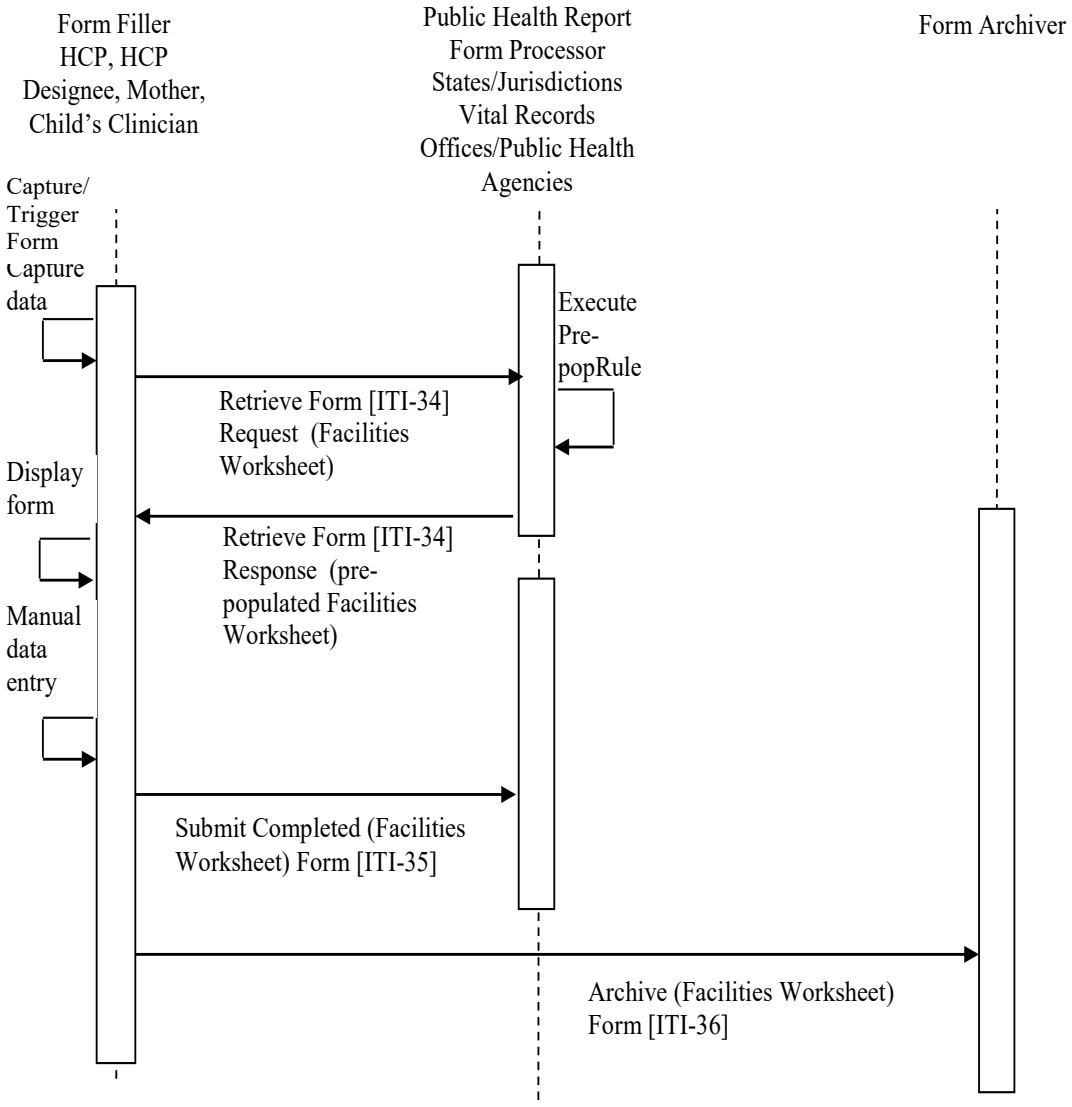
This flow captures the EBRS information using forms provided by public health and incorporates the data that is captured using product-defined methods.

X.4.2.3.2.3 Post-conditions

The EBRS has received the data.

X.4.2.3.3 Process Flow

The provider EMR presents the Facilities Worksheet providing an LDS or LDS-VR document for Pre-population by the Form Manager. The birth information specialist completes the form, verifies the accuracy of all information, and submits the form. The RFD Processor information is consumed directly by the EBRS.



950 **Figure X.4.2.3.3-1: Use Case 3 - Native Forms Data Capture**

X.4.2.4 Use Case #4: EMR BFDR Document Submission

The EMR BFDR Document Submission use case creates the QRPH BFDR FHIR document directly and transmits the document to the EBRS.

X.4.2.4.1 Use Case Description

955 When the delivery has been documented in the system, the EMR system creates the QRPH BFDR document and sends it to the EBRS.

X.4.2.4.2 Processing Steps

X.4.2.4.2.1 Pre-conditions

A delivery has been documented in the EMR system.

X.4.2.4.2.2 Main Flow

This flow sends the birth registration information to the EBRS using the BFDR Document (FHIR).

X.4.2.4.2.3 Post-conditions

The EBRS has received the data.

X.4.2.4.3 Process Flow

The provider EMR sends the QRPH BFDR document to the EBRS.

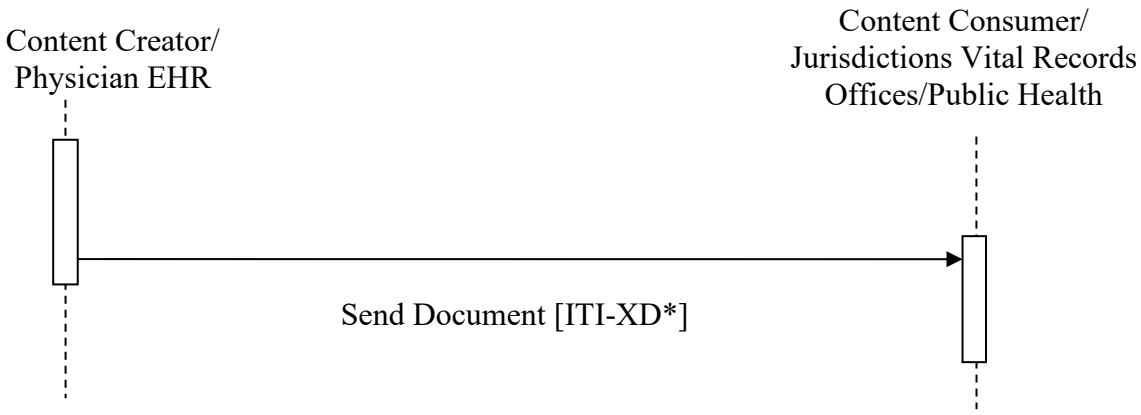


Figure X.4.2.4.3-1: Use Case 5- EMR BFDR Document Submission

X.4.2.5 Use Case #5: Mother's Information Data Collection

In the Mother's Information Data Collection use case, the mother uses a PHR with a SMART-on-FHIR app to complete the relevant portions of the mother's information for the newborn's vital record. The completed reporting information is sent to the EBRS where the jurisdiction completes the processing of the information with the national statistics agency.

X.4.2.5.1 Mother's Information Data Collection Use Case Description

When the mother is ready to provide information that will be used to generate the vital records report associated with the delivery, the mother's delivery vital record SMART-on-FHIR app

queries the EHR using BFDRQuery (QRPH-46) to retrieve information about the parents. The mother is able to complete the form with information not already available through the PHR.

Once the reporting information is documented using the app, the system creates an HL7 BFDR message or a BFDR FHIR document and sends the message to the EBRS directly. The EBRS communicates jurisdiction information to the national statistic agency where the standard coded cause of death is determined and returned to the jurisdiction.

X.4.2.5.2 Mother's Information Data Collection Process Flow

The SMART-on-FHIR app Data Consumer sends the BFDRQuery [QRPH-46] message to the PHR Data Responder to assist the mother in completing delivery reporting details. The mother's delivery reporting information is sent to the jurisdiction vital records office EBRS.

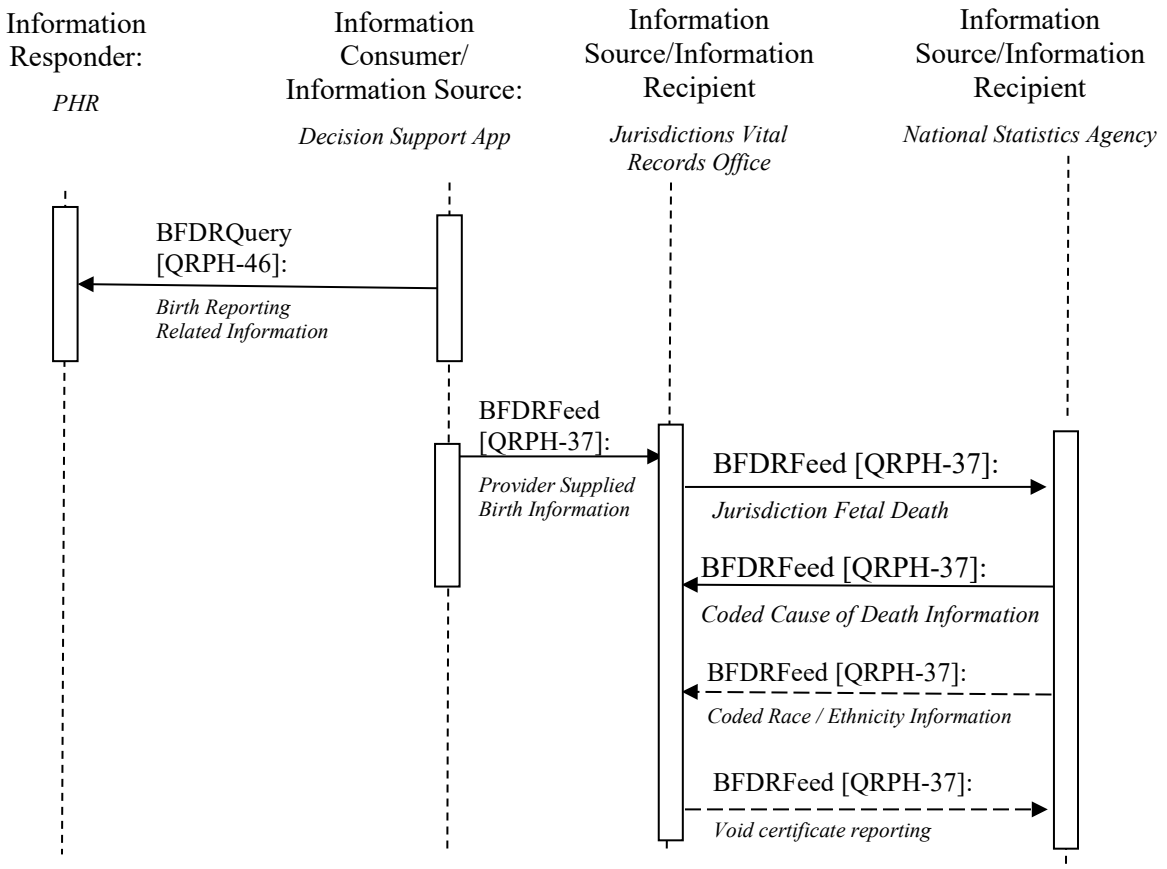


Figure X.4.2.5.2-1: Use Case 6- Mother's Information Data Collection

X.5 Security Considerations

BFDR includes clinical content related to the information subject. As such, it is anticipated that the transfers of Personal Health Information (PHI) will be protected. The IHE ITI Audit Trail and Node Authentication (ATNA) Profile SHOULD be implemented by all of the actors involved in the IHE transactions specified in this profile to protect node-to-node communication and to produce an audit trail of the PHI related actions when they exchange messages, though other private security mechanisms MAY be used to secure content within enterprise managed systems. Details regarding ATNA logging will be further described in Volume 2.

The content of the form also results in a legal document, and the Form Manager MAY include a digital signature using ITI Document Digital Signature (DSG) Profile to assure that the form content submitted cannot be changed.

For security purposes, when sending information specifically to vital records Electronic Registration Systems, systems will also need to know the identity of the user and the location to identify the data source. In this case, the Cross-Enterprise User Assertion (XUA) Profile MAY be utilized to support this implementation.

X.6 Cross Profile Considerations

The following informative narrative is offered as implementation guidance.

X.6.1 mRFD – Mobile Retrieve Form for Data Capture

The BFDRQuery[46] transaction may be used with Mobile Retrieve form for Data Capture as an alternative for form pre-population. To accomplish this, the Data Consumer should be grouped with the Form Manager of mRFD, and the Data Responder should be grouped with the Form Filler of mRFD.

X.6.2 XD*– Cross Enterprise Document Sharing.b, Cross Enterprise Document Media Interchange, or Cross Enterprise Document Reliable Interchange

The use of the IHE XD* family of transactions is encouraged to support standards-based interoperability between systems acting as Content Creator and Content Consumer. The grouping of Content Creator and Content Consumer Actors with ITI XD* Actors is defined in the PCC Technical Framework (PCC TF-1:3.7.1). Below is a summary of recommended IHE transport transactions that MAY be utilized by systems playing the roles of Content Creator or Content Consumer to support the use cases defined in this profile:

- A Document Source in XDS.b, a Portable Media Creator in XDM, or a Document Source in XDR might be grouped with the BFDR-E Content Creator. A Document Consumer in XDS.b, a Portable Media Importer in XDM, or a Document Recipient in XDR might be grouped with the BFDR-E Content Consumer. A registry/repository-based infrastructure is defined by the IHE Cross Enterprise Document Sharing (XDS.b) that includes profile support that can be leveraged to facilitate retrieval of public health related information

from a document sharing infrastructure: Multi-Patient Query (MPQ), Document Metadata Subscription (DSUB).

- A media-based infrastructure is defined by the IHE Cross Enterprise Document Media Interchange (XDM) Profile. A Portable Media Creator in XDM might be grouped with the BFDR-E Content Creator. A Portable Media Importer in XDM might be grouped with the BFDR-E Content Consumer.
- A reliable messaging-based infrastructure is defined by the IHE Cross Enterprise Document Reliable Interchange (XDR) Profile. A Document Source in XDR might be grouped with the BFDR-E Content Creator. A Document Recipient in XDR might be grouped with the BFDR-E Content Consumer.

X.6.3 Sharing Value Sets (SVS)

Actors in the BFDR-E Profile may support the Sharing Value Sets (SVS) Profile in order to use a common uniform managed vocabulary for dynamic management of form mapping rules.

X.7 BFDR Data Elements

This profile defines specific data element content. These data elements are used to create the BFDR Provider Live Birth Report FHIR Document or the BFDR Provider Fetal Death Report FHIR Document, generate the HL7 BFDRFeed [QRPH-37] message, or populate a form defined to gather the required structured data, such as the US BFDR Form. That set of data elements in the form are identified and defined in Appendix B.

Appendices to Volume 1

Appendix A – BFDR-E Profile - Sample Forms

A.1 Sample Birth Reporting Facilities Worksheet

The sample Birth Reporting Facilities Worksheet form included in this content profile reflects the U.S. Standard Certificate of Live Birth reporting requirements from the birthing facility. However, the BFDR Content Profile may be modified by national extension to include and accommodate international birth reporting requirements. The sample form is posted at https://www.cdc.gov/nchs/data/dvs/facility-worksheet-2016.pdf.

Note: The following form elements are no longer included as part of the U.S. national birth file and will be removed from the facilities worksheet form in the next formal release of that document:

- Date of last prenatal care visit
- Premature rupture of the membranes >=12 hours (Onset of labor)
- Precipitous labor <3 hours (Onset of labor)
- Prolonged labor => 20 hours(Onset of labor)
- Tocolysis (Obstetric procedure)
- Cervical cerclage (Obstetric procedure)
- Unplanned operating room procedures (Maternal morbidity)
- Significant birth injury (Abnormal condition of the Newborn)
- Other previous poor pregnancy outcomes (Risk Factors in this Pregnancy)
- Moderate/heavy meconium staining of the amniotic fluid (Characteristics of Labor and Delivery)
- Fetal intolerance of labor (Characteristics of Labor and Delivery)

A.2 Sample US Fetal Death Facilities Worksheet

The sample Fetal Death Reporting Facilities Worksheet form included in this content profile reflects the U.S. Standard Report of Fetal Death reporting requirements from the birthing facility. However, the BFDR Content Profile may be modified to include and accommodate international fetal death reporting requirements. The sample form is posted at http://www.cdc.gov/nchs/data/dvs/FacilityFetal04.pdf.

Note: The following form elements are no longer included as part of the U.S. national fetal death file and will be removed from the facilities worksheet form in the next formal release of that document:

- Total number of prenatal visits for this pregnancy
  - Edit flag - Total number of prenatal visits for this pregnancy
- Date of last prenatal care visit*
- Mother's weight at delivery
  - Edit flag – Mother's weight at delivery
- Number of other pregnancy outcomes
- Date of last other pregnancy outcome
- Mother/patient transferred for maternal medical or fetal indications for delivery?
- Previous preterm birth (Risk factors for this pregnancy)
- Other previous poor pregnancy outcomes (Risk factors for this pregnancy)*
- Gonorrhea (Infections present and/or treated during this pregnancy**)
- Syphilis (Infections present and/or treated during this pregnancy**)
- Chlamydia (Infections present and/or treated during this pregnancy**)
- Listeria (Infections present and/or treated during this pregnancy**)
- Group B strep (Infections present and/or treated during this pregnancy**)

- Cytomegalovirus (Infections present and/or treated during this pregnancy**)
- Parvovirus (Infections present and/or treated during this pregnancy**)
- Toxoplasmosis (Infections present and/or treated during this pregnancy**)
- Other (Specify) (Infections present and/or treated during this pregnancy**)
- Hysterotomy/hysterectomy (Method of delivery)
- Maternal transfusion (Maternal morbidity)
- Third or fourth degree perineal laceration (Maternal morbidity)
- Unplanned hysterectomy (Maternal morbidity)
- Unplanned operating room procedure (Maternal morbidity)
- Anencephaly (Congenital anomalies of the fetus**)
- Meningomyelocele/Spina bifida (Congenital anomalies of the fetus**)
- Cyanotic congenital heart disease (Congenital anomalies of the fetus**)
- Congenital diaphragmatic hernia (Congenital anomalies of the fetus**)
- Omphalocele (Congenital anomalies of the fetus**)
- Gastroschisis (Congenital anomalies of the fetus**)
- Limb reduction defect (Congenital anomalies of the fetus**)
- Cleft Lip with or without Cleft Palate (Congenital anomalies of the fetus**)
- Cleft palate alone (Congenital anomalies of the fetus**)
- Down syndrome- karyotype confirmed/pending (Congenital anomalies of the fetus**)
- Suspected Chromosomal disorder - karyotype confirmed/pending (Congenital anomalies of the fetus**)
- Hypospadias (Congenital anomalies of the fetus**)

* Item previously announced as dropped from the national birth file.

**All checkboxes on the national standard worksheet under this category have been dropped.

A.3 Sample US mother's live birth information for Child's Birth Certificate

The sample mother's live birth information for Child's Birth Certificate form included in this content profile reflects the reporting requirements from the mother. However, the BFDR Content Profile may be modified to include and accommodate international reporting requirements that may be captured from the mother. The sample form is posted at https://www.cdc.gov/nchs/data/dvs/moms-worksheet-2016.pdf.

Note: The following form elements are no longer included as part of the U.S. Mother's Worksheet for Child's Birth Certificate file and will be removed from the worksheet form in the next formal release of that document:

- Has the mother ever been married?
- Mother Married (At birth, conception, or any time between)

A.4 Sample Patient's Worksheet for the Report of Fetal Death

The sample Patient's Worksheet for the Report of Fetal Death form included in this content profile reflects the reporting requirements from the mother. However, the BFDR Content Profile may be modified to include and accommodate international reporting requirements that may be captured from the mother. The sample form is posted at https://www.cdc.gov/nchs/data/dvs/patientwkstfetaldth.pdf.

Note: The following form elements are no longer included as part of the U.S. Patient's Worksheet for the Report of Fetal Death file and will be removed from the worksheet form in the next formal release of that document:

- Has the mother ever been married?
- Mother Married (At birth, conception, or any time between)

Appendix B – BFDR-E Profile - Data Element Definitions

The following data elements are used in Vital Records Birth and Fetal Death Reporting:

1135

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
ANTI	Y	N	Abnormal conditions of the newborn: Antibiotics [received by the newborn for suspected neonatal sepsis]	Any antibacterial drug given systemically (intravenous or intramuscular.) For example, penicillin, ampicillin, gentamicin, cefotoxine, etc.)
AVEN1	Y	N	Abnormal conditions of the newborn: Assisted ventilation [required immediately following delivery]	Infant given manual breaths for any duration with bag and mask or bag and endotracheal tube within the first several minutes from birth. Excludes free flow (blow-by) oxygen only, laryngoscopy for aspiration of meconium, nasal cannula, and bulb suction.
AVEN6	Y	N	Abnormal conditions of the newborn: Assisted ventilation for 6 or more hours	Infant given mechanical ventilation (breathing assistance) by any method for more than 6 hours. Includes conventional, high frequency and/or continuous positive pressure (CPAP). Excludes free flow oxygen only, laryngoscopy for aspiration of meconium and nasal cannula.
BINJ	Y	N	Abnormal conditions of the newborn: Significant birth injury [(skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)]	Significant birth injury: (skeletal fracture(s), peripheral nerve injury and/or soft tissue/solid organ hemorrhage which requires intervention). Defined as present immediately following delivery or manifesting following delivery. Includes any bony fracture or weakness or loss of sensation but excludes fractured clavicles and transient facial nerve palsy. Soft tissue hemorrhage requiring evaluation and/or treatment includes sub-galeal (progressive extravasation within the scalp) hemorrhage, giant cephalohematoma, extensive truncal, facial and /or extremity ecchymossi accompanied by evidence of anemia and/or hypovolemia and or hypotension. Solid organ hemorrhage includes subcapsular hematoma of the liver, fractures of the spleen, or adrenal hematoma. All require confirmation by diagnostic imaging or exploratory laparotomy.
NICU	Y	N	Abnormal conditions of the newborn: Admission to NICU	Admission into a facility or unit staffed and equipped to provide continuous mechanical ventilatory support for the newborn. Include NICU admission at any time during the infant's hospital stay following delivery. Do not include units that do not provide continuous mechanical ventilation. Do not include well-baby nurseries or special care nurseries (i.e., Level II nursery). Do not include if the newborn was taken to the NICU for observation but is not admitted to the NICU.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
SEIZ	Y	N	Abnormal conditions of the newborn: Seizure or serious neurologic dysfunction	Seizure defined as any involuntary repetitive, convulsive movement or behavior. Serious neurologic dysfunction defined as severe alteration of alertness such as obtundation, stupor, or coma, i.e., hypoxicischemic encephalopathy. Excludes lethargy or hypotonia in the absence of other neurologic findings. Exclude symptoms associated with CNS congenital anomalies.
SURF	Y	N	Abnormal conditions of the newborn:[Newborn given] Surfactant replacement therapy	Newborn given surfactant replacement therapy: Endotracheal instillation of a surface active suspension for the treatment of surfactant deficiency either due to preterm birth or pulmonary injury resulting in decreased lung compliance (respiratory distress). Includes both artificial and extracted natural surfactant.
NOA54	Y	N	Abnormal conditions of the newborn: None of the above	None of the listed abnormal conditions of the newborn.
DNA54	Y	N	Abnormal conditions of the newborn: Pending	If the data are not available when the abnormal conditions of the newborn are provided, the pending flag is set. The item will appear on the final review screen for entry before information is sent to vital records.
APGAR5	Y	N	Apgar Score: 5 Minute	A systematic measure for evaluating the physical condition of the infant at specific intervals following birth. Enter the infant's Apgar score at 5 minutes.
APGAR10	Y	N	Apgar Score: 10 Minute	A systematic measure for evaluating the physical condition of the infant at specific intervals following birth. If the score at 5 minutes is less than 6, enter the infant's Apgar score at 10 minutes.
ATTENDN	Y	Y	Attendant's name	The name of the attendant (the person responsible for delivering the child), their title, and their National Provider Identification (NPI) Number.
ATTEND	Y	Y	Attendant's title:	The title of the person (attendant) responsible for delivering the child. The attendant at birth is defined as the individual physically present at the delivery who is responsible for the delivery. Titles include: M.D. (doctor of medicine); D.O. (doctor of osteopathy); CNM/CM (certified nurse midwife/certified midwife); Other midwife (midwife other than a CNM/CM); and Other (specify)
ATTENDS	Y	Y	Attendant: Other specified	The specific title of the person (attendant) responsible for delivering the child if not included in the list of provided titles. Examples include nurse, father, police officer, and EMS technician. The attendant at birth is defined as the individual physically present at the delivery who is responsible for the delivery.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
NPI	Y	Y	Attendant's NPI	The National Provider Identification Number (NPI) of the person (attendant) responsible for delivering the child.
BWG	Y	N	Birth weight (Infant's)	Infant's birthweight in grams.
BWO	Y	N	Birth weight (Infant's)	Infant's birthweight in ounces.
BWP	Y	N	Birth weight (Infant's)	Infant's birthweight in pounds.
ANTB	Y	N	Characteristics of labor and delivery: Antibiotics[received by the mother during labor]	Antibiotics received by the mother during labor. Includes antibacterial medications given systemically (intravenous or intramuscular) to the mother in the interval between the onset of labor and the actual delivery. Includes: Ampicillin, Penicillin, Clindamycin, Erythromycin, Gentamicin, Cefataxine, and Ceftriaxone. Information about the course of labor and delivery. Mother should have undergone labor, regardless of method of delivery. Check the timing of the administration of the antibacterial medications. Check this item only if medications were received systemically by the mother during labor. If information on onset of labor cannot be determined from the records, check with the birth attendant.
AUGL	Y	N	Characteristics of labor and delivery: Augmentation of labor	Augmentation of labor: Stimulation of uterine contractions by drug or manipulative technique with the intent to reduce the time of delivery (i.e., after labor has begun). Check this item if medication was given or procedures to augment labor were performed AFTER labor began. If it is not clear whether medication or procedures were performed before or after labor had begun, review records to determine when labor began and when medication were given or procedures performed. If this information is unclear or not available check with the birth attendant. Do not include if induction of labor was performed.
CHOR	Y	N	Characteristics of labor and delivery: [Clinical] Chorioamnionitis [diagnosed during labor or maternal temperature >=38 degrees (100.4F)]	Any recorded maternal temperature at or above 38oC (100.4oF) or clinical diagnosis of chorioamnionitis during labor made by the delivery attendant (usually includes more than one of the following: fever, uterine tenderness and/or irritability, leukocytosis, or fetal tachycardia). Information about the course of labor and delivery.
ESAN	Y	N	Characteristics of labor and delivery: [Epidural or spinal]Anesthesia[during labor]	Administration to the mother of a regional anesthetic to control the pain of labor. Delivery of the agent into a limited space with the distribution of the analgesic effect limited to the lower body. Mother should have undergone labor, regardless of method of delivery.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
INDL	Y	N	Characteristics of labor and delivery: Induction of labor	Induction of labor: Initiation of uterine contractions by medical and/or surgical means for the purpose of delivery before the spontaneous onset of labor (i.e., before labor has begun). Examples of methods include, but are not limited to: artificial rupture of membranes, balloons, oxytocin, prostaglandin, luminaria, or other cervical ripening agents. Check this item if medication was given or procedures to induce labor were performed BEFORE labor began. If it is not clear whether medication or procedures were performed before or after labor had begun, review records to determine when labor began and when medications were given or procedures performed. If this information is unclear or not available check with the birth attendant. Induction of labor should be checked even if the attempt to initiate labor is not successful or the induction follows a spontaneous rupture of the membrane without contractions. Does not include augmentation of labor, which applies only after labor/contractions have begun.
STER	Y	N	Characteristics of labor and delivery: Steroids [(glucocorticoids) for fetal lung maturation received by the mother prior to delivery]	Steroids received by the mother prior to delivery to accelerate fetal lung maturation. Typically administered in anticipation of preterm (less than 37 completed weeks of gestation) delivery Steroids. Includes: Betamethasone dexamethasone, or hydrocortisone specifically given to accelerate fetal lung maturation in anticipation of preterm delivery. Does not include: Steroid medication given to the mother as an anti- inflammatory treatment before or after delivery. Three conditions must be met for this item. Check this item when 1) steroid medication was given to the mother 2) prior to delivery 3) for fetal lung maturation. Steroids may be administered to the mother prior to admittance to the hospital for delivery. Review the mother's prenatal care and other hospital records for mention of steroid administration for this purpose.
NOA04	Y	N	Characteristics of labor and delivery: None of the above	None of the listed characteristics of labor and delivery that provide information about the course of labor and delivery.
IDOB_YR	Y	N	Child: Date of Birth: Year	The infant's date (year) of birth.
IDOB_MO	Y	N	Child: Date of Birth: Month	The infant's date (month) of birth.
IDOB_DY	Y	N	Child: Date of Birth: Day	The infant's date (day) of birth.
KIDFNAME	Y	Y	Child's First Name/ Name of Fetus(optional at the discretion of the parents)	The legal name (first) of the child as provided by the parents.
KIDMNAME	Y	Y	Child's Middle Name / Name of Fetus(optional at the discretion of the parents)	The legal name (middle) of the child as provided by the parents.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
KIDLNAME	Y	Y	Child's Last Name / Name of Fetus(optional at the discretion of the parents)	The legal name (last) of the child as provided by the parents.
KIDSUFFX	Y	Y	Child's Last Name Suffix:	The legal name (suffix) of the child as provided by the parents.
BFED	Y	N	Child: Infant being breastfed?	Information on whether the infant was receiving breastmilk/colostrum during the period between birth and discharge from the hospital. Breastfeeding refers to the establishment of breastmilk through the action of breastfeeding or pumping (expressing). Include any attempt to establish breastmilk production during the period between birth and discharge from the hospital. Include if the infant received formula in addition to being breastfed. Does not include the intent to breastfeed.
ILIV	Y	N	Child: Infant living at time of report?	Information on the infant's survival. Check "Yes" if the infant is living. Check "Yes" if the infant has already been discharged to home care. Check "No" if it is known that the infant has died. If the infant was transferred but the status is known, indicate the known status.
IRECNUM	Y	N	Child: Newborn Medical Record Number	The medical record number assigned to the newborn.
ISEX	Y	N	Child: (infant) Sex -	The sex of the infant.
ITRAN	Y	N	Child: Infant transferred within 24 hours of delivery/name the facility FTRAN	Transfer status of the infant within 24 hours after delivery.
FTRAN	Y	N	Child: Infant transferred within 24 hours of delivery/name the facility	
TB	Y	N	Child: Time of Birth	The infant's time of birth.
ANEN	Y	Y	Congenital anomalies of the Newborn: Anencephaly	Partial or complete absence of the brain and skull. Also called anencephalus, acrania, or absent brain. Also includes infants with craniorachischisis (anencephaly with a contiguous spine defect).
CCHD	Y	Y	Congenital anomalies of the Newborn: Cyanotic congenital heart disease	Congenital heart defects that cause cyanosis.
CDH	Y	Y	Congenital anomalies of the Newborn:- Congenital diaphragmatic hernia	Defect in the formation of the diaphragm allowing herniation of abdominal organs into the thoracic cavity.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
CDIC	Y	Y	Congenital anomalies of the Newborn: Suspected chromosomal disorder karyotype confirmed	Suspected chromosomal disorder karyotype confirmed
CDIS	Y	Y	Congenital anomalies of the Newborn: Suspected chromosomal Disorder	Suspected chromosomal disorder: Includes any constellation of congenital malformations resulting from or compatible with known syndromes caused by detectable defects in chromosome structure.
CDIP	Y	Y	Congenital anomalies of the Newborn: Suspected chromosomal disorder karyotype pending	Suspected chromosomal disorder karyotype pending.
CL	Y	Y	Congenital anomalies of the Newborn: Cleft Lip with or without Cleft Palate	Cleft lip with or without cleft palate refers to incomplete closure of the lip. Cleft lip may be unilateral, bilateral or median; all should be included in this category.
CP	Y	Y	Congenital anomalies of the Newborn: Cleft Palate alone	Cleft palate refers to incomplete fusion of the palatal shelves. This may be limited to the soft palate or may also extend into the hard palate. Cleft palate in the presence of cleft lip should be included in the "Cleft Lip with or without cleft Palate" category, rather than here.
DOWC	Y	Y	Congenital anomalies of the Newborn: Down Karyotype Confirmed	Down Karyotype confirmed
DOWN	Y	Y	Congenital anomalies of the Newborn: Down Syndrome	Down Syndrome: Trisomy 21 - A chromosomal abnormality caused by the presence of all or part of a third copy of chromosome 21. Check if a diagnosis of Down syndrome, Trisomy 21 is confirmed or pending.
DOWP	Y	Y	Congenital anomalies of the Newborn: Down Karyotype Pending	Down Karyotype pending
GAST	Y	Y	Congenital anomalies of the Newborn: Gastroschisis	An abnormality of the anterior abdominal wall, lateral to the umbilicus, resulting in herniation of the abdominal contents directly into the amniotic cavity. Differentiated from omphalocele by the location of the defect and absence of a protective membrane.
HYPO	Y	Y	Congenital anomalies of the Newborn: Hypospadias	Hypospadias: Incomplete closure of the male urethra resulting in the urethral meatus opening on the ventral surface of the penis. Includes first degree – on the glans ventral to the tip, second degree – in the coronal sulcus, and third degree – on the penile shaft.
LIMB	Y	Y	Congenital anomalies of the Newborn: Limb reduction defect	Limb reduction defect: (excluding congenital amputation and dwarfing syndromes) Complete or partial absence of a portion of an extremity secondary to failure to develop.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
MNSB	Y	Y	Congenital anomalies of the Newborn: Meningomyelocele/Spina Bifida	Spina bifida is herniation of the meninges and/or spinal cord tissue through a bony defect of spine closure. Meningomyelocele is herniation of meninges and spinal cord tissue. Meningocele (herniation of meninges without spinal cord tissue) should also be included in this category. Both open and closed (covered with skin) lesions should be included. Do not include Spina bifida occulta (a midline bony spinal defect without protrusion of the spinal cord or meninges).
OMPH	Y	Y	Congenital anomalies of the Newborn: Omphalocele	A defect in the anterior abdominal wall, accompanied by herniation of some abdominal organs through a widened umbilical ring into the umbilical stalk. The defect is covered by a membrane, (different from gastroschisis, see below), although this sac may rupture. Also called exomphalos. Umbilical hernia (completely covered by skin) should not be included in this category.
NOA55	Y	Y	Congenital anomalies of the Newborn: None of the anomalies listed above	None of the listed congenital anomalies of the newborn or fetus.
YLLB	Y	Y	Date of last live birth:	The year of birth of the last live-born infant.
MLLB	Y	Y	Date of last live birth:	The month of birth of the last live-born infant.
DLMP_DY	Y	Y	Date last Normal Menses began:	The date the mother's last normal menstrual period began.
DLMP_MO	Y	Y	Date last Normal Menses began:	The date the mother's last normal menstrual period began.
DLMP_YR	Y	Y	Date last Normal Menses began:	The date the mother's last normal menstrual period began.
YOPO	Y	Y	Date of Last Other Pregnancy Outcome: Year	The date (year) that the last pregnancy that did not result in a live birth ended. Includes pregnancy losses at any gestation age. Examples: spontaneous or induced losses or ectopic pregnancy. If applicable, enter the month and year. If date information is incomplete, Enter all parts of the date that are known. Enter "unknown" for any parts of the date that are missing. Do not estimate or guess a date.
MOPO	Y	Y	Date of Last Other Pregnancy Outcome: Month	The date (month) that the last pregnancy that did not result in a live birth ended. Includes pregnancy losses at any gestation age. Examples: spontaneous or induced losses or ectopic pregnancy. If applicable, enter the month and year. If date information is incomplete, Enter all parts of the date that are known. Enter "unknown" for any parts of the date that are missing. Do not estimate or guess a date.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
ADDRESS_D	Y	Y	Facility Address	
FNAME	Y	Y	Facility Name (if Not institution, give street and number)	The name of the facility where the delivery took place.
FNPI	Y	Y	Facility National Provider Identifier	National Provider Identifier.
CHAM	Y	Y	Infections present and treated during this pregnancy: Chlamydia	Chlamydia: A positive test for Chlamydia trachomatis. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
GON	Y	Y	Infections present and treated during this pregnancy: Gonorrhea	Gonorrhea: A positive test/culture for Neisseria gonorrhea. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
HEPB	Y	N	Infections present and treated during this pregnancy: Hepatitis B	Hepatitis B (HBV, serum hepatitis): A positive test for the hepatitis B virus. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
HEPC	Y	N	Infections present and treated during this pregnancy: Hepatitis C	Hepatitis C (non-A, non-B hepatitis (HCV)): A positive test for the hepatitis C virus. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
SYPH	Y	Y	Infections present and treated during this pregnancy: Syphilis	Syphilis (also called lues) A positive test for Treponema pallidum. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
NOA02	Y	Y	Infections present and treated during this pregnancy: None of the above	None of the listed infections were present and treated during this pregnancy.
AINT	Y	Y	Maternal Morbidity: - Admission to Intensive care [unit]	Admission to intensive care unit: Any admission, planned or unplanned, of the mother to a facility/unit designated as providing intensive care. Serious complications experienced by the mother associated with labor and delivery.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
MTR	Y	Y	Maternal Morbidity: Maternal Transfusion	Maternal transfusion: Includes infusion of whole blood or packed red blood cells within the period specified. Serious complications experienced by the mother associated with labor and delivery.
PLAC	Y	Y	Maternal Morbidity: [Third or fourth degree] perineal laceration	Third or fourth degree perineal laceration: 3rd degree laceration extends completely through the perineal skin, vaginal mucosa, perineal body and anal sphincter. 4th degree laceration is all of the above with extension through the rectal mucosa. Serious complications experienced by the mother associated with labor and delivery.
RUT	Y	Y	Maternal Morbidity: Ruptured Uterus	Ruptured Uterus: Tearing of the uterine wall. Tearing of the uterine wall. Uterine rupture is a full-thickness disruption of the uterine wall that also involves the overlying visceral peritoneum (uterine serosa). Does not include uterine dehiscence in which the fetus, placenta, and umbilical cord remain contained with the uterine cavity. Does not include a silent or incomplete rupture or an asymptomatic separation.
UHYS	Y	Y	Maternal Morbidity: Unplanned hysterectomy	Unplanned hysterectomy: Surgical removal of the uterus that was not planned prior to admission for delivery. Includes an anticipated or possible but not definitively planned procedure. Serious complications experienced by the mother associated with labor and delivery.
UOPR	Y	Y	Maternal Morbidity: Unplanned operat[ing]ion [room procedure following delivery]	Unplanned operating room procedure following delivery: Any transfer of the mother back to a surgical area for an operative procedure that was not planned prior to the admission for delivery. Excludes postpartum tubal ligations. Serious complications experienced by the mother associated with labor and delivery.
NOA05	Y	Y	Maternal Morbidity:None of the above NOTE: NOA05 is also used for onset of labor	None of the listed serious complications experienced by the mother associated with labor and delivery.
PRES	Y	Y	Method of Delivery: Fetal presentation [at birth]: Cephalic	The physical process by which the complete delivery of the fetus was affected. Fetal presentation at birth - Cephalic: Presenting part of the fetus listed as vertex, occiput anterior (OA), occiput posterior (OP); Breech: Presenting part of the fetus listed as breech, complete breech, frank breech, footling breech; Other: Any other presentation not listed above.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
ROUT	Y	Y	Method of Delivery: [Final]Route and method of delivery	The physical process by which the complete delivery of the fetus was affected. Includes: Vaginal/spontaneous: delivery of the entire fetus through the vagina by the nature force of labor with or without manual assistance from the delivery attendant; Vaginal/forceps: Delivery of the fetal head through the vagina by the application of obstetrical forceps to the fetal head; Vaginal/vacuum: Delivery of the fetal head through the vagina by the application of a vacuum cup or ventouse to the fetal head; or Cesarean: Extraction of the fetus, placenta, and membranes through an incision in the maternal abdominal and uterine walls.
TLAB	Y	Y	Method of Delivery: Trial of labor attempted	If cesarean, indicate if a trial of labor was attempted (labor was allowed, augmented, or induced with plans for a vaginal delivery).
MFNAME	Y	Y	Mother's Current Legal Name: First Name	The current legal first name of the mother.
MMNAME	Y	Y	Mother's Current Legal Name: Middle Name	The current legal middle name of the mother.
MLNAME	Y	Y	Mother's Current Legal Name: Last Name	The current legal last name of the mother.
MSUFF	Y	Y	Mother's Current Legal Name: suffix	The current legal name suffix of the mother.
HFT	Y	Y	Mother's Height: Feet	Mother’s height feet
HIN	Y	Y	Mother's Height: Inches	Mother’s height inches
MRECNUM	Y	Y	Mother's medical record number	The mother’s medical record number for this facility admission
PWGT	Y	Y	Mother's pre-pregnancy weight	The mother’s prepregnancy weight
NFACL	Y	Y	Mother: If Mother transferred for maternal medical or fetal indications for delivery, enter name of facility mother transferred from.	Indicates the name of the facility the mother was transferred from if the mother was transferred from another facility. Transfers include hospital to hospital, birth facility to hospital, etc. Does not include home to hospital.
TRAN	Y	Y	Mother transferred for maternal medical or fetal indications for delivery?	Indicates if the mother was transferred from another facility. Transfers include hospital to hospital, birth facility to hospital, etc. Does not include home to hospital.
DWGT	Y	Y	Mother's weight at delivery	The mother’s weight at the time of delivery.
POPO	Y	Y	Number of other pregnancy outcomes	Total number of other pregnancy outcomes that did not result in a live birth. Includes pregnancy losses of any gestation age. Examples: spontaneous or induced losses or ectopic pregnancy.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
PLBD	Y	Y	Number of previous live births now dead (do not include this child)	The total number of previous live-born infants now dead.
PLBL	Y	Y	Number of previous live births now living (do not include this child)	The total number of previous live-born infants now living.
PNC	Y	Y	Prenatal Care	The mother did not receive prenatal care at any time during the pregnancy.
OWGEST	Y	Y	Obstetric Estimate of Gestation	The best obstetric estimate of the infant's gestational age (OE) in completed weeks is based on the clinician's final estimate of gestation. The final number of weeks should be available in the OB admission H&P as the first source. The final number of weeks may also be obtained from the PNC records as a secondary source if the information is not available in the OB admissions H&P.
CERV	Y	N	Obstetric procedures: Cervical cerclage	Cervical cerclage: Circumferential banding or suture of the cervix to prevent or treat dilation. Includes: MacDonald's suture; Shirodkar procedure; and Abdominal cerclage via laparotomy. Obstetric procedures: Medical treatment or invasive/manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor and/or delivery.
ECVF	Y	N	Obstetric procedures: Failed External cephalic Version	Failed External cephalic version: Failed attempt to convert a fetus from a nonvertex to a vertex presentation by external manipulation. Obstetric procedures: Medical treatment or invasive/manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor and/or delivery.
ECVS	Y	N	Obstetric procedures: Successful External cephalic version	Successful External cephalic version: Successful conversion of a fetus from a nonvertex to a vertex presentation by external manipulation. Obstetric procedures: Medical treatment or invasive/manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor and/or delivery.
TOC	Y	N	Obstetric procedures: Tocolysis	Tocolysis: Administration of any agent with the intent to inhibit preterm uterine contractions to extend the length of the pregnancy. Medications: Magnesium sulfate (for preterm labor); Terbutaline; Indocin (for preterm labor). Obstetric procedures: Medical treatment or invasive/manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor and/or delivery.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
NOA03	Y	N	Obstetric procedures: None of the above	None of the listed obstetric procedures were performed for medical treatment or invasive/manipulative procedures during this pregnancy to treat the pregnancy or to manage labor and/or delivery.
PROM	Y	N	Onset of labor: Premature Rupture	Premature Rupture of the Membranes (prolonged≥12 hours): Spontaneous tearing of the amniotic sac, (natural breaking of the "bag of waters"), 12 hours or more before labor begins. Serious complications experienced by the mother associated with labor and delivery.
PRIC	Y	N	Onset of labor: Precipitous Labor	Precipitous labor (<3hours): Labor that progresses rapidly and lasts for less than 3 hours. Serious complications experienced by the mother associated with labor and delivery.
PROL	Y	N	Onset of labor: Prolonged Labor	Prolonged labor (≥ 20 hours): Labor that progresses slowly and lasts for 20 hours or more. Serious complications experienced by the mother associated with labor and delivery.
NOA05	Y	N	Onset of labor: None of the above NOTE: NOA05 is also used for Maternal Morbidity	None of the listed serious complications experienced by the mother associated with labor and delivery.
SFN	Y	Y	Place where birth occurred: State Facility Number	Place where birth occurred: State Facility Number
FLOC	Y	Y	Place where birth occurred: Facility City/Town	Place where birth occurred: Facility City/Town
CNAME	Y	Y	Place where birth occurred: County Name	Place where birth occurred: County Name
CNTYO	Y	Y	Place where birth occurred: County Code	Place where birth occurred: County Code
BPLACE	Y	N	Place where birth occurred: Birth Place	Place where birth occurred: Birth Place
PLUR	Y	Y	Plurality	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. ("Reabsorbed" fetuses, those which are not "delivered" (expulsed or extracted from the mother) should not be counted.)
DOFP_MO	Y	Y	Prenatal care visits: Date of first prenatal care visit: Month	The month a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.
DOFP_DY	Y	Y	Date of first prenatal care visit: Day	The day a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
DOFP_YR	Y	Y	Date of first prenatal care visit: Year	The year a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.
NPREV	Y	Y	Prenatal care visits: Total number of prenatal visits for this pregnancy	The total number of visits recorded in the record. A prenatal visit is one in which the physician or other health care professional examines or counsels the pregnant woman for her pregnancy Do not include visits for laboratory and other testing in which a physician or health care professional did not examine or counsel the pregnant woman Access the most recent prenatal records available. If up-to-date records are not available, contact the prenatal care provider for the most current information. Count the prenatal visits recorded in the record. Exclude visits for laboratory and other tests or classes in which the mother was not seen by a physician or other health care professional for pregnancy-related care. If it is not clear whether the mother was seen by a physician or other health care professional, include the visit(s) in the total number.
PAY	Y	N	Principal source of payment for this delivery	The principal source of payment at the time of delivery: Includes: Private insurance (Blue Cross/Blue Shield, Aetna, etc.); Medicaid (or a comparable State program); Self-pay (no third party identified); Other (Indian Health Service, CHAMPUS/ TRICARE, other government [Federal, State, local]); Unknown
PDIAB	Y	Y	Risk factors in this pregnancy: Prepregnancy Diabetes	Prepregnancy Diabetes (diagnosis of glucose intolerance requiring treatment before this pregnancy).
GDIAB	Y	Y	Risk factors in this pregnancy: Gestational Diabetes	Gestational Diabetes (diagnosis of glucose intolerance requiring treatment during this pregnancy).
PHYPE	Y	Y	Risk factors in this pregnancy: Prepregnancy Hypertension	Prepregnancy (Chronic) Hypertension (Elevation of blood pressure above normal for age, gender, and physiological condition with diagnosis prior to the onset of this pregnancy. Does not include gestational (pregnancy induced) hypertension (PIH)).
GHYPE	Y	Y	Risk factors in this pregnancy: Gestational Hypertension	Gestational Hypertension (Elevation of blood pressure above normal for age, gender, and physiological condition with diagnosis in this pregnancy (pregnancy-induced hypertension or preeclampsia.))
EHYPE	Y	Y	Risk factors in this pregnancy: Eclampsia	Eclampsia Hypertension (Elevation of blood pressure above normal for age, gender, and physiological condition with proteinuria with generalized seizures or coma.) May include pathologic edema.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
PPB	Y	Y	Risk factors in this pregnancy: Previous preterm births	History of pregnancy(ies) terminating in a live birth of less than 37 completed weeks of gestation.
INFT	Y	Y	Risk factors in this pregnancy: Infertility treatment	Any assisted reproductive treatment used to initiate the pregnancy. Includes: Any assisted reproductive treatment used to initiate the pregnancy. Includes: - Drugs (such as Clomid, Pergonal) - Artificial insemination - Technical procedures (such as in-vitro fertilization) Drugs (such as Clomid, Pergonal); Artificial insemination; Technical procedures (such as in-vitro fertilization).
INFT_DRG	Y	Y	Risk factors in this pregnancy: Infertility: Fertility Enhancing Drugs, AI	Fertility-enhancing drugs, artificial insemination or intrauterine insemination Any fertility enhancing drugs (e.g., Clomid, Pergonal), artificial insemination or intrauterine insemination used to initiate the pregnancy.
INFT_ART	Y	Y	Risk factors in this pregnancy: Infertility: Asst. Rep. Technology	Assisted reproductive technology (e.g., in vitro fertilization (IVF), gamete intrafallopian transfer GIFT)) Any assisted reproductive technology (ART/technical procedures (e.g., IVF, GIFT, ZIFT)) used to initiate the pregnancy.
PCES	Y	Y	Risk factors in this pregnancy: Previous cesarean	Previous delivery by extracting the fetus, placenta, and membranes through an incision in the mother's abdominal and uterine walls.
NPCES	Y	Y	Risk factors in this pregnancy: Number of previous cesareans	Number of previous deliveries extracting the fetus, placenta, and membranes through an incision in the mother's abdominal and uterine walls.
NOA01	Y	Y	Risk factors in this pregnancy: None of the above	The patient had none of the listed risk factors in this pregnancy.
SORD	Y	Y	Set Order	Order this infant was delivered in the set.
FSEX	N	Y	Child: (fetus) Sex -	The sex of the fetus.
FDOD_YR	N	Y	Date of Delivery (Fetus) Year	Date of Delivery (Fetus) Year
FDOD_MO	N	Y	Date of Delivery (Fetus) Month	Date of Delivery (Fetus) Month
FDOD_DY	N	Y		Date of Delivery (Fetus) Day
ETIME	N	Y	Estimated Time of Fetal Death	Item to indicate when the fetus died with respect to labor and assessment.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
LIVEB	Y	N	Not single birth - specify number of infants in this delivery born alive.	Specify the number of infants in this delivery born alive
FDTH	N	Y	Number of fetal deaths	Specify the number of fetal deaths in this delivery
HYST	N	Y	Method of Delivery: Hysterotomy/Hysterectomy?	Hysterotomy/Hysterectomy was the physical process by which the complete delivery of the fetus was affected. Hysterotomy: Incision into the uterus extending into the uterine cavity. May be performed vaginally or transabdominally. Hysterectomy: Surgical removal of the uterus. May be performed abdominally or vaginally.
TD	N	Y	Time of delivery	Hour and minute fetus was delivered.
AUTOP	N	Y	Was an autopsy performed?	Information on whether or not an autopsy was performed
FWO	N	Y	Weight of Fetus (in ounces)	Fetus' weight in ounces.
FWG	N	Y	Weight of Fetus (grams preferred, specify unit)	Fetus' weight in grams.
FWP	N	Y	Weight of Fetus (in pounds)	Fetus' weight in pounds.
LM	N	Y	Infections present and treated during this pregnancy: Listeria	Listeria: A diagnosis of or positive test for Listeria monocytogenes. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
GBS	N	Y	Infections present and treated during this pregnancy: Group B Streptococcus	Group B Streptococcus: A diagnosis of or positive test for Streptococcus agalactiae or group B streptococcus. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.
CMV	N	Y	Infections present and treated during this pregnancy: Cytomeglovirus	Cytomegalovirus (CMV): A diagnosis of or positive test for Cytomegalovirus. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
B19	N	Y	Infections present and treated during this pregnancy: Parvovirus	Parvovirus: A diagnosis of or positive test for Parvovirus B19. Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record
HISTOP	N	Y	Was a Histological Placental Examination performed?	Information on whether or not a histological placental examination was performed
TOXO	N	Y	Infections present and treated during this pregnancy: Toxoplasmosis	Toxoplasmosis: A diagnosis of or positive test for Toxoplasma gondii.
COD18a1	N	Y	Initiating Cause/Condition - Rupture of membranes prior to onset of labor	NA
COD18a2	N	Y	Initiating Cause/Condition - Abruptio placenta	NA
COD18a3	N	Y	Initiating Cause/Condition - Placental insufficiency	NA
COD18a4	N	Y	Initiating Cause/Condition - Prolapsed cord	NA
COD18a5	N	Y	Initiating Cause/Condition - Chorioamnionitis	NA
COD18a6	N	Y	Initiating Cause/Condition - Other complications of placenta, cord, or membranes	NA
COD18a7	N	Y	Initiating Cause/Condition - Unknown	NA
COD18a8	N	Y	Initiating Cause/Condition - Maternal conditions/diseases literal	NA
COD18a9	N	Y	Initiating Cause/Condition - Other complications of placenta, cord, or membranes literal	NA
COD18a10	N	Y	Initiating Cause/Condition - Other obstetrical or pregnancy complications literal	NA

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
COD18a11	N	Y	Initiating Cause/Condition - Fetal anomaly literal	NA
COD18a12	N	Y	Initiating Cause/Condition - Fetal injury literal	NA
COD18a13	N	Y	Initiating Cause/Condition - Fetal infection literal	NA
COD18a14	N	Y	Initiating Cause/Condition - Other fetal conditions/disorders literal	NA
COD18b1	N	Y	Other Significant Cause/Condition - Rupture of membranes prior to onset of labor	NA
COD18b2	N	Y	Other Significant Cause/Condition - Abruptio placenta	NA
COD18b3	N	Y	Other Significant Cause/Condition - Placental insufficiency	NA
COD18b4	N	Y	Other Significant Cause/Condition - Prolapsed cord	NA
COD18b5	N	Y	Other Significant Cause/Condition - Chorioamnionitis	NA
COD18b6	N	Y	Other Significant Cause/Condition - Other complications of placenta, cord, or membranes	NA
COD18b7	N	Y	Other Significant Cause/Condition - Unknown	NA
COD18b8	N	Y	Other Significant Cause/Condition - Maternal conditions/diseases literal	NA
COD18b9	N	Y	Other Significant Cause/Condition - Other complications of placenta, cord, or membranes literal	NA

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
COD18b10	N	Y	Other Significant Cause/Condition - Other obstetrical or pregnancy complications literal	NA
COD18b11	N	Y	Other Significant Cause/Condition - Fetal anomaly literal	NA
COD18b12	N	Y	Other Significant Cause/Condition - Fetal injury literal	NA
COD18b13	N	Y	Other Significant Cause/Condition - Fetal infection literal	NA
COD18b14	N	Y	Other Significant Cause/Condition - Other fetal conditions/disorders literal	NA
UNUM	Y	Y	Mother's Residence: Apartment or Unit Number	Mother's Residence: Apartment or Unit Number
CITY	Y	Y	Mother's Residence: City, Town or Location	Mother's Residence: City or Town name
CITYC	Y	Y	Mother's Residence: Code for City, Town or Location	Mother's Residence: City or Town code
COUNTY	Y	Y	Mother's Residence: County*	Mother's Residence: County
LIMITS	Y	Y	Mother's Residence: Inside City Limits	Indicates if the mother's residence is within city limits
STATE	Y	Y	Mother's Residence: State	Mother's Residence: State/Province
STNAME	Y	Y	Mother's Residence: Street Name	Mother's Residence: Street Name
STNUM	Y	Y	Mother's Residence: Street Number	Mother's Residence: Street Number
ZIP	Y	Y	Mother's Residence: Zip Code	Mother's Residence: Zip Code
LIMITS	Y	Y	Mother's Residence: Inside City Limits*	Indicates if the mother's residence is within city limits
MSTNAME	Y	Y	Mother's Mailing Address*: Name	The mother's mailing address (complete number and street name)
MAPT	Y	Y	Mother's Mailing Address: Apartment	The mother's mailing address (Apartment number)
MCITY	Y	Y	Mother's Mailing Address: City	The mother's mailing address (city or town name)
MSTATE	Y	Y	Mother's Mailing Address: State	The mother's mailing address (state, territory or province)
MZIP	Y	Y	Mother's Mailing Address: Zip	The mother's mailing address (zip code)

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
MCOUNTRY	Y	Y	Mother's Mailing Address: Country	The mother's mailing address (country)
MDOB_YR	Y	Y	Mother's Date of Birth* Year	The mother's date (year) of birth
MDOB_MO	Y	Y	Mother's Date of Birth* Month	The mother's date (month) of birth
MDOB_DY	Y	Y	Mother's Date of Birth* Day	The mother's date (day) of birth
BPLACEC_CNT*	Y	Y	Birthplace – Code for Mother's country of birth	Code for Mother's country of birth
BPLACE_ST*	Y	Y	Birthplace – Mother's state of birth	Mother's state of birth (literal)
BPLACE_TER*	Y	Y	Birthplace – Mother's territory of birth	Mother's territory of birth (literal)
BPLACEC_ST_TER *	Y	Y	Birthplace – Code for Mother's state or territory of birth	Code for Mother's state or territory of birth
METHNIC1	Y	Y	Mother of Hispanic Origin? Mexican/ Mexican American/ Chicana	Mother's Hispanic Origin is Mexican/Mexican American/Chicana
METHNIC2	Y	Y	Mother of Hispanic Origin? Puerto Rican	Mother's Hispanic Origin is Puerto Rican
METHNIC3	Y	Y	Mother of Hispanic Origin? Cuban	Mother's Hispanic Origin is Cuban
METHNIC4	Y	Y	Mother of Hispanic Origin? Other Spanish/Hispanic/Latina	Mother's Hispanic Origin is Other Spanish/Hispanic/Latina
METHNIC5	Y	Y	Mother of Hispanic Origin? Other Literal Entry	Mother's Hispanic Origin is Other (specify)
MRACE1	Y	Y	Mother's Race: White	Mother's Race is White
MRACE2	Y	Y	Mother's Race: Black or African American	Mother's Race: Black or African American
MRACE3	Y	Y	Mother's Race: American Indian or Alaska Native	Mother's Race: American Indian or Alaska Native
MRACE4	Y	Y	Mother's Race: Asian Indian	Mother's Race: Asian Indian
MRACE5	Y	Y	Mother's Race: Chinese	Mother's Race: Chinese
MRACE6	Y	Y	Mother's Race: Filipino	Mother's Race: Filipino
MRACE7	Y	Y	Mother's Race: Japanese	Mother's Race: Japanese

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
MRACE8	Y	Y	Mother's Race: Korean	Mother's Race: Korean
MRACE9	Y	Y	Mother's Race: Vietnamese	Mother's Race: Vietnamese
MRACE10	Y	Y	Mother's Race: Other Asian	Mother's Race: Other Asian (specify)
MRACE11	Y	Y	Mother's Race: Native Hawaiian	Mother's Race: Native Hawaiian
MRACE12	Y	Y	Mother's Race: Guamanian or Chamorro	Mother's Race: Guamanian or Chamorro
MRACE13	Y	Y	Mother's Race: Samoan	Mother's Race: Samoan
MRACE14	Y	Y	Mother's Race: Other Pacific Islander	Mother's Race: Other Pacific Islander (specify)
MRACE15	Y	Y	Mother's Race: Other Race	Mother's Race: Other Race (specify)
MRACE16	Y	Y	Mother's Race: First American Indian or Alaska Native	Mother's Race: First American Indian or Alaska Native (literal)
MRACE17	Y	Y	Mother's Race: Second American Indian or Alaska Native	Mother's Race: Second American Indian or Alaska Native (literal)
MRACE18	Y	Y	Mother's Race: First Other Asian	Mother's Race: First Other Asian (literal)
MRACE19	Y	Y	Mother's Race: Second Other Asian	Mother's Race: Second Other Asian (literal)
MRACE20	Y	Y	Mother's Race: First Other Pacific Islander	Mother's Race: First Other Pacific Islander (literal)
MRACE21	Y	Y	Mother's Race: Second Other Pacific Islander	Mother's Race: Second Other Pacific Islander (literal)
MRACE22	Y	Y	Mother's Race: First Other Race	Mother's Race: First Other Race (literal)
MRACE22	Y	Y	Mother's Race: Second Other Race	Mother's Race: Second Other Race (literal)
CMHR	Y	Y	Mother: Did the mother get WIC food for herself during this pregnancy	Indicates if there was use of the Women, Infant's and Children (WIC) nutritional program by the mother during the pregnancy
CIGPN	Y	Y	Cigarette Smoking before and during pregnancy: Number of cigarettes smoked prior to pregnancy	Number cigarettes smoked prior to pregnancy
CIGPP	Y	Y	Cigarette Smoking before and during pregnancy :Number of packs of cigarettes smoked prior to pregnancy	Number of packs smoked prior to pregnancy

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
CIGFN	Y	Y	Cigarette Smoking before and during pregnancy: Number of cigarettes smoked in 1st three months of pregnancy	Number of cigarettes smoked in 1st three months
CIGFP	Y	Y	Cigarette Smoking before and during pregnancy: Number of packs of cigarettes smoked in the first three months of pregnancy	Number of packs smoked in 1st three months
CIGSN	Y	Y	Cigarette Smoking before and during pregnancy: Number of cigarettes smoked in the 2nd three months of pregnancy	Number of cigarettes smoked in 2nd three months
CIGSP	Y	Y	Cigarette Smoking before and during pregnancy: Number of packs of cigarettes smoked in the 2nd three months of pregnancy	Number of packs smoked in 2nd three months
CIGLN			Cigarette Smoking before and during pregnancy: Number cigarettes smoked in 3rd three months of pregnancy	Number of cigarettes smoked in third trimester
CIGLP	Y	Y	Cigarette Smoking before and during pregnancy: Number of packs of cigarettes smoked in the 3rd three months of pregnancy	Number of packs smoked in third trimester
FBPLACE_ST_TER_L	Y	Y	Father's Birthplace (State or Territory)	The geographic location (state or territory) of the father's place of birth (literal).
FBPLACE_ST_L	Y	Y	Father's Birthplace (Code for Father's State of Birth)	The geographic location (state) of the father's place of birth (code).
FBPLACE_ST_TER_C	Y	Y	Father's Birthplace (Code for Father's State or Territory of Birth)	The geographic location (state or territory) of the father's place of birth (code).
FBPLACE_CNT_C	Y	Y	Father's Birthplace (Code for Father's Country of Birth)	The geographic location (country) of the father's place of birth (code).
FFNAME	Y	Y	Father's Current Legal Name*: First Name	The current legal first name of the father.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
FMNAME	Y	Y	Father's Current Legal Name*: Middle Name	The current legal middle name of the father.
FLNAME	Y	Y	Father's Current Legal Name*: Last Name	The current legal last name of the father.
FSUFF	Y	Y	Father's Current Legal Name*: Suffix	The current legal name suffix of the father.
FNREF	Y	Y	Father's Current Legal Name*: Refused	Indicates if the father's name can be entered and the mother refuses to name the father. This should only occur when the mother was married at birth, conception, or any time in between and refuses the name of her husband.
FDOB_YR	Y	Y	Father's Date of Birth*: Year	The father's date (year) of birth
FDOB_MO	Y	Y	Father's Date of Birth*: Month	The father's date (month) of birth
FDOB_DY	Y	Y	Father's Date of Birth*: Day	The father's date (day) of birth
FEDUC	Y	N	Father's Education*	The highest degree or level of schooling completed by the father at the time of this delivery
FETHNIC1	Y	N	Father of Hispanic Origin? Mexican, Mexican American or Chicano	Father is Mexican, Mexican American or Chicano
FETHNIC2	Y	N	Father of Hispanic Origin? Puerto Rican	Father is Puerto Rican
FETHNIC3	Y	N	Father of Hispanic Origin? Cuban	Father is Cuban
FETHNIC4	Y	N	Father of Hispanic Origin? Other	Father is other: Spanish/Hispanic/Latino
FETHNIC5	Y	N	Father of Hispanic Origin? Other literal entry	Other literal entry
FRACE1	Y	N	Father's Race: White	Father's Race is White
FRACE2	Y	N	Father's Race: Black or African American	Father's Race is Black or African American
FRACE3	Y	N	Father's Race: American Indian or Alaska Native	Father's Race is American Indian or Alaska Native (Name of the enrolled or principal tribe)
FRACE4	Y	N	Father's Race: Asian Indian	Father's Race is Asian Indian
FRACE5	Y	N	Father's Race: Chinese	Father's Race is Chinese
FRACE6	Y	N	Father's Race: Filipino	Father's Race is Filipino
FRACE7	Y	N	Father's Race: Japanese	Father's Race is Japanese

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
FRACE8	Y	N	Father's Race: Korean	Father's Race is Korean
FRACE9	Y	N	Father's Race: Vietnamese	Father's Race is Vietnamese
FRACE10	Y	N	Father's Race: Other Asian	Father's Race is Other Asian (specify)
FRACE11	Y	N	Father's Race: Native Hawaiian	Father's Race is Native Hawaiian
FRACE12	Y	N	Father's Race: Guamanian or Chamorro	Father's Race is Guamanian or Chamorro
FRACE13	Y	N	Father's Race: Samoan	Father's Race is Samoan
FRACE14	Y	N	Father's Race: Other Pacific Islander	Father's Race is Other Pacific Islander (specify)
FRACE15	Y	N	Father's Race: Other Race	Father's Race is Other Race (specify)
FRACE16	Y	N	Father's Race: First American Indian or Alaska Native	Father's Race is First American Indian or Alaska Native (literal)
FRACE17	Y	N	Father's Race: Second American Indian or Alaska Native	Father's Race is Second American Indian or Alaska Native (literal)
FRACE18	Y	N	Father's Race: First Other Asian	Father's Race is: First Other Asian (literal)
FRACE19	Y	N	Father's Race: Second Other Asian	Father's Race is: Second Other Asian (literal)
FRACE20	Y	N	Father's Race: First Other Pacific Islander	Father's Race is First Other Pacific Islander (literal)
FRACE21	Y	N	Father's Race: Second Other Pacific Islander	Father's Race is Second Other Pacific Islander (literal)
FRACE22	Y	N	Father's Race: First Other Race	Father's Race is: First Other Race (literal)
FRACE23	Y	N	Father's Race: Second Other Race	Father's Race is: Second Other Race (literal)
MSSN	Y	N	Mother's Jurisdiction Identifier (e.g., Security Number)	The jurisdiction identifier (e.g., social security number (SSN)) of the mother
FSSN	Y	N	Father's Jurisdiction Identifier (e.g., Security Number)	The jurisdiction identifier (e.g., social security number (SSN)) of the father named on the certificate.
ACKN	Y	N	Acknowledgment of paternity signed	The mother and father signed a form (Insert name of the State acknowledgement of paternity form) in which the father accepted legal responsibility for the child?
MHT	Y	Y	Mother's body height	Open Issue: Mother's Body Height is listed as a separate new LOINC code
BREGDATE	Y	N	Date of birth registration	The date on which the birth was registered.
FAGE	Y	Y	Father's reported age in years	A record of the father's age at the time of birth or delivery.

Attribute Name	Used in Birth	Used in Fetal Death	Birth and Fetal Death Report Data Element	Description
HDELPLAN	Y	N	Planned to deliver at home	Open Issue: Planned to deliver at home is part of the Birthplace value set, but a separate LOINC code has been assigned for the draft HL7 spec. Boolean indicator (Yes/No/Unknown) that indicates whether the mother intended to have a home birth. Only value this observation if the birth took place at home.
MAGE	Y	Y	Mother's reported age in years	Mother's age is calculated using mother's date of birth (completed dates only) and the child's date of birth. Calculated age must be >8 and < 65
NOINAME	Y	Y	Baby name not yet chosen	Open Issue: Baby name not yet chosen is not in edit specifications. An indicator that the name for a newborn baby has not yet been chosen. Enter "Yes" if no name has been chosen
BATTEND	Y	N	Birth attendant details	Name and identifier information for the person attending the birth.
BCERTIFIER	Y	N	Birth certifier details	Name and identifier information for the person certifying the birth.
CERTDATE	Y	N	Date birth certified	The date the birth was certified by the certifying professional.
FDREGDATE	N	Y	Date of fetal death registration	The date the fetal death was registered at the jurisdictional vital statistics office.
FDELDATE	N	Y	Date of fetal delivery	The date of delivery for the fetus.
FETNAME	N	Y	Name of fetus	Name given to the fetus.
INFOSRC	Y	N	Person providing information for mother's live birth information	The name of the person providing information for the mother's worksheet.
RELINFOSRC	Y	N	Relationship of person providing information for mother's live birth information	The relationship between the mother and the person providing information for the mother's worksheet
DISPMET	N	Y	Fetal remains disposition method	To reflect the method by which the fetal remains were disposed
OTHCOD	N	Y	Death cause other significant conditions	Coded value that provides information on one or more significant condition that contributed to death but did not result in the underlying cause that is elsewhere described. This data is returned to the jurisdiction as an ICD 10 code.
INITCOD	N	Y	Initiating cause of death or condition	Coded value that indicates the disease, injury, or complication that was implicated as the initiating cause of fetal death. This data is returned to the jurisdiction as an ICD 10 code.
MARITAL	Y	Y	The mother's marital status	The mother's marital status

Volume 2 – Transactions

Add Section 3.46

3.46 BFDRQuery [QRPH-46]

The Data Consumer retrieves death reporting related health information from the Data Responder.

3.46.1 Scope

This transaction connects a Data Consumer to a Data Responder to allow query/retrieve of birth or fetal death reporting related health information.

3.46.2 Actor Roles

Figure 3.46.2-1: Use Case Diagram between Data Consumer and Data Responder

Table 3.46.2-1: Actor Roles

Actor:	Data Consumer
Role:	The Data Consumer is responsible for creating a FHIR-based request for birth or fetal death reporting related health information and retrieving this information from the Data responder.
Actor:	Data Responder
Role:	The Data Responder responds to the request for birth or fetal death reporting related health information or provides the appropriate response if the information does not exist.

3.46.3 Referenced Standards

- HL7 FHIR standard STU3
  http://www.hl7.org/implement/standards/product_brief.cfm?product_id=449

3.46.4 Messages

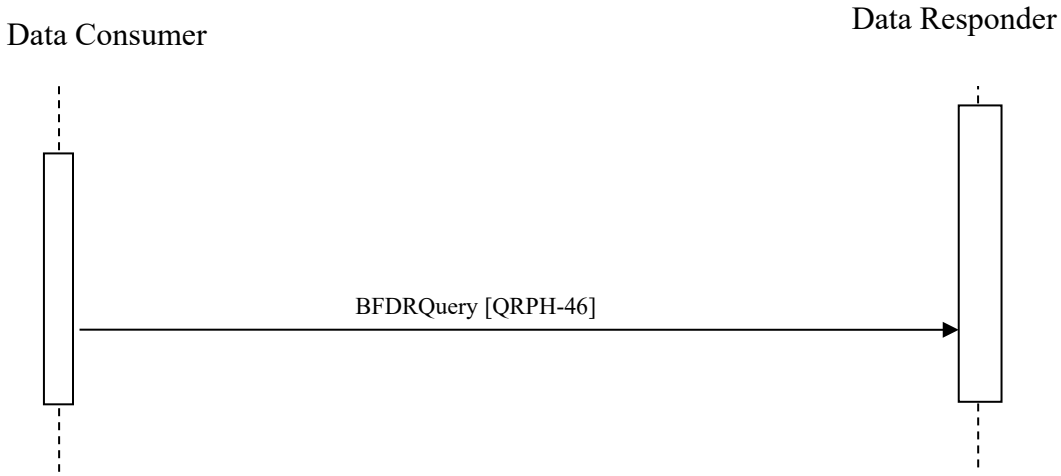


Figure 3.46.4: Interaction Diagram

3.46.4.1 BFDRQuery Message

Data Consumer retrieves the birth or fetal death reporting related health information from the Data Responder.

3.46.4.1.1 Trigger Events

Data Consumer shall trigger a FHIR-based query [QRPH-46] to the Data Responder when:

The birth clerk is preparing to complete the birth or fetal death reporting details for jurisdictional vital records reporting

3.46.4.1.2 Message Semantics

The message is a FHIR HTTP or HTTPS GET of Birth or Fetal Death Reporting Data where the parameter provided is the PatientID of the mother. While both HTTP and HTTPS are permitted, the implementation SHOULD consider HTTPS.

As the information is retrieved from multiple resources, the URL resources for this operation are

- Resources relating to the mother (using the id of the mother):
  - [base]/Composition/[id]

- [base]/Patient/[id]
- [base]/Condition/[id]
- [base]/Observation/[id]
- [base]/Procedure/[id]
- [base]/MedicationAdministration/[id]
- [base]/Encounter/[id]
- [base]/Coverage/[id]

- Resources relating to the newborn or fetus (using the id of the newborn or fetus):
  - [base]/Patient/[id]
  - [base]/MedicationAdministration/[id]
  - [base]/Procedure/[id]
  - [base]/Observation/[id]
  - [base]/Condition/[id]
  - [base]/Encounter/[id]

3.46.4.1.3 Expected Actions

The Data Consumer initiates the retrieve request for the resources specified in QRPH TF-3: 6.6.5.2 FHIR Resource Data Specifications using HTTP or HTTPS GET, and the Data Responder responds using the resources specified in QRPH TF-3: 6.6.5.2 FHIR Resource Data Specifications according to the FHIR GET specification with the requested birth or fetal death reporting related health information Birth or Fetal Death Reporting information or an error message. See: http://hl7.org/fhir/http.html#read.

3.46.5 Security Considerations

This transaction includes identifiable health information, and depending upon the implementation and application, may constitute a disclosure of health information that require audit, encryption, and authentication of the Data Consumer and Data responder. For further guidance, see ITI TF Supplement: Appendix Z.

3.46.5.1 Security Audit Considerations – BFDRQuery [QRPH-46] (ADT)

The BFDRQuery [QRPH-46] (FHIR GET) messages are audited as “PHI Export” events, as defined in ITI TF-2a: Table 3.20.4.1.1.1-1. The following tables show items that are required to be part of the audit record for these specific BFDRQuery transactions.

3.46.5.1.1 Data Responder Actor audit message:

	Field Name	Opt	Value Constraints
Event **AuditMessage/ EventIdentification**	EventID	M	EV(110106, DCM, “Export”)
	EventActionCode	M	“C” (create) for QRPH-46 (BFDRQuery)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV(“QRPH-46”, “IHE Transactions”, “BFDRQuery”)
Source (Death Reporting Data Responder) (1)			
Human Requestor (0..n)			
Destination (Death Reporting Data Consumer) (1)			
Audit Source (Death Reporting Data Responder) (1)			
Patient (1)			

Where:

Source **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Birth and Fetal Death Reporting Data Responder facility and responder application; concatenated together, separated by the | character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, “Source”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) **AuditMessage/ ActiveParticipant**	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

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Destination **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Birth and Fetal Death Reporting Data Consumer facility and responder application; concatenated together, separated by the | character.
	AlternativeUserID	*M*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*

	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address, as specified in RFC3881.

Audit Source **AuditMessage/ AuditSourceIdentification**	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

Patient **(AuditMessage/ ParticipantObjectIdentification)**	ParticipantObjectTypeCode	M	“1” (person)
	ParticipantObjectTypeCodeRole	M	“1” (patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, “Patient Number”)
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

3.46.5.1.2 Data Consumer Actor audit message:

	Field Name	Opt	Value Constraints
Event **AuditMessage/ EventIdentification**	EventID	M	EV(110107, DCM, “Import”)
	EventActionCode	M	“C” (create) for QRPH-46 (BFDRQuery)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV(“QRPH-46”, “IHE Transactions”, “BFDRQuery”)
Source (Death Reporting Data Consumer) (1)			
Destination (Death Reporting Data Responder) (1)			
Audit Source (Death Reporting Data Consumer) (1)			
Patient(1)			

Where:

Source **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Birth and Fetal Death Reporting Data Responder facility and responder application; concatenated together, separated by the | character
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Destination **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Birth and Fetal Death Reporting Data Consumer facility and responder application; concatenated together, separated by the | character
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Audit Source **AuditMessage/ AuditSourceIdentification**	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

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Patient **(AuditMessage/ ParticipantObjectIdentification)**	ParticipantObjectTypeCode	M	"1" (person)
	ParticipantObjectTypeCodeRole	M	"1" (patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Patient Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

3.37.5.1.3 Form Receiver Message Exporter Actor audit message

	Field Name	Opt	Value Constraints
Event **AuditMessage / EventIdentification**	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"C" (create) "U" (update)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("QRPH-37", "IHE Transactions", "BFDRFeed")
Source (Form Receiver Message Exporter Actor) (1)			
Human Requestor (0..n)			
Destination (Information Recipient Actor) (1)			
Audit Source (Form Receiver Message Exporter Actor) (1)			
Patient (1)			

Where:

Source **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Form Receiver Message Exporter facility and sending application from the HL7 message; concatenated together, separated by the | character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) **AuditMessage/ ActiveParticipant**	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

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Destination **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the | character.
	AlternativeUserID	*M*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110152, DCM, "Destination")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Audit Source **AuditMessage/ AuditSourceIdentification**	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

Patient **(AuditMessage/ ParticipantObjectIdentification)**	ParticipantObjectTypeCode	M	"1" (person)
	ParticipantObjectTypeCodeRole	M	"1" (patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, "Patient Number")
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

3.37.5.1.4 Form Processor Message Exporter Actor audit message

	Field Name	Opt	Value Constraints
Event **AuditMessage / EventIdentification**	EventID	M	EV(110106, DCM, "Export")
	EventActionCode	M	"C" (create) "U" (update)
	EventDateTime	*M*	*not specialized*
	EventOutcomeIndicator	*M*	*not specialized*
	EventTypeCode	M	EV("QRPH-37", "IHE Transactions", "BFDRFeed")
Source (Form Processor Message Exporter Actor) (1)			
Human Requestor (0..n)			
Destination (Information Recipient Actor) (1)			
Audit Source (Form Processor Message Exporter Actor) (1)			
Patient (1)			

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Where:

Source **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Form Processor Message Exporter facility and sending application from the HL7 message; concatenated together, separated by the | character.
	AlternativeUserID	M	The process ID as used within the local operating system in the local system logs.
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110153, DCM, "Source")
	NetworkAccessPointTypeCode	M	"1" for machine (DNS) name, "2" for IP address
	NetworkAccessPointID	M	The machine name or IP address

Human Requestor (if known) **AuditMessage/ ActiveParticipant**	UserID	M	Identity of the human that initiated the transaction.
	AlternativeUserID	*U*	*not specialized*
	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	U	Access Control role(s) the user holds that allows this transaction.
	NetworkAccessPointTypeCode	NA	
	NetworkAccessPointID	NA	

Destination **AuditMessage/ ActiveParticipant**	UserID	M	The identity of the Information Recipient Public Health Organization and receiving application from the HL7 message; concatenated together, separated by the | character.
	AlternativeUserID	*M*	*not specialized*

	UserName	*U*	*not specialized*
	UserIsRequestor	*M*	*not specialized*
	RoleIDCode	M	EV(110152, DCM, “Destination”)
	NetworkAccessPointTypeCode	M	“1” for machine (DNS) name, “2” for IP address
	NetworkAccessPointID	M	The machine name or IP address

Audit Source **AuditMessage/ AuditSourceIdentification**	*AuditSourceID*	*U*	*not specialized*
	AuditEnterpriseSiteID	*U*	*not specialized*
	AuditSourceTypeCode	*U*	*not specialized*

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Patient **(AuditMessage/ ParticipantObjectIdentification)**	ParticipantObjectTypeCode	M	“1” (person)
	ParticipantObjectTypeCodeRole	M	“1” (patient)
	ParticipantObjectDataLifeCycle	*U*	*not specialized*
	ParticipantObjectIDTypeCode	M	EV(2, RFC-3881, “Patient Number”)
	ParticipantObjectSensitivity	*U*	*not specialized*
	ParticipantObjectID	M	The patient ID in HL7 CX format.
	ParticipantObjectName	*U*	*not specialized*
	ParticipantObjectQuery	*U*	*not specialized*
	ParticipantObjectDetail	M	Type=MSH-10 (the literal string), Value=the value of MSH-10 (from the message content, base64 encoded)

Appendices to Volume 2

None

Namespace Additions for Volume 2

The Quality, Research and Public Health domain registry of OIDs is located at https://wiki.ihe.net/index.php/QRPH_Registry

Volume 2 additions to the Quality, Research and Public Health OID Registry are:

None

Volume 3 – Content Modules

5 IHE Namespaces, Concept Domains and Vocabularies

Add to Section 5 Namespaces, Concept Domains and Vocabularies

5.1 IHE Quality, Research and Public Health Namespaces

The Quality, Research and Public Health registry of OIDs is located at https://wiki.ihe.net/index.php/QRPH_Registry

Additions to the Quality, Research and Public Health OID Registry are:

codeSystem	codeSystemName	Description
2.16.840.1.113883.6.1	LOINC	Logical Observation Identifier Names and Codes
2.16.840.1.113883.6.96	SNOMED-CT	Systematized Nomenclature Of Medicine Clinical Terms
2.16.840.1.113883.6.88	RxNorm	RxNorm
2.16.840.1.113883.12.1	AdministrativeGender	See the HL7 AdministrativeGender Vocabulary
2.16.840.1.113883	ServiceDeliveryLocation	See the HL7 ServiceDeliveryLocation Vocabulary

Add to Section 5 Namespaces and Vocabularies

codeSystem	codeSystemName	Description
1.3.6.1.4.1.19376.1.5.3.1	IHE PCC Template Identifiers	This is the root OID for all IHE PCC Templates. A list of PCC templates can be found below in CDA Release 2.0 Content Modules.
1.3.6.1.4.1.19376.1.7.3.1.1	IHE BFDR Template Identifiers	This is the root OID for all the IHE BFDR Templates.
1.3.6.1.4.1.19376.1.5.3.2	IHEActCode	See IHEActCode Vocabulary below
1.3.6.1.4.1.19376.1.5.3.3	IHE PCC RoleCode	See IHERoleCode Vocabulary below
1.3.6.1.4.1.19376.1.5.3.4		Namespace OID used for IHE Extensions to CDA Release 2.0
2.16.840.1.113883.10.20.1	CCD Root OID	Root OID used for by ASTM/HL7 Continuity of Care Document
2.16.840.1.113883.5.112	RouteOfAdministration	See the HL7 RouteOfAdministration Vocabulary
2.16.840.1.113883.5.1063	SeverityObservation	See the HL7 SeverityObservation Vocabulary

codeSystem	codeSystemName	Description
2.16.840.1.113883.1.11.12212	MaritalStatus	See the HL7 MaritalStatus Vocabulary
2.16.840.1.113883	ServiceDeliveryLocation	See the HL7 ServiceDeliveryLocation Vocabulary
2.16.840.1.113883.12.1	AdministrativeGender	See the HL7 AdministrativeGender Vocabulary
2.16.840.1.113883.5.111	Role	See the HL7 Role Vocabulary
2.16.840.1.113883.5.1077	EducationLevel	See the HL7 EducationLevel Vocabulary
2.16.840.1.113883.6.1	LOINC	Logical Observation Identifier Names and Codes
2.16.840.1.113883.6.96	SNOMED-CT	SNOMED Clinical Terms
2.16.840.1.113883.6.103	ICD-9CM (diagnosis codes)	International Classification of Diseases, Clinical Modifiers, Version 9
2.16.840.1.113883.6.104	ICD-9CM (procedure codes)	International Classification of Diseases, Clinical Modifiers, Version 9
2.16.840.1.113883.6.3	ICD10	International Classification of Diseases Revision 10 (ICD 10) Note this does NOT have the CM changes and is specifically for international use.
2.16.840.1.113883.6.4	ICD-10-PCS	International Classification of Diseases, 10th Revision, Procedure Coding System
2.16.840.1.113883.6.90	ICD-10-CM	International Classification of Diseases, 10th Revision, Clinical Modification
2.16.840.1.113883.6.26	MEDCIN	A classification system from MEDICOMP Systems.
2.16.840.1.113883.6.88	RxNorm	RxNorm
2.16.840.1.113883.6.63	FDDC	First DataBank Drug Codes
2.16.840.1.113883.6.12	C4	Current Procedure Terminology 4 (CPT-4) codes.
2.16.840.1.113883.6.257	Minimum Data Set for Long Term Care	The root OID for Minimum Data Set Answer Lists
2.16.840.1.113883.2.8.1.1	CCAM	Classification Commune des Actes Medicaux
2.16.840.1.113883.6.21	NUBC	National Uniform Billing Codes (US)

5.2 IHE Quality, Research and Public Health Concept Domains

For a listing of the Quality, Research and Public Health Concept Domains see:

1265 NA

conceptDomain	conceptDomainName	Description
None		

5.3 IHE Quality, Research and Public Health Format Codes and Vocabularies

5.3.1 IHE Format Codes

*List in the table below any **new** format codes to be added to the IHE Format Codes page at https://profiles.ihe.net/fhir/ihe.formatcode.fhir/index.html. For public comment, the additions must be listed in the table below. The domain technical committee must ensure any new codes are also added to the html page prior to publication for trial implementation.*

Profile	Format Code	Media Type	Template ID
None			

5.3.2 IHEActCode Vocabulary

*List in the table below, any **new** additions to the IHEActCode Vocabulary wiki page at http://wiki.ihe.net/index.php/IHEActCode_Vocabulary. For public comment, the additions must be listed in the table below. The domain technical committee must ensure any new codes are also added to the wiki page prior to publication for trial implementation.*

Code	Description
None	

5.3.3 IHERoleCode Vocabulary

*List in the table below any **new** additions to the IHERoleCode Vocabulary wiki page at http://wiki.ihe.net/index.php/IHERoleCode_Vocabulary. For public comment, the additions must be listed in the table below. The domain technical committee must ensure any new codes are also added to the wiki page prior to publication for trial implementation.*

Code	Description
None	

6 CDA Content Modules

6.3.1 CDA Document Templates

Add to Section 6.3.1.D Document Content Modules

6.3.2 CDA Header Templates

Add to Section 6.3.2 Header Content Module Templates

None

6.3.3 CDA Section Templates

Add to Section 6.3.3.10 Section Content Module Templates

None

6.3.4 CDA Entry Content Module Templates

Add to Section 6.3.4.E Entry Content Modules

None

6.4 Section not applicable

This heading is not currently used in a CDA document.

6.5 Value Sets

The following table describes each of the value sets used to support the BFDR-E Profile. These are all published by and available from the PHIN Vocabulary Access and Distribution System (PHIN VADS). Each of the value sets below are established as extensional with the discrete values available at the PHIN-VADS URL provided. Version status may change from time-to-time as these value sets are maintained by NCHS, so version number should not be referenced when using these value sets in support of the BFDR-E Profile. Similarly, associated date related metadata attributes will change as a result of value set maintenance activities and can be obtained at the PHIN-VADS URL provided. BFDR-E Vocabulary has dynamic binding of value sets. In dynamic binding the most current version of the value set in the terminology server is used.

6.5.1 Value Sets Used by this Profile

Table 6.5.1-1: Value Sets used in the BFDR-e Profile

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
10 Min Apgar Score (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.13	To reflect the 10 Min Apgar Score	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.13	IHE BFDR
5 Min Apgar Score (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.12	To reflect the 5 Min Apgar Score	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.12	IHE BFDR
Anencephaly of the Newborn (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.53	To reflect Anencephaly of the Newborn as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.53	IHE BFDR
Antibiotic Administration Procedure (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.178	To reflect Antibiotic Administration Procedure during labor and delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.178	IHE BFDR
Antibiotics (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.3	To reflect that antibiotics were received by the mother during delivery and by the newborn for suspected neonatal sepsis	RxNorm	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.3	IHE BFDR
Antibiotics Received During Labor Finding (NCHS)	2.16.840.1.114222.4.11.7535	To identify findings that the mother has received antibiotics during labor.	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7535	IHE BFDR
Artificial or Intrauterine Insemination (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.145	To reflect the Artificial or Intrauterine Insemination as a Risk Factor in Pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.145	IHE BFDR
Assisted Ventilation (NCHS)	2.16.840.1.114222.4.11.7156	To reflect that the newborn was provided assisted ventilation reflecting an abnormal condition of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7156	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Assisted Ventilation Finding (NCHS)	2.16.840.1.114222.4.11.7533	To identify findings that the newborn received assisted ventilation immediately following delivery.	PHIN VS (CDC Local Coding System)	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7533	IHE BFDR
Assisted Ventilation for >6 hours Finding (NCHS)	2.16.840.1.114222.4.11.7534	To identify findings that the newborn received assisted ventilation for >6 hours following delivery.	PHIN VS (CDC Local Coding System)	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7533	IHE BFDR
Assistive Reproductive Technology (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.146	To reflect the Assistive Reproductive Technology as a Risk Factor in Pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.146	IHE BFDR
Augmentation of Labor Finding (NCHS)	2.16.840.1.114222.4.11.7532	To identify findings that labor was augmented	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7532	IHE BFDR
Augmentation of Labor - Medication (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.23	To reflect a medication used for the of Augmentation of Labor	RxNorm	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.23	IHE BFDR
Augmentation of Labor - Procedure (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.22	To reflect a procedure of Augmentation of Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.22	IHE BFDR
Autopsy Planned (NCHS)	2.16.840.1.114222.4.11.7140	To reflect that an autopsy was planned	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7140	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Birth Plurality of Delivery (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.132	To reflect the Plurality, which is 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. ("Reabsorbed" fetuses, those which are not "delivered" (expulsed or extracted from the mother) should not be counted.)	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.132	IHE BFDR
Birth Weight (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.20	To reflect the Birth Weight	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.20	IHE BFDR
Birthplace Clinic Office (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.197	To reflect the birth occurred in the at clinic or office	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.197	IHE BFDR
Birth Place Freestanding Birthing Center (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.196	To reflect the birth occurred at a freestanding birthing enter	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.196	IHE BFDR
Birth Place Home Intended (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.193	To reflect the birth occurred in the at home as intended	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.193	IHE BFDR
Birth Place Home Unintended (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.194	To reflect the birth occurred in the at home as unintended	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.194	IHE BFDR
Birth Place Home Unknown Intention (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.195	To reflect the birth occurred in the at home with intention unknown	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.195	IHE BFDR
Birthplace Hospital (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.192	To reflect the birth occurred in the hospital	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.192	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Birthplace Setting (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.184	To reflect the birthplace of the newborn (setting)	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.184	IHE BFDR
Body Weight (NCHS)	2.16.840.1.114222.4.11.7421	To Reflect the question as to the body weight of the patient	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7421	IHE BFDR
Breastfed Infant (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.41	To reflect Breastfed Infant at discharge	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.41	IHE BFDR
Certified Midwife (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.17	To reflect the Title of the Attendant responsible for the delivery Procedure as a Certified Midwife	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.17	IHE BFDR
Cervical Cerclage (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.125	To reflect Obstetric Procedures as Cervical Cerclage	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.125	IHE BFDR
Chlamydia (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.93	To reflect Chlamydia as Infections present and treated during this pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.93	IHE BFDR
Chorioamnionitis During Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.24	To reflect a Chorioamnionitis During Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.24	IHE BFDR
Cleft Lip with or without Cleft Palate (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.58	To reflect Cleft Lip with/without Cleft Palate as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.58	IHE BFDR
Cleft Palate Alone (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.189	To reflect Cleft Palate alone as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.189	IHE BFDR
Conception Date (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.180	To reflect Conception Date	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.180	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Congenital Diaphragmatic Hernia (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.55	To reflect Congenital Diaphragmatic Hernia as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.55	IHE BFDR
Cyanotic Congenital Heart Disease (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.54	To reflect Cyanotic Congenital Heart Disease as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.54	IHE BFDR
Cytomegalovirus (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.167	To reflect infection with Cytomegalovirus	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.167	IHE BFDR
Date of Last Live Birth (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.67	To reflect the Date of Last Live Birth	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.67	IHE BFDR
Date of Last Menses (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.69	To reflect the Date of Last Menses	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.69	IHE BFDR
Date of Last Other Pregnancy Outcome (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.70	To reflect the Date of Last Other Pregnancy Outcome such as spontaneous or induced losses or ectopic pregnancy	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.70	IHE BFDR
Delivery (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14	To reflect the Delivery Procedure	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14	IHE BFDR
Doctor of Osteopathic Medicine (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.16	To reflect the Title of the Attendant responsible for the delivery Procedure as a Doctor of Osteopathic Medicine	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.16	IHE BFDR
Downs Syndrome (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.61	To reflect Downs Syndrome as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.61	IHE BFDR
Eclampsia (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.140	To reflect Risk Factors of Eclampsia	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.140	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Epidural/Spinal Anesthesia - Medication (NCHS)	2.16.840.1.114222.4.11.7475	To Reflect an Epidural and Spinal Anesthesia Medication	RxNorm	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7475	IHE BFDR
Epidural Anesthesia - Procedure (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.27	To reflect an Epidural Anesthesia Procedure	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.27	IHE BFDR
Estimated Time Of Fetal Death (NCHS)	2.16.840.1.114222.4.11.7426	To reflect the question as to the estimated time of fetal death	LOINC	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7426	IHE BFDR
External Cephalic Version (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.127	To reflect Obstetric Procedures as External Cephalic Version	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.127	IHE BFDR
Facility Location ICU (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.2	To reflect that the patient (mother) was treated in the ICU for complications associated with labor and delivery reflecting a maternal morbidity.	HL7 Service Delivery Location	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.2	IHE BFDR
Facility Location NICU (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.1	To reflect that the newborn was admitted to the NICU reflecting an abnormal condition of the newborn	HL7 Service Delivery Location	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.1	IHE BFDR
Facility Location OR (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.104	To reflect that the patient (mother) was treated in the OR for an unplanned operation for complications associated with labor and delivery reflecting unplanned operation	HL7 Service Delivery Location	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.104	IHE BFDR
Female Gender (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.43	To reflect the Female Gender	HL7 Administrative Gender	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.43	IHE BFDR
Fertility Enhancing Drugs Medications (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.144	To reflect that Fertility Enhancing Drugs were administered as a risk factor for pregnancy	RxNorm	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.144	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Autopsy Performed (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.1	To reflect Autopsy was performed	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.23.8.1	IHE BFDR
Fetal Death Time Point (NCHS)	2.16.840.1.114222.4.11.7112	A list of time points during the delivery process at which the fetal death is thought to have occurred. Note, SNOMED is being used as the primary source for codes within the value set.	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7112	IHE BFDR
Fetal Presentation at Birth-Breech (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.108	To reflect the Fetal Presentation at Birth-Breech method of delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.108	IHE BFDR
Fetal Presentation at Birth-Cephalic (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.109	To reflect the Fetal Presentation at Birth-Cephalic method of delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.109	IHE BFDR
Fetal Presentation at Birth-Other (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.110	To reflect the Fetal Presentation at Birth-Other	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.110	IHE BFDR
Fever Greater Than 100.4 (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.25	To reflect a Fever Greater Than 100.4 During Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.25	IHE BFDR
First Prenatal Care Visit (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.133	To reflect the Date of the First Prenatal Care Visit	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.133	IHE BFDR
Fourth Degree Perineal Laceration (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.101	To reflect Fourth Degree Perineal Laceration as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.101	IHE BFDR
Gastroschisis of the Newborn (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.62	To reflect Gastroschisis of the Newborn as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.62	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Gestational Diabetes (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.137	To reflect Risk Factors of Gestational Diabetes	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.137	IHE BFDR
Gestational Hypertension (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.139	To reflect Risk Factors of Gestational Hypertension	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.139	IHE BFDR
Gonorrhea (NCHS)	2.16.840.1.114222.4.11.6071	To reflect Gonorrhea as Infections present and treated during this pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6071	IHE BFDR
Group B Streptococcus (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.166	To reflect Infection with Group B Streptococcus	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.166	IHE BFDR
Height (NCHS)	2.16.840.1.114222.4.11.7155	To reflect the mother's height	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7155	IHE BFDR
Hepatitis B (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.96	To reflect Hepatitis B as Infections present and treated during this pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.96	IHE BFDR
Hepatitis C (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.97	To reflect Hepatitis C as Infections present and treated during this pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.97	IHE BFDR
Histological Placental Examination (NCHS)	2.16.840.1.114222.4.11.7138	To reflect the Histological Placental Examination for fetal death		https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7138	IHE BFDR
Hypospadias (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.63	To reflect Hypospadias as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.63	IHE BFDR
Hysterotomy Hysterectomy (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.150	To reflect hysterotomy/hysterectomy as the method of delivery in fetal death	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.150	IHE BFDR
ICU Care (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.188	To reflect that the mother was transferred to ICU following the birth	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.188	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
IM Medication Administration Route (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.5	To reflect that Intramuscular Medication Administration Route was used to administer a medication	HL7 Route of Administration	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.5	IHE BFDR
Induction of Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.34	To reflect that there was an Induction of Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.34	IHE BFDR
Induction of Labor Finding (NCHS)	2.16.840.1.114222.4.11.7531	To identify findings that labor was induced	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7531	IHE BFDR
Infertility Treatment (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.143	To reflect Risk Factors of Pregnancy Infertility Treatment	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.143	IHE BFDR
Institution Referred to (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.191	To reflect the institution to which the patient was referred	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.191	IHE BFDR
IV Medication Administration Route (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.4	To reflect that IV Medication Administration Route was used to administer a medication	HL7 Route of Administration	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.4	IHE BFDR
Karyotype Confirmed (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.56	To reflect Karyotype Confirmed as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.56	IHE BFDR
Karyotype Determination (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.154	To reflect Karyotype determination as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.154	IHE BFDR
Karyotype Result (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.59	To reflect Karyotyping to determine that the result is pending	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.59	IHE BFDR
Limb Reduction Defect (NCHS)	6.1.4.1.19376.1.7.3.1.1.13.8.64	To reflect Limb Reduction Defect as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=6.1.4.1.19376.1.7.3.1.1.13.8.64	IHE BFDR
Listeria (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.147	To reflect Listeria as Infections present and treated during this pregnancy		https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.147	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Male Gender (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.42	To reflect the Male Gender	HL7 AdministrativeGender	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.42	IHE BFDR
Meningomyelocele/Spina Bifida - Newborn (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.65	To reflect Meningomyelocele/Spina Bifida of the Newborn as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.65	IHE BFDR
Method of Delivery Cesarean Finding (NCHS)	2.16.840.1.114222.4.11.7527	To identify findings of delivery of the entire fetus through the vaginal wall (cesarean)	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7527	IHE BFDR
Method of Delivery Vaginal Forceps Finding (NCHS)	2.16.840.1.114222.4.11.7528	To identify findings of delivery of the fetus using vaginal forceps	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7528	IHE BFDR
Method of Delivery Vaginal-Spon Finding (NCHS)	2.16.840.1.114222.4.11.7526	To identify findings of delivery of the entire fetus through the vagina by the natural force of labor with or without manual assistance from the delivery attendant.	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7526	IHE BFDR
Method of Delivery Vaginal Vacuum Finding (NCHS)	2.16.840.1.114222.4.11.7529	To identify findings of delivery of the fetus using vaginal vacuum	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7529	IHE BFDR
Midwife (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.18	To reflect the Title of the Attendant responsible for the delivery Procedure as a Midwife excluding registered midwife which is reflected in the 'certified midwife' value set	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.18	IHE BFDR
Mothers Delivery Weight (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.120	To reflect the Mother's Delivery Weight	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.120	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Neonatal Death (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.149	To reflect that the newborn died	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.149	IHE BFDR
Neonatal Sepsis (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.6	To reflect that the newborn had suspected neonatal sepsis reflecting an abnormal condition of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.6	IHE BFDR
Newborn Receiving Surfactant Replacement Therapy (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.11	To reflect that the Newborn received Surfactant Replacement Therapy reflecting an abnormal condition of the newborn	RxNorm	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.11	IHE BFDR
Pregnancy Resulting From Fertility Enhancing Drugs (NCHS)	2.16.840.1.114222.4.11.7423	The value set contains a list of items to indicate whether a pregnancy resulted from fertility enhancing drugs	SNOMED-CT	http://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7423	IHE BFDR
Surfactant Replacement Therapy (NCHS)	2.16.840.1.114222.4.11.7431	Surfactant Replacement Therapy (NCHS)	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7431	IHE BFDR
NICU Care (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.198	To reflect the that the baby was transferred to NICU following the birth	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.198	IHE BFDR
Number of Fetal Deaths This Delivery (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.164	To reflect the Number of Fetal Deaths This Delivery	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.164	IHE BFDR
Number of Live Births (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.68	To reflect the Number of Live Births for the current pregnancy	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.68	IHE BFDR
Number of Preterm Births (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.187	To reflect the number of preterm births in prior pregnancies	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.187	IHE BFDR
Number of Previous Cesareans (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148	To reflect the Number of Previous Cesareans as a Risk Factor in Pregnancy	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Number of Previous Live Births Now Dead (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.122	To reflect the Number of Previous Live Births Now Dead	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.122	IHE BFDR
Number of Previous Live Births Now Living (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.123	To reflect the Number of Live Births Now Living	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.123	IHE BFDR
Number of Prior Pregnancies (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.71	To reflect the Number of Prior Pregnancies	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.71	IHE BFDR
Number Prenatal Care Visits (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.135	To reflect the Number Prenatal Care Visits	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.135	IHE BFDR
Obstetric Estimate of Gestation (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.124	To reflect the Obstetric Estimate of Gestation of the newborn	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.124	IHE BFDR
Omphalocele of the Newborn (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.66	To reflect Omphalocele of the Newborn as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.66	IHE BFDR
Parvovirus (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.168	To reflect infection with Parvovirus	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.168	IHE BFDR
Physician (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.15	To reflect the Title of the Attendant responsible for the delivery Procedure as a Physician	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.15	IHE BFDR
Precipitous Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.130	To reflect Onset of labor with Precipitous Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.130	IHE BFDR
Premature Rupture (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.129	To reflect Onset of labor with Premature Rupture	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.129	IHE BFDR
Prepregnancy Diabetes (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.136	To reflect Risk Factors of Prepregnancy Diabetes	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.136	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Prepregnancy Hypertension (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.138	To reflect Risk Factors of Prepregnancy Hypertension	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.138	IHE BFDR
Pre-Pregnancy Weight (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.118	To reflect the mother's Pre-Pregnancy Weight	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.118	IHE BFDR
Preterm Birth (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.141	To reflect Risk Factors of Preterm Birth (history)	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.141	IHE BFDR
Previous Cesarean (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.147	To reflect Risk Factors of Pregnancy Previous Cesarean	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7165	IHE BFDR
Previous Other Pregnancy Outcomes (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.121	To reflect the Previous Other Pregnancy Outcomes	LOINC	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.121	IHE BFDR
Problem Status Active (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.119	To reflect the Problem Status Active	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.119	IHE BFDR
Prolonged Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.131	To reflect Onset of labor with Prolonged Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.131	IHE BFDR
Route and Method of Delivery - Cesarean (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.114	To reflect the Route and Method of Delivery as Cesarean Delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.114	IHE BFDR
Route and Method of Delivery - Forceps (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.112	To reflect the Route and Method of Delivery as Forceps Delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.112	IHE BFDR
Route and Method of Delivery - Scheduled C (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.116	To reflect the Route and Method of Delivery as Scheduled Cesarean	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.116	IHE BFDR
Route and Method of Delivery - Spontaneous (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.111	To reflect the Route and Method of Delivery as Spontaneous Delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.111	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Route Method of Delivery - Trial of Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.115	To reflect the Route and Method of Delivery if Cesarean was as Trial of Labor Attempted	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.115	IHE BFDR
Route and Method of Delivery - Vacuum (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.113	To reflect the Route and Method of Delivery as Vacuum Delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.113	IHE BFDR
Ruptured Uterus (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.102	To reflect Ruptured Uterus as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.102	IHE BFDR
Scheduled Cesarean Finding (NCHS)	2.16.840.1.114222.4.11.7530	To identify findings that a Cesarean Section was scheduled	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7530	IHE BFDR
Seizure or Serious Neurologic Dysfunction (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.10	To reflect that the newborn suffered a Seizure or Serious Neurologic Dysfunction reflecting an abnormal condition of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.10	IHE BFDR
Significant Birth Injury (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.9	To reflect that the newborn suffered a Significant Birth Injury (skeletal fracture(s), peripheral nerve injury, and/ or soft tissue/solid organ hemorrhage which requires intervention) reflecting an abnormal condition of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.9	IHE BFDR
Spinal Anesthesia - Procedure (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.29	To reflect a Spinal Anesthesia Procedure	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.29	IHE BFDR
Spontaneous Onset of Labor (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.35	To reflect that there was a Spontaneous Onset of Labor	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.35	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Steroids For Fetal Lung Maturation (NCHS)	2.16.840.1.114222.4.11.7425	The value set contains a list of items to indicate whether steroids (glucocorticoids) for fetal lung maturation was received by the mother before delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7423	IHE BFDR
Suspected Chromosomal Disorder (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.57	To reflect Suspected Chromosomal Disorder as an anomaly of the newborn	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.57	IHE BFDR
Syphilis (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.98	To reflect Syphilis as Infections present and treated during this pregnancy	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.98	IHE BFDR
Third Degree Perineal Laceration (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.100	To reflect Third Degree Perineal Laceration as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.100	IHE BFDR
Tocolysis (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.128	To reflect Obstetric Procedures as Tocolysis	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.128	IHE BFDR
Toxoplasmosis (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.169	To reflect infection with Toxoplasmosis	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.169	IHE BFDR
Transfer In (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.177	To reflect if the mother was transferred to this facility	Admit source (HL7)	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.177	IHE BFDR
Transfer to (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190	To reflect if the infant was transferred within 24 hours of delivery to another facility	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190	IHE BFDR
Transferred for Maternal Medical or Fetal Indications for Delivery (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.176	To reflect Transferred for Maternal Medical or Fetal Indications for Delivery	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.176	IHE BFDR

Name	Identifier	Purpose	Source	PHIN VADS URL	Groups
Transfusion Whole Blood or Packed Red Bld (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.99	To reflect Transfusion Whole Blood or Packed Red Blood as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.99	IHE BFDR
Unplanned Hysterectomy (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.103	To reflect Ruptured Uterus as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.103	IHE BFDR
Unplanned Operation (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.105	To reflect Ruptured Uterus as a maternal morbidity	SNOMED-CT	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.105	IHE BFDR
U.S. Territories (NCHS)	1.3.6.1.4.1.19376.1.7.3.1.1.13.8.19	To reflect the U.S. Territories	FIPS 5-2	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=1.3.6.1.4.1.19376.1.7.3.1.1.13.8.19	IHE BFDR

6.5.2 Value Sets Defined by this profile

None

6.6 Data Mappings

This section defines mappings to and from the standard data elements defined in this profile.

6.6.1 Form Data Element Mappings

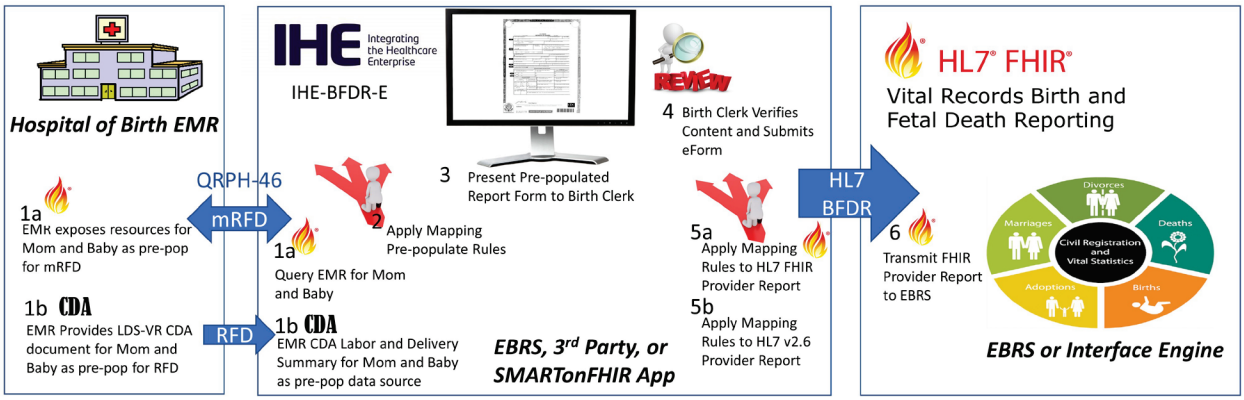
The data elements defined in this profile can be computed from data elements in the Labor and Delivery Summary (LDS) of the electronic health record that is used as the pre-pop document. The LDS mapping rules described below overlays these data elements typically presented to the birth registrar in a form. The Derivation Rule includes a specification defining the source section and entry along with the rules for examining the LDS content to determine whether or not the data element is satisfied. These rules may specify examination of one or more LDS locations to make a determination of the data element result. While any LDS document may be used to populate the form, the IHE PCC Labor and Delivery Summary Document as constrained by the LDS-VR will result in the maximum number of pre-populated data elements.

The following sub-sections include a table for each data element that describes the pre-population rules to derive the data elements in this profile from the pre-population via mRFD/QRPH-46, via RFD/(LDS-VR/LDS). The Derivation Rule identifies whether or not the form value is checked (Y/N). The variables used to define the rule describe the mapping to the EMR FHIR Resources or the EMR Labor and Delivery CDA (LDS-VR) XPATH. The Value

Sets reference the Value Subsets which are published and available from the Public Health Information Network Vocabulary Access and Distribution System (PHIN-VADS).

Also included in these tables is the mapping to the HL7 BFDR FHIR Document location and content to populate in that location for reporting to the Jurisdiction EBRS.

Also included in these tables is the mapping to the HL7 BFDR V2.6 Message location and content to populate in that location for reporting to the Jurisdiction EBRS.



1. EBRS or 3rd Party Uses EMR uses EMR clinical data as a source for birth and fetal death reporting information
   a. Queries EMR for mom/baby clinical data supporting Birth and Fetal Death Reporting using resource mapping from IHE BFDR, OR
   b. EMR supplies LDS-VR CDA document as pre-pop data when retrieving the Birth Reporting form
2. EBRS or 3rd Party Using mapping pre-population rules and CDC-Defined value sets specified in IHE BFDR-E, determine attribute values (aligned with NCHS Edit Specifications)
3. Automatically Pre-populate eForm with BFDR attributes derived from the pre-population Rules applied to the EMR data and present to the Birth Clerk from within their EMR environment (e.g. via SMARTonFHIR App)
4. Birth Clerk reviews report content, makes any required updates, and submits form
   NOTE: The mapping could be automated without the human review to autogenerate the report to vital records
5. Apply the mapping rules from the BFDR attributes to generate the
   a. HL7 FHIR Vital Records BFDR
   b. HL7 v2.6 Vital Records BFDR
6. Transmit the HL7 FHIR HL7 FHIR Vital Records BFDR to vital Records (EBRS or Interface Engine)

6.6.1.1 Form Derivation Rules

Variable definitions within this section are only scoped within each rule. For this document, the convention is that Variable names begin with '$'.

6.6.1.1.1 ANTI: Antibiotics [received by the newborn for suspected neonatal sepsis]

ANTI Derivation Rule (2)
IF ($Indication CONTAINS ValueSet *(Neonatal Sepsis (NCHS))* AND ($CodedProductName CONTAINS ValueSet (Antibiotics (NCHS))) AND ($Route CONTAINS ValueSet *(IM Medication Administration Route (NCHS))* OR ValueSet *(IV Medication Administration Route (NCHS))*, OR IF $ProcedureCode CONTAINS ValueSet *(Antibiotic Administration Procedure (NCHS))* THEN ANTI SHALL = "Y" ELSE "N.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$CodedProductName	MedicationAdministration.medication[x].medicationCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$Route	MedicationAdministration.dosage.route	ClinicalDocument/component/structuredBody/component/section[[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4]]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.21]]/substanceAdministration/routeCode
$Indication	MedicationAdministration.reasonReference	ClinicalDocument/component/structuredBody/component/section[[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/substanceAdministration/entryRelationship[@typeCode='RSON']/ act[cda:templateId/@root='1.3.6.1.4.1.19376.1.5.3.1.4.4.1]/code
$ProcedureCode	Procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF ANTI = 'Y' then condition.code ='434621000124103', CodeSystemName='SNOMED CT', DisplayName=' Antibiotics Received for Suspected Neonatal Sepsis'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 434621000124103^ Antibiotics given for suspected neonatal sepsis	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||434621000124103^ Antibiotics given for suspected neonatal sepsis^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.2 AVEN1: Assisted Ventilation [required immediately following delivery]

AVEN1 Derivation Rule (2)		
IF ((**$ProcedureCode** CONTAINS ValueSet *(Assisted Ventilation (NCHS))* AND (**$ProcedureStartTime -$BirthTime**< 5 minutes)) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*PHVS_AssistedVentilationMinutesAfterBirth_NCHS*)) OR (**$ProblemCode** CONTAINS ValueSet (*PHVS_AssistedVentilationMinutesAfterBirth_NCHS*)) THEN AVEN1 SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	Condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$ProcedureCode	Procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureStartTime	Performed[x].period of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/low
$BirthTime	Patient. Birthdate of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]/subject/birthTime
$EventOutcomesObservationCode	NA (only review condition.code)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ /observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF AVEN1 = 'Y' then condition.code ='PHC1250', CodeSystemName= 'PHIN VS (CDC Local Coding System)', DisplayName=' Assisted ventilation required immediately following Delivery'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain PHC1250^Assisted ventilation required immediately following delivery	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||PHC1250^ Assisted ventilation required immediately following delivery^CDCPHINVS ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y

		JFDI	
		CCOFDI	

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6.6.1.1.3 AVEN6 Abnormal Conditions of the Newborn [Assisted ventilation for 6 or more hours]

AVEN6 Derivation Rule (2)		
IF ((**$ProcedureCode** CONTAINS ValueSet (*Assisted Ventilation (NCHS)*) AND (**$ProcedureEndTime** – **$ProcedureStartTime** >=6 hours)) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet *(PHVS_AssistedVentilationMoreThanSixHours_NCHS)* OR (**$ProblemCode** CONTAINS ValueSet *(PHVS_AssistedVentilationMoreThanSixHours_NCHS)* THEN AVEN6 SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	Procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureEndTime	Performed[x].period of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/high
$ProcedureStartTime	Performed[x].period of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/low
$EventOutcomesObservationCode	NA (only review condition.code)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ /observation/value
$ProblemCode	Condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF AVEN6 = 'Y' then condition.code ='PHC1251', CodeSystemName= 'PHIN VS (CDC Local Coding System)', DisplayName='Assisted ventilation required for more than six hours'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE		PSMLBDI	

OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 434621000124103^ Antibiotics given for suspected neonatal sepsis	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||434621000124103^ Antibiotics given for suspected neonatal sepsis^SNM ||||||F	PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.4 BINJ Abnormal Conditions of the Newborn [Significant birth injury(skeletal fracture(s), peripheral nerve injury, and/or soft tissue/solid organ hemorrhage which requires intervention)]

BINJ Derivation Rule (2)		
IF **$ProblemObservation** CONTAINS ValueSet (*Significant Birth Injury (NCHS)*), THEN BINJ **SHALL** = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemObservation	Condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] AND subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.4.5']]/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF BINJ = 'Y' then condition.code =' 56110009', CodeSystemName= 'SNOMED CT', DisplayName='Birth trauma of fetus'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 56110009^Birth trauma of fetus	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||56110009^Birth trauma of fetus^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.5 NICU Abnormal Conditions of the Newborn [Admission to NICU]

NICU Derivation Rule (2)		
IF (**$PatientTransferType** CONTAINS (*NICU Care (NCHS)*), THEN NICU SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PatientTransferType	PENDING	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.113.7']]/entry[templateId[@root=' 1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']/act/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF NICU = 'Y' then condition.code ='405269005', CodeSystemName= 'SNOMED CT', DisplayName=' Neonatal intensive care unit'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 405269005^Neonatal intensive care unit	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||405269005^ Neonatal intensive care unit^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.6 SEIZ Abnormal Conditions of the Newborn [Seizure or serious neurologic dysfunction]

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SEIZ Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Seizure or Serious Neurologic Dysfunction (NCHS)*) THEN SEIZ SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	Condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND

		id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF SEIZ = 'Y' then condition.code =' 91175000', CodeSystemName= 'SNOMED CT', DisplayName='Seizure'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 91175000^Seizure	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||91175000^ Seizure^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.7 SURF Abnormal Conditions of the Newborn [[Newborn given] Surfactant replacement therapy]

SURF Derivation Rule (2)		
IF (**$CodedProductName** CONTAINS ValueSet (*Newborn Receiving Surfactant Replacement Therapy (NCHS)*) OR **$ProcedureCode** CONTAINS ValueSet (*Surfactant Replacement Therapy (NCHS)*), THEN SURF SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$CodedProductName	MedicationAdministration.medication[x].medicationCodableConcept of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$ProcedureCode	Procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report	IF SURF = 'Y' then

• ConditionAbnormalConditionOfNewborn	condition.code =’43470100012410’, CodeSystemName= ‘SNOMED CT’, DisplayName=’ Surfactant replacement therapy’

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 434701000124101^Surfactant replacement therapy	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||434701000124101^ Surfactant replacement therapy ^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1370 ### 6.6.1.1.8 NOA54 Abnormal Conditions of the Newborn [None of the above]

NOA54 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
NA	NA	NA

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • ConditionAbnormalConditionOfNewborn	IF NOA54 = 'Y' then condition.code =’260413007’, CodeSystemName= ‘SNOMED CT’, DisplayName=’None’

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73812-0^Abnormal conditions of the newborn OBX-5 SHALL contain 260413007 None (qualifier value)	OBX|1|CWE|73812-0^Abnormal conditions of the Newborn ^LN||260413007^None (qualifier value)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	

		CCOFDI	

6.6.1.1.9 DNA54 Abnormal Conditions of the Newborn [Pending]

DNA54 Derivation Rule (2)		
This section intentionally left blank.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
This section intentionally left blank.	This section intentionally left blank.	This section intentionally left blank.

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
N/A	N/A

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
N/A	N/A	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.10 APGAR5 Apgar Score [5 Minute]

APGAR5 Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*5 Min Apgar Score (NCHS)*), THEN "APGAR5" = (**$GeneralAppearanceObservationValue**)		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearanceObservationCode	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/co

		mponent/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry /observation/code
$GeneralAppearance ObservationValue	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/co mponent/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry /observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	observation.code=' 9274-2', CodeSystemName= 'LOINC', DisplayName=' Score^5M post birth' AND observation.value= APGAR5

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 9274-2^Score^5M post birth OBX-5 SHALL contain the 5-minute Apgar Score	OBX|1|NM|9274-2^ Score^5M post birth ^LN||4	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.11 APGAR10 Apgar Score [10 Minute]

APGAR10 Derivation Rule (2)		
IF ("APGAR5" <6), AND (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*10 Min Apgar Score (NCHS)s*), THEN "APGAR10" = (**$GeneralAppearanceObservationValue**)		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/co mponent/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry /observation/code
$GeneralAppearance ObservationValue	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/

		subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	observation.code='9271-8', CodeSystemName= 'LOINC', DisplayName=' Score^10M post birth' AND observation.value= APGAR10

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 9271-8 ^Score^10M post birth OBX-5 SHALL contain the 10-minute Apgar Score	OBX|1|NM|9271-8|^ Score^10M post birth ^LN||8	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.12 ATTENDN Attendant's Name

ATTENDN Derivation Rule (2)		
"ATTENDN" SHALL be populated using **$ProviderName** WHERE **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*) WHERE the provider is the person responsible for delivering the child**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProviderName	procedure.performer.actor Reference (Practitioner.name)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/performer/assignedEntity/assignedPerson/name
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR	/performer/assignedEntity/assignedPerson/name = ATTENDN

Composition - Provider Fetal Death Report • PENDING			
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain XCN OBX-3 SHALL contain 87286-1 ^ Birth attendant OBX-5 SHALL contain Name and identifier information for the person attending the birth.	OBX|1|XCN| 87286-1 |^ Birth attendant ^LN||^Walshingham^Albert^DR^^Good Health Hospital^^^NPI	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1380

6.6.1.1.13 ATTEND Attendant's Title

ATTEND Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet *(Delivery (NCHS))*, THEN IF **$ProviderType** CONTAINS ValueSet *(Physician (NCHS))*, THEN "ATTEND" SHALL = "1", ELSE IF **$ProviderType** CONTAINS ValueSet (*Doctor of Osteopathic Medicine (NCHS)*), THEN "ATTEND" SHALL = "2", ELSE IF **$ProviderType** CONTAINS ValueSet (*Certified Midwife (NCHS)*), THEN "ATTEND" SHALL = "3", ELSE IF **$ProviderType** CONTAINS ValueSet (*Midwife (NCHS)*), THEN "ATTEND" SHALL = "4", ELSE IF **$ProviderType** NOT NULL THEN "ATTEND" SHALL = "5", ELSE "ATTEND" SHALL = "9"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProviderType	procedure.performer.role	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/performer/assignedEntity/code
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource	**Content**	
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/performer/assignedEntity/assignedPerson/code = ATTEND	

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73764-3^Birth Attendant Title OBX-5 SHALL contain a value selected from value the set Birth Attendant Title (Birth Attendant Titles) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7111	OBX|1|CWE|73764-3^Birth Attendant^LN||76231001^ Osteopath^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1385 **6.6.1.1.14 ATTENDS Attendant [Other specified]**

ATTENDS Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet *(Delivery (NCHS))* AND "ATTEND" = "5", THEN ATTENDS SHALL = **$ProviderType**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProviderType	procedure.performer.role	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/performer/assignedEntity/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/performer/assignedEntity/assignedPerson/name = ATTENDS

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73764-3^Attendants's Title OBX-5 SHALL contain OTH^ Other(specify) ^NullFlavor	OBX|3|CWE|73764-3^Attendants's Title^LN|| OTH^ Other(specify) ^NullFlavor ^^Chief Birthing Specialist|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y

OBX-5 SHALL contain the Text Description of the Attendant's Title in Alternate Text 73764-3^ Birth attendant title		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1390 **6.6.1.1.15 NPI Attendant's NPI**

NPI Derivation Rule (2)		
"NPI" **SHALL** be populated using the **$ProviderID** WHERE **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*) where the **$ProviderID** is expressed as the National Provider Identifier (NPI)		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProviderID	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureCode	procedure.performer.actor Reference (Practitioner.identifier)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/performer/assignedEntity/id/@extension

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/performer/assignedEntity/id = NPI

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain XCN OBX-3 SHALL contain 87286-1 ^ Birth attendant OBX-5 SHALL contain Name and identifier information for the person attending the birth.	OBX|1|XCN| 87286-1 |^ Birth attendant details ^LN||^Walshingham^Albert^DR^^Good Health Hospital^^s^NPI |	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y

		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.16 BWG Birth weight (Infant's) [grams]

BWG Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) = WHERE **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*), THEN "BWG" SHALL = **$VitalSignsResultValue** WHERE Result Value Units are expressed in grams		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component /observation/code
$VitalSignsMethodCode	Observation.method	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component /observation/methodCode
$VitalSignsResultValue	Observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component /observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	observation.code=' 8339-4', CodeSystemName= 'LOINC', DisplayName='Body Weight^at birth' AND observation.value[x]= BWG(PQ) observation.value[x].unit= 'gm'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM		PSMLBDI	

OBX-3 SHALL contain 8339-4 ^Body weight^at birth OBX-5 SHALL contain the birthweight in Grams OBX-6 SHALL indicate grams using UCUM units: SHALL contain gm	OBX|24|NM|8339-4 ^ Body weight^at birth^LN||1200|gm	PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.17 BWO Birth weight (Infant's) [ounces]

BWO Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*)WHERE **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*), THEN "BWO" SHALL = **$VitalSignsResultValue** WHERE Result Value Units are expressed in ounces. The preferred measure is in grams rather than ounces. Refer to BWG.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	Observation.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsMethodCode	Observation.method of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode
$VitalSignsResultValue	Observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource		**Content**
Composition - Provider Live Birth Report • PENDING		observation.code=' 8339-4', CodeSystemName= 'LOINC', DisplayName='Body Weight^at birth' AND observation.value[x]= BWO(PQ)

	Observation.value[x].unit= 'oz' NOTE: Preferred measure of weight is in Grams.

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 8339-4 ^Body weight^at birth OBX-5 SHALL contain the birthweight in Ounces OBX-6 SHALL indicate ounces using UCUM units: SHALL contain oz NOTE: it is preferred to send in grams (see BWG)	OBX|24|NM|8339-4 ^Body weight^at birth^LN||1200|oz	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.18 BWP Birth weight (Infant's) [pounds]

BWP Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*)WHERE **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*), THEN "BWP" SHALL = **$VitalSignsResultValue** WHERE Result Value Units are expressed in pounds. The preferred measure is in grams rather than pounds. Refer to BWG.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	Observation.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsMethodCode	Observation.method of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode
$VitalSignsResultValue	Observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	observation.code= Code=' 8339-4', CodeSystemName= 'LOINC', DisplayName='Body Weight^at birth' AND observation.value[x]= BWP(PQ) Observation.value[x].unit= 'lb' NOTE: Preferred measure of weight is in Grams.

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 8339-4 ^ Body weight^at birth OBX-5 SHALL contain the birthweight in Pounds OBX-6 SHALL indicate pounds using UCUM units: SHALL contain lb NOTE: it is preferred to send in grams (see BWG)	OBX|24|NM|8339-4 ^Body weight^at birth ^LN||1200|lb	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.19 ANTB Characteristics of Labor and Delivery [Antibiotics[received by the mother during labor]]

ANTB Derivation Rule (2)		
IF ((**$CodedProductName** CONTAINS ValueSet (*Antibiotics (NCHS)*) AND (**$Route** CONTAINS ValueSet (*IM Medication Administration Route (NCHS)*) OR ValueSet (*IV Medication Administration Route (NCHS)*)) AND (**$AdministrationTime** >= **$ProcedureStartTime** AND **$AdministrationTime** <=**$ProcedureEndTime**) WHERE **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*) OR **$EventOutcomesObservationCode** CONTAINS ValueSet *(Antibiotics Received During Labor Finding (NCHS))*THEN "ANTB" SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$CodedProductName	MedicationAdministration.medication[x].medicationCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.3.21]]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$Route	MedicationAdministration.dosage.route	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/substanceAdministration /routeCode
$AdministrationTime	MedicationAdministration.effective[x]	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/substanceAdministration/effectiveTime/low

$ProcedureStartTime	Procedure.Performed[x].period	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/effectiveTime/low
$ProcedureEndTime	Procedure.Performed[x].period	ClinicalDocument/component/structuredBody/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3]]/component/section[templateId[@root=1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11]]/entry/effectiveTime/high
$ProcedureCode	Procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$EventOutcomesObservationCode	observation.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/act/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF ANTB = 'Y' then condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]=' 634771000124114', CodeSystemName= 'SNOMED CT', DisplayName='Antibiotics received during labor'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 434691000124101^Antibiotics received during labor	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||434691000124101^ Antibiotics received during labor^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.20 AUGL Characteristics of Labor and Delivery [Augmentation of labor]

AUGL Derivation Rule (2)
IF (**$ProcedureCode** CONTAINS ValueSet (*Augmentation of Labor - Procedure (NCHS)*) OR **$CodedProductName** CONTAINS (*Augmentation of Labor - Medication (NCHS)*) OR **$EventOutcomesObservationCode** CONTAINS ValueSet (Augmentation of Labor Finding (NCHS))OR **$ProblemCode** CONTAINS ValueSet (*Augmentation of Labor Finding (NCHS)*), THEN "AUGL" SHALL ="Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProcedureCode	Procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$CodedProductName	MedicationAdministration.medication[x].medicationCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$EventOutcomesObservationCode	observation.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/act/code
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report • PENDING	IF AUGL = 'Y' then) condition.code=73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]=='237001001', CodeSystemName= 'SNOMED CT', DisplayName= 'Augmentation of labor'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 237001001^Augmentation of Labor	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||237001001^ Augmentation of Labor^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1405 **6.6.1.1.21 CHOR Characteristics of Labor and Delivery [[Clinical] Chorioamnionitis [diagnosed during labor or maternal temperature >=38 degrees (100.4F)]]**

CHOR Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Chorioamnionitis During Labor (NCHS)*) OR (*Fever Greater Than 100.4 (NCHS)*) THEN "CHOR" SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF CHOR = 'Y' then condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]='11612004', CodeSystemName= 'SNOMED CT', DisplayName= 'Chorioamnionitis'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 11612004^ Chorioamnionitis	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||11612004^ Chorioamnionitis^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.22 ESAN Characteristics of Labor and Delivery [[Epidural or spinal]Anesthesia[during labor]]

ESAN Derivation Rule (2)
IF (**$CodedProductName** CONTAINS ValueSet *(Epidural/Spinal Anesthesia - Medication (NCHS))* OR (**$ProcedureCode** CONTAINS *(Epidural Anesthesia - Procedure (NCHS))* OR *(Spinal Anesthesia - Procedure (NCHS))* THEN "ESAN" SHALL be "Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$CodedProductName	MedicationAdministration.medication[x].medicationCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF ESAN = 'Y' then condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]=' 231064003', CodeSystemName= 'SNOMED CT', DisplayName= 'Intrathecal injection of local anesthetic agent'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 231064003^ Intrathecal injection of local anesthetic agent	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||231064003^ Intrathecal injection of local anesthetic agent^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.23 INDL Characteristics of Labor and Delivery [Induction of labor]

INDL Derivation Rule (2)
IF (**$ProcedureCode** CONTAINS ValueSet *(Induction of Labor (NCHS))* OR **$EventOutcomesObservationCode** CONTAINS ValueSet *(Induction of Labor Finding (NCHS))*OR **$ProblemCode** CONTAINS ValueSet *(Induction of Labor Finding (NCHS))* THEN "INDL" **SHALL** = "Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/act/code
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF INDL = 'Y' then condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]=' 236958009', CodeSystemName= 'SNOMED CT', DisplayName= 'Induction of labor'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 236958009^Induction of labor	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||236958009^Induction of labor^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.24 STER Characteristics of Labor and Delivery [Steroids [(glucocorticoids) for fetal lung maturation received by the mother prior to delivery]]

STER Derivation Rule (2)
IF (**$ProcedureCode** CONTAINS ValueSet (*Steroids For Fetal Lung Maturation (NCHS)*) THEN "STER" SHALL ="Y"ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF STER = 'Y' then condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]='634621000124113', CodeSystemName= 'SNOMED CT', DisplayName= 'Steroids (glucocorticoids) for fetal lung maturation (procedure)'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 434611000124106 ^Maternal antenatal administration of corticosteroids for fetal lung maturation	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||434611000124106 ^Maternal antenatal administration of corticosteroids for fetal lung maturation ^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.25 NOA04 Characteristics of Labor and Delivery [None of the above]

NOA04 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report	IF NOA04 = 'Y' then

• PENDING	condition.code =73813-8', CodeSystemName= 'LOINC', DisplayName='Characteristics of labor and delivery' AND condition.value[x]=' 260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73813-8^ Characteristics of labor and delivery OBX-5 SHALL contain 260413007^ None (qualifier value)	OBX|23|CWE|73813-8^Characteristics of labor and delivery^LN||260413007^ None (qualifier value)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.26 DNA04

DNA04 Derivation Rule (2)

This section intentionally left blank.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
PENDING	PENDING	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	

		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.27 IDOB_YR Child Date of Birth [Year]

IDOB_YR Derivation Rule (2)		
"IDOB_YR" SHALL be populated using the Year part of **$BirthTime** WHERE the Year is represented using 4-digits.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BirthTime	Patient. Birthdate of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/birthTime

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	patient.birthDate contains IDOB_YR/IDOB_MO/IDOB_DY

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-29 SHALL contain the Newborn's date and time of birth	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.28 IDOB_MO Child Date of Birth [Month]

IDOB_MO Derivation Rule (2)		
"IDOB_MO" SHALL be populated using the Year part of **$BirthTime** WHERE the Month is represented using 2-digits.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$BirthTime	Patient. Birthdate of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]/subject/birthTime

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	patient.birthDate contains IDOB_YR/IDOB_MO/IDOB_DY

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-7 SHALL contain the Newborn's date and time of birth	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.29 IDOB_DY Child Date of Birth [Day]

IDOB_DY Derivation Rule (2)		
"IDOB_DY" SHALL be populated using the Year part of **$BirthTime** WHERE the Day is represented using 2-digits**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BirthTime	Patient. Birthdate of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/birthTime

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	patient.birthDate contain IDOB_YR/IDOB_MO/IDOB_DY

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-7 SHALL contain the Newborn's date and time of birth	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	

		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.30 KIDFNAME Child's First Name/ Name of Fetus [optional at the discretion of the parents]

KIDFNAME Derivation Rule (2)		
"KIDFNAME" SHALL be populated using the First Name part of **$ChildName.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildName	patient.name of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ subject/name/given[1]

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	patient.name.given.value[1] contains KIDFNAME

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-5 SHALL contain the New born name. In the case of fetal death reporting, a name may be provided at the discretion of the parents Using PID-5. When the name is not provided, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no newborn or fetus name.	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F||||||||||||N	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	Y

6.6.1.1.31 KIDMNAME Child's Middle Name / Name of Fetus [optional at the discretion of the parents]

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KIDMNAME Derivation Rule (2)		
"KIDMNAME" SHALL be populated using the Middle Name part of **$ChildName.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildName	patient.name of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/name/given[2]

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	patient.name.given.value [2] contains KIDMNAME

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-5 SHALL contain the New born name. In the case of fetal death reporting, a name may be provided at the discretion of the parents using PID-5. When the name is not provided, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no newborn or fetus name.	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	Y

6.6.1.1.32 KIDLNAME Child's Last Name / Name of Fetus [optional at the discretion of the parents]

KIDLNAME Derivation Rule (2)		
"KIDLNAME" SHALL be populated using the Last Name part of **$ChildName**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildName	patient.name of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/name/family

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	patient.name.family.value contains KIDLNAME

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-5 SHALL contain the New born name. In the case of fetal death reporting, a name may be provided at the discretion of the parents using PID-5. When the name is not provided, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no newborn or fetus name.	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	Y

6.6.1.1.33 KIDSUFFX Child's Last Name Suffix

KIDSUFFX Derivation Rule (2)		
"KIDSUFFX" SHALL be populated using the Suffix part of **$ChildName**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildName	patient.name of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/name/suffix

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	Composition.subject[PatientChild] patient.name.suffix.value contains KIDSUFFX

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-5 SHALL contain the New born name.	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	Y
		PSMFDI	Y

In the case of fetal death reporting, a name may be provided at the discretion of the parents using PID-5. When the name is not provided, a value must still be placed in this field since the field is required. In that case, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code in the second name indicates that it is unspecified. Since there may be no name components populated, this means there is no legal name, nor is there an alias. This guide will interpret this sequence to mean there is no newborn or fetus name.		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	Y

6.6.1.1.34 BFED Child [Infant being breastfed]

BFED Derivation Rule (2)		
IF **$ProblemCode** CONTAINS ValueSet (*Breastfed Infant (NCHS)*) THEN BFED SHALL be "Y".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	/code@code= Code='3756-9', CodeSystemName= 'LOINC', DisplayName=' Infant is being breastfed at discharge' AND /value@value= Boolean form of BFED

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73756-9^Infant is being breastfed at discharge OBX-5 SHALL contain a value selected from PHVS_YesNoUnknown_CDC Yes No Unknown (YNU)	OBX|34|CWE|73756-9^Infant is being breastfed at discharge^LN||Y^Yes^ PHVS_YesNoUnknown_CDC ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1440 **6.6.1.1.35 ILIV Child [Infant living at time of report]**

ILIV Derivation Rule (2)		
IF (NOT (**$ProblemObservationCode** CONTAINS ValueSet (*Neonatal Death (NCHS)*) OR (**$DeceasedIndicator** = 'True'))) THEN "ILIV" SHALL = 'Y' ELSE 'N'		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ /observation/value
$DeceasedIndicator	patient.deceased[x].deceasedBoolean of newborn	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]/subject/sdtc:deceasedInd

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	/code@code= Code='73757-7', CodeSystemName= 'LOINC', DisplayName='Infant living at time of report' AND /value@value= Boolean form of ILIV

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73757-7^Infant living at time of report OBX-5 SHALL contain a value selected from PHVS_YesNoUnknown_CDC –Yes No Unknown (YNU)	OBX|59|CWE|73757-7^Infant living at time of report^LN||Y^Yes^ PHVS_YesNoUnknown_CDC ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.36 IRECNUM Child [Newborn Medical Record Number]

IRECNUM Derivation Rule (2)
"IRECNUM" **SHALL** = **$BabyMedRecNum**

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$BabyMedRecNum	patient.identifier	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]/sdtc:id

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	/subject/relatedSubject/subject/sdtc:Id = IRECNUM

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-3 In the case of fetal death reporting, a medical record number may be provided at the discretion of the parents using PID-3.	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	Y
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	Y

6.6.1.1.37 ISEX Child [(infant) Sex]

ISEX Derivation Rule (2)		
IF **$Gender** CONTAINS ValueSet (*Male Gender (NCHS)*) THEN "ISEX" SHALL ='M' ELSE IF **$Gender** CONTAINS ValueSet (*Female Gender (NCHS)*) THEN "ISEX" SHALL ='F' ELSE THEN "ISEX" SHALL ='N'		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$Gender	PENDING	ClinicalDocument/component/structuredBody/component/section[templateId[@root='2.16.840.1.113883.10.20.1.21']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/relatedSubject/subject/administrativeGenderCode

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	/subject/relatedSubject/subject/administrativeGenderCode = ISEX

Mapping to HL7 v2.6 BFDR (5b)		
Mapping Location and Content	**Example**	**Usage**

PID-8	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	Y

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6.6.1.1.38 ITRAN Child [Infant transferred within 24 hours of delivery/name the facility FTRAN]

ITRAN Derivation Rule (2)		
$PatientTransferType CONTAINS ValueSet (*Transfer to (NCHS)*) and (Coded **$PatientTransferTime** – **$BirthTime**) <= 24 hours THEN ITRAN **SHALL** = "Y" ELSE ITRAN **SHALL** = "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PatientTransferType	procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7'/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']/act/code
$PatientTransferTime	procedure. Performed[x].period of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']/act/effectiveTime[high
$BirthTime	patient.birthDate of newborn	/ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/birthTime
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource		**Content**
Composition - Provider Live Birth Report • PENDING		/code@code= Code='73758-5', CodeSystemName= 'LOINC', DisplayName= 'Infant was transferred within 24 hours of delivery' AND /value@value= Boolean form of ITRAN
Mapping to HL7 v2.6 BFDR (5b)		

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73758-5^Infant was transferred within 24 hours of delivery OBX-5 SHALL contain a value selected from value the set from PHVS_YesNoUnknown_CDC Yes No Unknown (YNU)	OBX|32|CWE|73758-5^ Infant was transferred within 24 hours of delivery ^LN||N^No^ PHVS_YesNoUnknown_CDC |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.39 FTRAN Child [Infant transferred within 24 hours of delivery/name the facility]

FTRAN Derivation Rule (2)		
IF **$PatientTransferType** CONTAINS ValueSet (*Institution Referred to (NCHS)*) and **($PatientTransferTime – $BirthTime)** <= 24 hours THEN FTRAN **SHALL** = **$PatientInstitutionTransferName**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PatientTransferType	procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/component/section[templateId[@root = '1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/entry/act/entryRelationship/observation/code
$PatientTransferTime	procedure. Performed[x].period of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/component/section[templateId[@root = '1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/entry/act/entryRelationship/observation/effectiveTime[high]
$BirthTime	patient.birthDate of newborn	/ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/sub/ect/birthTime
$PatientInstitutionTransferName	procedure.value of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/component/section[templateId[@root = '1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/entry/act/entryRelationship/observation/value
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource		**Content**
Composition - Provider Live Birth Report • PENDING		/participant/participantRole/name = FTRAN

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain XON OBX-3 SHALL contain 73770-0^ Name of facility infant transferred to OBX-5 SHALL contain the name of the facility the infant was transferred to. (Only value if the infant was transferred within 24 hours of delivery.)	OBX|32|XON|73770-0^ Name of facility infant transferred to^LN|| Good Health Hospital^L^^^^&2.16.840.1.113883.19.4.6 ^ISO^XX^^^1234 ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1450 **6.6.1.1.40 TB Child [Time of Birth]**

TB Derivation Rule (2)		
"TB" **SHALL** = Time part of **$BirthTime**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BirthTime	patient.birthDate of newborn	/ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/birthTime

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	/subject/relatedSubject/subject/birthTime = TB

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-7 SHALL contain the Newborn's date and time of birth,	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	

		CCOFDI	

6.6.1.1.41 ANEN Congenital Anomalies of the Newborn [Anencephaly]

ANEN Derivation Rule (2)		
IF (**$NervousSystemObservationCode** CONTAINS ValueSet (*Anencephaly of the Newborn (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Anencephaly of the Newborn (NCHS)*) THEN "ANEN" **SHALL** = "Y" ELSE		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$NervousSystemObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.35']]/entry/observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF ANEN = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code=' 89369001', CodeSystemName= 'SNOMED CT', DisplayName= 'Anencephalus'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 89369001^Anencephalus	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||89369001^Anencephalus^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.42 CCHD Congenital Anomalies of the Newborn [Cyanotic congenital heart disease]

CCHD Derivation Rule (2)		
IF (**$HeartSystemObservationCode** CONTAINS ValueSet (*Cyanotic Congenital Heart Disease (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Cyanotic Congenital Heart Disease (NCHS)*) THEN "CCHD" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$HeartSystemObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.29']]/entry/act/entryRelationship/observation/code
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CCHD = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code='12770006', CodeSystemName= 'SNOMED CT', DisplayName= 'Cyanotic congenital heart disease'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 12770006^Cyanotic congenital heart disease	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||12770006^Cyanotic congenital heart disease^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.43 CDH Congenital Anomalies of the Newborn [Congenital diaphragmatic hernia]

CDH Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Congenital Diaphragmatic Hernia (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Congenital Diaphragmatic Hernia (NCHS)*) THEN "CDH" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CDH = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code='17190001', CodeSystemName= 'SNOMED CT', DisplayName= 'Congenital diaphragmatic hernia'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 17190001^Congenital diaphragmatic hernia	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||17190001^Congenital diaphragmatic hernia^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1460

6.6.1.1.44 CDIC Congenital Anomalies of the Newborn [Suspected chromosomal disorder karyotype confirmed]

CDIC Derivation Rule (2)		
IF ((**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Karyotype Confirmed (NCHS)*) AND **$GeneralAppearanceObservationCode** Code CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Karyotype Confirmed (NCHS)*) AND (**$ProblemCode** Code CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) THEN "CDIC" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CDIC = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code='409709004', CodeSystemName= 'SNOMED CT', DisplayName= 'Chromosomal Disorder' AND /entryRelationship/code@code Code=' 73778-3', CodeSystemName= 'LOINC', DisplayName=' Suspected chromosomal disorder karyotype status' /entryRelationship/value@code Code=' 442124003', CodeSystemName= 'SNOMED CT', DisplayName= 'Karyotype evaluation abnormal'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn	PSMLBDI	
		PSMFDI	

OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 409709004^Chromosomal disorder (disorder) AND a second OBX segment WHERE: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73778-3^Suspected chromosomal disorder karyotype status OBX-5 SHALL contain 442124003^Karyotype evaluation abnormal	^LN||409709004^Chromosomal disorder^SNM |||||F OBX|27|CWE|73778-3 ^Suspected chromosomal disorder karyotype status^LN||442124003^Karyotype evaluation abnormal^SNM |||||F	PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.45 CDIS Congenital Anomalies of the Newborn [Suspected chromosomal Disorder]

CDIS Derivation Rule (2)		
IF (NOT (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Karyotype Confirmed (NCHS)*) AND (**$GeneralAppearanceObservationCode** Code CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) OR (NOT (**$ProblemCode** CONTAINS ValueSet (*Karyotype Confirmed (NCHS)*) AND (**$ProblemCode** Code CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) THEN "CDIS" **SHALL** = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearanceObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CDIS = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code='409709004', CodeSystemName= 'SNOMED CT', DisplayName= 'Chromosomal Disorder'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn	PSMLBDI	
		PSMFDI	

OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 409709004^Chromosomal disorder	^LN||409709004^Chromosomal disorder^SNM |||||F	PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1465

6.6.1.1.46 CDIP Congenital Anomalies of the Newborn [Suspected chromosomal disorder karyotype pending]

CDIP Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Suspected Chromosomal Disorder (NCHS)*) AND (**$ProcedureCode** Contains (*Karyotype Determination (NCHS)*) AND act classCode='ACT' moodCode='INT') AND (NOT **$CodedResultCode** (*Karyotype Result (NCHS)*) THEN "CDIP" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearanceObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry/act/entryRelationship/observation/code
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$ProcedureCode	procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$CodedResultCode	observation.code of newborn constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsKaryotype))	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] AND subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.4.13']]/observation/code
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource		**Content**

Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CDIP = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code='409709004', CodeSystemName= 'SNOMED CT', DisplayName= 'Chromosomal Disorder' AND /entryRelationship/code@code Code=' 73778-3', CodeSystemName= 'LOINC', DisplayName=' Suspected chromosomal disorder karyotype status' /entryRelationship/value@code Code='312948004', CodeSystemName= 'SNOMED CT', DisplayName= 'Karyotype determination'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 409709004^Chromosomal disorder (disorder) AND a second OBX segment WHERE: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73778-3^Suspected chromosomal disorder karyotype status OBX-5 SHALL contain 312948004^ Karyotype determination	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||409709004^Chromosomal disorder^SNM |||||F OBX|27|CWE|73778-3^Suspected chromosomal disorder karyotype ^LN||312948004^ Karyotype determination^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.47 CL Congenital Anomalies of the Newborn [Cleft Lip with or without Cleft Palate]

CL Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Cleft Lip with or without Cleft Palate (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Cleft Lip with or without Cleft Palate (NCHS)*) THEN "CL" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value

$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CL = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '80281008', CodeSystemName= 'SNOMED CT', DisplayName= 'Cleft lip'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 80281008^Cleft lip	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||80281008^Cleft lip^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1470

6.6.1.1.48 CP Congenital Anomalies of the Newborn [Cleft Palate alone]

CP Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Cleft Palate Alone (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Cleft Palate Alone (NCHS)*) THEN "CP" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearanceObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/

		subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CP = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '87979003', CodeSystemName= 'SNOMED CT', DisplayName= 'Cleft palate'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 87979003^ Cleft palate	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||87979003^ Cleft palate^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.49 DOWC Congenital Anomalies of the Newborn [Down Karyotype Confirmed]

DOWC Derivation Rule (2)		
IF ((**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Karyotype Confirmed (NCHS)*) AND (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Downs Syndrome (NCHS)*) THEN "DOWC" **SHALL** = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code	

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**

Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF DOWC = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '70156005', CodeSystemName= 'SNOMED CT', DisplayName= 'Anomaly of chromosome pair 21' AND /entryRelationship/code@code Code=' 73778-3', CodeSystemName= 'LOINC', DisplayName=' Suspected chromosomal disorder karyotype status' /entryRelationship/value@code Code=' 442124003', CodeSystemName= 'SNOMED CT', DisplayName= 'Karyotype evaluation abnormal'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 70156005^Anomaly of chromosome pair 21 (disorder) AND a second OBX segment WHERE: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73779-1^Down syndrome karyotype status OBX-5 SHALL contain 442124003^Karyotype evaluation abnormal (finding)	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||70156005^Anomaly of chromosome pair 21^SNM |||||F OBX|27|CWE|73779-1^Down syndrome karyotype status ^LN||442124003^Karyotype evaluation abnormal (finding)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.50 DOWN Congenital Anomalies of the Newborn [Down Syndrome]

DOWN Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Downs Syndrome (NCHS)*) THEN "DOWN" SHALL = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	condition.code of newborn	

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF DOWN = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '70156005', CodeSystemName= 'SNOMED CT', DisplayName= 'Anomaly of chromosome pair 21'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 70156005^Anomaly of chromosome pair 21	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||70156005^Anomaly of chromosome pair 21^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.51 DOWP Congenital Anomalies of the Newborn [Down Karyotype Pending]

DOWP Derivation Rule (2)		
IF (**$GeneralAppearanceObservationCode** CONTAINS ValueSet (*Downs Syndrome (NCHS)*) AND (**$ProcedureCode** CONTAINS (*Karyotype Determination (NCHS)*) AND act classCode='ACT' moodCode='INT') AND (NOT **$CodedResultCode** (*Karyotype Result (NCHS)*) THEN DOWP" **SHALL** = "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$GeneralAppearance ObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProcedureCode	procedure.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

$CodedResultCode	observation.code of newborn constrained by: http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsKaryotype))	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.28']] subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/entry/observation/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF DOWP = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '70156005', CodeSystemName= 'SNOMED CT', DisplayName= 'Anomaly of chromosome pair 21' AND /entryRelationship/code@code Code=' 73778-3', CodeSystemName= 'LOINC', DisplayName=' Suspected chromosomal disorder karyotype status' /entryRelationship/value@code Code='312948004', CodeSystemName= 'SNOMED CT', DisplayName= 'Karyotype determination'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 70156005^Anomaly of chromosome pair 21 AND a second OBX segment WHERE: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73779-1^Down syndrome karyotype status OBX-5 SHALL contain 312948004^ Karyotype determination	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||70156005^Anomaly of chromosome pair 21 (disorder)^SNM ||||||F OBX|27|CWE|73779-1^ Down syndrome karyotype status ^LN||^312948004^ Karyotype determination^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.52 GAST Congenital Anomalies of the Newborn [Gastroschisis]

GAST Derivation Rule (2)
IF (**$AbdomenObservationCode** CONTAINS ValueSet (*Gastroschisis of the Newborn (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Gastroschisis of the Newborn (NCHS)*) THEN "GAST" **SHALL** = "Y" ELSE "N".

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$AbdomenObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.31']]/entry//observation/valueNewborn Delivery Information Section
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF GAST = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '72951007', CodeSystemName= 'SNOMED CT', DisplayName= 'Gastroschisis'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 72951007^Gastroschisis	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||72951007^Gastroschisis^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.53 HYPO Congenital Anomalies of the Newborn [Hypospadias]

HYPO Derivation Rule (2)
If (**$RenoGenitaliaObservationCode** = CONTAINS ValueSet (*Hypospadias (NCHS)*) OR (**$ProblemCode** = CONTAINS ValueSet (*Hypospadias (NCHS)*) THEN "HYPO" **SHALL** = "Y" ELSE "N".

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$RenoGenitaliaObservationCode	PENDING	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.16']]/entry//observation/value
$ProblemCode	PENDING	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF HYPO = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '416010008', CodeSystemName= 'SNOMED CT', DisplayName= 'Hypospadias'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 416010008^Hypospadias	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||416010008^Hypospadias^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.54 LIMB Congenital Anomalies of the Newborn [Limb reduction defect]

LIMB Derivation Rule (2)		
IF (**$MusculoskeletalObservationCode** CONTAINS ValueSet (*Limb Reduction Defect (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Limb Reduction Defect (NCHS)*) THEN "LIMB" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$MusculoskeletalObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.34']]/entry//observation/valueNewborn Delivery Information Section
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF LIMB = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '67341007', CodeSystemName= 'SNOMED CT', DisplayName= 'Longitudinal deficiency of limb'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 67341007^Longitudinal deficiency of limb	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||67341007^Longitudinal deficiency of limb^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.55 MNSB Congenital Anomalies of the Newborn [Meningomyelocele/Spina Bifida]

MNSB Derivation Rule (2)		
IF (**$NeurologicSystemObservationCode** CONTAINS ValueSet (*Meningomyelocele/Spina Bifida - Newborn (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Meningomyelocele/Spina Bifida - Newborn (NCHS)*) THEN "MNSB" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$NeurologicSystemObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.35']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF MNSB = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '67341007', CodeSystemName= 'SNOMED CT', DisplayName= 'Longitudinal deficiency of limb'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 67531005^Spina bifida	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||67531005^Spina bifida^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.56 OMPH Congenital Anomalies of the Newborn [Omphalocele]

OMPH Derivation Rule (2)		
IF (**$AbdomenObservationCode** CONTAINS ValueSet (*Omphalocele of the Newborn (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Omphalocele of the Newborn (NCHS)*) THEN "OMPH" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$AbdomenObservationCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/

		subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.31']]/entry//observation/value
$ProblemCode	condition.code of newborn	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF OMPH = 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '18735004', CodeSystemName= 'SNOMED CT', DisplayName= 'Congenital omphalocele'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 18735004^Congenital omphalocele	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||17190001^18735004^Congenital omphalocele^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.57 NOA55 Congenital Anomalies of the Newborn [None of the anomalies listed above]

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NOA55 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**

Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF NOA55= 'Y' then /code@code= Code= '73780-9', CodeSystemName= 'LOINC', DisplayName='Congenital anomalies of the newborn' AND /value@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73780-9^Congenital anomalies of the newborn OBX-5 SHALL contain 260413007^None (qualifier value)	OBX|27|CWE|73780-9^Congenital anomalies of the Newborn ^LN||260413007^None (qualifier value)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.58 DNA55 Date of Last Live Birth

DNA55 Derivation Rule (2)

This section intentionally left blank.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
PENDING	PENDING	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	

		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.59 YLLB Date of Last Live Birth

YLLB Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Live Birth (NCHS)*), THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "YLLB" SHALL = the Year part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date AND WHERE the Year is represented using 4-digits ELSE "YLLB" SHALL = '8888') ELSE "YLLB" SHALL = '9999'		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLLB)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry /observation/code Pregnancy History Section
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry /observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='68499-3', CodeSystemName= 'LOINC', DisplayName='Date last live birth' AND /value@value= YLLB

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 68499-3^Date last live birth OBX-5 SHALL contain 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. (Month and year should be provided.)	OBX|14|DTM|68499-3^Date last live birth^LN||20090926	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y

		JFDI	Y
		CCOFDI	

1495

6.6.1.1.60 MLLB Date Last Normal Menses Began

MLLB Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Live Birth (NCHS)*), THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "MLLB" SHALL = the Month part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date AND WHERE the Month is represented using 2-digits ELSE "MLLB" SHALL = '88') ELSE "YLLB" SHALL = '99'		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLLB)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='68499-3', CodeSystemName= 'LOINC', DisplayName='Date last live birth' AND /value@value= MLLB

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 68499-3^Date last live birth OBX-5 SHALL contain 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. (Month and year should be provided.)	OBX|14|DTM|68499-3^Date last live birth^LN||20090926	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.61 DLMP_DY Date Last Normal Menses Began [Day]

DLMP_DY Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Menses (NCHS)*), THEN "DLMP_DY" SHALL = Day part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLMP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code=' 8665-2', CodeSystemName= 'LOINC', DisplayName=' Date last menstrual period' AND /value@value contains DLMP_DY

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 8665-2^Date last menstrual period OBX-5 SHALL contain the date the mother's last normal menstrual period began. (month, day and year.)	OBX|16|DTM|8665-2^ Date last menstrual period ||20100418	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.62 DLMP_MO Date Last Normal Menses Began [Month]

DLMP_MO Derivation Rule (2)

IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Menses (NCHS)*), THEN "DLMP_MO" SHALL = Month part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLMP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code=' 8665-2', CodeSystemName= 'LOINC', DisplayName=' Date last menstrual period' AND /value@value contains DLMP_MO

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 8665-2^Date last menstrual period OBX-5 SHALL contain the date the mother's last normal menstrual period began. (month, day and year.)	OBX|16|DTM|8665-2^ Date last menstrual period ||20100418	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.63 DLMP_YR Date Last Normal Menses Began [Year]

--------- Derivation Rule (2)

IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Menses (NCHS)*), THEN "DLMP_YR" SHALL = Year part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLMP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code=' 8665-2', CodeSystemName= 'LOINC', DisplayName=' Date last menstrual period' AND /value@value contains DLMP_YR

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 8665-2^Date last menstrual period OBX-5 SHALL contain the date the mother's last normal menstrual period began. (month, day and year.)	OBX|16|DM|8665-2^ Date last menstrual period ||20100418	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1505

6.6.1.1.64 YOPO Date of Last Other Pregnancy Outcome [Year]

YOPO Derivation Rule (2)

IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Other Pregnancy Outcome (NCHS)*), THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "YOPO" SHALL = the Year part of

$PregnancyHistoryObservationValue WHERE **$PregnancyHistoryObservationValue** is expressed as Date AND WHERE the Year is represented using 4-digits ELSE YOPO" SHALL = '8888') ELSE "YOPO" SHALL = '9999'		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsOPO)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='69043-8', CodeSystemName= 'LOINC', DisplayName='Other pregnancy outcomes' AND /effectiveTime contains YOPO

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 68500-8^Date last other pregnancy outcome OBX-5 SHALL contain the date that the last pregnancy that did not result in a live birth ended. Includes pregnancy losses at any gestation age. (month and year)	OBX|16|DTM|68500-8^Date last other pregnancy outcome||20100418	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1510

6.6.1.1.65 MOPO Date of Last Other Pregnancy Outcome [Month]

MOPO Derivation Rule (2)
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Date of Last Other Pregnancy Outcome (NCHS)*), THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "MOPO" SHALL = the Month part of **$PregnancyHistoryObservationValue** WHERE **$PregnancyHistoryObservationValue** is expressed as Date AND WHERE the Month is represented using 2-digits ELSE MOPO" SHALL = '88') ELSE "MOPO" SHALL = '99'

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$PregnancyHistoryObservationCode	observation.code observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsOPO)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='69043-8', CodeSystemName= 'LOINC', DisplayName='Other pregnancy outcomes' AND /effectiveTime contains MOPO

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 68500-8^Date last other pregnancy outcome OBX-5 SHALL contain the date that the last pregnancy that did not result in a live birth ended. Includes pregnancy losses at any gestation age. (month and year)	OBX|16|DTM|68500-8^Date last other pregnancy outcome||20100418	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.66 ADDRESS_D Facility Address

ADDRESS_D Derivation Rule (2)		
"Facility Address" SHALL be populated using the **$ChildFacilityAddress**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ChildFacilityAddress	encounter.serviceProvider(organization.name)	ClinicalDocument/componentOf/encompassingEncounter/location/healthCareFacility/location/addr

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/addr = ADDRESS_D

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-11 where XAD_BR-7 Address Type is BDL (,Birth delivery location (address where birth occurred)) from PHVS_BirthReportingAddressType_NCHS	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||300 Main St^^Metropolis^Rhode Island^03443^BDL||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.67 FNAME Facility Name [if Not institution, give street and number]

FNAME Derivation Rule (2)		
FNAME" SHALL be populated using the **$ChildFacilityName.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildFacilityName	encounter.serviceProvider(organization.name)	ClinicalDocument/componentOf/encompassingEncounter/location/healthCareFacility/location/name

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/playingEntity/name = FNAME

Mapping to HL7 v2.6 BFDR (5b)		
Mapping Location and Content	**Example**	**Usage**

OBX-2 SHALL contain AD OBX-3 SHALL contain 62330-6 ^Birth Hospital Facility Name OBX-5 SHALL contain the name of the facility where the delivery occurred	OBX|16|AD| 62330-6^Birth Hospital Facility Name || Good Health Hospital	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.68 FNPI Facility National Provider Identifier

FNPI Derivation Rule (2)		
"FNPI" SHALL be populated using the **$ChildFacilityNPI.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ChildFacilityNPI	encounter.serviceProvider(organization.identifier)	ClinicalDocument/componentOf/encompassingEncounter/location/healthCareFacility/location/id

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/id = FNPI

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain AD OBX-3 SHALL contain 62329-8 ^Facility ID OBX-5 SHALL contain the national identifier of the facility where the delivery occurred	OBX|16|AD|62329-8 I^Facility ID || 12345	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.69 CHAM Infections Present and Treated During This Pregnancy [Chlamydia]

CHAM Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Chlamydia (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Chlamydia (NCHS)*) THEN "CHAM" SHALL = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF CHAM = 'Y' then /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '105629000', CodeSystemName= 'SNOMED CT', DisplayName= 'Chlamydia infection'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^ Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 105629000^Chlamydial infection For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 105629000^Chlamydial infection	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||105629000^Chlamydial infection ^SNM|||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||105629000^Chlamydial infection ^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.70 GON Infections Present and Treated During This Pregnancy [Gonorrhea]

GON Derivation Rule (2)

IF (**$ProblemCode** CONTAINS ValueSet (*Gonorrhea (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Gonorrhea (NCHS)*) THEN "GON" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF GON = 'Y' then /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '1562800', CodeSystemName= 'SNOMED CT', DisplayName= 'Gonorrhea'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^ Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 15628003^Gonorrhea For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 15628003^Gonorrhea	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||15628003^Gonorrhea ^SNM|||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN|15628003^Gonorrhea^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.71 HEPB Infections Present and Treated During This Pregnancy [Hepatitis B]

HEPB Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Hepatitis B (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Hepatitis B (NCHS)*) THEN "HEPB" SHALL = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF HEPB = 'Y' then /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '66071002', CodeSystemName= 'SNOMED CT', DisplayName= 'Type B viral hepatitis'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^ Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 66071002^ Type B viral hepatitis For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 66071002^ Type B viral hepatitis	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||66071002^ Type B viral hepatitis ^SNM||||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN|66071002^ Type B viral hepatitis ^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

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6.6.1.1.72 HEPC Infections Present and Treated During This Pregnancy [Hepatitis C]

HEPC Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Hepatitis C (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Hepatitis C (NCHS)*) THEN "HEPC" **SHALL** = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

$InfectionHistoryProblemCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']] /entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report • PENDING	IF HEPC = 'Y' then /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '50711007', CodeSystemName= 'SNOMED CT', DisplayName= 'Viral hepatitis C'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 50711007^Viral hepatitis C For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 50711007^Viral hepatitis C	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||50711007^Viral hepatitis C^SNM|||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN|50711007^Viral hepatitis C^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.73 SYPH Infections Present and Treated During This Pregnancy [Syphilis]

SYPH Derivation Rule (2)

IF (**$ProblemCode** CONTAINS ValueSet (*Syphilis (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Syphilis (NCHS)*) THEN "SYPH" **SHALL** ="Y" ELSE "N".

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	N/A- only verified by condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']] /entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF SYPH = 'Y' then /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '76272004', CodeSystemName= 'SNOMED CT', DisplayName= 'Syphilis'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 76272004^Syphilis For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 76272004^Syphilis	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||76272004^Syphilis ^SNM|||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN|76272004^Syphilis^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.74 NOA02 Infections Present and Treated During This Pregnancy [None of the above]

NOA02 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF NOA02 = 'Y' ssthen /code@code= Code= '72519-2', CodeSystemName= 'LOINC', DisplayName= 'Infections present and or treated during this pregnancy for live birth' AND /value@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
For Live Birth: OBX-2 SHALL contain CWE OBX-3 SHALL contain 72519-2^Infections present &or treated during this pregnancy for live birth OBX-5 SHALL contain 76272004^Syphilis (disorder) For Fetal Death: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 260413007^None (qualifier value)	For Live Birth: OBX|20|CWE|72519-2^Infections present and treated during this pregnancy for live birth^LN||260413007^None (qualifier value)^SNM||||||F For Fetal Death: OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN|260413007^None (qualifier value)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.75 AINT Maternal Morbidity [Admission to Intensive care [unit]]

AINT Derivation Rule (2)		
IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*ICU Care (NCHS)*) THEN "AINT" SHALL be "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/act/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF AINT = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '309904001', CodeSystemName= 'SNOMED CT', DisplayName= 'Intensive care unit'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 309904001^Intensive care unit	OBX|23|CWE|73781-7^Maternal Morbidity ^LN||309904001^Intensive care unit^SNM||||||Fs	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y

		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.76 MTR Maternal Morbidity [Maternal Transfusion]

MTR Derivation Rule (2)		
IF (**$ProcedureCode** CONTAINS ValueSet (*Transfusion Whole Blood or Packed Red Bld (NCHS)*) THEN "MTR" **SHALL** be "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF MTR = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '116859006', CodeSystemName= 'SNOMED CT', DisplayName= 'Maternal Transfusion'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 116859006^Transfusion of blood product (procedure)	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||116859006^Transfusion of blood product^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.77 PLAC Maternal Morbidity [[Third or fourth degree] perineal laceration]

PLAC Derivation Rule (2)		
IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Third Degree Perineal Laceration (NCHS)*) OR (*Fourth Degree Perineal Laceration (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Third Degree Perineal Laceration (NCHS)*) OR (*Fourth Degree Perineal Laceration (NCHS)*) THEN "PLAC" **SHALL** be "Y" ELSE "N"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	procedure.code	CodeClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PLAC = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '398019008', CodeSystemName= 'SNOMED CT', DisplayName= 'Perineal laceration during delivery'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 398019008^Perineal laceration during delivery (disorder)	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||398019008^Perineal laceration during delivery (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.78 RUT Maternal Morbidity [Ruptured Uterus]

RUT Derivation Rule (2)
IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Ruptured Uterus (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Ruptured Uterus (NCHS)*) THEN "RUT" **SHALL** be "Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$EventOutcomesObservationCode	procedure.code	CodeClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF RUT = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '34430009', CodeSystemName= 'SNOMED CT', DisplayName= 'Rupture of uterus'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 34430009^Rupture of uterus (disorder)	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||34430009^Rupture of uterus (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.79 UHYS Maternal Morbidity [Unplanned hysterectomy]

UHYS Derivation Rule (2)

IF (**$ProcedureCode** CONTAINS ValueSet (*Unplanned Hysterectomy (NCHS)*) THEN "UHYS" **SHALL** be "Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF UHYS = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '625654015', CodeSystemName= 'SNOMED CT', DisplayName= 'Emergency cesarean hysterectomy'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 236987005^Emergency cesarean hysterectomy (procedure)	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||236987005^Emergency cesarean hysterectomy (procedure)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.80 UOPR Maternal Morbidity [Unplanned operat[ing]ion [room procedure following delivery]]

UOPR Derivation Rule (2)

IF (**$ProcedureCode** CONTAINS ValueSet (*Unplanned Operation (NCHS)*) "UOPR" **SHALL** be "Y" ELSE "N"

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF UOPR = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '177217006', CodeSystemName= 'SNOMED CT', DisplayName= 'Immediate repair of obstetric laceration'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 442261000124103^Emergency operation following delivery	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||442261000124103^ Emergency operation following delivery^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.81 NOA05 Maternal Morbidity [None of the above] NOTE: NOA05 is also used for onset of labor

NOA05 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF NOA05 = 'Y' then /code@code= Code= '73781-7', CodeSystemName= 'LOINC', DisplayName= 'Maternal morbidity' AND /value@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73781-7^ Maternal morbidity OBX-5 SHALL contain 260413007^None (qualifier value)	OBX|22|CWE|73781-7^Maternal Morbidity ^LN||260413007^None (qualifier value)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y

		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.82 PRES Method of Delivery [Fetal presentation [at birth] – Cephalic]

PRES Derivation Rule (2)		
IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Cephalic (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Cephalic (NCHS)s)* THEN "PRES" **SHALL** = "1" ELSE IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Breech (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Breech (NCHS))* THEN "PRES" **SHALL** = "2" ELSE IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Other (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Fetal Presentation at Birth- Other (NCHS)*) THEN "PRES" **SHALL** = "3" ELSE "PRES" **SHALL** = "9"		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource	**Content**	
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PRES = '1' then entryRelationship/code@code= Code= '73761-9', CodeSystemName= 'LOINC', DisplayName= 'Fetal presentation at birth' AND entryRelationship/value@code= Code= '6096002', CodeSystemName= 'SNOMED CT', DisplayName= 'Breech presentation' ELSE IF PRES = '2' then entryRelationship/code@code= Code= '73761-9', CodeSystemName= 'LOINC', DisplayName= 'Fetal presentation at birth' AND entryRelationship/value@code= Code= '70028003', CodeSystemName= 'SNOMED CT', DisplayName= 'Vertex Presentation' ELSE IF PRES = '3' then entryRelationship/code@code= Code= '73761-9', CodeSystemName= 'LOINC', DisplayName= 'Fetal presentation at birth'	

	AND entryRelationship/value@code= Code= '394841004', CodeSystemName= 'SNOMED CT', DisplayName= 'Other category' ELSE IF PRES = '9' then entryRelationship/code@code= Code= '73761-9', CodeSystemName= 'LOINC', DisplayName= 'Fetal presentation at birth' AND entryRelationship/value@code= Code= '261665006', CodeSystemName= 'SNOMED CT', DisplayName= 'Unknowncategory'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73761-9^Fetal Presentation at Birth OBX-5 SHALL contain 70028003^Vertex presentation (finding)	OBX|24|CWE|73761-9^Fetal presentation at Birth^LN||70028003^Cephalic^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73761-9^Fetal Presentation at Birth OBX-5 SHALL contain 6096002^Breech Presentation	OBX|20|CWE|73761-9^Fetal presentation at Birth^LN||6096002^Breech Presentation^SNM|||||F	PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73761-9^Fetal Presentation at Birth OBX-5 SHALL contain 394841004^Other category (qualifier value)	OBX|20|CWE|73761-9^Fetal presentation at Birth^LN||394841004^ Other category^SNM|||||F	JFDI	Y
		CCOFDI	

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6.6.1.1.83 ROUT Method of Delivery [[Final]Route and method of delivery]

ROUT Derivation Rule (2)		
IF ((**$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Spontaneous (NCHS)*) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Method of Delivery Vaginal-Spon Finding (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Method of Delivery Vaginal-Spon Finding (NCHS)*) THEN "ROUT" SHALL = "1" ELSE IF (**$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Forceps (NCHS)*) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Method of Delivery Vaginal Forceps Finding (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Method of Delivery Vaginal Forceps Finding (NCHS)*) THEN "ROUT" SHALL = "2" ELSE IF (**$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Vacuum (NCHS)*) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Method of Delivery Vaginal Vacuum Finding (NCHS))* OR (**$ProblemCode** CONTAINS ValueSet (*Method of Delivery Vaginal Vacuum Finding (NCHS))* THEN "ROUT" SHALL = "3" ELSE IF (**$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Cesarean (NCHS)*) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Method of Delivery Cesarean Finding (NCHS))* OR (**$ProblemCode** CONTAINS ValueSet (*Method of Delivery Cesarean Finding (NCHS))* THEN "ROUT" SHALL = "4" ELSE "ROUT" **SHALL** = "9".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']]/act/codes
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF ROUT = '1' then entryRelationship/code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery' AND entryRelationship/value@code= Code= '48782003', CodeSystemName= 'SNOMED CT', DisplayName= 'Delivery normal' ELSE IF ROUT = '2' then entryRelationship/code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery' AND entryRelationship/value@code= Code= '302383004', CodeSystemName= 'SNOMED CT', DisplayName= 'Forceps delivery' ELSE IF ROUT = '3' then entryRelationship/code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery' AND entryRelationship/value@code= Code= '61586001', CodeSystemName= 'SNOMED CT', DisplayName= 'Delivery by vacuum extraction' ELSE IF ROUT = '4' then entryRelationship/code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery' AND entryRelationship/value@code= Code= '11466000', CodeSystemName= 'SNOMED CT', DisplayName= 'Cesarean section' ELSE IF ROUT = '9' then entryRelationship/code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery'

	AND entryRelationship/value@code= Code= '261665006', CodeSystemName= 'SNOMED CT', DisplayName= 'Unknown category'		
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73762-7^Final Route and Method of Delivery OBX-5 SHALL contain 48782003^Delivery normal	OBX|20|CWE|73762-7^Final Route and Method of Delivery^LN||48782003 ^ Delivery normal ^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73762-7^ Final Route and Method of Delivery OBX-5 SHALL contain 302383004^Forceps delivery	OBX|20|CWE|73762-7^Final Route and Method of Delivery^LN|| 302383004^ Forceps delivery^SNM|||||F	PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73762-7^ Final Route and Method of Delivery OBX-5 SHALL contain 61586001^ Delivery by vacuum extraction	OBX|20|CWE|73762-7^Final Route and Method of Delivery^LN|| 61586001^ Delivery by vacuum extraction^SNM|||||F	JFDI	Y
		CCOFDI	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73762-7^Final Route and Method of Delivery OBX-5 SHALL contain 11466000^ Cesarean section	OBX|20|CWE|73762-7^Final Route and Method of Delivery^LN||11466000^Cesarean section^SNM|||||F		

6.6.1.1.84 TLAB Method of Delivery [Trial of labor attempted]

TLAB Derivation Rule (2)		
IF ((**$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Cesarean (NCHS)*) OR (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Scheduled Cesarean Finding (NCHS)*) OR (**$ProblemCode** CONTAINS ValueSet (*Scheduled Cesarean Finding (NCHS)*) THEN (IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Method of Delivery Trial Labor Finding (NCHS)*)OR (**$ProblemCode** CONTAINS ValueSet (*Route Method of Delivery - Trial of Labor (NCHS)*) THEN "TLAB" **SHALL** be "Y" ELSE IF NOT **$ProcedureCode** CONTAINS ValueSet (*Route and Method of Delivery - Scheduled C (NCHS)*) THEN "TLAB" SHALL NOT be available for data entry and SHALL = "X" ELSE IF =NULL THEN "U") ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@

		root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.25.1.4.1']/act/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF TLAB = 'Y' then /code@code= Code= '72149-8', CodeSystemName= 'LOINC', DisplayName= 'Delivery method' AND entryRelationship /code@code= Code= '73762-7', CodeSystemName= 'LOINC', DisplayName= 'Final route and method of delivery' AND /entryRelationship/value@code= Code= '11466000, CodeSystemName= 'SNOMED CT', DisplayName= 'Cesarean section' AND /entryRelationship/entryRelationship/code@code= Code= '73760-1', CodeSystemName= 'LOINC', DisplayName= 'If cesarean, a trial of labor was attempted' AND /entryRelationship /entryRelationship/value@code= Boolean form of TLAB

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73760-1^If cesarean, a trial of labor was attempted OBX-5 SHALL contain boolean indication using PHVS_YesNoUnknown_CDC Yes No Unknown (YNU)	OBX|24|CWE|73761-9^Fetal presentation at Birth^LN|| N^No^ PHVS_YesNoUnknown_CDC ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.85 MFNAME Mother's Current Legal Name [First Name]

MFNAME Derivation Rule (2)
"MFNAME" **SHALL** be populated using the First Name part of **$MotherName**.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$MotherName	patient.name	/ClinicalDocument/ recordTarget/patientRole/patient/name

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PENDING	PENDING	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.86 MMNAME Mother's Current Legal Name [Middle Name]

MMNAME Derivation Rule (2)		
"MMNAME" **SHALL** be populated using the Middle Name part of part **$MotherName.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$MotherName	patient.name	/ClinicalDocument/ recordTarget/patientRole/patient/name

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PENDING	PENDING	PSMLBDI	

		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.87 MLNAME Mother's Current Legal Name [Last Name]

MLNAME Derivation Rule (2)				
"MLNAME" **SHALL** be populated using the Last Name part of part of **$MotherName.**				
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**		
$MotherName	patient.name	/ClinicalDocument/ recordTarget/patientRole/patient/name		
Mapping to HL7 FHIR BFDR (5a)				
FHIR Profile/Resource		**Content**		
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING		PENDING		
Mapping to HL7 v2.6 BFDR (5b)				
Mapping Location and Content		**Example**	**Usage**	
PENDING		PENDING	PSMLBDI	
			PSMFDI	
			PSLBI	
			PSFLBI	
			PSFFDI	
			PSFDI	
			JLBI	
			JFDI	
			CCOFDI	

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6.6.1.1.88 MSUFF Mother's Current Legal Name [suffix]

MSUFF Derivation Rule (2)		
"MSUFF" **SHALL** be populated using the Last Name Suffix part of part of **$MotherName.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$MotherName	patient.name	/ClinicalDocument/ recordTarget/patientRole/patient/name

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PENDING	PENDING	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.89 HFT Mother's Height [Feet]

HFT Derivation Rule (2)		
IF (**$VitalSignsTypeCode** CONTAINS ValueSet (*Height (NCHS)*), THEN "HFT" **SHALL** = feet part of **$VitalSignsResultValue** WHERE **$VitalSignsResultUnits** are expressed in Feet and Inches**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsHT)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsResultValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@

		root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value
$VitalSignsResultUnits	Observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value[@units]

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='3137-7', CodeSystemName= 'LOINC', DisplayName='Body height' AND /value@value= HFT(PQ) /value/@unit= 'ft'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 83846-6^ Mother's body height OBX-5 SHALL contain the Mother's Height in Inches OBX-6 SHALL indicate feet using UCUM units: SHALL contain ft	OBX|9|NM|83846-6^ Mother's body height ^LN||6|ft	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.90 HIN Mother's Height [Inches]

HIN Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet *(Height (NCHS))*, THEN "HIN" **SHALL** = Inches part of **$VitalSignsResultValue** WHERE **$VitalSignsResultUnits** are expressed in Feet and Inches**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsHT)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsResultValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@

		root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value
$VitalSignsResultUnits	Observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value[@units]

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='3137-7', CodeSystemName= 'LOINC', DisplayName='Body height' AND /value@value= HIN(PQ) /value/@unit= 'in'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 83846-6^ Mother's body height OBX-5 SHALL contain the Mother's Height in Inches OBX-6 SHALL indicate inches using UCUM units: SHALL contain in	OBX|9|NM|83846-6^ Mother's body height ^LN||58|in	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.91 MRECNUM Mother's Medical Record Number

MRECNUM Derivation Rule (2)		
"MRECNUM" **SHALL** be populated using **$MotherMedRecNum**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$MotherMedRecNum	patient.identifier	/ClinicalDocument/patientRole/id

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	recordTarget/patientRole/id = MRECNUM

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
NK1-33 where NK1-3 (Relationship) is MTH (Mother)	NK1|1|Johnson^Susanna^J^III^^^^^^^^^^ MD|1830 Sunshine Drive^^Beautiful City^HerState^86534-1111^^H||||||||||||||||||||||||||9876546688^^^^MRN	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.92 PWGT Mother's Pre-pregnancy Weight

PWGT Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) where **$VitalSignsMethodCode** CONTAINS ValueSet (*Pre-Pregnancy Weight (NCHS)*), THEN "PWGT" **SHALL** = **$VitalSignsResultValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsHT)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsMethodCode	Observation.method	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode
$VitalSignsResultValue	Observation. valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value
$VitalSignsResultUnits	observation.valueQuantity	PENDING

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='56077-1', CodeSystemName= 'LOINC', DisplayName= 'Body weight -- pre current pregnancy' AND

	/value@value= PWGT(PQ) /value/@unit= 'lb'		
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 56077-1^Body weight ^ pre current pregnancy OBX-5 SHALL contain the mother's weight before becoming pregnant OBX-6 SHALL indicate pounds using UCUM units: SHALL contain lb	OBX|10|NM|56077_1^Body weight-pre current pregnancy^LN||94lb	PSMLBDI	Y
		PSMFDI	Y
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.93 NFACL Mother [If Mother transferred for maternal medical or fetal indications for delivery, enter name of facility mother transferred from.]

NFACL Derivation Rule (2)		
IF **$AdmitSrc** CONTAINS value set (*Transfer In (NCHS)*) OR **$ProblemCode** Contains Value Set (*Transferred for Maternal Medical or Fetal Indications for Delivery (NCHS)*), THEN **NFACL SHALL** = **$ReferringFacilityName** ELSE **NFACL SHALL** = NULL'.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$AdmitSrc	encounter.hospitalization.admitSource	encompassingEncounter/sdtc:admissionSourceReferralCode
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$ReferringFacilityName	encounter.hospitalization.origin(location.name)	/encompassingEncouter/encounterParticipant[@typeCode='REF']/assignedEntity/representedOrganization

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/scopingEntity/name = NFACL

Mapping to HL7 v2.6 BFDR (5b)		
Mapping Location and Content	**Example**	**Usage**

PV1-6	PV1||I||^^^^^^^^Simple Birth Clinic||||||||||||PI	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.94 TRAN Mother Transferred for Maternal Medical or Fetal Indications for Delivery

TRAN Derivation Rule (2)		
IF **$AdmitSrc** CONTAINS Value Set (*Transfer In (NCHS)*) OR **$ProblemCode** CONTAINS Value Set (*Transferred for Maternal Medical or Fetal Indications for Delivery (NCHS)*), THEN "**TRAN" SHALL** = "Y" ELSE IF **$AdmitSrc** NOT NULL, THEN TRAN **SHALL** = "N" ELSE TRAN **SHALL** = "U".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$AdmitSrc	encounter.hospitalization.admitSource	encompassingEncounter/sdtc:admissionSourceReferralCode
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='73763-5', CodeSystemName= 'LOINC', DisplayName=' Mother was transferred for maternal medical or fetal indications for delivery' AND /value@value= Boolean form of TRAN

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73763-5^ Mother was transferred for maternal medical or fetal indications for delivery OBX-5 SHALL contain boolean indication of whether a trial of labor was attempted using	OBX|4|CWE|73763-5^Mother transferred for maternal medical or fetal indications for delivery?^LN||N^No^ PHVS_YesNoUnknown_CDC ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y

PHVS_YesNoUnknown_CDC Yes No Unknown (YNU)		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.95 DWGT Mother's Weight at Delivery

DWGT Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) where **$VitalSignsMethodCode** CONTAINS ValueSet (*Mothers Delivery Weight (NCHS)*), THEN "DWGT" **SHALL** = **$VitalSignsResultValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsHT)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsMethodCode	Observation.method	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode
$VitalSignsResultValue	Observation. valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/value
$VitalSignsResultUnits	observation.valueQuantity	PENDING

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='69461-2', CodeSystemName= 'LOINC', DisplayName= 'Body weight mother -- at delivery' AND /value@value= DWGT(PQ) /value/@unit= 'lb'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 69461-2^ Body weight at delivery	OBX|10|NM|69461-2^ Body weight at delivery^LN||124lb	PSMLBDI	
		PSMFDI	
		PSLBI	Y

OBX-5 SHALL contain the mother's weight at the time of delivery OBX-6 SHALL indicate pounds using UCUM units: SHALL contain lb		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.96 POPO Number of Other Pregnancy Outcomes

POPO Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Previous Other Pregnancy Outcomes (NCHS)v*), THEN "POPO" **SHALL** = **$PregnancyHistoryObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Previous Other Pregnancy Outcomes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.121)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='69043-8', CodeSystemName= 'LOINC', DisplayName= 'Other pregnancy outcomes' AND /value@value= POPO(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 69043-8^Other pregnancy outcomes OBX-5 SHALL contain the 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.	OBX|15|NM|69043-8^Other pregnancy outcomes||1	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y

		CCOFDI	

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6.6.1.1.97 PLBD Number of Previous Live Births now dead [do not include this child]

PLBD Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Number of Previous Live Births Now Dead (NCHS)v*), THEN "PLBD" **SHALL** = **$PregnancyHistoryObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Number of Previous Live Births Now Dead (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.122)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='68496-9', CodeSystemName= 'LOINC', DisplayName= 'Live births now dead' AND /value@value= PLBD(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 68496-9^Live births.now dead OBX-5 SHALL contain 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	OBX|15|NM|68496-9^Live births.now dead||1	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.98 PLBL Number of Previous Live Births now living [do not include this child]

PLBL Derivation Rule (2)

IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Number of Previous Live Births Now Living (NCHS)*), THEN "PLBL" **SHALL** = **$PregnancyHistoryObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Number of Previous Live Births Now Living (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.123)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='11638-4', CodeSystemName= 'LOINC', DisplayName= 'Births still living' AND /value@value= PLBL(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 11638-4^Births.still living OBX-5 SHALL contain 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.	OBX|12|NM|11638-4^Births.still living^LN||2	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.99 OWGEST Obstetric Estimate of Gestation

OWGEST Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Obstetric Estimate of Gestation (NCHS)*), THEN "OWGEST" **SHALL** = **$PregnancyHistoryObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Obstetric	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code

	Estimate of Gestation (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.124)	
$PregnancyHistoryObservationValue	observation.valueCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='11884-4', CodeSystemName= 'LOINC', DisplayName= 'Gestational age Estimated' AND /value@value= OWGEST(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 11884-4^Obstetric estimate of gestation OBX-5 SHALL contain the best obstetric estimate of the infant's gestation in completed weeks based on the birth attendant's final estimate of gestation. This estimate of gestation should be determined by all perinatal factors and assessments such as ultrasound, but not the neonatal exam. Ultrasound taken early in pregnancy is preferred. Do not complete solely based on the infant's date of birth and the mothers date of last menstrual period.	OBX|25|NM|11884-4^Obstetric estimate of gestation^LN||39|wk	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.100 CERV Obstetric Procedures [Cervical cerclage]

CERV Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Cervical Cerclage (NCHS)*), THEN "CERV" **SHALL** = 'Y' ELSE "CERV" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF CERV = 'Y' then /code@code= Code= '265636007', CodeSystemName= 'SNOMED CT', DisplayName= 'Cerclage of cervix'

	/@negationInd = false		
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73814-6^Obstetric procedures performed OBX-5 SHALL contain 265636007^Cerclage of cervix (procedure)	OBX|21|CWE|73814-6^Obstetric procedures^LN||265636007^Cerclage of cervix (procedure)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.101 ECVF Obstetric Procedures [Failed External cephalic Version]

ECVF Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*External Cephalic Version (NCHS)v*) as 'INT' and Negation=TRUE, THEN "ECVF" **SHALL** = 'Y' ELSE "ECVF" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73814-6^Obstetric procedures performed OBX-5 SHALL contain 240278000^External cephalic version (procedure) AND OBX-2 SHALL contain CWE OBX-3 SHALL contain 73820-3^Successful external cephalic version	OBX|21|CWE|73814-6^Obstetric procedures^LN||240278000^ External cephalic version (procedure)^SNM|||||F OBX|21|CWE|73820-3^Successful external cephalic version ^LN|| N^No^HL70532|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y

OBX-5 SHALL contain boolean indication (No)		JFDI	
		CCOFDI	

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6.6.1.1.102 ECVS Obstetric Procedures [Successful External cephalic version]

ECVS Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*External Cephalic Version (NCHS)*), AND **NOT ('INT' and Negation)=TRUE**, THEN "ECVS" **SHALL** = 'Y' ELSE "ECVS" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF ECVS = 'Y' then /code@code= Code= '240278000', CodeSystemName= 'SNOMED CT', DisplayName= 'External Cephalic Version' /@negationInd = false

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73814-6^Obstetric procedures performed OBX-5 SHALL contain 240278000^External cephalic version (procedure) AND OBX-2 SHALL contain CWE OBX-3 SHALL contain 73820-3^Successful external cephalic version OBX-5 SHALL contain boolean indication (Yes)	OBX|21|CWE|73814-6^Obstetric procedures^LN||240278000^ External cephalic version (procedure)^SNM|||||F OBX|21|CWE|73820-3^Successful external cephalic version ^LN|| Y^Yes^HL70532|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.103 TOC Obstetric Procedures [Tocolysis]

TOC Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Tocolysis (NCHS)*), THEN "TOC" **SHALL** = 'Y' ELSE "TOC" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF TOC = 'Y' then /code@code= Code= '103747003', CodeSystemName= 'SNOMED CT', DisplayName= 'Tocolysis' /@negationInd = false

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73814-6^Obstetric procedures performed OBX-5 SHALL contain 103747003^Tocolysis (procedure)	OBX|21|CWE|73814-6^Obstetric procedures^LN||103747003^Tocolysis (procedure)^SNM|||||Fs	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.104 NOA03 Obstetric Procedures [None of the above]

NOA03 Derivation Rule (2)		
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF NOA03 = 'Y' then /code@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None' /@negationInd = false

Mapping to HL7 v2.6 BFDR (5b)		
Mapping Location and Content	**Example**	**Usage**

OBX-2 SHALL contain CWE OBX-3 SHALL contain 73814-6^Obstetric procedures performed OBX-5 SHALL contain 260413007^None (qualifier value)	OBX|21|CWE|73814-6^Obstetric procedures^LN||260413007^None (qualifier value)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.105 PROM Onset of Labor [Premature Rupture]

PROM Derivation Rule (2)		
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Premature Rupture (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Premature Rupture (NCHS)*),, THEN "PROM" **SHALL** = 'Y' ELSE "PROM" SHALL = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF PROM = 'Y' then /code@code= Code= '73774-2', CodeSystemName= 'LOINC', DisplayName= 'Onset of labor' AND /value@code= Code= '44223004', CodeSystemName= 'SNOMED CT', DisplayName= 'Premature rupture of membranes'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73774-2^ Onset of labor OBX-5 SHALL contain 44223004^Premature Rupture of membranes (disorder)	OBX|22|CWE|73774-2^Onset of labor||44223004^Premature Rupture of membranes (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	

		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.106 PRIC Onset of Labor [Precipitous Labor]

PRIC Derivation Rule (2)		
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Precipitous Labor (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Precipitous Labor (NCHS)*), THEN "PRIC" **SHALL** = 'Y' ELSE "PRIC" SHALL = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF PRIC = 'Y' then /code@code= Code= '73774-2', CodeSystemName= 'LOINC', DisplayName= 'Onset of labor' AND /value@code= Code= '51920004', CodeSystemName= 'SNOMED CT', DisplayName= 'Precipitate labor'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73774-2^ Onset of labor OBX-5 SHALL contain 51920004^Precipitate labor (disorder)	OBX|22|CWE|73774-2^Onset of labor||51920004^Precipitate labor (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1600

6.6.1.1.107 PROL Onset of Labor [Prolonged Labor]

PROL Derivation Rule (2)		
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Prolonged Labor (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Prolonged Labor (NCHS)*), THEN "PROL" **SHALL** = 'Y' ELSE "PROL" SHALL = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF PROL = 'Y' then /code@code= Code= '73774-2', CodeSystemName= 'LOINC', DisplayName= 'Onset of labor' AND /value@code= Code= '53443007', CodeSystemName= 'SNOMED CT', DisplayName= Prolonged labor'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73774-2^ Onset of labor OBX-5 SHALL contain 53443007^Prolonged labor (disorder)	OBX|22|CWE|73774-2^Onset of labor||53443007^Prolonged labor (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.108 NOA05 Onset of Labor [None of the above NOTE: NOA05 is also used for Maternal Morbidity]

NOA05 Derivation Rule (2)
This SHALL require data entry and SHALL NOT be a result of a default from the other attributes in the list.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	IF NOA05 = 'Y' then /code@code= Code= '73774-2', CodeSystemName= 'LOINC', DisplayName= 'Onset of labor' AND /value@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73774-2^ Onset of labor OBX-5 SHALL contain 260413007^None (qualifier value)	OBX|22|CWE|73774-2^Onset of labor||53443007^260413007^None (qualifier value)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

1605

6.6.1.1.109 SFN Place Where Birth Occurred [State Facility Number]

SFN Derivation Rule (2)		
"SFN" SHALL be populated using **$BabyFacilityStateID.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BabyFacilityStateID	encounter.serviceProvider(organization.identifier)	/ClinicalDocument/componentOf/encompassingEncounter/location/healthCareFacility/location/id

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/id = SFN

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain AD OBX-3 SHALL contain 62329-8^ Birth Hospital Facility Id OBX-5 SHALL contain the address of the facility where the delivery occurred	OBX|16|AD| 62329-8^ Birth Hospital Facility Id ||300 Main St^^Metropolis^Rhode Island^03443^	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.110 FLOC Where Birth Occurred [Facility City/Town]

FLOC Derivation Rule (2)		
"FLOC" SHALL = City/Town part of **$BabyFacilityLocation.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BabyFacilityLocation	encounter.serviceProvider(organization.address)	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/addrcity

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/addr contains FLOC

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain AD OBX-3 SHALL contain 62331-4 ^Birth Hospital Facility Address OBX-5 SHALL contain the address of the facility where the delivery occurred	OBX|16|AD| 62331-4 ^Birth Hospital Facility Address ||300 Main St^^Metropolis^Rhode Island^03443^	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y

		JFDI	Y
		CCOFDI	

6.6.1.1.111 CNAME Where Birth Occurred [County Name]

CNAME Derivation Rule (2)		
"CNAME" SHALL = County name part of **$BabyFacilityLocation.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$BabyFacilityLocation	encounter.serviceProvider(organization.address)	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] /relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/ addr/county

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/addr contains CNAME

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain AD OBX-3 SHALL contain 62331-4 ^Birth Hospital Facility Address OBX-5 SHALL contain the address of the facility where the delivery occurred	OBX|16|AD| 62331-4 ^Birth Hospital Facility Address ||300 Main St^^Metropolis^Rhode Island^03443^	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.112 CNTYO Where Birth Occurred [County Code]

CNTYO Derivation Rule (2)		
"CNTYO" SHALL = County Code part of **$BabyFacilityLocation.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$BabyFacilityLocation	encounter.serviceProvider(organization.address)	/participant/participantRole/addr This derivation rule is subject to Realm specificity. For example, in the US, a value set lookup using the code from CNTYO.

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/participant/participantRole/addr contains CNTYO

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain AD OBX-3 SHALL contain 62331-4 ^Birth Hospital Facility Address OBX-5 SHALL contain the address of the facility where the delivery occurred	OBX|16|AD| 62331-4 ^Birth Hospital Facility Address ||300 Main St^^Metropolis^Rhode Island^03443^	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.113 BPLACE Where Birth Occurred [Birth Place]

BPLACE Derivation Rule (2)		
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Birthplace Setting (NCHS)*) THEN IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birthplace Hospital (NCHS)*) THEN BPLACE SHALL = '1' ELSE IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birth Place Freestanding Birthing Center (NCHS)*) THEN BPLACE SHALL = '2' ELSE IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birth Place Home Intended (NCHS)*) THEN BPLACE SHALL = '3' ELSE IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birth Place Home Unintended (NCHS)*) THEN BPLACE SHALL = '4' ELSE IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birth Place Home Unknown Intention (NCHS)*) THEN BPLACE SHALL = '5' ELSE IF **$EventOutcomesObservationValue** CONTAINS ValueSet (*Birthplace Clinic Office (NCHS)*) THEN BPLACE SHALL = '6' ELSE BPLACE SHALL = '7'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsBPLACE)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/observation/code

$EventOutcomesObservationValue	observation.valueCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report • PENDING	IF BPLACE = '1' then /participant/participantRole/code@code = Code= '22232009', CodeSystemName= 'SNOMED CT', DisplayName= 'Hospital' ELSE IF BPLACE = '2' then /participant/participantRole/code@code = Code= '91154008', CodeSystemName= 'SNOMED CT', DisplayName= 'Free-standing birthing center' ELSE IF BPLACE = '3' then (/participant/participantRole/code@code = Code= '169813005', CodeSystemName= 'SNOMED CT', DisplayName= 'Home birth' AND /entryRelationship/component/[home Birth Plan [Observation: templateId 2.16.840.1.113883.10.20.26.26]] /code@code = Code= '73765-0', CodeSystemName= 'LOINC', DisplayName= 'Home birth' /value@code = '1') ELSE IF BPLACE = '4' then (/participant/participantRole/code@code = Code= '169813005', CodeSystemName= 'SNOMED CT', DisplayName= 'Home birth' AND /entryRelationship/component/[home Birth Plan [Observation: templateId 2.16.840.1.113883.10.20.26.26]] /code@code = Code= '73765-0', CodeSystemName= 'LOINC', DisplayName= 'Home birth' /value@code = '0') ELSE IF BPLACE = '5' then (/participant/participantRole/code@code = Code= '169813005', CodeSystemName= 'SNOMED CT', DisplayName= 'Home birth' AND /entryRelationship/component/[home Birth Plan [Observation: templateId 2.16.840.1.113883.10.20.26.26]] /code@code = Code= '73765-0', CodeSystemName= 'LOINC', DisplayName= 'Home birth' /value@code = NULL Flavor) ELSE IF BPLACE = '6' then /participant/participantRole/code@code = Code= '67190003', CodeSystemName= 'SNOMED CT', DisplayName= 'Free-standing clinic'

	ELSE IF BPLACE = '7' then /participant/participantRole/code@code = Code= '394841004', CodeSystemName= 'SNOMED CT', DisplayName= 'Other'		
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain 22232009^Hospital	OBX|1|CWE|73766-8^Birth/delivery location type^LN||22232009^Hospital^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
	OBX|1|CWE|73766-8^Birth/delivery location type^LN||67190003^Free-standing clinic ^SNM|||||F	PSFLBI	Y
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain 67190003^Free-standing clinic		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
	OBX|1|CWE|73766-8^Birth/delivery location type^LN||91154008^Free-standing birthing center ^SNM|||||F	JFDI	Y
		CCOFDI	
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain 91154008^Free-standing birthing center	OBX|1|CWE|73766-8^Birth/delivery location type^LN||408838003^Unplanned Home Birth^SNM|||||F		
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain one of: 408839006^Planned Home Birth, SNM 408838003^Unplanned Home Birth, SNM PHC1297^Unknown if Planned Home Birth, PHINVS	OBX|1|CWE|73766-8^Birth/delivery location type^LN||OTH^Other^NullFlavor|||||F		
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain OTH^Other, NullFlavor	OBX|1|CWE|73766-8^Birth/delivery location type^LN||UNK^Unknown^NullFlavor|||||F		
PID-11 (for address if not in facility); If in Facility: OBX-2 SHALL contain CWE			

OBX-3 SHALL contain 73766-8^Place where birth occurred OBX-5 SHALL contain UNK^Unknown, NullFlavor			

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6.6.1.1.114 PLUR Plurality

PLUR Derivation Rule (2)		
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Birth Plurality of Delivery (NCHS)*), THEN "PLUR" SHALL = **$EventOutcomesObservationValue**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsPLUR)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/observation/code
$EventOutcomesObservationValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='57722-1', CodeSystemName= 'LOINC', DisplayName= 'Birth plurality' AND /value@value= PLUR(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 57722-1^Birth plurality OBX-5 SHALL contain 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	OBX|30|NM|57722-1^Birth plurality^LN||1	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y

		CCOFDI	

6.6.1.1.115 DOFP_MO Prenatal Care Visits [Month]

DOFP_MO Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*First Prenatal Care Visit (NCHS)*) THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "DOFP_MO" SHALL = the Month part of **$PregnancyHistoryObservationValue** WHERE the Month is represented using 2-digits ELSE DOFP_MO" SHALL = '88') ELSE "DOFP_MO" SHALL = '99'.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsDOFP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/effectiveTime/low

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 69044-6^Date first prenatal visit OBX-5 SHALL contain the date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	OBX|5|DTM|69044-6^Date first prenatal visit^LN||20100528|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.116 DOFP_DY Prenatal Care Visits [Day]

DOFP_DY Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*First Prenatal Care Visit (NCHS)v*) THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "DOFP_DY" SHALL CONTAINS the Day part of **$PregnancyHistoryObservationValue** WHERE the Day is represented using 2-digits ELSE DOFP_DY" SHALL = '88') ELSE "DOFP_DY" SHALL = '99'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsDOFP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/effectiveTime/low

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 69044-6^Date first prenatal visit OBX-5 SHALL contain the date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	OBX|5|DTM|69044-6^Date first prenatal visit^LN||20100528|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

1625

6.6.1.1.117 DOFP_YR Prenatal Care Visits [Year]

DOFP_YR Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*First Prenatal Care Visit (NCHS)*), THEN (IF **$PregnancyHistoryObservationValue** NOT NULL THEN "DOFP_YR" SHALL = the Year part of **$PregnancyHistoryObservationValue** WHERE the Year is represented using 4-digits ELSE DOFP_YR" SHALL = '8888') ELSE "DOFP_YR" SHALL = '9999'.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsDOFP)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/effectiveTime/low

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain DTM OBX-3 SHALL contain 69044-6^Date first prenatal visit OBX-5 SHALL contain the date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	OBX|5|DTM|69044-6^Date first prenatal visit^LN||20100528|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.118 NPREV Prenatal Care Visits [Total number of prenatal visits for this pregnancy]

NPREV Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Number Prenatal Care Visits (NCHS)*), THEN "NPREV" **SHALL** = **$PregnancyHistoryObservationValue**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsNPREV)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/entryRelationship/observation/code@code= Code='68493-6', CodeSystemName= 'LOINC', DisplayName= 'Prenatal visits for this pregnancy' AND /value@value= NPREV(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 68493-6^ Prenatal visits for this pregnancy OBX-5 SHALL contain the total number of visits recorded in the record.	OBX|8|NM|68493-6^Prenatal visits for this pregnancy^LN||10	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.119 PAY Principal Source of Payment for this Delivery

PAY Derivation Rule (2)		
NOTE: The US-Specific codes associated with this value set are not yet mapped to the form data from HITSP selected ANSI X12 Values. Until such time as these codes are mapped, this attribute will require implementation-specific mapping.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
PENDING	Coverage.type	PENDING

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report • PENDING	entryRelationship/observation/ code@code= Code= '68461-3', CodeSystemName= 'LOINC', DisplayName= 'Payment source' AND /value@code = PAY using Value Set 'Birth and Fetal Death Financial Class (NCHS) (2.16.840.1.114222.4.11.7163)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PV1-20 SHALL contain PAY using the PHVS_BirthAndFetalDeathFinancialClass_NCHS	PV1||N||||^^^^^^^^Simple Birth Clinic||||||||||||2^MEDICAID^PHVS_Birth AndFetalDeathFinancialClass_NCHS|	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	
		PSFDI	
		JLBI	Y
		JFDI	
		CCOFDI	

6.6.1.1.120 PDIAB Risk Factors in this Pregnancy [Pre-pregnancy Diabetes]

PDIAB Derivation Rule (2)		
IF $**PregnancyHistoryObservationValue** CONTAINS ValueSet (*Prepregnancy Diabetes (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Prepregnancy Diabetes (NCHS)*), THEN "PDIAB" **SHALL** = 'Y' ELSE "PDIAB" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PDIAB = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '73211009', CodeSystemName= 'SNOMED CT', DisplayName= 'Diabetes mellitus'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 73211009^Diabetes mellitus (disorder)	OBX|17|CWE|73775-9^Risk factors in this pregnancy^LN||73211009^Diabetes mellitus (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.121 GDIAB Risk Factors in this Pregnancy [Gestational Diabetes]

GDIAB Derivation Rule (2)		
IF $**PregnancyHistoryObservationValue** CONTAINS ValueSet (*Gestational Diabetes (NCHS)*) OR **$ProbemCode** CONTAINS ValueSet (*Gestational Diabetes (NCHS)*), THEN "GDIAB" **SHALL** = 'Y' ELSE "GDIAB" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$**PregnancyHistoryObservationValue**	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF GDIAB = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND

	/value@code= Code= '11687002', CodeSystemName= 'SNOMED CT', DisplayName= 'Gestational diabetes mellitus'		
Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 11687002^Gestational diabetes mellitus (disorder)	OBX|17|CWE|11687002^Gestational diabetes mellitus (disorder)^LN||73211009^Diabetes mellitus (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.122 PHYPE Risk Factors in this Pregnancy [Prepregnancy Hypertension]

PHYPE Derivation Rule (2)		
IF (**$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Prepregnancy Hypertension (NCHS)*)OR **$ProblemCode** CONTAINS ValueSet (*Prepregnancy Hypertension (NCHS)*) AND NOT (**$PregnancyHistoryObservationValue** CONTAINS (*Gestational Hypertension (NCHS)*) OR **$ProblemCode** CONTAINS (*Gestational Hypertension (NCHS)*) THEN "PHYPE" **SHALL** = 'Y' ELSE "PHYPE" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
Mapping to HL7 FHIR BFDR (5a)		
FHIR Profile/Resource	**Content**	
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PHYP = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '38341003', CodeSystemName= 'SNOMED CT', DisplayName= 'Hypertensive disorder, systemic arterial'	
Mapping to HL7 v2.6 BFDR (5b)		
Mapping Location and Content	**Example**	**Usage**

OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 38341003^Hypertensive disorder, systemic arterial (disorder)	OBX|17|CWE|11687002^Gestational diabetes mellitus (disorder)^LN||38341003^Hypertensive disorder, systemic arterial (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.123 GHYPE Risk Factors in this Pregnancy [Gestational Hypertension]

GHYPE Derivation Rule (2)		
IF (**$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Gestational Hypertension (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Gestational Hypertension (NCHS)*) AND NOT (**$PregnancyHistoryObservationValue** CONTAINS (*Prepregnancy Hypertension (NCHS)*) OR **$ProblemCode** CONTAINS (*Prepregnancy Hypertension (NCHS)*) THEN "GHYPE" **SHALL** = 'Y' ELSE "GHYPE" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF GHYP = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '48194001', CodeSystemName= 'SNOMED CT', DisplayName= 'Pregnancy-induced hypertension'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 48194001^Pregnancy-induced hypertension (disorder)	OBX|17|CWE|73775-9^Risk factors in this pregnancy^LN||48194001^ Pregnancy-induced hypertension (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y

		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.124 EHYPE Risk Factors in this Pregnancy [Eclampsia]

EHYPE Derivation Rule (2)		
IF (**$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Eclampsia (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Eclampsia (NCHS)*), THEN "EHYPE" **SHALL** = 'Y' ELSE "EHYPE" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$**PregnancyHistoryObservationValue**	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry /observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF EHYP = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '15938005', CodeSystemName= 'SNOMED CT', DisplayName= 'Eclampsia'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 15938005^Eclampsia (disorder)	OBX|17|CWE|73775-9^Risk factors in this pregnancy^LN||15938005^Eclampsia (disorder)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.125 PPB Risk Factors in this Pregnancy [Previous preterm births]

PPB Derivation Rule (2)		
IF **$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Preterm Birth (NCHS)*) *OR* **$ProblemCode** CONTAINS ValueSet (*Preterm Birth (NCHS)*) OR (**$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Number of Preterm Births (NCHS)*) AND **$PregnancyHistoryObservationValue** >0)THEN "PPB" **SHALL** = 'Y' ELSE "PPB" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/ component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$PregnancyHistoryObservationCode	condition.code	ClinicalDocument/ component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/code

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PPB = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '161765003', CodeSystemName= 'SNOMED CT', DisplayName= 'History of - premature delivery'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 161765003^History of - premature delivery (situation)	OBX|17|CWE|73775-9^Risk factors in this pregnancy^LN||161765003^History of - premature delivery (situation)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.126 INFT Risk Factors in this Pregnancy [Infertility treatment]

INFT Derivation Rule (2)		
IF $**PregnancyHistoryObservationValue** CONTAINS ValueSet (*Infertility Treatment (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Infertility Treatment (NCHS)*) THEN "INFT" **SHALL** = 'Y' ELSE "INFT" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistory ObservationValue	condition.code	ClinicalDocument/ component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF INFT = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '65046005', CodeSystemName= 'SNOMED CT', DisplayName= 'Infertility Therapy'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 58533008^ Artificial insemination (procedure)	OBX|18|CWE|73775-9^Risk factors in this pregnancy^LN||5853300865046005^ Artificial insemination (procedure)^SDM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.127 INFT_DRG Risk Factors in this Pregnancy [Fertility Enhancing Drugs, AI]

INFT_DRG Derivation Rule (2)
IF **$CodedProductName** CONTAINS ValueSet (*Fertility Enhancing Drugs Medications (NCHS)*) THEN "INFT_DRG" **SHALL** = 'Y' ELSE IF **$PregnancyHistoryObservationValue** CONTAINS (*Artificial or Intrauterine Insemination (NCHS)*) THEN "INFT_DRG" SHALL = 'Y' ELSE IF (**$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Pregnancy*

Resulting From Fertility Enhancing Drugs (NCHS)v) OR **$ProblemCode** CONTAINS (*Artificial or Intrauterine Insemination (NCHS)*) THEN INFT_DRG SHALL = 'Y' ELSE "INFT_DRG" **SHALL** = 'N'.

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$CodedProductName	MedicationStatement.medication[x].medicationCodableConcept	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.21']]/entry/substanceAdministration/consumable/manufacturedProduct/labeledDrug/code
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value
$PregnancyHistoryObservationCode	PENDING	PENDING
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF INFT_DRG = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '58533008', CodeSystemName= 'SNOMED CT', DisplayName= 'Artificial insemination'

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 445151000124101^ Fertility enhancing drug therapy	OBX|19|CWE|73775-9^Risk factors in this pregnancy^LN|| 445151000124101^ Fertility enhancing drug therapy^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.128 INFT_ART Risk Factors in this Pregnancy [Asst. Rep. Technology]

INFT_ART Derivation Rule (2)

IF **$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Assistive Reproductive Technology (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Assistive Reproductive Technology (NCHS)*) THEN "INFT_ART" **SHALL** = 'Y' ELSE "INFT_ART" **SHALL** = 'N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PCES = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '200144004', CodeSystemName= 'SNOMED CT', DisplayName= 'Deliveries by cesarean'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 63487001^Assisted fertilization (procedure)	OBX|19|CWE|73775-9^Risk factors in this pregnancy^LN||63487001^Assisted fertilization (procedure)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.129 PCES Risk Factors in this Pregnancy [Previous cesarean]

PCES Derivation Rule (2)
IF **$PregnancyHistoryObservationValue** CONTAINS ValueSet (*Previous Cesarean (NCHS)*) OR **$ProblemCode** CONTAINS ValueSet (*Previous Cesarean (NCHS)*) THEN "PCES" **SHALL** = 'Y' ELSE "PCES" **SHALL** = 'N'**.**

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$PregnancyHistoryObservationValue	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/ observation/value
$ProblemCode	condition.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF NPCES = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '200144004', CodeSystemName= 'SNOMED CT', DisplayName= 'Deliveries by cesarean'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 200144004^Deliveries by cesarean (finding)	OBX|19|CWE|73775-9^Risk factors in this pregnancy^LN||200144004^Deliveries by cesarean (finding)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.130 NPCES Risk Factors in this Pregnancy [Number of previous cesareans]

NPCES Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*Number of Previous Cesareans (NCHS)*), THEN "NPCES" **SHALL** = **$PregnancyHistoryObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Number of Previous Cesareans (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/ entry/ observation/code

	constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsNPCES)	
$PregnancyHistoryObservationValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4]']/ entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF PCES = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '200144004', CodeSystemName= 'SNOMED CT', DisplayName= 'Deliveries by cesarean' /entryRelationship/observation/code@code= Code= '68497-7', CodeSystemName= 'LOINC', DisplayName= 'Previous cesarean deliveries' AND /value@value= NPCES(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 68497-7^Previous cesarean deliveries OBX-5 SHALL contain The number of previous cesarean deliveries	OBX|8|NM|68497-7^Previous cesarean deliveries^LN||1	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.131 NOA01 Risk Factors in this Pregnancy [None of the above]

NOA01 Derivation Rule (2)		
This attribute SHALL NOT be determined by default. If there are no other risk factors identified through other attributes, the form manager SHALL require data entry to assure the accuracy of the data.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

N/A	N/A	N/A

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	IF NOA01 = 'Y' then /code@code= Code= '73775-9', CodeSystemName= 'LOINC', DisplayName= 'Risk factors in this pregnancy' AND /value@code= Code= '260413007', CodeSystemName= 'SNOMED CT', DisplayName= 'None'

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73775-9^Risk Factors in this Pregnancy OBX-5 SHALL contain 260413007^None (qualifier value)	OBX|19|CWE|73775-9^Risk factors in this pregnancy^LN||260413007^None (qualifier value)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.132 SORD Set Order

SORD Derivation Rule (2)		
IF **$MultipleBirthInd** ='true' THEN "SORD" **SHALL** be populated using **$MultipleBirthOrder** AND using '99' where not known ELSE IF Multiple Birth ='false' "SORD" **SHALL** = '88'.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$MultipleBirthInd	patient.multipleBirth[x].multipleBirthBoolean	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/relatedSubject/subject/sdtc:multipleBirthInd
$MultipleBirthOrder	patient.multipleBirth[x].multipleBirthInteger	ClinicalDocument/component/structuredBody/component/section/templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/ relatedSubject/subject/sdtc:multipleBirthOrderNumber

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**

Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='73771-8', CodeSystemName= 'LOINC', DisplayName= 'Birth order' AND /value@value= SORD(int)

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-25	PID|1||987645432^^^^MRN||~^^^^^^U||20 1105302349|M|||||||||||N||2	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

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6.6.1.1.133 FSEX Child [fetus) Sex]

FSEX Derivation Rule (2)		
IF **$Gender** CONTAINS ValueSet (*Male Gender (NCHS)*) THEN "FSEX" SHALL ='M' ELSE IF **$Gender** CONTAINS ValueSet (*Female Gender (NCHS)*) THEN "FSEX" SHALL ='F' ELSE THEN "FSEX" SHALL ='N'**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$Gender	patient.gender	ClinicalDocument/component/structuredBody/component/section[templateId[@root='2.16.840.1.113883.10.20.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/subject/relatedSubject/subject/administrativeGenderCode

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	/subject/relatedSubject/subject/administrativeGender = FSEX

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-8	PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||N	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	

		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.134 FDOD_YR Date of Delivery [(Fetus) Year]

FDOD_YR Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*) THEN "FDOD_YR" **SHALL** = Year part of **$ProcedureEndTime.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureEndTime	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/high

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-29	PID|1||123456688^^^^MRN||Johnson^Baby|||20170408120700|F||||||||||||||||||||20170408120700|	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.135 FDOD_MO Derivation Rule Date of Delivery [Fetus) Month]

FDOD_MO Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*) THEN "FDOD_MO" **SHALL** = Month part of **$ProcedureEndTime**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureEndTime	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/high

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-29	PID|1||123456688^^^^MRN||Johnson^Baby|||20170408120700|F||||||||||||||||||||20170408120700|	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.136 FDOD_DY Date of Delivery [Fetus) Day]

FDOD_DY Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (Delivery (NCHS)) THEN "FDOD_DYYR" **SHALL** = Day part of **$ProcedureEndTime.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureEndTime	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/high

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-29	PID|1||123456688^^^^MRN||Johnson^Baby|||20170408120700|F||||||||||||||||||||20170408120700|	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.137 ETIME Estimated Time of Fetal Death

ETIME Derivation Rule (2)
IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Estimated Time Of Fetal Death (NCHS)*), THEN "ETIME" **SHALL** = **$EventOutcomesObservationValue** WHERE **$EventOutcomesObservationValue** contains ValueSet (*Fetal Death Time Point (NCHS)*).

Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsETIME)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/code
$EventOutcomesObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/

		subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73811-2^Estimated time of fetal death OBX-5 SHALL contain a value selected from value the set Fetal Death Time Points (NCHS) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7112	OBX|19|CWE|73811-2^Estimated time of fetal death ^LN||634751000124116 ^ Dead at time of first assessment, no labor ongoing (observable entity)^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.138 LIVEB Not Single Birth [specify number of infants in this delivery born alive.]

LIVEB Derivation Rule (2)		
$EventOutcomesObservationCode CONTAINS ValueSet (*Number of Live Births (NCHS)*), THEN SHALL = **$EventOutcomesObservationValue.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLIVEB)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/code
$EventOutcomesObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**

Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='73773-4', CodeSystemName= 'LOINC', DisplayName= 'Number of infants in this delivery born alive' AND /value@value= LIVEB(int)

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain NM OBX-3 SHALL contain 73773-4^Number of infants in this delivery born alive OBX-5 SHALL specify the number of live born in this delivery	OBX|8|NM|73773-4^Number of infants in this delivery born alive ^LN||1	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.1.1.139 FDTH Number of Fetal Deaths

FDTH Derivation Rule (2)

IF **$EventOutcomesObservationCode** CONTAINS ValueSet (*Number of Fetal Deaths This Delivery (NCHS)*), THEN **SHALL** = **$EventOutcomesObservationValue.**

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsFDTH)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/code
$EventOutcomesObservationValue	observation.valueDateTime	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/ subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry/ observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain NM OBX-3 SHALL contain 73772-6^ Number of fetal deaths delivered OBX-5 SHALL specify the number of fetal deaths in this delivery	OBX|8|NM|73772-6^ Number of fetal deaths delivered^LN||1	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

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6.6.1.1.140 HYST Method of Delivery [Hysterotomy/Hysterectomy]

HYST Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Hysterotomy Hysterectomy (NCHS)*), THEN "HYST" **SHALL** = 'Y', ELSE "HYST" **SHALL** = 'N'.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73759-3^ Hysterotomy or hysterectomy was performed at delivery OBX-5 SHALL contain boolean indication (Yes/No/Unknown/Not Applicable) of whether a hysterotomy or hysterectomy was performed using HL7 0532 Expanded yes/no indicator (NCHS)	OBX|21|CWE|73759-3^ Hysterotomy or hysterectomy was performed at delivery^LN|| N^No^HL70532|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

6.6.1.1.141 TD Time of Delivery

TD Derivation Rule (2)		
IF **$ProcedureCode** CONTAINS ValueSet (*Delivery (NCHS)*), THEN "TD" **SHALL** = **$ProcedureEndTime**.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code
$ProcedureEndTime	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.3']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/effectiveTime/low

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
PID-7	PID|1||123456688^^^^MRN||Johnson^Baby|||20170408120700|F||||||||||||||||||||20170408120700|	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	
		PSFDI	
		JLBI	
		JFDI	
		CCOFDI	

1685 ### 6.6.1.1.142 AUTOP Was an Autopsy Performed?

AUTOP Derivation Rule (2)		
IF (**$ProcedureCode** CONTAINS ValueSet CONTAINS ValueSet (*Autopsy Performed (NCHS)*) THEN "AUTOP" SHALL = "Y" ELSE IF **$ProcedureCode** CONTAINS ValueSet CONTAINS ValueSet (*Autopsy Planned (NCHS)*) THEN "AUTOP" SHALL = "P" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**

$ProcedureCode	procedure.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.13.2.11']]/entry/procedure/code

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73768-4^Autopsy was performed OBX-5 SHALL contain a value selected from value the set Autopsy Examination (NCHS) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7137	OBX|19|CWE|73768-4^Autopsy was performed ^LN||44551000009109^ Autopsy not performed ^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.143 FWO Weight of Fetus [in ounces]

FWO Derivation Rule (2)

IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) where **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*) THEN "FWO" **SHALL** = **$VitalSignsResultValue** WHERE units are specified in Ounces

The preferred measure is in grams rather than ounces. Refer to FWG**.**

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsFW)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsResultValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/valueClinicalDocument

$VitalSignsMethodCode	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 8339-4 ^Weight at delivery OBX-5 SHALL contain the birthweight in Grams converted from Ounces OBX-6 SHALL indicate ounces using UCUM units: SHALL contain oz NOTE: it is preferred to send in grams (see FWG)	OBX|24|NM|8339-4 ^ Body weight at birth ^LN||1200|oz	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.144 FWG Weight of Fetus [grams preferred, specify unit]

FWG Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) where **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*) THEN "FWG" **SHALL** = **$VitalSignsResultValue** WHERE units are specified in Grams**.**		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsFW)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsResultValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/valueClinicalDocument

$VitalSignsMethodCode	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 8339-4 ^Weight at delivery OBX-5 SHALL contain the birthweight in Grams OBX-6 SHALL indicate grams using UCUM units: SHALL contain gm	OBX|24|NM|8339-4 ^ Body weight at birth ^LN||1200|gm	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

1690

6.6.1.1.145 FWP Weight of Fetus [in pounds]

FWP Derivation Rule (2)		
IF **$VitalSignsTypeCode** CONTAINS ValueSet (*Body Weight (NCHS)*) where **$VitalSignsMethodCode** CONTAINS ValueSet (*Birth Weight (NCHS)*) THEN "FWP" **SHALL** = **$VitalSignsResultValue** WHERE units are specified in Pounds The preferred measure is in grams rather than ounces. Refer to FWG.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$VitalSignsTypeCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsFW)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/code
$VitalSignsResultValue	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/valueClinicalDocument

$VitalSignsMethodCode	observation.valueQuantity	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4']]/subject/relatedSubject/code[@code='NCHILD' AND id=idOfTheChild]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.9.15.1']]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.2']]/entry/organizer/component/observation/methodCode

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain NM OBX-3 SHALL contain 8339-4 ^Weight at delivery OBX-5 SHALL contain the birthweight in Grams converted from Pounds OBX-6 SHALL indicate pounds using UCUM units: SHALL contain lb NOTE: it is preferred to send in grams (see FWG)	OBX|24|NM|8339-4 ^ Body weight at birth ^LN||1200|lb	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.146 LM Infections Present and Treated During this Pregnancy [Listeria]

LM Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Listeria (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Listeria (NCHS)*) THEN "LM" SHALL = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	problem.code	ClinicalDocument//component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 4241002^ Listeriosis (disorder)	OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||4241002^ Listeriosis (disorder)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

1695 **6.6.1.1.147 GBS Infections Present and Treated During this Pregnancy [Group B Streptococcus]**

GBS Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Group B Streptococcus (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Group B Streptococcus (NCHS)*) THEN "GBS" SHALL = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	problem.code	ClinicalDocument//component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 426933007^Streptococcus agalactiae infection (disorder)	OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||426933007^Streptococcus agalactiae infection (disorder)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y

		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.148 CMV Infections Present and Treated During this Pregnancy [Cytomeglovirus]

CMV Derivation Rule (2)		
IF (**$ProblemCode** CONTAINS ValueSet (*Cytomegalovirus (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Cytomegalovirus (NCHS)*) THEN "CMV" SHALL = "Y" ELSE "N".		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$ProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	problem.code	ClinicalDocument//component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 28944009^Cytomegalovirus infection (disorder)	OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||28944009^Cytomegalovirus infection (disorder)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

1700

6.6.1.1.149 B19 Infections Present and Treated During this Pregnancy [Parvovirus]

B19 Derivation Rule (2)

IF (**$ProblemCode** CONTAINS ValueSet (*Parvovirus (NCHS)*) OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet (*Parvovirus (NCHS)*) THEN "B19" SHALL = "Y" ELSE "N".

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	problem.code	ClinicalDocument//component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']] /entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 186748004^Parvovirus	OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||186748004^Parvovirus^SNM ||||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.150 HISTOP Was a Histological Placental Examination Performed?

HISTOP Derivation Rule (2)

IF (**$EventOutcomesObservationCode** CONTAINS ValueSet (*Histological Placental Examination (NCHS)*) THEN "HISTOP" SHALL = **$EventOutcomesObservationValue.**

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$EventOutcomesObservationCode	observation.code constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsHISTOP)) of the mother or fetus	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] AND subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.4.13']]/observation/code

$EventOutcomesObservationValue	observation.value Boolean	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.21.2.4'] AND subject/relatedSubject[code[@code='NCHILD' AND id=idOfTheChild]]]/component/section[templateId[@root='1.3.6.1.4.1.19376.1.7.3.1.1.13.7']]/entry[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.4.13']]/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73767-6^Histological placental examination was performed OBX-5 SHALL contain a value selected from value the set Histological Placental Examination (NCHS) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7138	OBX|19|CWE|73767-6^Histological placental examination was performed ^LN||262008008^ Not Performed^SNM|||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

1705 6.6.1.1.151 TOXO Infections Present and Treated During this Pregnancy [Toxoplasmosis]

TOXO Derivation Rule (2)

IF **($ProblemCode** CONTAINS ValueSet *(Toxoplasmosis (NCHS))* OR (**$InfectionHistoryProblemCode** CONTAINS ValueSet *(Toxoplasmosis (NCHS))* THEN "TOXO" SHALL = "Y" ELSE "N".

Variable Name	Source in EMR Using FHIR (1a)	Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)
$ProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.3.6']]/entry/act/entryRelationship/observation/value
$InfectionHistoryProblemCode	problem.code	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']] /entry/act/entryRelationship/observation/value

Mapping to HL7 FHIR BFDR (5a)

FHIR Profile/Resource	Content
Composition - Provider Fetal Death Report • PENDING	PENDING

Mapping to HL7 v2.6 BFDR (5b)			
Mapping Location and Content	**Example**	**Usage**	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73769-2^ Infections present and treated during the pregnancy for fetal death OBX-5 SHALL contain 187192000^ Toxoplasmosis (disorder)	OBX|19|CWE|73769-2^Infections present treated during the pregnancy for fetal death^LN||187192000^ Toxoplasmosis (disorder)^SNM |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	
		PSFLBI	
		PSFFDI	Y
		PSFDI	Y
		JLBI	
		JFDI	Y
		CCOFDI	

6.6.1.1.152 PNC

PNC Derivation Rule (2)		
IF **$PregnancyHistoryObservationCode** CONTAINS ValueSet (*No Prenatal Care Visit (NCHS)*) THEN (IF **$PregnancyHistoryObservationValue** = 'True' THEN PNC SHALL = 'Y' ELSE IF **$PregnancyHistoryObservationValue** = 'False'"PNC" SHALL = 'N') ELSE Data Entry SHALL be required to capture PNC.		
Variable Name	**Source in EMR Using FHIR (1a)**	**Source in EMR Using CDA Labor and Delivery Summary-VR XPATH (1b)**
$PregnancyHistoryObservationCode	observation.code in value set (Number of Previous Cesareans (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148) constrained by: (http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPNC)	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/code
$PregnancyHistoryObservationValue	observation.valueBoolean	ClinicalDocument/component/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']]/entry/observation/value

Mapping to HL7 FHIR BFDR (5a)	
FHIR Profile/Resource	**Content**
Composition - Provider Live Birth Report OR Composition - Provider Fetal Death Report • PENDING	/code@code= Code='73776-7', CodeSystemName= 'LOINC', DisplayName=' No-prenatal care indicator' AND /value@value= Boolean form of PNCss

Mapping to HL7 v2.6 BFDR (5b)

Mapping Location and Content	Example	Usage	
OBX-2 SHALL contain CWE OBX-3 SHALL contain 73776-7^No Prenatal Care Indicator OBX-5 SHALL contain a value selected from value the set from PHVS_YesNo_HL7_2x	OBX|32|CWE|73776-7^ No prenatal care indicator ^LN||N^No^ PHVS_YesNo_HL7_2x |||||F	PSMLBDI	
		PSMFDI	
		PSLBI	Y
		PSFLBI	Y
		PSFFDI	Y
		PSFDI	Y
		JLBI	Y
		JFDI	Y
		CCOFDI	

6.6.4 Discrete Data Import Element Mappings From APS to LDS-VR Content Document

This section identifies the form data elements that may be available from the Antepartum Summary Record (APS), and the associated mapping for discrete data import of these data elements from the APS. Form Fillers that support the Antepartum Import Option SHALL support import of these attributes where available for incorporation into the LDS or LDS-VR pre-population document.

Table 6.6.4-1: Discrete Data Import Elements Data Mapped to LDS-VR Content Document Modules for Birth

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
DOFP_MO DOFP_DY DOFP_Y	Date of first prenatal care visit	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset First Prenatal Care Visit (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.133 Documenting ../effectiveTime using date timestamp associated with the event

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
NPREV	Total number of prenatal care visits for this pregnancy	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Number Prenatal Care Visits (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.135 Documenting ../value using INT
OWGEST	Obstetric Estimate of Gestation	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Estimate of Gestation (templateId: 2.16.840.1.113883.10.20.26.21) Documenting ../value using INT NOTE: The preferred source for the Obstetric Estimate of Gestation is the OB History and Physical. The primary source would be the OB admission H&P. This information may also be available in the prenatal care record (e.g., APS), but this should be used as a secondary source if the OB admission H&P does not contain this information.
DLMP_DY DLMP_MO DLMP_YR	Date last normal menses began	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Last Menstrual Period Date (templateId: 2.16.840.1.113883.10.20.26.33) Documenting ../effectiveTime using date timestamp associated with the event
PLBL	Number of previous live births now living	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Number of Previous Live Births Now Living (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.123 Documenting ../value using INT

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
PLBD	Number of previous live births now dead	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Number of Previous Live Births Now Dead (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.122 Documenting ../value using INT
YLLB MLLB	Date of last live birth	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Date of Last Live Birth (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.67 Documenting ../effectiveTime using date timestamp associated with the event
POPO	Number of other pregnancy outcomes	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Previous Other Pregnancy Outcomes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.121 Documenting ../value using INT
YOPO MOPO	Date of last other pregnancy outcome	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Date of Last Other Pregnancy Outcome (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.70 Documenting ../effectiveTime using date timestamp associated with the event
PDIAB	Risk factors in this pregnancy: Pre-Pregnancy Diabetes	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Prepregnancy Diabetes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.136 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
GDIAB	Risk factors in this pregnancy: Gestational Diabetes	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Gestational Diabetes (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.137 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
PHYPE	Risk factors in this pregnancy: pre-pregnancy hypertension	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Prepregnancy Hypertension (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.138 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
GHYPE	Risk factors in this pregnancy: gestational hypertension	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Gestational Hypertension (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.139 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
EHYPE	Risk factors in this pregnancy: gestational eclampsia	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Eclampsia (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.140 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
PPB	Previous Preterm Births	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Preterm Birth (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.141 Documenting ../value using INT

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
INFT	Pregnancy resulted from infertility treatment	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Infertility Treatment (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.143 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
INFT_DRG	Fertility-enhancing drugs, artificial insemination, or intrauterine insemination	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Artificial or Intrauterine Insemination (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.145 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
INFT_ART	Assisted reproductive technology (e g , in-vitro fertilization [IVF] gamete intrafallopian transfer [GIFT])	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Assistive Reproductive Technology (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.146 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
PCES	Previous Cesarean	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/value Using valueset Previous Cesarean (NCHS) 2.16.840.1.114222.4.11.7165 Documenting PregnancyObservation/code/@code=73775-9 Risk Factors in this Pregnancy
NPCES	Number of previous cesareans	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Pregnancy History 1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4	Pregnancy Observation 1.3.6.1.4.1.19376.1.5.3.1.4.13.5	/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.5.3.4']] /entry/observation/code Using valueset Number of Previous Cesareans (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148 Documenting ../value using INT

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
GON	Infections present and/or treated during this pregnancy: Gonorrhea	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Gonorrhea (NCHS)2.16.840.1.114222.4.11.6071 Documenting ../code = 'finding', '404684003'
SYPH	Infections present and/or treated during this pregnancy: Syphilis	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Syphilis (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.98 Documenting ../code = 'finding', '404684003'
CHAM	Infections present and/or treated during this pregnancy: Chlamydia	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Chlamydia (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.93 Documenting ../code = 'finding', '404684003'
HEPB	Infections present and/or treated during this pregnancy: Hepatitis B (HBV, serum hepatitis)	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Hepatitis B (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.96 Documenting ../code = 'finding', '404684003'

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
HEPC	Infections present and/or treated during this pregnancy: Hepatitis C (non A or non B hepatitis [HCV])	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Hepatitis C (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.97 Documenting ../code = 'finding', '404684003'
LM	Infections present and/or treated during this pregnancy: Listeria	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Listeria (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.147 Documenting ../code = 'finding', '404684003'
GBS	Infections present and/or treated during this pregnancy: Group B Streptococcus	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Group B Streptococcus (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.166 Documenting ../code = 'finding', '404684003'
CMV	Infections present and/or treated during this pregnancy: Cytomegalovirus	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Cytomegalovirus (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.167 Documenting ../code = 'finding', '404684003'

Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element	APS Section Level Map (if specific)	APS Entry Level Map	LDS Mapping
B19	Infections present and/or treated during this pregnancy: Parvovirus	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Parvovirus (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.168 Documenting ../code = 'finding', '404684003'
TOXO	Infections present and/or treated during this pregnancy: Toxoplasmosis	Antepartum Summary Specification 1.3.6.1.4.1.19376.1.5.3.1.1.11.2 Code History of Infection 1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1	Problem Concern Entry 1.3.6.1.4.1.19376.1.5.3.1.4.5.2	ClinicalDocument/structuredBody/component/section[templateId[@root='1.3.6.1.4.1.19376.1.5.3.1.1.16.2.1.1.1']]/entry/act/entryRelationship/observation/value Using valueset Toxoplasmosis (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.169 Documenting ../code = 'finding', '404684003'

6.6.5 QRPH Data Mapping to Provider FHIR Resources

6.6.5.1 Provider FHIR Resource Bundle Content

FHIR Resource	Optionality	Cardinality	Structured Definition
Composition	R	1..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.Composition
MedicationAdministration	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MotherMedicationAdministration
MedicationAdministration	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornMedicationAdministration NOTE: Attributes related to newborn or fetus
Procedure	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MotherProcedure
Procedure	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornProcedure NOTE: Attributes related to newborn or fetus

FHIR Resource	Optionality	Cardinality	Structured Definition
Observation	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservations which is a composite of: • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPLUR • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLIVEB • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsFDTH • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLLB • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsLMP • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsOPO • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsDOFP • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPLBD • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPLBL • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPPB • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsOWGEST • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsNPCES • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsNPREV • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPOPO • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsPNC • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsHT • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MaternalObservationsWT

FHIR Resource	Optionality	Cardinality	Structured Definition
Observation	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservations which is a composite of: • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsAPGAR5 • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsAPGAR10 • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsBW • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsFW • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsBPLACE • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornObservationsKaryotype NOTE: Attributes related to newborn or fetus
Observation	RE	0..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservations which is a composite of: • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsFW • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsETIME • http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusObservationsHISTOP NOTE: Attributes related to newborn or fetus
Condition	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MotherCondition
Condition	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornCondition NOTE: Attributes related to newborn or fetus
Condition	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusCondition NOTE: Attributes related to newborn or fetus
Encounter	R	1..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MotherBirthEncounter
Encounter	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornBirthEncounter NOTE: Attributes related to newborn or fetus
Encounter	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusDeliveryEncounter NOTE: Attributes related to newborn or fetus
Patient	RE	1..1	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.MotherPatient
Patient	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.NewbornPatient NOTE: Attributes related to newborn or fetus
Patient	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.FetusPatient NOTE: Attributes related to newborn or fetus
Coverage	RE	0..*	http://ihe.net/fhir/StructureDefinition/IHE.BFDRE.Coverage

6.6.5.2 FHIR Resource Data Specifications

The following table shows the mapping of the FHIR Resources supporting the content for each of the BFDR Data Elements/Attributes. Data Responders SHALL support the Resources identified by this table. Data Consumers SHALL be able to retrieve birth and fetal death reporting related health information from the specified resource for one or more attributes.

Table 6.6.5.2-1: Required Mappings – Birth and Fetal Death Reporting Attribute to FHIR Resource

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
Attributes related to mother as the primary patient. The newborn or fetus will be referenced by their ID.				
MedicationAdministration.Resource	medication[x].medicationCodableConcept	SHALL include the coded product name using the following value sets unless further extended by national extension where these products were given to the patient: Antibiotics (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.3 Augmentation of Labor - Medication (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.23 Epidural/Spinal Anesthesia - Medication (NCHS) 2.16.840.1.114222.4.11.7475	ANTI AUGL ESAN	Abnormal conditions of the newborn: • Antibiotics [received by the newborn for suspected neonatal sepsis] Characteristics of labor and delivery: • Augmentation of labor • [Epidural or spinal] Anesthesia [during labor]

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
MedicationAdministration.Resource	dosage.route	SHALL specifically indicate the route where IV or IM administration route is used to administer the medications using the following value sets unless further extended by national extension: IV Medication Administration Route (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.4 IM Medication Administration Route (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.5	ANTI ANTB	Abnormal conditions of the newborn: Antibiotics [received by the newborn for suspected neonatal sepsis] Antibiotics received by the mother during labor. Includes antibacterial medications given systemically (intravenous or intramuscular) to the mother in the interval between the onset of labor and the actual delivery. Includes: Ampicillin, Penicillin, Clindamycin, Erythromycin, Gentamicin, Cefataxine, and Ceftriaxone. Information about the course of labor and delivery.
MedicationAdministration.Resource	reasonReference	Neonatal Sepsis (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.6	ANTI	Abnormal conditions of the newborn: Antibiotics [received by the newborn for suspected neonatal sepsis]
MedicationAdministration.Resource	medication[x].medicationCodableConcept	Fertility Enhancing Drugs Medications (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.144	INFT_DRG	Fertility-enhancing drugs, artificial insemination, or intrauterine insemination

Procedure.Resource	Code	SHALL include the coded procedure using the following value sets unless further extended by national extension where these procedures were performed on the patient: Augmentation of Labor - Procedure (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.22 Epidural Anesthesia - Procedure (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.27 Spinal Anesthesia - Procedure (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.29 Induction of Labor (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.34 Steroids For Fetal Lung Maturation (NCHS) 2.16.840.1.114222.4.11.7423 Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14 Unplanned Operation (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.105 Unplanned Hysterectomy (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.103 Transfusion Whole Blood or Packed Red Bld (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.99 Cervical Cerclage (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.125 External Cephalic Version (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.127 Tocolysis (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.128 Hysterotomy Hysterectomy (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.150 Histological Placental Examination (NCHS) 2.16.840.1.114222.4.11.7138 Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14	AUGL ESAN INDL STER UOPR UHYS MTR CERV ECVF ECVS TOC HYST HISTOP ANTB AINT	Characteristics of labor and delivery: • Augmentation of labor • [Epidural or spinal]Anesthesia[during labor] • Induction of labor • Steroids [(glucocorticoids) for fetal lung maturation received by the mother prior to delivery Maternal Morbidity: • Unplanned operat[ing]ion [room procedure following delivery] • Unplanned hysterectomy • Maternal Transfusion Obstetric procedures: • Cervical cerclage • Failed External cephalic Version • Successful External cephalic version • Tocolysis Method of Delivery: • Hysterotomy/Hysterectomy

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
		For External Cephalic Version, the procedure should be documented whether it is performed during prenatal care record or during labor and delivery.		Was a Histological Placental Examination performed? Abnormal conditions of the newborn: • Antibiotics [received by the newborn for suspected neonatal sepsis] Maternal Morbidity: - Admission to Intensive care [unit]
	Performed[x].period	SHALL be included for all procedures performed if known		
	Outcome	For Failed External Cephalic Version outcome= 385671000 unsuccessful, SNOMED-CT	ECVF	Obstetric procedures: • Failed External cephalic
	performer.actor Reference (Practitioner.identifier)	SHALL also indicate the NPI for the delivery event identified by the following procedure value set: Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14	NPI	The National Provider Identification Number (NPI) of the person (attendant) responsible for delivering the child.
	Performer.role	SHALL also indicate the provider role for the delivery event identified by the following procedure value set: Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14 Using the following value sets unless otherwise constrained by jurisdiction: Physician (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.15 Doctor of Osteopathic Medicine (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.16 Certified Midwife (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.17 /Midwife (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.18	ATTEND	The title of the person (attendant) responsible for delivering the child. The attendant at birth is defined as the individual physically present at the delivery who is responsible for the delivery. Titles include: M.D. (doctor of medicine); D.O. (doctor of osteopathy); CNM/CM (certified nurse midwife/certified midwife); Other midwife (midwife other than a CNM/CM); and Other (specify)

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	performer.actor Reference (Practitioner.name)	SHALL also indicate the provider name for the delivery event identified by the following procedure value set: Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.14	ATTENDN	The name of the attendant (the person responsible for delivering the child), their title, and their National Provider Identification (NPI) Number.
	Method (HL7 extension: procedure-method)	Route and Method of Delivery SHALL be documented using the following value sets unless further extended by national extension: Route and Method of Delivery - Spontaneous (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.111 Route and Method of Delivery - Forceps (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.112 Route and Method of Delivery - Vacuum (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.113 Route and Method of Delivery - Scheduled C (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.116 Route and Method of Delivery - Cesarean (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.114	ROUT	Delivery of the fetal head through the vagina by the application of obstetrical forceps to the fetal head; Vaginal/vacuum Delivery of the fetal head through the vagina by the application of a vacuum cup or ventouse to the fetal head; or Cesarean: Extraction of the fetus, placenta, and membranes through an incision in the maternal abdominal and uterine walls.

Condition.Resource	code	SHALL include the following problems where these conditions existed during the pregnancy if known: Induction of Labor Finding (NCHS) 2.16.840.1.114222.4.11.7531 Method of Delivery Vaginal-Spon Finding (NCHS) 2.16.840.1.114222.4.11.7526 Method of Delivery Vaginal Forceps Finding (NCHS) 2.16.840.1.114222.4.11.7528 Method of Delivery Vaginal Vacuum Finding (NCHS) 2.16.840.1.114222.4.11.7529 Method of Delivery Cesarean Finding (NCHS) 2.16.840.1.114222.4.11.7527 Trial of Labor 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.115 Transferred for Maternal Medical or Fetal Indications for Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.176 Chlamydia (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.93 Gonorrhea (NCHS) 2.16.840.1.114222.4.11.6071 Hepatitis B (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.96 Hepatitis C (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.97 Syphilis (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.98 Listeria (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.147 Group B Streptococcus (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.166 Cytomegalovirus (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.167 Parvovirus (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.168 Toxoplasmosis (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.169 Prepregnancy Diabetes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.136	INDL ROUT TLAB TRAN GON SYPH CHAM HEPB HEPC LM GBS CMV B19 TOXO PDIAB GDIAB PHYPE GHYPE EHYPE PPB INFT INFT_DRG INFT_ART INFT_DRG PCES PLAC RUT PRES PRIC PROL PROM	Characteristics of labor and delivery: Induction of labor Method of Delivery: [Final]Route and method of delivery: Vaginal/spontaneous Vaginal/forceps Vaginal/vacuum Cesarean Method of Delivery: Trial of labor attempted Mother transferred for maternal medical or fetal indications for delivery? Infections present and/or treated during this pregnancy: • Gonorrhea • Syphilis • Chlamydia • Hepatitis B (HBV, serum hepatitis) • Hepatitis C (non A or non B hepatitis [HCV]) • Listeria • Group B Streptococcus • Cytomegalovirus • Parvovirus • Toxoplasmosis Risk factors in this pregnancy: • Prepregnancy Diabetes • Gestational Diabetes

		Gestational Diabetes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.137 Prepregnancy Hypertension (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.138 Gestational Hypertension (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.139 Eclampsia (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.140 Preterm Birth (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.141 Infertility Treatment (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.143 Artificial or Intrauterine Insemination (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.145 Assistive Reproductive Technology (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.146 Pregnancy Resulting From Fertility Enhancing Drugs (NCHS) 2.16.840.1.114222.4.11.7423 Previous Cesarean (NCHS) 2.16.840.1.114222.4.11.7165 Third Degree Perineal Laceration (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.100 Fourth Degree Perineal Laceration (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.101 Ruptured Uterus (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.102 Fetal Presentation at Birth- Breech (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.108 Fetal Presentation at Birth- Cephalic (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.109 Fetal Presentation at Birth- Other (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.110 Precipitous Labor (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.130 Prolonged Labor (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.131		• Prepregnancy Hypertension • Gestational Hypertension • Eclampsia • Previous preterm births • Infertility treatment • Infertility: Fertility Enhancing Drugs, AI • Infertility: Asst. Rep. Technology • Previous cesarean Maternal Morbidity: [Third or fourth degree] perineal laceration Ruptured Uterus Method of Delivery: Fetal presentation [at birth]: Cephalic Onset of labor: Precipitous Labor Prolonged Labor Premature Rupture

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
		Premature Rupture (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.129		
	code	SHALL include the following problems where these conditions existed during the delivery if known: Chorioamnionitis During Labor (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.24	CHOR	Characteristics of labor and delivery: [Clinical] Chorioamnionitis [diagnosed during labor or maternal temperature >=38 degrees (100.4F)]
Observation.Resource	Code	Birth Plurality of Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.132	PLUR	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. ("Reabsorbed" fetuses, those which are not "delivered" (expulsed or extracted from the mother) should not be counted.)
	valueQuantity	Integer		
Observation.Resource	Code	Number of Live Births (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.68	LIVEB	Not single birth - specify number of infants in this delivery born alive.
	valueQuantity	integer		
Observation.Resource	Code	Number of Fetal Deaths This Delivery (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.164	FDTH	Number of fetal deaths
	valueQuantity	Integer		
Observation.Resource	Code	Date of Last Live Birth (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.67	YLLB	Date of last live birth

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	ValueDateTime	timestamp	MLLB	
Observation.Resource	Code	Date of Last Menses (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.69	DLMP_DY DLMP_MO DLMP_YR	Date last normal menses began
	ValueDateTime	timestamp		
Observation.Resource	Code	Date of Last Other Pregnancy Outcome (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.70 (e.g., spontaneous or induced losses or ectopic pregnancy)	YOPO MOPO	Date of last other pregnancy outcome
	ValueDateTime	timestamp		
Observation.Resource	code	First Prenatal Care Visit (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.133	DOFP_MO DOFP_DY DOFP_Y	Date of first prenatal care visit
	valueDateTime	timestamp For the First Prenatal Care Visit, the following guidance should be noted: 1. First Prenatal Care Visit effectiveTime SHALL be NULL if any of the following are true: a. the patient received prenatal care but the information is not in the record b. it is unknown whether or not the patient received prenatal care c. there was no prenatal care		
Observation.Resource	code	Number of Previous Live Births Now Dead (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.122	PLBD	Number of previous live births now dead (do not include this child)
	valueQuantity	integer		
Observation.Resource	code	Number of Previous Live Births Now Living (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.123	PLBL	Number of previous live births now living (do not include this child)
	valueQuantity	integer		

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
Observation.Resource	code	Number of Preterm Births (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.187	PPB	Risk factors in this pregnancy: Previous preterm births
	valueQuantity	Integer		
Observation.Resource	code	Obstetric Estimate of Gestation (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.124	OWGEST	Obstetric Estimate of Gestation
	valueQuantity	Integer		
Observation.Resource	code	Number of Previous Cesareans (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.148	NPCES	Risk factors in this pregnancy: Number of previous cesareans
	valueQuantity	Integer		
Observation.Resource	code	Number Prenatal Care Visits (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.135	NPREV	Prenatal care visits: Total number of prenatal visits for this pregnancy
	valueQuantity	integer For the Number of Prenatal Care Visits, the following guidance should be noted: 1. The value SHALL be NULL if this is unknown or not available in the record. 2. The value SHALL be the count of the total number of prenatal visits a. Count only visits recorded in the most current record available. Do not estimate additional prenatal visits when the prenatal record is not up to date b. The value SHALL be '0' only if it is known that there were no prenatal care visits.		
Observation.Resource	code	Previous Other Pregnancy Outcomes (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.121	POPO	Number of other pregnancy outcomes
	valueQuantity	Integer		

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
Observation.Resource	code	code=73776-7 No-prenatal care indicator, LOINC	PNC	An indication that a physician or other healthcare professional has not examined and/or counselled the pregnant woman for the pregnancy
	valueBoolean	boolean		
Observation.Resource	Code	Mother's Height SHALL be included, using the value set: Height (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190	HFT HIN	Mother's Height: Feet Mother's Height: Inches
	valueQuantity	The height SHALL be expressed using UCUM for units with the preference to express in feet and inches.		
Observation.Resource	Code	Mother's Weight SHALL be included, using the value set: Body Weight (NCHS) 2.16.840.1.114222.4.11.7421	PWGT DWGT	Mother's pre-pregnancy weight Mother's weight at delivery
	method	using the following value set unless further extended by national extension: Mothers Delivery Weight (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.120 Pre-Pregnancy Weight (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.118		
	valueQuantiy	the weight SHALL be expressed using UCUM for units with the preference to express in pounds unless further extended by national extension		
Encounter.Resource	part of	Type Reference(Encounter) Where reference encounter is the child		
	hospitalization.admitSource		NFACL	Mother: If Mother transferred for maternal medical or fetal indications for delivery, enter name of facility mother transferred from.
	hospitalization.origin(location.name)			

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
Attributes related to mother supplied information				
Patient.resource	Name	SHALL be populated with Mother's Current Legal Name	MFNAME MMNAME MLNAME MSUFF	Mother's Current Legal Name
		SHALL be populated with Mother's Maiden Name	MAIDEN	Mother's Maiden Name
	Id	SHALL be populated with the Mother's Medical Record Number	MRECNUM	The mother's medical record number for this facility admission
		SHALL be populated with the jurisdiction identifier of the mother (NOTE: may be restricted by jurisdiction)	MSSN	The jurisdiction identifier (e.g., social security number (SSN)) of the mother

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	address	SHALL be populated with residential addresses	UNUM CITY CITYC COUNTY LIMITS STATE STNAME STNUM ZIP LIMITS	Mother's Residence: Apartment or Unit Number Mother's Residence: City or Town name Mother's Residence: City or Town code Mother's Residence: County Indicates if the mother's residence is within city limits Mother's Residence: State/Province Mother's Residence: Street Name Mother's Residence: Street Number Mother's Residence: Zip Code Indicates if the mother's residence is within city limits
		SHALL be populated with mailing addresses	MSTNAME MAPT MCITY MSTATE MZIP MCOUNTRY	The mother's mailing address (complete number and street name) The mother's mailing address (Apartment number) The mother's mailing address (city or town name) The mother's mailing address (state, territory or province) The mother's mailing address (zip code) The mother's mailing address (country)

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
		SHALL be populated with birth address (state/province and country)	BPLACEC_CNT* BPLACE_ST * BPLACE_TER* BPLACEC_ST_TER *	Code for Mother's country of birth Mother's state of birth (literal) Mother's territory of birth (literal) Code for Mother's state or territory of birth
	birthdate	SHALL be populated with the mother's date of birth	MDOB_YR MDOB_MO MDOB_DY	The mother's date (year) of birth The mother's date (month) of birth The mother's date (day) of birth
	maritalStatus	SHALL be populated with the mother's marital status if known and as restricted by jurisdiction	MARITAL	The mother's marital status
Attributes related to father from the mother supplied information, such that link.RelatedPerson reflects the father of the newborn or fetus				
RelatedPerson	Id	SHOULD contain the jurisdiction identifier of the father named on the certificate (if known and as permitted or required by Jurisdiction)	FSSN	The jurisdiction identifier (e.g., social security number (SSN)) of the father named on the certificate.

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	Address	SHALL be populated with the father's place of birth (state/province and country)	FBPLACE_ST_TER_L FBPLACE_ST_L FBPLACE_ST_TER_C FBPLACE_CNT_C	The geographic location (state or territory) of the father's place of birth (literal). The geographic location (state) of the father's place of birth (code). The geographic location (state or territory) of the father's place of birth (code). The geographic location (country) of the father's place of birth (code).
	Name	SHALL be populated with the father's legal name	FFNAME FMNAME FLNAME FSUFF FNREF	The current legal first name of the father. The current legal middle name of the father. The current legal last name of the father. The current legal name suffix of the father. Indicates if the father's name can be entered and the mother refuses to name the father. This should only occur when the mother was married at birth, conception, or any time in between and refuses the name of her husband.

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	Birthdate	SHALL be populated with the father's date of birth	FDOB_YR FDOB_MO FDOB_DY	The father's date (year) of birth The father's date (month) of birth The father's date (day) of birth
Attributes related to newborn or fetus, such that ID reflects the newborn or fetus				
Patient.resource	multipleBirth[x].multipleBirthInteger	SHALL be present if known	SORD	The order born in the delivery, live-born or fetal death.
	id	SHALL be populated with the newborn's Medical Record Number	IRECNUM	Child: Newborn Medical Record Number
	birthdate	SHALL be present	AVEN1 IDOB_YR IDOB_MO IDOB_DY ITRAN FTRAN TB	Abnormal conditions of the newborn: Assisted ventilation [required immediately following delivery] Child: Date of Birth: • Year • Month • Day Child: Infant transferred within 24 hours of delivery/name the facility, FTRAN Child: Time of Birth

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	Name	SHALL be present if available.	KIDFNAME KIDMNAME KIDLNAME KIDSUFFX	The name of the newborn or fetus
	gender	SHALL be present	ISEX	The sex of the infant.
	deceased[x].deceasedBoolean	SHALL be present if infant has died	ILIV	Child: Infant living at time of report?
	deceased[x].deceasedDateTime			
	identifier	Infant's Medical Record Number SHALL be present to indicate the number assigned by the organization	IRECNUM	Child: Newborn Medical Record Number
Observation.Resource	code	Body Weight (NCHS) 2.16.840.1.114222.4.11.7421	BWG BWO BWP FWO FWG FWP	Birth weight (Infant's) in • Grams • Ounces • Pounds Weight of Fetus in • Ounces • Grams • Pounds
	method	Birth Weight (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.20		
	valueQuantity	The weight SHALL be expressed using UCUM for units with the preference to express in grams		
Observation.Resource	Code	Apgar Score SHALL be provided for the 5-Minute Apgar Score, using the value set: 5 Min Apgar Score (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.12 IF the 5-Minute Apgar Score is <= 5, then the 10-Minute Apgar Score SHALL be provided, Identified using the value set: 10 Min Apgar Score (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.13	APGAR5 APGAR10	Apgar Score: • 5 Minute • 10 Minute
	Value	where the value is INT<=10		

Condition.Resource	Code	Breastfed Infant (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.41 Neonatal Death (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.149 Seizure or Serious Neurologic Dysfunction (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.10 Meningomyelocele/Spina Bifida - Newborn (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.65 Anencephaly of the Newborn (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.53 Cleft Lip with or without Cleft Palate (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.58 Cleft Palate Alone (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.189 Cyanotic Congenital Heart Disease (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.54 Gastroschisis of the Newborn (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.62 Limb Reduction Defect (NCHS) 6.1.4.1.19376.1.7.3.1.1.13.8.64 Omphalocele of the Newborn (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.66 Hypospadias (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.63 Significant Birth Injury (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.9 Suspected Chromosomal Disorder (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.57 Downs Syndrome (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.61 Karyotype Confirmed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.56 Congenital Diaphragmatic Hernia (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.55 Assisted Ventilation for >6 hours Finding (NCHS) 2.16.840.1.114222.4.11.7534	BFED ILIV SIEZ MNSB ANEN CL CP CCHD GAST LIMB OMPH HYPO BINJ CDIS CDIC CDIP DOWN DOWC DOWP CDH AVEN6 AVEN1 TRANS	Infant being breastfed? Infant living at time of report? Congenital anomalies of the Newborn: • Seizure or serious neurologic dysfunction • Meningomyelocele/Spina Bifida • Anencephaly • Cleft Lip with or without Cleft Palate • Cleft Palate alone • Cyanotic congenital heart disease • Gastroschisis • Limb reduction defect • Omphalocele • Hypospadias • Significant birth injury • Suspected chromosomal Disorder • Suspected chromosomal disorder karyotype confirmed • Suspected chromosomal disorder karyotype pending • Down Syndrome • Down Karyotype Confirmed • Down Karyotype Pending

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
		Assisted Ventilation Finding (NCHS) 2.16.840.1.114222.4.11.7533 Transfer to (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190		• Congenital diaphragmatic hernia Assisted ventilation for 6 or more hours Assisted ventilation [required immediately following delivery]
	onset[x].onsetDateTime	Problem Date and Time SHALL be included for all problems if known		
Procedure.Resource	Code	Antibiotic Administration Procedure (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.178 Assisted Ventilation (NCHS) 2.16.840.1.114222.4.11.7156 Karyotype Determination (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.154 Autopsy Performed (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.1 Autopsy Planned (NCHS) 2.16.840.1.114222.4.11.7140 Surfactant Replacement Therapy (NCHS) 2.16.840.1.114222.4.11.7431 Transfer to facility (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190	ANTI AVEN1 AVEN6 AUTOP DOWC DOWP CDC CDP ITRAN FTRAN	Assisted ventilation [required immediately following delivery] Assisted ventilation for 6 or more hours Congenital anomalies of the Newborn: • Suspected chromosomal disorder karyotype confirmed • Suspected chromosomal disorder karyotype pending • Down Karyotype Confirmed • Down Karyotype Pending Was an autopsy performed? Child: Infant transferred within 24 hours of delivery/name the facility
	Performed[x].period	Procedure Date and Time SHALL be included for all procedures performed if known		
	Value	Procedure value SHALL contain the name of the receiving facility where procedure.code contains: Transfer to facility (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.190	FTRAN	Child: Infant transferred within 24 hours of delivery/name the facility

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
MedicationAdministration.Resource	medication[x].medicationCodableConcept	Newborn Receiving Surfactant Replacement Therapy (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.11 Antibiotics (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.3	SURF ANTI	Abnormal conditions of the newborn: • Surfactant replacement therapy • Antibiotics [received by the newborn for suspected neonatal sepsis]
	dosage.route	SHALL specifically indicate the route where IV or IM administration route is used where Antibiotics are administered for Neonatal Sepsis using the following value sets unless further extended by national extension: IM Medication Administration Route (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.5 IV Medication Administration Route (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.4	ANTI	Abnormal conditions of the newborn: • Antibiotics [received by the newborn for suspected neonatal sepsis]
	reasonReference	Medication indication SHALL be coded using SNOMED-CT where Antibiotics are administered for Neonatal Sepsis using the value set: Neonatal Sepsis (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.6		
Observation.Resource	Code	Birthplace Setting (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.184	BPLACE	Place where birth occurred: Birth Place

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	value	Birthplace Hospital (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.192 Birth Place Home Intended (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.193 Birth Place Home Unintended (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.194 Birth Place Home Unknown Intention (NCHS)1.3.6.1.4.1.19376.1.7.3.1.1.13.8.195 Birthplace Clinic Office (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.197 Birth Place Freestanding Birthing Center (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.196		
Observation.Resource	Code	Histological Placental Examination Performed (NCHS) 2.16.840.1.114222.4.11.7430	HISTOP	Was a Histological Placental Examination performed?
	Value	Histological Placental Examination (NCHS) 2.16.840.1.114222.4.11.7138		
Observation.Resource	Code	Estimated Time Of Fetal Death (NCHS) 2.16.840.1.114222.4.11.7426	ETIME	Estimated Time of Fetal Death
	Value	Fetal Death Time Point (NCHS) 2.16.840.1.114222.4.11.7112		
Encounter.Resource	location.location.type	NICU Care (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.198	NICU	Abnormal conditions of the newborn: Admission to NICU
	location.period	In support of some jurisdictional needs, the date and time that the patient was transferred out MAY be documented		
	Location.status	Where EncounterLocationStatus = planned	TRANS	Infant transferred within 24 hours of delivery
	Location.name	Where EncounterLocationStatus = planned	FTRAN	Infant transferred within 24 hours of delivery/name the facility

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	serviceProvider(organization.name)		ADDRESS_D FLOC	The name of the city, town, township, village, or other location where the birth occurred.
	serviceProvider(organization.identifier)		SFN	Place where birth occurred: State Facility Number
Observation.resource	Code	Karyotype Result (NCHS) 1.3.6.1.4.1.19376.1.7.3.1.1.13.8.59	CDIC CDIP DOWC DOWP	Abnormal conditions of the newborn: • Suspected chromosomal disorder karyotype confirmed • Suspected chromosomal disorder karyotype pending • Down Karyotype Confirmed • Down Karyotype Pending
	Value	The 'value' element not constrained		
Coverage.resource	Type	Potential vocabularies to use include HL7 ActCoverageType X12 Data Element 1336	PAY	Principal source of payment for this delivery

6.6.2 QRPH BFDR Provider Reporting FHIR Document Composition Bundle Content Specification

This section specifies the content that is conveyed to communicate the Provider Live Birth Report information as compiled from source reporting. As described in Volume 1 use cases, this may be used to convey compiled live birth reporting information to a jurisdiction, from the jurisdiction to the national agency, or from the jurisdiction to an analytics organization. This specification is designed for international use based upon the underlying HL7 BFDR FHIR specification. National extensions in Volume 4 may further constrain local concepts

6.6.2.1 Referenced Standards

This section specifies the content that is conveyed to communicate the BFDR information as:

Title	URL
HL7 FHIR standard STU	http://hl7.org/fhir/index.html
Vital Records Birth and Fetal Death Reporting FHIR Implementation Guide based on FHIR R4	https://trifolia-fhir.lantanagroup.com/igs/lantana_hapi_r4/hl7-fhir-us-bfdr/index.html

6.6.2.2 Live Birth Report FHIR Provider Document Composition Bundle Content

The following table specifies the FHIR Resources and Structured Definitions supporting the BFDR Provider Live Birth Report FHIR Document Composition Bundle. Inclusion in the FHIR Document Composition Bundle may be further constrained by jurisdiction disclosure policies. Optionality for each of the FHIR Document Composition Bundle Options is detailed in the Optionality column.

Table 6.6.2.2-1: FHIR Document Composition Bundle Structure Definitions

FHIR Resource location	Optionality	Cardinality	Structured Definition
Birth Record Identifier		[1..1]	http://build.fhir.org/ig/HL7/vrdr/StructureDefinition-VRDR-BirthRecordIdentifier.html (PUBLICATION PENDING: http://hl7.org/fhir/us/vrdr/StructureDefinition/BirthRecordIdentifier)

Appendices to Volume 3

None

Volume 4 – National Extensions

Add appropriate Country section

4 National Extensions

4.I National Extensions for IHE USA

4.I.1 Comment Submission

This national extension document was authored under the sponsorship and supervision of IHE QRPH with collaboration from the CDC/National Center for Health Statistics, who welcome comments on this document and the IHE USA initiative. Comments should be directed to:

http://www.ihe.net/QRPH_Public_Comments

4.I.2 Birth and Fetal Death Reporting – Extended (BFDR-E)

4.I.2.1 BFDR US Volume 1 Constraints

4.I.2.1.1 BFDR Actors and Options US Constraints

The US National Extension constrains the actors and options defined in QRPH TF-1: Table X.2-1: BFDR - Actors and Options. Birth and Fetal Death reporting in the US requires that State Jurisdictions support the following Profile Options for message transactions that will be conducted with NCHS and Provider information sources. Information is also provided for prospective Infrastructure/HIE communications that may serve to facilitate some of these communications.

Additionally, standard worksheets are used to enhance the collection of quality, reliable data. A common, standard form, entitled “Mother’s Worksheet for Child’s Birth Certificate”, has been established to identify information to be collected directly from the mother. The “Facility Worksheet for the Live Birth Certificate” was developed to identify information for which the best sources are the mother’s and infant’s medical records. The use of separate worksheets promotes a standardized collection across states. The "Patient's Worksheet for the Report of Fetal Death" and the "Facility Worksheet for the Report of Fetal Death" have also been established for the purpose of reporting fetal death information.

The hospital is responsible for completing the Record of Live Birth in the jurisdiction's Electronic Birth Registration System (EBRS). Information collected from the mother on the mother’s live birth information must be data entered into the EBRS. Facility Worksheet data transmitted electronically into the EBRS from the EMR must be reviewed for completeness and accuracy. The birth records specialist plays an essential role in gathering the information and ensuring that all information is complete before transmission to the vital registration system at

the states/jurisdictional vital record offices. Select birth data may be transmitted later to public health authorities as allowed by individual state statute and other vital records stakeholders

4.I.2.3 BFDR US Volume 3 Constraints

4.I.2.3.1 BFDR US Forms Pre-population

The U.S. Standard Certificate of Live Birth and the U.S. Standard Report of Fetal Death SHALL use derived elements to populate the processing variables as indicated in Table 6.6.1-1: Form Data Elements Data Mapped to Input Content Document Modules and as specified in the Birth Edit Specifications and the Fetal Death Edit Specifications for the 2003 Revisions of the U.S. Standard Certificate of Live Birth and the U.S. Standard Report of Fetal Death.

Standard worksheets are used in the U.S. to enhance the collection of quality, reliable data for birth and fetal death events. A common, standard form, entitled "Mother's Worksheet for Child's Birth Certificate", has been established to identify information to be collected directly from the mother. The "Facility Worksheet for the Live Birth Certificate" was developed to identify information for which the best sources are the mother's and infant's medical records.

The U.S. currently limits the data that may be pre-populated from an EMR for birth and fetal death events to a subset of vital records' medical/health data requirements, that is, primarily those items included in the U.S. Standard Facility Worksheet for the Live Birth Certificate and the U.S. Standard Facility Worksheet for the Report of Fetal Death. The initial goal will be to monitor and assess the quality of the data that will be exchanged between electronic health record and vital records systems and the quality of the process of information exchange.

4.I.2.3.2 BFDR-E Data Element Index

A relevant data set for birth and fetal death record content reporting includes those elements identified within the US efforts under the CDC/National Center for Health Statistics (NCHS) that can be computed from data elements in the electronic health record. The BFDR-E Summary CDA mapping rules described below overlays these data elements typically presented to the birth registrar. This Derived Data Element Index specifies which sections are intended to cover which domains, the value sets to be used to interpret the Summary CDA Document content, and rules for examining Summary CDA content to determine whether or not the data element is satisfied. These rules may specify examination of one or more Summary CDA Document locations to make a determination of the data element result. The list includes derived data elements that compose knowledge concepts not currently represented in standards, most of which are optional. Where such standards do not exist, the Form Manager will enhance with non-standard fields. Any Summary CDA document may be used to populate the form.

4.I.2.3.3 BFDR-E Form Manager Pre-population Data Element Mapping Specification

Table 4.I.2.1.2-1 describes the US domain mapping to the BFDR-e data elements and the form for the U.S. Standard Facility Worksheet for the Live Birth Certificate. It also indicates attributes

that are permissible in the US for pre-population and those that require data entry. Further edit specifications are in the Birth Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Live Birth (4/2004; 3/2005; Updated 7/2012). Mapping to these attributes is also provided below. For the US, all of the data elements are required. Form Managers SHALL support direct data entry to offer the opportunity to modify all pre-populated information before it is submitted to VR systems

Note: The following attributes are no longer part of the National requirements, but may continue to be used by the jurisdictions:

- CERV
- BINJ
- TOC
- PROM
- PRIC
- PROL
- HIST
- LM
- GBS
- CMV
- B19
- TOXO

Note: Demographic information is sourced from the mother's worksheet throughout, and any EMR mapping provided is intended to facilitate record matching.

Table 4.I.2.3.3-1: Form Element Mapping Specification for Birth

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Facility name: Include the name of Facility where birth occurred	The name of the facility where the delivery took place. If not an institution, give street and number.	1	Pre-populate	FNAME

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Facility I.D. (National Provider Identifier)	Facility National Provider Identifier	2	Pre-populate	FNPI
Facility: City, Town or Location of birth	The name of the city, town, township, village, or other location where the birth occurred.	3	Pre-populate	ADDRESS_D FLOC
Facility: County of birth	The name of the county where the birth occurred.	4	Pre-populate	CNAME CNTYO
Type of Place of birth	The type of place where the birth occurred.	5	Pre-populate	BPLACE
Date of first prenatal care visit	The date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	6	Pre-populate	DOFP_YR, DOFP_MO, DOFP_DY
No Prenatal Care	There was no prenatal care.	6	Pre-populate	PNC
Total number of prenatal care visits for this pregnancy	The total number of prenatal visits recorded in the record.	7	Pre-populate	NPREV
Date last normal menses began	The date the mother's last normal menstrual period began. This item is used to compute the gestational age of the infant.	8	Pre-populate	DLMP_YR, DLMP_MO, DLMP_DY
<!-- #9. Number of previous live births now living -->	The total number of previous live-born infants now living.	9	Pre-populate	PLBL
Number of previous live births now dead	The total number of previous live-born infants now dead..	10	Pre-populate	PLBD
Date of last live birth	The date of birth of the last live-born infant.	11	Pre-populate	YLLB, MLLB
Total number of other pregnancy outcomes	The total number of other pregnancy outcomes that did not result in a live birth. Includes pregnancy losses of any gestational age. Examples: spontaneous or induced losses or ectopic pregnancy	12	Pre-populate	POPO

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Date of last other pregnancy outcome	The date of the last pregnancy that did not result in a live birth ended. Includes pregnancy losses of any gestational age. Examples: spontaneous or induced losses or ectopic pregnancy	13	Pre-populate	YOPO, MOPO
Risk factors in this pregnancy	Risk factors of the mother during this pregnancy.	14	Pre-populate	GDIAB, PHYPE, GHYPE, PPB, VB, INFT, PCES, NPCES
Infections present and/or treated during this pregnancy	Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.	15	Pre-populate	GON, SYPH, CHAM, HEPB, HEPC
Obstetric procedures	Medical treatment or invasive/manipulative procedure performed during this pregnancy to treat the pregnancy or to manage labor and/or delivery.	16	Pre-populate	CERV, TOC, ECVS, ECVF
Onset of Labor	Serious complications experienced by the mother associated with labor and delivery.	17	Pre-populate	PROM, PRIC, PROL
Date of birth	The infant's date of birth	18	Pre-populate	IDOB_YR, IDOB_MO, IDOB_DY
Time of birth	The infant's time of birth	19	Pre-populate	TB
Certifier's name and title: OMIT	The individual who certified to the fact that the birth occurred.	20	Direct Data Entry	No Attribute conveyed
Date certified:	The date that the birth was certified.	21	Direct Data Entry	No Attribute conveyed
Principal source of payment for this delivery	The principal source of payment at the time of delivery.	22	Pre-populate	PAY
Infant's medical record number	The medical record number assigned to the newborn.	23	Pre-populate	IRECNUM

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Was the mother transferred to this facility for maternal medical or fetal indications for delivery?	Information about the transfer status of the mother prior to delivery. Transfers include hospital to hospital, birth facility to hospital, etc. Does not include home to hospital.	24	Pre-populate	TRAN
Attendant's name	The name of the person responsible for delivering the child.	25A	Pre-populate	ATTENDN
Attendants title	The title of the person responsible for delivering the child. The attendant at birth is defined as the individual physically present at the delivery who is responsible for the delivery.	25B	Pre-populate	ATTEND
Attendant's N.P.I.	The National Provider Identification Number of the person responsible for delivering the child. The attendant at birth is defined as the individual physically present at the delivery who is responsible for the delivery.	25C	Pre-populate	NPI
Mother's weight at delivery	The mother's weight at the time of delivery. The preferred unit of measure is in pounds.	26	Pre-populate	DWGT
Characteristics of labor and delivery	Information about the course of labor and delivery.	27	Pre-populate	INDL, AUGL, STER, ANTB, CHOR, ESAN
Method of Delivery	The physical process by which the complete delivery of the fetus was affected.	28	Pre-populate	ROUT, PRES, TLAB
Maternal morbidity	Serious complications experienced by the mother associated with labor and delivery.	29	Pre-populate	MTR, PLAC, RUT, UHYS, AINT, UOPR
Birthweight	The weight of the infant at birth. The preferred unit of measure is in grams.	30	Pre-populate	BWG
Obstetric estimate of gestation at delivery	The best obstetric estimate to the infant's gestation in completed weeks based on birth attendant's final estimate of gestation. This estimate of gestation should be determined by all perinatal factors and assessments such as ultrasound, but not the neonatal exam.	31	Pre-populate	OWGEST

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Sex (Male, Female, or Not yet determined)	Sex of the infant.	32	Pre-populate	ISEX
APGAR Score at 5 minutes	A systematic measure for evaluating the physical condition of the infant at 5 minutes following birth.	33A	Pre-populate	APGAR5
APGAR Score at 10 minutes-	A systematic measure for evaluating the physical condition of the infant at 10 minutes following birth. The APGAR score at 10 minutes is documented if the score at 5 minutes is less than 6.	33B	Pre-populate	APGAR10
Plurality	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.	34	Pre-populate	PLUR
If not single birth (Order delivered in the pregnancy, specify 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, etc.) (Include all live births and fetal losses resulting from this pregnancy): Not Applicable	The order born in the delivery, live-born or fetal death.	35	Pre-populate	SORD
If not single birth, specify number of infants in this delivery born alive	The number of infants in this delivery born alive at any point in the pregnancy.	36	Pre-populate	LIVEB
Abnormal conditions of the newborn	Disorders or significant morbidity experienced by the newborn.	37	Pre-populate	AVEN1, AVEN6, NICU, SURF, ANTI, SEIZ, BINJ

US Birth Registration Form Question	Description	Mapping to US Birth Registration Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Congenital anomalies of the newborn	Malformations of the newborn diagnosed prenatally or after delivery.	38	Pre-populate	ANEN, MNSB, CCHD, CDH, OMPH, GAST, LIMB, CL, CP, DOWN, DOWC, DOWP, CDIS, CDIC, CDIP, HYPO
Was infant transferred within 24 hours of delivery	Transfer status of the infant within 24 hours after delivery.	39	Pre-populate	ITRAN
Is infant living at time of report	Information on the infant's survival.	40	Pre-populate	ILIV
Is infant being breastfed at discharge	Information on whether the infant is being breast-fed before discharge from the hospital.	41	Pre-populate	BFED
Maternal height	The mother's height The preferred unit of measure is in feet and inches.	42	Pre-populate	HFT, HIN
Maternal weight immediately before this pregnancy	The mother's pre-pregnancy weight The preferred unit of measure is in pounds.	43	Pre-populate	PWGT

1845 **Table 4.I.2.3.3-2: Form Element Mapping Specification for Fetal Death**

US Fetal Death Report Form Question	Description	Mapping to US Fetal Death Report Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Facility name: Include the name of Facility where birth occurred-	The name of the facility where the delivery took place. If not an institution, give street and number.	1	Pre-populate	FNAME
Facility I.D. (National Provider Identifier)	Facility National Provider Identifier	2	Pre-populate	FNPI

US Fetal Death Report Form Question	Description	Mapping to US Fetal Death Report Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Facility: City, Town or Location of delivery	The name of the city, town, township, village, or other location where the birth occurred.	3	Pre-populate	FLOC
Facility: County of delivery	The name of the county where the delivery occurred.	4	Pre-populate	CNAME CNTYO
Type of Place of delivery	The type of place where the delivery occurred.	5	Pre-populate	BPLACE
Date of first prenatal care visit	The date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	6	Pre-populate	DOFP_YR, DOFP_MO, DOFP_DY
No Prenatal Care	There was no prenatal care.	6	Pre-populate	PNC
Total number of prenatal care visits for this pregnancy	The total number of prenatal visits recorded in the record.	7	Pre-populate	NPREV
Date last normal menses began	The date the mother/patient's last normal menstrual period began. This item is used to compute the gestational age of the fetus.	8	Pre-populate	DLMP_YR, DLMP_MO, DLMP_DY
Number of previous live births now living	The total number of previous live-born infants now living.	9	Pre-populate	PLBL
Number of previous live births now dead	The total number of previous live-born infants now dead.	10	Pre-populate	PLBD
Date of last live birth	The date of birth of the last live-born infant.	11	Pre-populate	YLLB, MLLB
Total number of other pregnancy outcomes	The total number of other pregnancy outcomes that did not result in a live birth. Includes pregnancy losses of any gestational age. Examples: spontaneous or induced losses or ectopic pregnancy	12	Pre-populate	POPO
Date of last other pregnancy outcome	The date of the last pregnancy that did not result in a live birth ended. Includes pregnancy losses of any gestational age. Examples: spontaneous or induced losses or ectopic pregnancy	13	Pre-populate	YOPO, MOPO

US Fetal Death Report Form Question	Description	Mapping to US Fetal Death Report Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Risk factors in this pregnancy	Risk factors of the mother during this pregnancy.	14	Pre-populate	GDIAB, PHYPE, GHYPE, PPB, PPO, VB, INFT, PCES, NPCES
Infections present and/or treated during this pregnancy	Infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment. Documentation of treatment during this pregnancy is adequate if a definitive diagnosis is not present in the available record.	15	Pre-populate	GON, SYPH, CHAM, LM, GBS, CMV, B19, TOXO
Date of Delivery	The fetus' date of delivery	16	Pre-populate	FDOD_YR , FDOD_MO , FDOD_DY ,
Time of Delivery	The fetus' date of delivery	17	Pre-populate	TD
Name and title of person completing report:	The individual who certified to the fact that the delivery occurred.	18	Direct Data Entry	No Attribute conveyed
Date Report Completed	The date that the delivery was certified.	19	Direct Data Entry	No Attribute conveyed
Was the mother transferred to this facility for maternal medical or fetal indications for delivery?	Information about the transfer status of the mother prior to delivery. Transfers include hospital to hospital, birth facility to hospital, etc. Does not include home to hospital.	20	Pre-populate	TRAN
Attendant's name	The name of the person responsible for delivering the fetus.	21A	Pre-populate	ATTENDN
Attendants title	The title of the person responsible for delivering the fetus. The attendant is defined as the individual physically present at the delivery who is responsible for the delivery.	21B	Pre-populate	ATTEND
Attendant's N.P.I.	The National Provider Identification Number of the person responsible for delivering the fetus. The attendant is defined as the individual physically present at the delivery who is responsible for the delivery.	21C	Pre-populate	NPI

US Fetal Death Report Form Question	Description	Mapping to US Fetal Death Report Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Mother/patient's weight at delivery	The mother/patient's weight at the time of delivery. The preferred unit of measure is in pounds.	22	Pre-populate	DWGT
Method of Delivery:	Information about the course of labor and delivery.	23	Pre-populate	ROUT, PRES, TLAB, HYST
Maternal morbidity	Serious complications experienced by the mother/patient associated with labor and delivery.	24	Pre-populate	MTR, PLAC, RUT, UHYS, AINT, UOPR
Weight of Fetus:	The weight of the fetus at delivery. The preferred unit of measure is in grams.	25	Pre-populate	FWG
Obstetric estimate of gestation at delivery	The best obstetric estimate to the fetus gestation in completed weeks based on birth attendant's final estimate of gestation. This estimate of gestation should be determined by all perinatal factors and assessments such as ultrasound, but not the neonatal exam.	26	Pre-populate	OWGEST
Sex (Male, Female, or Unknown):	Sex of the fetus.	27	Pre-populate	FSEX
Plurality	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.	28	Pre-populate	PLUR
If not single delivery (Order delivered in the pregnancy, specify 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, etc.) (Include all live births and fetal losses resulting from this pregnancy): Not Applicable-	The order this fetus was delivered in the set. Include all live-births and fetal death.	29	Pre-populate	SORD
If not single birth, specify number of infants in this delivery born alive	The number of infants in this delivery born alive at any point in the pregnancy.	30	Pre-populate	LIVEB

US Fetal Death Report Form Question	Description	Mapping to US Fetal Death Report Form Number	US Requirements for Direct Data Entry or Pre-populate	BFDR-E Data Element
Malformations of the fetus diagnosed prenatally or after delivery	Malformations of the fetus diagnosed prenatally or after delivery.	31	Pre-populate	ANEN, MNSB, CCHD, CDH, OMPH, GAST, LIMB, CL, CP, DOWC, DOWN, DOWP, CDIC, CDIS, CDIP, HYPO
Method of Disposition	Method of final disposition of the dead fetus.	32	Direct Data Entry	DISP
Initiating Cause/Condition	The initiating cause/condition is for reporting a single condition that most likely began the sequence of events resulting in the death of the fetus. NOTE: While up to 7 initiating causes may be collected from the provider, there is only 1 Initiating Cause/Condition returned from NCHS.	33	Direct Data Entry	IICOD
Other Significant Causes or Conditions	Other significant causes or conditions include all other conditions contributing to death. These conditions may be conditions that are triggered by the initiating cause or causes that are not among the sequence of events triggered by the initiating cause.	34	Direct Data Entry	IOSC1, IOSC2, IOSC3, IOSC4, IOSC5, IOSC6, IOSC7
Was an autopsy performed?	Information on whether or not an autopsy was performed.	35	Pre-populate	AUTOP
Was a histological placental examination performed?	Information on whether or not a histological placental examination was performed.	36	Pre-populate	HISTOP
Were autopsy or histological placental examination results used in determining the cause of fetal death?	Information on whether the findings of the autopsy or histological placental examination, if performed, were used in completing the medical portion of the fetal death report.	37	Direct Data Entry	AUTOPF
Estimated time of fetal death	Item to indicate when the fetus died with respect to labor and assessment.	38	Pre-populate	ETIME

4.I.6.6.5.2 BFDR-E FHIR Resource Data Specifications

The following table shows US constraints on the mapping of the FHIR Resources supporting the content for each of the BFDR Data Elements/Attributes. Data Responders SHALL support the Resources identified by this table. Data Consumers SHALL be able to retrieve birth and fetal death reporting related health information from the specified resource for one or more attributes.

Table 4.I.6.6.5.2-1: Required Mappings – Birth and Fetal Death Reporting Attribute to FHIR Resource

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
Attributes related to mother supplied information				
Patient.resource	Name	SHALL be populated with Mother's Current Legal Name	MFNAME MMNAME MLNAME MSUFF	Mother's Current Legal Name

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
	us-core-race (NOTE: may be restricted by jurisdiction)	SHOULD be populated if known with the mother's race	MRACE1 MRACE2 MRACE3 MRACE4 MRACE5 MRACE6 MRACE7 MRACE8 MRACE9 MRACE10 MRACE11 MRACE12 MRACE13 MRACE14 MRACE15 MRACE16 MRACE17 MRACE18 MRACE19 MRACE20 MRACE21 MRACE22 MRACE22	Mother's Race is White Mother's Race: Black or African American Mother's Race: American Indian or Alaska Native Mother's Race: Asian Indian Mother's Race: Chinese Mother's Race: Filipino Mother's Race: Japanese Mother's Race: Korean Mother's Race: Vietnamese Mother's Race: Other Asian (specify) Mother's Race: Native Hawaiian Mother's Race: Guamanian or Chamorro Mother's Race: Samoan Mother's Race: Other Pacific Islander (specify) Mother's Race: Other Race (specify) Mother's Race: First American Indian or Alaska Native (literal) Mother's Race: Second American Indian or Alaska Native (literal) Mother's Race: First Other Asian (literal) Mother's Race: Second Other Asian (literal) Mother's Race: First Other Pacific Islander (literal) Mother's Race: Second Other Pacific Islander (literal) Mother's Race: First Other Race (literal) Mother's Race: Second Other Race (literal)
	us-core-ethnicity (NOTE: may be restricted by jurisdiction)	SHOULD be populated if known with the mother's ethnicity	METHNIC1 METHNIC2 METHNIC3 METHNIC4 METHNIC5	Mother's Hispanic Origin is Mexican/Mexican American/Chicana Mother's Hispanic Origin is Puerto Rican Mother's Hispanic Origin is Cuban Mother's Hispanic Origin is Other Spanish/Hispanic/Latina Mother's Hispanic Origin is Other (specify)
Attributes related to father from the mother supplied information, such that link.RelatedPerson reflects the father of the newborn or fetus				

FHIR Resource Location	FHIR Source Element Name	Notes	Attribute Name <QRPH TF-1: Appx B>	Birth and Fetal Death Report Data Element
RelatedPerson	us-core-ethnicity (NOTE: may be restricted by jurisdiction)	SHOULD be populated if known with the father's ethnicity	FETHNIC1 FETHNIC2 FETHNIC3 FETHNIC4 FETHNIC5	Father is Mexican, Mexican American or Chicano Father is Puerto Rican Father is Cuban Father is other: Spanish/Hispanic/Latino Other literal entry
	us-core-race (NOTE: may be restricted by jurisdiction)	SHOULD be populated if known with the father's race	FRACE1 FRACE2 FRACE3 FRACE4 FRACE5 FRACE6 FRACE7 FRACE8 FRACE9 FRACE10 FRACE11 FRACE12 FRACE13 FRACE14 FRACE15 FRACE16 FRACE17 FRACE18 FRACE19 FRACE20 FRACE21 FRACE22 FRACE23	Father's Race is White Father's Race is Black or African American Father's Race is American Indian or Alaska Native (Name of the enrolled or principal tribe) Father's Race is Asian Indian Father's Race is Chinese Father's Race is Filipino Father's Race is Japanese Father's Race is Korean Father's Race is Vietnamese Father's Race is Other Asian (specify) Father's Race is Native Hawaiian Father's Race is Guamanian or Chamorro Father's Race is Samoan Father's Race is Other Pacific Islander (specify) Father's Race is Other Race (specify) Father's Race is First American Indian or Alaska Native (literal) Father's Race is Second American Indian or Alaska Native (literal) Father's Race is: First Other Asian (literal) Father's Race is: Second Other Asian (literal) Father's Race is First Other Pacific Islander (literal) Father's Race is Second Other Pacific Islander (literal) Father's Race is: First Other Race (literal) Father's Race is: Second Other Race (literal)

