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DRAFT STANDARD FOR TRIAL USE

February 2015

Publication of this draft standard for trial use and comment has been approved by Health Level Seven International (HL7). This draft standard is not an accredited American National Standard. The comment period for use of this draft standard shall end 24 months from the date of publication. Suggestions for revision should be submitted at http://www.hl7.org/dstucomments/index.cfm.

Following this 24 month evaluation period, this draft standard, revised as necessary, will be submitted to a normative ballot in preparation for approval by ANSI as an American National Standard. Implementations of this draft standard shall be viable throughout the normative ballot process and for up to six months after publication of the relevant normative standard.

ADT^A04, ADT^A08
HL7 Version 2.5.1

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1.Introduction

The Implementation Guide (IG) is an initial effort to provide guidance and messaging infrastructure for transmitting medical/health information on live births and fetal deaths from a birthing facility setting to a jurisdictional vital records electronic registration system. The use case describes the transmission of the data using trigger events and abstract messages to record the creation, revision, or retraction of live birth or fetal death reports. This specification covers the transmission of medical/health information for live birth and fetal death reporting to the applicable jurisdictional Vital Records Office.

1.1 PURPOSE

The guide is needed in order to provide documentation of the constraints of specific implementations.

1.2 AUDIENCE

This guide is designed for use by analysts and developers who require guidance on optional and ambiguous elements of the *HL7 Version 2.5.1 Patient Administration (Chapter 3) Information* relative to its specialized use for providing live birth and fetal death related information. Users of this guide must be familiar with the details of HL7 message construction and processing. This guide is not intended to be a tutorial on that subject.

1.3 SCOPE

This specification covers the transmission of medical/health information for live birth and fetal death reporting to the applicable jurisdictional Vital Records Office.

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

This specification documents a message profile for reporting clinician sourced live birth and fetal death medical and health information.

Two profiles are found in this document:

- Electronic Health Record Sender – a message profile for Electronic Health Record to provide relevant live birth and fetal death reporting information
- Vital Records Receiver – a message profile, the mirror image of the sending profile, to be used by the vital records electronic registration system to receive selected live birth and fetal death reporting information.

This implementation guide assumes that there will be unidirectional communication between an EHR and a vital records electronic registration system.

1.4 CONVENTIONS

This guide adheres to the following conventions:

- The guide is constructed assuming the implementer has access to the 2.5.1 version of the HL7 Standard. Although some information from the standard is included in this implementation guide, much information from the standard has not been repeated here.
- The rules outlined in *HL7 2.5.1, Chapter 2, Section 2.12, Conformance Using Message Profiles*, were used to document the use case for, and constraints applied to, the messages described in this guide.
- Data types have been described separately from the fields that use the data types. For details regarding data type field lengths, please refer to *Section 2.1.3, Lengths*, in this document.
- No conformance information is provided for optional message elements. This includes length, usage,

cardinality, value sets and descriptive information. Implementers who want to use optional message elements should refer to the HL7 Standard to determine how these optional message elements will be used.

1.4.1 Message Element Attributes

The following table describes the various attributes used by this guide to document data type attribute tables, message structure attribute tables and segment attribute tables. Not all attributes apply to all attribute tables.

Table 1. Message Element Attributes

Attribute	Definition
Seq	Sequence of the elements as numbered in the HL7 message element. The Seq attribute applies to the data type attribute table and the segment attribute table.
Segment	Three-character code for the segment and the abstract syntax (*e.g.*, the square and curly braces). [XXX] Optional { XXX } Repeating XXX Required [{ XXX }] Optional and Repeating Note that for segment groups there is no segment code present, but the square and curly braces will still be present. The Segment attribute only applies to the Message attribute table.
Length	Maximum length of the element. Lengths are provided only for primitive data types. The length attribute apples to data type attribute tables and segment attribute tables. Lengths should be considered recommendations, not absolutes. The receiver can truncate fields, components and sub-components that are longer than the recommended length. The receiver should continue to process a message even when a field, component, or sub-component length exceeds the maximum recommended length identified in this specification. See Section 2.1.3 Lengths for documentation on how lengths are handled in this guide. The length attribute may contain a character indicating how the data may be truncated by a receiver. The truncation characters are defined as follows: = Truncation not allowed # Truncation allowed No character indicates the truncation behavior is not defined.
DT	Data type used by this profile for HL7 element. The data type attribute applies to data type attribute tables and segment attribute tables.
Usage	Usage of the message element for this profile. Indicates whether the message element (segment, segment group, field, component, or subcomponent) is required, optional, or conditional in the corresponding message element. Usage applies to the message attribute table, data type attribute table and the segment attribute table. See below for further discussion. In this implementation guide, usage has been divided by actor. This guide documents two

Attribute	Definition
Usage	separate actors: • Electronic Health Record Sender • Vital Records Receiver Both of these actors are considered "Normative" in this guide. See section 3.1 for additional information about the various actors documented in this guide. Legal usage values are: **R –** Required. HL7 Definition: A conforming sending application shall populate all "R" elements with a non-empty value. Conforming receiving application shall process (save/print/archive/etc.) or ignore the information conveyed by required elements. A conforming receiving application must not raise an error due to the presence of a required element, but may raise an error due to the absence of a required element. Any element designated as required in a standard HL7 message definition shall also be required in all HL7 message profiles of that standard message. **RE –** Required, but can be empty. HL7 Definition: The element may be missing from the message, but must be sent by the sending application if there is relevant data. A conforming sending application must be capable of providing all "RE" elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values, then that element will be omitted. Receiving applications will be expected to process (save/print/archive/etc.) or ignore data contained in the element, but must be able to successfully process the message if the element is omitted (no error message should be generated because the element is missing). **O –** Optional. HL7 Definition: This code indicates that the Usage for this element has not yet been defined. A usage of 'Optional' may not be used in 'implementation' profiles (no-optionality profiles). Conformance may not be tested on an Optional field. Narrower profiles may be defined based on this profile, and may assign any usage code to the element. Those items listed as optional within this guide are not required in order to support the functional content of the guide. In many cases, they are outside of the scope of death reporting and may be ignored by implementers. Those items which are clearly not relevant to death reporting are marked with yellow shading within the guide to clearly note that senders do not have to provide content, and that receivers do not have to process any content received within those fields. At the same time it is important to note that providing information within an optional field does not constitute an error that would lead to rejecting a message. **C –** Conditional. HL7 Definition: This usage has an associated condition predicate. (Review the discussion of conditional within Chapter 2 – Control of the HL7 Standard for more information.) **If the predicate is satisfied:** A conformant sending application must always send the element. A conformant receiving application must process or ignore data in the element. It may raise an error if the element is not present. **If the predicate is NOT satisfied:** A conformant sending application must NOT send the element. A conformant receiving application must NOT raise an error if the condition predicate is false and the element is not present, though it may raise an error if the element IS present. **CE –** Conditional, but may be empty. HL7 Definition: This usage has an associated condition predicate. (Review the discussion

Attribute	Definition
	of conditional within Chapter 2 – Control of the HL7 Standard for more information.) **If the predicate is satisfied:** If the conforming sending application knows the required values for the element, then the application must send the element. If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application must be capable of knowing the element (when the predicate is true) for all 'CE' elements. If the element is present, the conformant receiving application shall process (display/print/archive/etc.) or ignore the values of that element. If the element is not present, the conformant receiving application shall not raise an error due to the presence or absence of the element. **If the predicate is not satisfied:** The conformant sending application shall not populate the element. The conformant receiving application may raise an application error if the element is present. **X –** Not used for this profile. HL7 Definition: For conformant sending applications, the element will not be sent. Conformant receiving applications may ignore the element if it is sent, or may raise an application error. **- -** The hyphen (-) Indicates the profile using the actor does not provide documentation of the structure containing the particular element or does not provide documentation of the particular element in the structure. For instance in a data type specification for CE, if a profile does not provide documentation of the CE data type, then each component of the data type would have a "-" for the usage for the actor associated with that profile.
Cardinality	Minimum and maximum number of times the element may appear. [0..0] Element never present. [0..1] Element may be omitted and can have, at most, one occurrence. [1..1] Element must have exactly one occurrence. [0..n] Element may be omitted or may repeat up to *n* times. [1..n] Element must appear at least once, and may repeat up to *n* times. [0..*] Element may be omitted or repeat an unlimited number of times. [1..*] Element must appear at least once, and may repeat unlimited number of times. [m..n] Element must appear at least *m*, and at most, *n* times. Cardinality applies only to message attribute tables and segment attribute tables.
Value Set	The set of coded values to be used with the field. The value set attribute applies only to the data type attribute tables and the segment attribute tables. The value set may equate with an entire code system part of a code system, or codes drawn from multiple code systems. Note: Where a table constraint is indicated, the constrained or specified HL7 table is included below the data type table.
Name	HL7 descriptor of the message element. Name applies to the message attribute table, data type attribute table and the segment attribute table.
Description/Comments	Context and usage for the element. Description/Comments applies to the message attribute table, data type attribute table and the segment attribute table.

Note: In the tables throughout this document, Yellow = This Interoperability Specification does not support the use of this item. This corresponds with the Usage codes "O" and "X".

1.4.1.0 Usage Conformance Testing Recommendations

The following table provides some recommendations for testing the various usage codes described in the previous table.

Table 2. Usage Conformance Testing Recommendations

Usage	Recommendation
R – Required	Required elements must be present in a message instance with the following caveats: A required segment, which is contained within a segment group, is required only when the segment group is present in the message. For instance if the segment group is RE, then when the segment group is present, the required segments in that group must be present. A required field in a segment is required only when the segment itself is present in the message. For instance if the segment is CE (conditional or empty) and the conditional predicate is satisfied, then the segment is present in the message and the required fields must be present in the segment. A required component of a data type is required only when the field the data type is associated with is present in the message. Testing of a required element generally involves generating both a fully populated message instance as well as a minimally populated message instance. It may be necessary to generate specific test cases to handle separate segment groups, segments, etc. depending on the usage associated with these higher level elements within a message.
RE – Required, but can be empty	Since conformant senders must be able to show they can send this data, the primary mechanism for testing the RE usage would involve requiring the sender to transmit a "fully" populated message instance from their application. In this case, the expectation is that the message will be generated by the application, not handcrafted. The message would contain all data the sending application can populate in the message. This generally means the sender would be populating in their application all data elements being tested, including those that are optional in the application.
O – Optional	Conformance testing for optional elements would not normally be performed. If a particular implementation decides to use an optional element, it should create an implementation specific profile which further constrains this profile, making the optional element either required, required but may be empty, condition or conditional but may be empty, and then test the element in question based upon the assigned usage in that profile.
C – Conditional	Testing conditional elements generally means a special test case must be developed based upon the specific conditional rule or conditional predicate documented for the element.
CE – Conditional, but may be empty	Testing conditional but may be empty elements generally means a special test case must be developed based upon the specific conditional rule or conditional predicate documented for the element.
X – Not used for this profile	Testing this usage code usually involves looking at both fully populated and minimally populated messages. Note that the sending application may collect the data element in question, but it should not communicate that data element in message instances.

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2. Messaging Infrastructure

2.1 MESSAGING FRAMEWORK

2.1.1 Delimiters

This profile supports the use of the normal HL7 delimiters. It is recommended, but not required, that implementers be able to send messages using the standard HL7 delimiters. Receivers must be capable of receiving any legal delimiters that are sent in a particular message instance.

This table is pre-adopted from the *HL7 Version 2.6*, which offers information regarding best practices. The intent has not changed from *Version 2.5.1*. Note that this implementation guide includes additional constraints and explanations for the entries.

Table 3. Delimiters

Delimiter	Required Value	Encoding Character Position	Description
Segment Terminator	<cr>	-	Terminates a segment record. This value cannot be changed by implementers. Additional Constraints and Explanation: The <cr> denotes the ASCII-013 carriage return character. There is a common misunderstanding that a linefeed character, or carriage return followed by a linefeed character, is allowed also. Neither HL7 nor this profile allows either of these two as part of the segment terminator. Only the ASCII-013 carriage return is allowed.
Field Separator	|	-	Separates two adjacent data fields within a segment. It also separates the segment ID from the first data field in each segment. Additional Constraints and Explanation: It is recommended that senders use ASCII-124, the vertical bar (|) character, as the field separator.
Component Separator	^	1	Separates adjacent components of data fields where allowed. Additional Constraints and Explanation: It is recommended that senders use ASCII-094, the caret (^) character, as the component separator.
Repetition Separator	~	2	Separates multiple occurrences of a field where allowed. Additional Constraints and Explanation: It is recommended that senders use ASCII-126, the tilde character (~), as the repetition separator.

Delimiter	Required Value	Encoding Character Position	Description
Escape Character	\	3	Use the escape character with any field represented by an ST, TX or FT data type, or for use with the data (fifth) component of the ED data type. If no escape characters are used in a message, this character may be omitted. However, it must be present if subcomponents are used in the message. Best practice is always to include this character. Additional Constraints and Explanation: It is recommended that senders use ASCII-091, the backslash (\) character, as the escape character.
Subcomponent Separator	&	4	Separates adjacent subcomponents of data fields where allowed. If there are no subcomponents, this character may be omitted. Best practice is always to include this character. Additional Constraints and Explanation: It is recommended that senders use ASCII-038, the ampersand (&) character, as the subcomponent separator.

2.1.2 Null Values In Fields Vs. Components

In HL7, a null value for a field is indicated by paired double quotes (|""|). The null value applies to the field as a whole, not to the components/subcomponents of the field. A null field value indicates that the receiver of the message should delete the corresponding set of information from the data store. For this implementation guide, null values within components and subcomponents are meaningless. In other words, “” within a component or sub-component is treated simply as if no content were provided. For example, |lastname^firstname^""^^^^L| would be interpreted exactly as |lastname^firstname^^^^^L|. The components and subcomponents of a data type constitute a snapshot of the data. The set of data represented by the data type is handled as a complete set; therefore, using the null value to indicate a missing component or subcomponent is unnecessary.

2.1.3 Lengths

In *HL7 Version 2.5*, HL7 assigned lengths to the components of data types, but did not standardize the lengths of the fields that use those data types. This guide pre-adopts the length rules from *HL7 Version 2.7*: Starting with v2.7, HL7 allows documentation of both a minimum and maximum length for an element.

In *HL7 Version 2.7* length is specified for primitive data types (i.e., those without components). Length is not specified for composite elements. For composite data types, the actual minimum and maximum lengths can be very difficult to determine due to the interdependencies on the component content, and the specification of actual lengths is not useful either. In general, this guide will adopt lengths from *HL7 Version 2.7*.

The concept of truncation is being pre-adopted from HL7 Version 2.7 as well, but only in regards to length documentation. The transmission of the truncation character in message data is not being pre-adopted.

> *Note: In* HL7 Version 2.5.1, *the length of 65536 has a special meaning: For HL7, "If the maximum length needs to convey the notion of a Very Large Number, the number 65536 should be displayed to alert the user."*
> *In this implementation guide, fields or components with length 65536 should be understood as having no prescribed length. Receivers should be prepared to accept any size chunk of data carried in the field or component.*

2.1.4 Snapshot processing

HL7 distinguishes between two methods of update: the "snapshot" and the "action code/unique identifier" modes. Both modes apply to repeating segments and repeating segment groups. For repeating fields, only snapshot

processing applies. For the purpose of this guide, only snapshot processing is supported for segments, segment groups and fields.

2.1.4.0 Repeating Segments

HL7 defines snapshot processing for segments as follows:

> In the "snapshot" mode, the information contained in the set of repeating segments or segment groups from the incoming message replaces the corresponding information in the receiving application. This is equivalent to a deletion of the prior information followed by the addition of the newly supplied information. In this mode, everything (all repeating segments and segment groups) must be sent with every subsequent message in the series of messages. There is no other way to indicate which ones changed and which ones did not.
> To specify "delete all of the segments in this repeating group" in the snapshot mode, send a single segment with "delete data" (indicated by a value of "") in all fields. This actively signals the receiver that there is information that needs to be deleted. If no segment were sent, this would equate to "no information." No information should not signal the receiver to take an action. There would be risk that the receiver might misinterpret the sender's intent.[1]

2.1.4.1 Repeating Fields

Snapshot processing for repeating fields requires sending a full list of repetitions for each transaction. If the intent is to delete an element, the element is left off the list. This is analogous to the snapshot mode for repeating segments and segment groups. To delete the whole list, transmit the field once with a |""| (null) in the first component.

Repetitions of fields shall not have empty repetitions followed by repetitions containing data, except where the HL7 standard clearly reserves certain repetitions for specific purposes. For instance, PID-5 Patient Name is a repeating field, the first repetition of which is reserved by HL7 for the legal name. In the case where a name is known for the patient, but is not the legal name, format the name field as follows: |~lastname^firstname^mi^^^^A|.

2.2 USE OF ESCAPE SEQUENCES IN TEXT FIELDS

Senders and receivers using this profile shall handle escape sequence processing as described in *HL7 Version 2.5.1, Chapter 2, Section 2.7.4 (Special Characters*). This requirement applies to the ST, TX and FT data types. Implementers shall not support escape sequences described in *Sections 2.7.2 (Escape sequences supporting multiple character sets), 2.7.3 (Highlighting), 2.7.5 (Hexadecimal), 2.7.6 (Formatted Text)* and *2.7.7 (Local).* This restriction applies to the TX and FT data types.

[1] Taken from HL:7 2.6, Chapter 2, section 2.10.4.1.

2.3 DATA TYPES

The table documents the list of data types used within the included profiles. It includes all the data types referred to by the supported fields within included segments for the messages.

Table 4. Supported Data Types

Data Type	Data Type Name
CE	Coded element
CWE	Coded with Exceptions
CNN	Composite ID Number and Name Simplified
CX	Extended Composite ID with Check Digit
DT	Date
DTM	Date/Time
EI	Entity Identifier
ERL	Error Location
FC	Financial Class
FN	Family Name
HD	Hierarchic Designator
ID	Coded Values for HL7 Tables
IS	Coded value for User-Defined Tables
MSG	Message Type
NM	Numeric
PL	Person Location
PT	Processing Type
SAD	Street Address
SI	Sequence ID
ST	String
TS	Time Stamp
TX	Text Data
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name for Person
XON	Extended Composite Name and ID Number for Organizations
XPN	Extended Person Name
XTN	Extended Telecommunications Number

2.3.1 CE – Coded Element

This data type transmits codes and the text associated with the code.

Table 5. Coded Element (CE)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	ST	RE	RE		Identifier	

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
2	1..199#	ST	RE	RE		Text	It is strongly recommended that text be sent to accompany any identifier. When a coded value is not known, text can still be sent, in which case no coding system should be identified.
3	1..12	ID	RE	C	HL70396	Name of Coding System	The component is required if an identifier is provided in component 1.
4	1..20=	ST	O	O		Alternate Identifier	The alternate identifier (from the alternate coding system) should be the closest match for the identifier found in component 1.
5	1..199#	ST	O	O		Alternate Text	It is strongly recommended that alternate text be sent to accompany any alternate identifier.
6	1..12	ID	CE	C	HL70396	Name of Alternate Coding System	The component is required if an alternate identifier is provided in component 4.

```
Example:  |625-4^Bacteria
     identified:Prid:Pt:Stool:Nom:Culture^LN^BAC^Bacteria
     Culture^99Lab|
```

2.3.2 CNE – Coded No Exceptions

Specifies a coded element and its associated detail. The CNE data type is used when a required or mandatory coded field is needed. The specified HL7 or externally defined table must be used and may not be extended with local values. Text may not replace the code. A CNE field must have an HL7 defined or external table associated with it. It must be specified in the standard..

Table 6. Coded No Exceptions (CNE)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	ST	RE	R		Identifier	

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
2	1..199#	ST	RE	RE		Text	It is strongly recommended that text be sent to accompany any identifier. When a coded value is not known, the original text attribute is used to carry the text, not the text component. If the Identifier component is empty, then this component must be empty.
3	1..12	ID	RE	R	HL70396	Name of Coding System	Required if an identifier is provided in component 1. See section 6 for description of the use of coding systems in this implementation guide.
4	1..20=	ST	O	O		Alternate Identifier	The alternate identifier (from the alternate coding system) should be the closest match for the identifier found in component 1.
5	1..199#	ST	O	O		Alternate Text	It is strongly recommended that alternate text be sent to accompany any alternate identifier. : If the alternate Identifier component is empty, then this component must be empty.
6	1..12	ID	CE	CE	HL70396	Name of Alternate Coding System	Required if an alternate identifier is provided in component 4. See section 6 for description of the use of coding systems in this implementation guide.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
7	1..10=	ST	O	O		Coding System Version ID	Required if a coding system is identified in component 3. However, the particular coding system indicates versioning should be handled will be appropriate here. The length has been increased to handle longer versioning strings.
8	1..10=	ST	O	O		Alternate Coding System Version ID	Required if an alternate coding system is identified in component 6. However, the particular coding system indicates versioning should be handled will be appropriate here. The length has been increased to handle longer versioning strings.
9	1..199#	ST	RE	RE		Original Text	Original Text is used to convey the text that was the basis for coding. This allows for specifying additional information when the "Other" code value is selected.
10	1..20=	ST	O	O		Second Alternate Identifier	Additional local code.
11	1..199#	ST	O	O		Second Alternate Text	Additional local text.
12	1..12	ID	O	O	HL70396	Second Name of Alternate Coding System	Required if a second alternate identifier is provided in component 10.
13	1..10=	ST	O	O		Second Alternate Coding System Version ID	Version for the coding system identified in components 12.
14	1..199=	ST	O	O		Coding System OID	OID for the coding system named in CWE.3.
15	1..199=	ST	O	O		Value Set OID	Not expected to be supported.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
16	1..8=	DTM	O	O		Value Set Version ID	Not expected to be supported.
17	1..199=	ST	O	O		Alternate Coding System OID	OID for the coding system named in CWE.6.
18	1..199=	ST	O	O		Alternate Value Set OID	Not expected to be supported.
19	1..8=	DTM	O	O		Alternate Value Set Version ID	Not expected to be supported.
20	1..199=	ST	O	O		Second Alternate Coding System OID	Not expected to be supported.
21	1..199=	ST	O	O		Second Alternate Value Set OID	Not expected to be supported.
22	1..8=	DTM	O	O		Second Alternate Value Set Version ID	Not expected to be supported.

Usage: The CWE data type is used where it is necessary to communicate a code, text, coding system and the version of coding system the code was drawn from. It also allows the communication of an alternate code drawn from another coding system. Many coded fields in this specification identify coding systems or value sets that must be used for the field. **When populating the CWE data types with these values, this guide does not give preference to the triplet in which the standard code should appear.** The receiver is expected to examine the coding system names in components 3 and 6 to determine if it recognizes the coding system.

The CWE data type allows communication of an early form of what has come to be called "null flavors." HL7 2.5.1 refers to these as CWE Statuses, where the values are drawn from HL7 Table 0353. .The CWE Statuses are not expected to be supported.in this guide.

```
Example:  |625-4^Bacteria
     identified:Prid:Pt:Stool:Nom:Culture^LN^BAC^Bacteria
     Culture^99Lab^2.26^May 2006|
```

2.3.3 CWE – Coded with Exceptions

Specifies a coded element and its associated detail. The CWE data type is used when 1) more than one table may be applicable **or** 2) the specified HL7 or externally defined table may be extended with local values **or** 3) when text is in place, the code may be omitted..

Table 7. Coded with Exceptions (CWE)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	ST	RE	RE		Identifier	
2	1..199#	ST	CE	RE		Text	It is strongly recommended that text be sent to accompany any identifier. When a coded value is not known, the original text attribute is used to carry the text, not the text component. If the Identifier component is empty, then this component must be empty.
3	1..12	ID	CE	RE	HL70396	Name of Coding System	Required if an identifier is provided in component 1. See section 6 for description of the use of coding systems in this implementation guide.
4	1..20=	ST	O	O		Alternate Identifier	The alternate identifier (from the alternate coding system) should be the closest match for the identifier found in component 1.
5	1..199#	ST	O	O		Alternate Text	It is strongly recommended that alternate text be sent to accompany any alternate identifier. If the alternate Identifier component is empty, then this component must be empty.
6	1..12	ID	O	O	HL70396	Name of Alternate Coding System	Required if an alternate identifier is provided in component 4. See section 6 for description of the use of coding systems in this implementation guide.
7	1..10=	ST	O	CE		Coding System Version ID	May be provided if a coding system is identified in component 3. The need for version information is determined by the nature of the code syatem.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
8	1..10=	ST	O	CE		Alternate Coding System Version ID	May be provided if an alternate coding system is identified in component 6. The need for version information is determined by the nature of the code syatem.
9	1..199#	ST	CE	CE		Original Text	Either original Text is used to convey the text that was the basis for coding, or when there is no code to be sent, only free text. If no identifier and alternate identifier are present, then this component is required.
10	1..20=	ST	O	O		Second Alternate Identifier	Additional local code.
11	1..199#	ST	O	O		Second Alternate Text	Additional local text.
12	1..12	ID	O	O	HL70396	Second Name of Alternate Coding System	Required if a second alternate identifier is provided in component 10.
13	1..10=	ST	O	O		Second Alternate Coding System Version ID	Version for the coding system identified in components 12.
14	1..199=	ST	O	O		Coding System OID	OID for the coding system named in CWE.3.
15	1..199=	ST	O	O		Value Set OID	Not expected to be supported.
16	1..8=	DTM	O	O		Value Set Version ID	Not expected to be supported.
17	1..199=	ST	O	O		Alternate Coding System OID	OID for the coding system named in CWE.6.
18	1..199=	ST	O	O		Alternate Value Set OID	Not expected to be supported.
19	1..8=	DTM	O	O		Alternate Value Set Version ID	Not expected to be supported.
20	1..199=	ST	O	O		Second Alternate Coding System OID	Not expected to be supported.
21	1..199=	ST	O	O		Second Alternate Value Set OID	Not expected to be supported.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
22	1..8=	DTM	O	O		Second Alternate Value Set Version ID	Not expected to be supported.

Usage: The CWE data type is used where it is necessary to communicate a code, text, coding system and the version of coding system the code was drawn from. It also allows the communication of an alternate code drawn from another coding system. Many coded fields in this specification identify coding systems or value sets that must be used for the field. **When populating the CWE data types with these values, this guide does not give preference to the triplet in which the standard code should appear.** The receiver is expected to examine the coding system names in components 3 and 6 to determine if it recognizes the coding system.

The CWE data type allows communication of an early form of what has come to be called "null flavors." HL7 2.5.1 refers to these as CWE Statuses, where the values are drawn from HL7 Table 0353. .The CWE Statuses are not expected to be supported.in this guide.

```
Example:  |625-4^Bacteria
     identified:Prid:Pt:Stool:Nom:Culture^LN^BAC^Bacteria
     Culture^99Lab^2.26^May 2006|
```

2.3.4 CX – Extended Composite ID with Check Digit

Table 8. Extended Composite ID with check digit (CX)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..15=	ST	R	R		ID Number	The ID Number must uniquely identify the associated object, i.e., any object with which the field is associated. Note - despite the component being named "ID Number" this component is an ST string data type, not numeric, so the component is not limited to just numbers.
2	1..4=	ST	O	O		Check Digit	Not expected to be supported.
3	3..3	ID	O	O	HL7 0061	Check Digit Scheme	Not expected to be supported.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
4		HD	RE	RE		Assigning Authority	The assigning authority is a unique name of the system (or organization or agency or department) that created the identifier value. It should be provided to help guarantee the uniqueness of the identifier.
5	2..5	ID	R	R	HL70203	Identifier Type Code	The component is used to indicate the type of identifier provided within the first component. It is provided to help guarantee the uniqueness of the identifier.
6		HD	O	O		Assigning Facility	The Assigning Facility identifies the place or location that the ID Number was assigned for use.
7		DT	O	O		Effective Date	Not expected to be supported.
8		DT	O	O		Expiration Date	Not expected to be supported.
9		CWE	O	O	Local	Assigning Jurisdiction	Not expected to be supported.
10	3..3	CWE	O	O	Local	Assigning Agency or Department	Not expected to be supported.

Usage: The CX data type is used to carry identifiers. This guide requires that all identifiers be accompanied by assigning authorities, and that all identifiers carry an identifier type. This method allows the exchange of unique identifiers for the associated object across organizational and enterprise boundaries, enabling broad interoperability.

Although the Identifier Type Code component is required, it is not a part of the actual identifier. Rather, it is metadata about the identifier. The ID Number and Assigning Authority component, together, constitute the actual identifier. The reason for this requirement is to promote forward compatibility with *HL7 Version 3* identifiers, where there is no concept of identifier type codes. Although this guide does not deal directly with *Version 3* constructs, it is intended to work within the context of the HITSP Interoperability constructs, which work with both *Version 2.x* messaging and *Version 3* constructs.

```
Example:
|36363636^^^MPI&2.16.840.1.113883.19.3.2.1&ISO^MR^A&2.16.840.1.1
13883.19.3.2.1&ISO|
```

2.3.5 DT – Date

Table 9. Date (DT)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	4..8	-	R	R		Date	Format: YYYY[MM[DD]]

```
Example:  |20080602|
```

2.3.6 DTM – Date/Time

Table 10. Date/Time (DTM)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	4..24	-	R	R		Date/Time	Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]

Usage: It is strongly recommended that the time zone offset always be included in the DTM particularly if the granularity includes hours, minutes, seconds, etc. Specific fields in this implementation guide may require Date/Time to a specific level of granularity, which may require the time zone offset.

```
Example:  |200806021328.0001-0005|
```

2.3.7 EI – Entity Identifier

Table 11. Entity Identifier (EI)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..199=	ST	R	R		Entity Identifier	
2	1..20=	IS	O	O	Local	Namespace ID	The coding system for this component is locally managed.
3	1..199=	ST	CE	CE		Universal ID	Must be an OID.
4	1..6	ID	CE	CE	HL70301	Universal ID Type	Constrained to the value "ISO.".

Usage: The EI is appropriate for, but not limited to, machine or software generated identifiers. The generated identifier goes in the first component. The remaining components, 2 through 4, are known as the assigning authority; they identify the machine/system responsible for generating the identifier in the first component.

In an implementation, the assigning authority, if it is provided, is identified either using component 2 or the combination of component 3 and 4.

```
Example:  |23456^EHR^2.16.840.1.113883.19.3.2.3^ISO|
```

2.3.8 ERL – Error Location

Table 12. Error Location (ERL)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	3..3=	ST	R	R		Segment ID	The 3-character name for the segment (i.e., PID).
2	1..2=	NM	R	R		Segment Sequence	
3	1..2=	NM	CE	CE		Field Position	The field number with the error. Should not be populated for errors involving the entire segment. This component is required if components 4, 5 and/or 6 are populated.
4	1..2=	NM	RE	RE		Field Repetition	The first field repetition is counted a 1. This component is required if the field identified in components 1, 2, and 3 is a repeating field.
5	1..2=	NM	CE	CE		Component Number	This component is required if component 6 is populated.
6	1..2=	NM	RE	RE		Sub-component Number	Provide if relevant to the error.

```
Example:  |MSH^1^21^1^2|
```

2.3.9 FC – Financial Class

Table 13. Financial Class (FC)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..50#	IS	R	R	0064	Financial Class Code	
2	1..26#	TS	O	O		Effective Date	Not expected to be supported

Example: |5|

2.3.10 FN – Family Name

Table 14. Family Name (FN)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..50#	ST	R	R		Surname	
2	1..20#	ST	O	O		Own Surname Prefix	Not expected to be supported
3	1..50#	ST	O	O		Own Surname	Not expected to be supported
4	1..20#	ST	O	O		Surname Prefix From Partner/Spouse	Not expected to be supported
5	1..50#	ST	O	O		Surname From Partner/Spouse	Not expected to be supported

Example: |Smith|

2.3.11 HD – Hierarchic Designator

Table 15. Hierarchic Designator (HD)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	IS	RE	RE	Local	Namespace ID	The coding system for this component is locally managed.
2	1..199=	ST	C	C		Universal ID	A string that is formatted according the scheme defined by the third component.
3	1..6	ID	C	C	HL70301	Universal ID Type	It governs the interpretation of the second component.

Usage: The HD data type is used directly to identify objects such as applications or facilities. It is used also as a component of other data types, where it is typically an assigning authority for an identifier.

The HD is designed to be used either as a local identifier (with only the <namespace ID> valued) or a publicly-assigned identifier, a UID (<universal ID> and <universal ID type> both valued).

If all three components of the HD are valued, the entity identified by the first component is the same as the entity identified by components two and three taken together. However, implementers may choose, by site agreement, to specify that if all three components of the HD are valued, the first component defines a member in the set defined by the second and third components.

```
Example:  |2345-3^2.16.840.1.113883.19.3.1.1^ISO|
          |Lab1|
          |^1.2.344.24.1.1.3^ISO|
```

2.3.12 ID – Coded Value for HL7-Defined Tables

Table 16. Coded Value - HL7 Defined Table (ID)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..15=	-	R	R		Coded Value for HL7-Defined Tables	

```
Example:  |ABC|
```

2.3.13 IS – Coded Value for User-Defined Tables

Table 17. Coded Value - User Defined Table (IS)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	-	R	R		Coded Value for User-Defined Tables	

```
Example:  |XYZ|
```

2.3.14 MSG – Message Type

Table 18. Message Type (MSG)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	3..3	ID	R	R	HL70076	Message Code	
2	3..3	ID	R	R	HL70003	Trigger Event	
3	3,7	ID	R	R	HL70354	Message Structure	

```
Example:  |ORU^R01^ORU_R01|
```

2.3.15 NM – Numeric

Table 19. Numeric (NM)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..16	-	R	R		Numeric	HL7 allows only ASCII numeric characters as well as an optional leading plus or minus sign and an option decimal point. Note that use of scientific notation for numbers is Not expected to be supported.by this data type.

```
Example:  |123.4|
```

2.3.16 PL – Person Location

The Person Location data type is used to record information about referral locations for mother and/or baby.

Table 20. Person Location (PL)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..20=	IS	O	O	HL70302	Point of Care	Not expected to be supported
2	1..20=	IS	O	O	HL70303	Room	Not expected to be supported
3	1..20=	IS	O	O	HL70304	Bed	Not expected to be supported
4	1..227#	HD	O	O		Facility	Not expected to be supported
5	1..20=	IS	O	O		Location Status	Not expected to be supported
6	1..20+	IS	O	O		Person Location Type	Not expected to be supported
7	1..20=	IS	O	O		Building	Not expected to be supported
8	1..20=	IS	O	O		Floor	Not expected to be supported
9	1..199#	ST	RE	RE		Location Description	Can be used to provide the name of a facility or place relevant to the birth or fetal death reporting.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
10		EI	O	O		Comprehensive Location Identifier	Not expected to be supported
11		HD	O	O		Assigning Authority for Location	Not expected to be supported

Use of the PL data type in this implementation guide is optional. All fields using the data type are either optional or not expected to be supported. Specifics on what components of the PL to use in an implementation would need to be determined by the implementers.

```
Example:  ||||||||New Harmony Community Health Center|
```

2.3.17 PT – Processing Type

Table 21. Processing Type (PT)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..1	ID	R	R	HL70103	Processing ID	
2	1..1	ID	O	O	HL70207	Processing Mode	

```
Example:  |P^T|
```

2.3.18 SAD – Street Address

Table 22. Street Address (SAD)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..75#	ST	R	R		Street or Mailing Address	
2	1..50#	ST	O	O		Street Name	Not expected to be supported
3	1..12#	ST	O	O		Dwelling Number	Not expected to be supported

Usage: The SAD is used only as a component of the XAD data type.

```
Example:  |2222 Home Street|
```

2.3.19 SI – Sequence ID

Table 23. Sequence ID (SI)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..4=	-	R	R		Sequence ID	Non-negative integer up to 9999. May be further constrained to limit the number of times a segment may repeat.

```
Example:  |1|
```

2.3.20 ST – String Data

Table 24. String Data (ST)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		-	R	R		String Data	

Usage: The ST data type is normally used for short text strings.

String data is left justified with trailing blanks optional. Any displayable (printable) ACSII characters (hexadecimal values between 20 and 7E, inclusive, or ASCII decimal values between 32 and 126), except the defined escape characters and defined delimiter characters.

. These are the escape sequences for the message delimiters (i.e., |^&~\).

```
Example:  |almost any test data at all|
```

2.3.21 TS – Time Stamp

Table 25. Time Stamp (TS)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		DTM	R	R		Time	
2		ID	O	O		Degree of Precision	Deprecated as of *HL7 Version 2.3*. See component 1 (DTM) for the current method of designating degree of precision.

```
Example:  |200806021328.0001-0005|
```

2.3.22 TX – Text Data

Table 26. Text Data (TX)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		-	R	R		Text Data	

Usage: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). In this Birth and Fetal Death Reporting Profile, the only allowed escape sequences are those allowed in HL7 Version 2.5.1, Chapter 2, Section 2.7.4 - Special Characters. These are the escape sequences for the message delimiters (i.e., |^&~\).

```
Example:  | leading spaces are allowed.|
```

2.3.23 VID – Version Identifier

Table 27. Version Identifier (VID)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	3..5	ID	R	R	HL70104	Version ID	Restricted to *2.5.1* in this guide. Literal value: '2.5.1'
2		CWE	O	O	Country Value Set	Internationalization Code	Not expected to be supported
3		CWE	O	O	Local	International Version ID	Not expected to be supported

```
Example:  |2.5.1|
```

2.3.24 XAD – Extended Address

This data type is used to support information about the place of birth (or place of delivery in the case of a fetal death). Note, in those cases in which a delivery takes place in a conveyance, e.g., automobile, the address of the facility the mother and baby are taken to is recorded. In those cases where no address data is available, the Other Geographic Designation component is used to hold relevant descriptive text.

Table 28. Extended Address (XAD)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		SAD	RE	RE		Street Address	

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
2	1..120#	ST	RE	RE		Other Designation	Other designation is to be used for descriptive information lying outside of the boundaries of a postal address.
3	1..28#	ST	RE	RE		City	
4	1..28#	ST	RE	RE	State Value Set	State or Province	
5	1..9=	ST	RE	RE	Postal Code Value Set	Zip or Postal Code	In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A9A9. Rules for other countries will differ.
6	3..28	ID	RE	RE	Country Value Set	Country	Country code is required for addresses outside of the United States.
7	1..3	ID	R	R	HL70190	Address Type	Use BDL – Birth Delivery Location.
8	1..50#	ST	RE	RE		Other Geographic Designation	Used for descriptive information relating to a place of birth or delivery of a fetus.
9	1..20=	IS	O	O		County/Parish Code	Records the county of residence.
10	1..20=	IS	O	O	HL70288	Census Tract	Not expected to be supported.
11	1..1	ID	O	O	HL70465	Address Representation Code	Not expected to be supported.
12		DR	O	O		Address Validity Range	Deprecated as of *HL7 Version 2.5*. See XAD-13 Effective Date and XAD-14 Expiration Date components.
13	1..8=	TS	O	O		Effective Date	Not expected to be supported.
14	1..8=	TS	O	O		Expiration Date	Not expected to be supported.

```
Example:  |4444 Healthcare Drive^Suite 123^Ann
Arbor^MI^99999^USA^BDL|
```

2.3.25 XCN – Extended Composite ID Number and Name for Persons

Table 29. Extended Composite ID Number and Name (XCN)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..15=	ST	RE	RE		ID Number	The ID Number component combined with the Assigning Authority component (component 9) must uniquely identify the associated person. Note - despite the component being named "ID Number" this component is an ST string data type, not numeric, so the component is not limited to just numbers.
2		FN	RE	RE		Family Name	
3	1..30#	ST	RE	RE		Given Name	I.e., first name.
4	1..30#	ST	RE	RE		Second and Further Given Names or Initials Thereof	
5	1..20#	ST	RE	RE		Suffix (e.g., JR or III)	
6	1..20#	ST	RE	RE		Prefix (e.g., DR)	
7	1..20=	IS	O	O		Degree (e.g., MD)	Deprecated as of *HL7 Version 2.4*. Use XCN-21 Professional Suffix.
8	1..20=	IS	O	O		Source Table	Not expected to be supported
9		HD	CE	C		Assigning Authority	Required if component 1 (ID Number) is populated.
10	1..5	ID	O	O		Name Type Code	Not expected to be supported.
11	1..4	ST	O	O		Identifier Check Digit	Not expected to be supported
12	3..3	ID	O	O	HL70061	Check Digit Scheme	Not expected to be supported
13	2..5	ID	C	C	HL70203	Identifier Type Code	Required if component 1 (ID Number) is populated.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
14		HD	O	O		Assigning Facility	Not expected to be supported
15	1..1	ID	O	O	HL70465	Name Representation Code	Not expected to be supported.
16		CE	O	O	HL70448	Name Context	Not expected to be supported.
17		DR	O	O		Name Validity Range	Deprecated as of *HL7 Version 2.5*. See XCN-19 Effective Date and XCN-20 Expiration Date components.
18	1..1	ID	O	O	HL70444	Name Assembly Order	Not expected to be supported.
19	1..8=	TS	O	O		Effective Date	Not expected to be supported.
20	1..8=	TS	O	O		Expiration Date	Not expected to be supported.
21	1..199#	ST	RE	RE		Professional Suffix	Record degree or title consistent with the usage in the National Standard Certificate.
22		CWE	O	O		Assigning Jurisdiction	Not expected to be supported.
23		CWE	O	O		Assigning Agency or Department	Not expected to be supported.

```
Example:
|1234^Admit^Alan^A^III^Dr^^^&2.16.840.1.113883.19.4.6&ISO^
^^^EI^&2.16.840.1.113883.19.4.6&ISO^^^^^^^MD|
```

2.3.26 XON – Extended Composite Name and Identification Number for Organizations

Table 30. Extended Composite ID/Name Organization (XON)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1	1..55#	ST	CE	CE		Organization Name	Must be present if there is no Organization Identifier in component 10. Send it if you have it.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
2		IS	O	O	HL70204	Organization Name Type Code	Not expected to be supported
3		NM	O	O		ID Number	(Deprecated as of *HL7 Version 2.5*.) Use XON-10 Organization Identifier.
4	1..4=	NM	O	O		Check Digit	Not expected to be supported
5	3..3	ID	O	O	HL70061	Check Digit Scheme	Not expected to be supported
6		HD	CE	CE		Assigning Authority	Required if component 10 (Organization Identifier) is populated.
7	2..5	ID	CE	CE	HL70203	Identifier Type Code	Required if component 10 (Organization Identifier) is populated.
8		HD	O	O		Assigning Facility	Not expected to be supported
9	1..1	ID	O	O	HL70465	Name Representation Code	Not expected to be supported
10	1..20=	ST	RE	RE		Organization Identifier	

```
Example:  |Level Seven Healthcare,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|
```

2.3.27 XPN – Extended Person Name (XPN)

Table 31. Extended Person Name

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		FN	RE	RE		Family Name	Required if component 7, name type code, is anything but “S” (Pseudo name) or “U” (unknown name).
2	1..50#	ST	RE	RE		Given Name	I.e., first name. Required if component 7, name type code, is anything but “S” (Pseudo name) or “U” (unknown name).

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
3	1..100#	ST	RE	RE		Second and Further Given Names or Initials Thereof	Aka Middle Name
4	1..20#	ST	RE	RE		Suffix (e.g., JR or III)	
5	1..20#	ST	RE	RE		Prefix (e.g., DR)	
6	1..20=	IS	O	O	HL70360	Degree (e.g., MD)	Recommended for backwards compatibility as of V2.5
7	1..5	ID	O	O	HL70200	Name Type Code	Not expected to be supported.
8	1..1	ID	O	O	HL70465	Name Representation Code	Not expected to be supported.
9		CWE	O	O	HL70448	Name Context	Not expected to be supported.
10		DR	O	O		Name Validity Range	Deprecated as of *HL7 Version 2.5*. See XPN-12 Effective Date and XPN-13 Expiration Date components.
11	1..1	ID	O	O	HL70444	Name Assembly Order	Not expected to be supported.
12		TS	O	O		Effective Date	Not expected to be supported.
13		TS	O	O		Expiration Date	Not expected to be supported.
14	1..20#	ST	RE	RE		Professional Suffix	Record degree or title consistent with the usage in the National Standard Certificate.

```
Example:  |Admit^Alan^A^III^Dr^^L^^^^^^^MD|
```

2.3.28 XTN – Extended Telecommunication Number

Table 32. Extended Telecommunication Number (XTN)

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
1		ST	O	O		Telephone Number	Deprecated as of *HL7 Version 2.3*.

SEQ	LEN	DT	Electronic Health Record Sender	Vital Records Receiver	Value Set	Component Name	Comments
2	3..3	ID	RE	RE	HL70201	Telecommunication Use Code	Should use 'NET' if component 4 (Email Address) is present.
3	2..8	ID	RE	RE	HL70202	Telecommunication Equipment Type	Should use 'Internet' if component 4 (Email Address) is present.
4	1..199=	ST	CE	CE		Email Address	Required if component 7 (local number) is not present. Component 4 (Email Address) must be empty if component 7 (Local Number) is present.
5	1..3=	NM	CE	CE		Country Code	This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
6	1..3=	NM	CE	CE		Area/City Code	This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
7	1..9=	NM	CE	CE		Local Number	Required if component 4 (Email Address) is not present. Component 7 (Local Number) must be empty if component 4 (Email Address) is present.
8	1..5=	NM	CE	CE		Extension	This component is required or empty (RE) if component 7 (Local Number) is present otherwise it must be empty.
9	1..199#	ST	RE	RE		Any Text	For example: "Regular hours 8 am to 5 pm."
10	1..4=	ST	O	O		Extension Prefix	Not expected to be supported.
11	1..6=	ST	O	O		Speed Dial Code	Not expected to be supported.
12	1..199#	ST	O	O		Unformatted Telephone number	Not expected to be supported.

Usage: Note that component 4 (Email Address) and component 7 (Local Number) are mutually exclusive. You must populate one or the other, but not both in a single repeat of this data type.

```
Example:  |^PRN^PH^^1^555^5552003|
   |^NET^Internet^eve.everywoman@hl7.org|
```

2.4 WORKINNG WITH VOCABULARY

This implementation guide has been developed to draw vocabulary content from the PHIN Vocabulary Access and Distribution System (PHIN VADS). It includes references to the URL for locating individual value sets within PHIN VADS. It is expected that implementers will make use of the most recent version of the value set to support data exchange.

3.Message Profile – Vital Records Birth & Fetal Death Reporting Messaging

3.1 USE CASE MODEL

Table 33. Live Birth & Fetal Death Reporting Use Case Details

Item	Detail
Description	The *Clinician Supplied Birth and Fetal Death Information Messaging Use Case* focuses on the use case describing the communication of that portion of the record collected by electronic health record systems to state/jurisdictional vital record offices using the *HL7 2.5.1* Update Patient Information (ADT^A08) message. It includes optional acknowledgments of receipt of transactions. The goal of the use case is to provide safe, reliable delivery of relevant clinical information to vital records. If PHIN MS is used for transport, then use of the HL7 Acknowledgments may be unnecessary, although PHIN MS does not ensure that the payload conforms to HL7 formatting rules, it does provide safe and reliable transport. The use case does not cover the data that is reported by the mother, or in the case of fetal death, by the funeral director. This use case is not intended to cover reporting to national public health agencies such as NCHS.
Actors	**Electronic Health Record Sender** – The Electronic Health Record Sender actor is an application managing information in support of patient care including the collection and transmission of selected medical/health information needed for the birth certificate or fetal death report. **Vital Records Receiver** – The vital records receiver is an application capable of receiving birth or fetal death information, of linking information received from a clinician or electronic health record with that received from other public health reporting sources, and of recording the relevant information needed for a birth certificate or fetal death report.
Assumptions	The following assumptions are preconditions for the use of this profile: The data requirements for clinician supplied birth or fetal death information are based on the Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Birth or the U.S. Standard Report of Fetal Death; US Standard Facility Worksheet for the Live Birth Certificate; and US Standard Facility Worksheet for the Report of Fetal Death. The jurisdiction may have additional data requirements and edit specifications that will be addressed at the jurisdictional level.

The *Clinician Supplied Birth Information Messaging* Use Case Model has two participating actors, the Electronic Health Record Sender – the initiator of the use case - and the Vital Records Receiver.

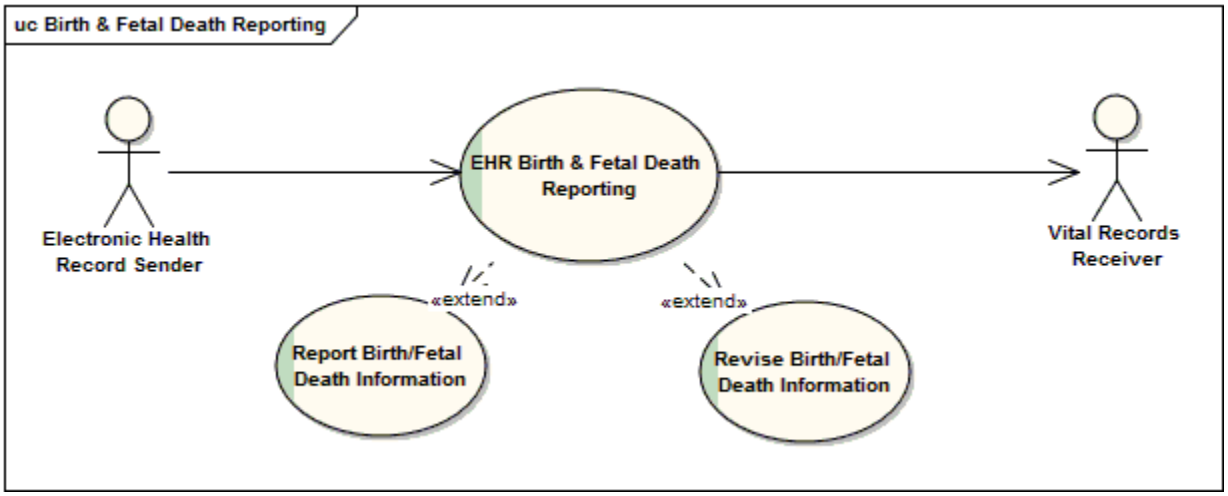

Figure 1. Birth & Fetal Death Information Reporting

3.2 DYNAMIC INTERACTION MODEL

The dynamic definitions are provided to support cases where acknowledgments are required, and where they are not used.

The dynamic definitions tables touch on the issue of message encoding. Implementers are expected to support ER7 – the traditional HL7 delimiter based encoding. However, in a particular site sender and receiver may elect to use HL7's XML encoding.

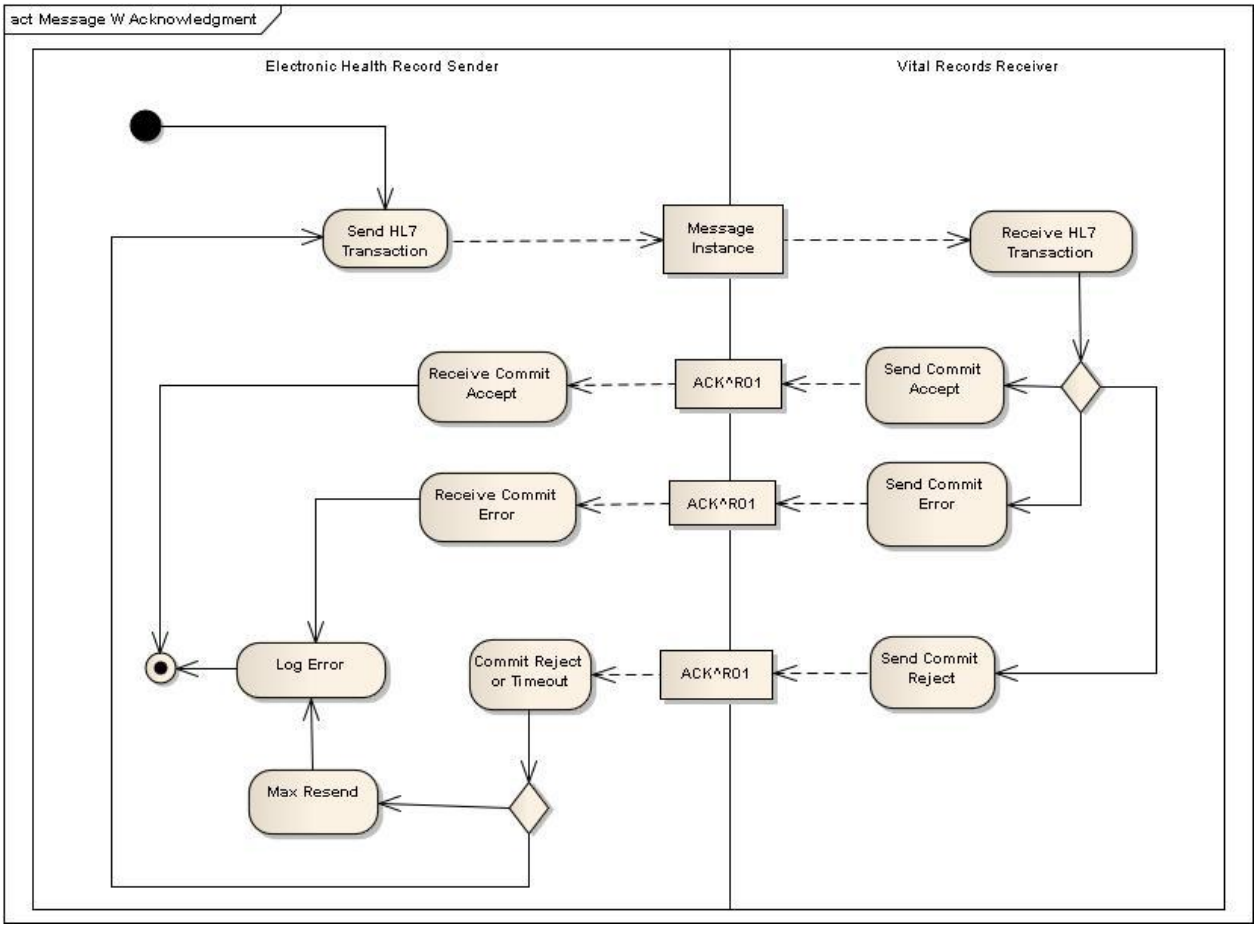

Figure 2. EHR Supplied Birth & Fetal Death Reporting – Acknowledgment Required

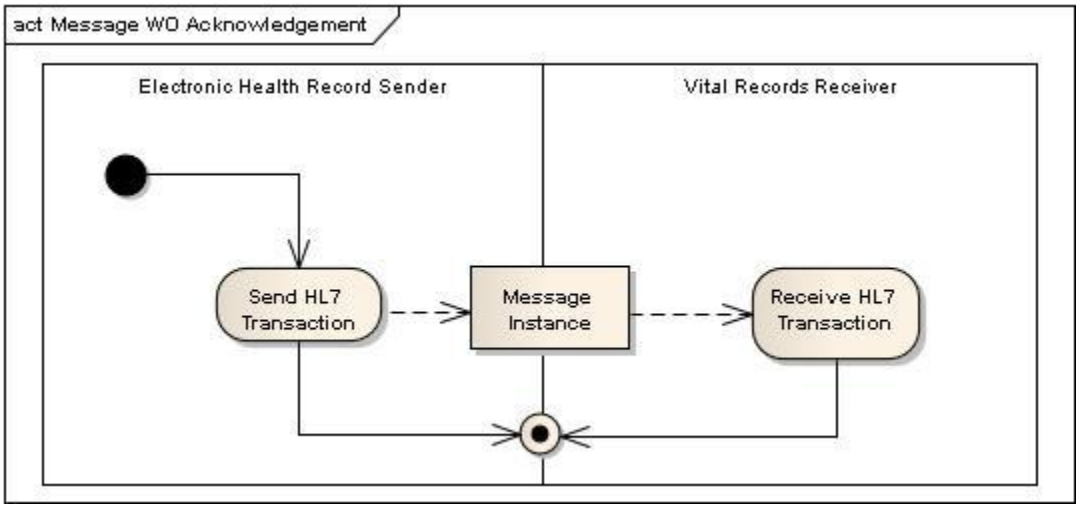

Figure 3. EHR Supplied Birth & Fetal Death Reporting - Without Acknowledgment

Table 34. Dynamic Definition: Transactions with ACKs

Item	Value
Profile ID	LiveBirthReport-Ack
HL7 Version	2.5.1
Accept Acknowledgement	AL – Always
Application Acknowledgement	Refer to HL7 Table 0155 – Accept/Application Acknowledgment conditions in section 6.2.24 for valid values.
Acknowledgement Mode	Immediate
Profile Type	Constrainable Profile
Message Types	ADT^A04, ADT^A08, ACK^R01^ACK
Encoding	ER7 (required) *2.5.1* XML (optional)

Item	Value
Profile ID	FetalDeathReport-Ack
HL7 Version	2.5.1
Accept Acknowledgement	AL – Always
Application Acknowledgement	Refer to HL7 Table 0155 – Accept/Application Acknowledgment conditions in section 6.2.24 for valid values.
Acknowledgement Mode	Immediate
Profile Type	Constrainable Profile
Message Types	ADT^A04, ADT^A08, ACK^R01^ACK
Encoding	ER7 (required) *2.5.1* XML (optional)

Table 35. Dynamic Definitions: Transactions without ACKs

Item	Value
Profile ID	LiveBirthReport-NoAck
HL7 Version	2.5.1
Accept Acknowledgement	NE – Never
Application Acknowledgement	NE – Never
Acknowledgement Mode	Immediate
Profile Type	Constrainable Profile
Message Types	ADT^A04, ADT^A08
Encoding	ER7 (required) *2.5.1* XML (optional)

Item	Value
Profile ID	FetalDeathReport-NoAck
HL7 Version	2.5.1
Accept Acknowledgement	NE – Never

Item	Value
Application Acknowledgement	NE – Never
Acknowledgement Mode	Immediate
Profile Type	Constrainable Profile
Message Types	ADT^A04, ADT^A08
Encoding	ER7 (required) *2.5.1* XML (optional)

3.3 INTERACTIONS

Table 36. Birth & Fetal Death Reporting Interactions

Event	Description	Electronic Health Record Sender	Vital Records Usage	Msg. Type	Receiver Action	Sender	Data Values
Report Birth Information Record	Information about a birth is transmitted to Vital Records	R	R	ADT^A04	Commit Accept, Commit Reject or Commit Error	Electronic Health Record Sender	MSH.9 = ADT^A04, ORC.1 = NW, EVN.4=”Live Birth Report
Revise Birth Information Record	A revision to information about a birth is transmitted to Vital Records	R	R	ADT^A08	Commit Accept, Commit Reject or Commit Error	Electronic Health Record Sender	MSH.9 = ADT^A08, EVN.4=” Live Birth Report”
Report Fetal Death Information Record	Information about a fetal death is transmitted to Vital Records	R	R	ADT^A04	Commit Accept, Commit Reject or Commit Error	Electronic Health Record Sender	MSH.9 = ADT^A04, EVN.4=”Fetal Death Report”
Revise Fetal Death Information Record	A revision to information about a fetal death is transmitted to Vital Records	R	R	ADT^A08	Commit Accept, Commit Reject or Commit Error	Electronic Health Record Sender	MSH.9 = ADT^A08, EVN.4=” Fetal Death Report”
Commit Accept	Enhanced mode: Accept acknowledgment: Commit Accept	R	O	ACK^R01	None	Vital Records Result Receiver	MSA-1=CA
Commit Error	Enhanced mode: Accept acknowledgment: Commit Error	R	O	ACK^R01	None	Vital Records Result Receiver	MSA-1=CE

Event	Description	Electronic Health Record Sender	Vital Records Usage	Msg. Type	Receiver Action	Sender	Data Values
Commit Reject	Enhanced mode: Accept acknowledgment: Commit Reject	R	O	ACK^R01	None	Vital Records Result Receiver	MSA-1=CR

3.4 REFERENCES

- National Center for Health Statistics. 2003 Revision of the U.S. Standard Certificate of Live Birth. Available from: http://www.cdc.gov/nchs/data/dvs/birth11-03final-ACC.pdf.

- National Center for Health Statistics. 2003 Revision of the U.S. Standard Report of Fetal Death. Available from: http://www.cdc.gov/nchs/data/dvs/FDEATH11-03finalACC.pdf.

- National Center for Health Statistics. Birth Edit Specifications for the 2003 Revision of the U.S. Standard Certificate of Birth. Available from: http://www.cdc.gov/nchs/data/dvs/FinalBirthSpecs3-24-2005.pdf.

- National Center for Health Statistics. Fetal Death Edit Specifications for the 2003 Revision of the U.S. Standard Report of Fetal Death. Available from: http://www.cdc.gov/nchs/data/dvs/FinalFetalDeathSpecs2-22-05.pdf.

- National Center for Health Statistics. Guide to Completing the Facility Worksheets for the Certificate of Live Birth and Report of Fetal Death (2003 Revision). Available from: http://www.cdc.gov/nchs/data/dvs/GuidetoCompleteFacilityWks.pdf.

- Facility Worksheets for the Birth Certificate
    - National Center for Health Statistics. Facility Worksheet for the Live Birth Certificate. Available from: http://www.cdc.gov/nchs/data/dvs/facwksBF04.pdf.

    - National Center for Health Statistics. Attachment to the Facility Worksheet for the Live Birth Certificate for Multiple Births. Available from: http://www.cdc.gov/nchs/data/dvs/MULTATTCHFimprov04.pdf.

- Facility Worksheet for the Report of Fetal Death
    - National Center for Health Statistics. Facility Worksheet for the Report of Fetal Death. Available from: http://www.cdc.gov/nchs/data/dvs/FacilityFetal04.pdf.

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4. Messages

The following sections detail the structure of each message, including segment name, usage, cardinality and description. See section 1.4.1 (Message Element Attributes) for a description of the columns in the Abstract Message Syntax Tables.

4.1 ADT^A04

Within the context of this document, the ADT^A04 message is constrained for transmitting information about a live birth or fetal death to Vital Records.

Table 37. Abstract Message - ADT^A04

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
MSH	Message Header	[1..1]	R	R	The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
[{SFT}]	Software Segment	[0..*]	R	R	Each HL7 aware application that touches the message on the way to the destination application must add a SFT segment for its application. For instance, PHIN MS is not HL7 aware and would not be expected to add an SFT. On the other hand, an integration engine is HL7 aware and would be expected to add an SFT. The first repeat (i.e., the originator) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.
EVN	Event Type	[1..1]	R	R	The Event Type (EVN) segment is used within ADT messaging to transmit trigger event information. In addition, EVN.04 (Reason Code) is used to indicate whether a transmission is a live birth or fetal death report.
PID	Patient Identification	[1..1]	R	R	The Patient Identification (PID) segment is used to provide basic demographics to allow identification of the person’
[PD1]	Additional Demographics	[0..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
[NK1]	Next of Kin/Associated Parties	[0..1]	R	R	The Next of Kin/Associated Parties (NK1) segment is used to capture information for the birth mother of the newborn or fetus.
PV1	Patient Visit	[1..1]	R	R	Required within the HL7 specification.
[PV2]	Patient Visit – Additional Information	[0..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..2]	R	R	The Role (ROL) segment is used to provide information on the birth attendant and the place of birth.
[{DB1}]	Disability Information	[0..*]	O	O	Not expected to be supported
{OBX]}	Observation/Result	[0..*]	R	R	The Observation segment is used to provide additional relevant information.
[{AL1}]	Allergy Information	[0..*]	O	O	Not expected to be supported
[{DG1}]	Diagnosis Information	[0..*]	O	O	Not expected to be supported
[DRG]	Diagnosis Related Group	[0..1]	O	O	Not expected to be supported
[{	***Procedure Begin***	[0..*]	O	O	Not expected to be supported
PR1	Procedure	[1..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported
}]	***Procedure End***				
[{GT1}]	Guarantor	[0..*]	O	O	Not expected to be supported
[{	***Insurance Begin***	[0..*]	O	O	Not expected to be supported
IN1	Insurance	[1..1]	O	O	Not expected to be supported
[IN2]	Insurance Additional Info.	[0..1]	O	O	Not expected to be supported
[{IN3}]	Insurance Additional Info – Cert.	[0..*]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported
}]	***Insurance End***				

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
[ACC]	Accident Information	[0..1]	O	O	Not expected to be supported
[UB1]	Universal Bill Information	[0..1]	O	O	Not expected to be supported
[UB2]	Universal Bill 92 Information	[0..1]	O	O	Not expected to be supported
[PDA]	Patient Death and Autopsy	[0..1]	O	O	Not expected to be supported

4.2 ADT^A08

Within the context of this document, the ADT^A08 message is constrained for updating previously transmitted information about a live birth or fetal death to Vital Records.

Table 38. Abstract Message - ADT^A08

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
MSH	Message Header	[1..1]	R	R	The Message Header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.
[{SFT}]	Software Segment	[0..*]	R	R	Each HL7 aware application that touches the message on the way to the destination application must add a SFT segment for its application. For instance, PHIN MS is not HL7 aware and would not be expected to add an SFT. On the other hand, an integration engine is HL7 aware and would be expected to add an SFT. The first repeat (i.e., the originator) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
EVN	Event Type	[1..1]	R	R	The Event Type (EVN) segment is used within ADT messaging to transmit trigger event information. In addition, EVN.04 (Reason Code) is used to indicate whether a transmission is a live birth or fetal death report.
PID	Patient Identification	[1..1]	R	R	The Patient Identification (PID) segment is used to provide basic demographics to allow identification of the person.
[PD1]	Additional Demographics	[0..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported
[NK1]	Next of Kin/Associated Parties	[0..1]	R	R	The Next of Kin/Associated Parties (NK1) segment is used to capture information for the birth mother of the newborn or fetus.
PV1	Patient Visit	[1..1]	R	R	Required within the HL7 specification.
[PV2]	Patient Visit – Additional Information	[0..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..2]	R	R	The Role (ROL) segment is used to provide information on the birth attendant and the place of birth.
[{DB1}]	Disability Information	[0..*]	O	O	Not expected to be supported
[{OBX]}	Observation/Result	[0..*]	R	R	The Observation segment is used to provide additional relevant information.
[{AL1}]	Allergy Information	[0..*]	O	O	Not expected to be supported
[{DG1}]	Diagnosis Information	[0..*]	O	O	Not expected to be supported
[DRG]	Diagnosis Related Group	[0..1]	O	O	Not expected to be supported
[{	***Procedure Begin***	[0..*]	O	O	Not expected to be supported
PR1	Procedure	[1..1]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported
}]	***Procedure End***				
[{GT1}]	Guarantor	[0..*]	O	O	Not expected to be supported

Segment in Standard	Name	Cardinality	ELR Sender Usage	Vital Records Receiver Usage	Description
[{	***Insurance Begin***	[0..*]	O	O	Not expected to be supported
IN1	Insurance	[1..1]	O	O	Not expected to be supported
[IN2]	Insurance Additional Info.	[0..1]	O	O	Not expected to be supported
[{IN3}]	Insurance Additional Info – Cert.	[0..*]	O	O	Not expected to be supported
[{ROL}]	Role	[0..*]	O	O	Not expected to be supported
}]	***Insurance End***				
[ACC]	Accident Information	[0..1]	O	O	Not expected to be supported
[UB1]	Universal Bill Information	[0..1]	O	O	Not expected to be supported
[UB2]	Universal Bill 92 Information	[0..1]	O	O	Not expected to be supported
[PDA]	Patient Death and Autopsy	[0..1]	O	O	Not expected to be supported

4.3 ACK^A04^ACK, ACK^A08^ACK

The acknowledgement message could be sent in response to any of the three transactions. Since the content of the message does not change even though it responds to a different trigger event, it is only shown once.

Table 39. Abstract Message: ACK

Segment in Standard	Name	Cardinality (All)	EHR Sender Usage	Vital Records Receiver Usage	Description
MSH	Message Header	[1..1]	R	R	The message header (MSH) segment contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

Segment in Standard	Name	Cardinality (All)	EHR Sender Usage	Vital Records Receiver Usage	Description
[{SFT}]	Software Segment	[0..*]	RE	RE	Each HL7 aware application that touches the message on the way to the destination application must add a SFT segment for its application. For instance, PHIN MS is not HL7 aware and would not be expected to add an SFT. On the other hand, an integration engine is HL7 aware and would be expected to add an SFT. The first repeat (i.e., the originator) is required. Any other application that transforms the message must add an SFT segment for that application. Other applications that route or act as a conduit may add an SFT but are not required to do so.
MSA	Message Acknowledgment	[1..1]	R	R	
[{ ERR }]	Error	[0..*]	CE	CE	Required when MSA-1 is not "AA" or "CA."

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5. Segment and Field Descriptions

This messaging guide provides notes for supported fields. The following format is used in this document for listing and defining message segments and fields. First, the message segment use is defined and then a segment attribute table listing all fields defined in the segment is shown. See section 1.4.1 (Message Element Attributes) for a description of the columns in the Segment Attribute Tables.

5.1 MSH – MESSAGE HEADER SEGMENT

The Message Header Segment (MSH) contains information describing how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

Table 40. Message Header Segment (MSH)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/Comments
1	1..1	ST	[1..1]	R	R		Field Separator	Character to be used as the field separator for the rest of the message. Literal value: '|' [ASCII (124)].
2	4..5	ST	[1..1]	R	R		Encoding Characters	Four characters, always appearing in the same order: |^~\&#|. Literal value: '^~\&#'.
3		HD	[1..1]	R	R		Sending Application	Field that may be used to identify the sending application uniquely for messaging purposes. Example: |Lab1^1234^CLIA|
4		HD	[1..1]	R	R		Sending Facility	Field that uniquely identifies the facility that sends the message. This identifies the originator of the original message. If acknowledgments are in use, this facility will receive any related acknowledgment message
5		HD	[1..1]	R	R		Receiving Application	Field that may be used to identify the receiving application uniquely for messaging purposes. Example: |Lab1^1234^CLIA|

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/Comments
6		HD	[1..1]	R	R		Receiving Facility	Field that uniquely identifies the facility that is to receive the message. This identifies the receiver of the original message. If acknowledgments are in use, this facility originates any related acknowledgment message.
7		TS	[1..1]	R	R		Date/Time Of Message	Field containing the date/time the message was created by the sending system. Format: YYYYMMDDHHMMSS[.S[S[S[S]]]]+/-ZZZZ. Note that the time zone offset is required, and the minimum granularity is to the second, although more precise time stamps are allowed.
8	1..40 =	ST	[0..1]	O	O		Security	This field can be used to implement security features.
9		MSG	[1..1]	R	R		Message Type	For the birth and fetal death report messages, the value will vary. It will indicate the trigger event and the abstract message type. For the acknowledgement message Literal Value: 'ACK^R01^ACK'.
10	1..199=	ST	[1..1]	R	R		Message Control ID	String that uniquely identifies the message instance from the sending application. Example formats for message control IDs include GUID, timestamp plus sequence number, OID plus sequence number or sequence number. The important point is that care must be taken to insure that the message control id is unique. The sending application (MSH-3) plus MSH-10 (message control id) needs to be globally unique.
11		PT	[1..1]	R	R		Processing ID	Field that may be used to indicate the intent for processing the message, such as "T" (training,) "D" (debug,) or "P" (production.)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/Comments
12		VID	[1..1]	R	R		Version ID	HL7 version number used to interpret format and content of the message. For this message, the version ID will always be Literal Value: *2.5.1*.
13		NM	[0..1]	O	O		Sequence Number	Not expected to be supported
14	1..180=	ST	[0..1]	O	O		Continuation Pointer	Not expected to be supported
15	2..2	ID	[0..1]	RE	RE	HL70155	Accept Acknowledgment Type	
16	2..2	ID	[0..1]	RE	RE	HL70155	Application Acknowledgment Type	
17	3..3	ID	[0..1]	O	O	Country Value Set	Country Code	The expected value, if used, is 'USA. (Note, This field contains the country of origin for the message.)
18	5..15	ID	[0..*]	O	O	HL70211	Character Set	Not expected to be supported
19		CWE	[0..1]	O	O		Principal Language Of Message	The expected value, if used, is "en." However, other values are possible, e.g., "es" - in Puerto Rico. [Code as "es^Spanish^HL70296"]
20	3..13	ID	[0..1]	O	O	HL70356	Alternate Character Set Handling Scheme	Not expected to be supported
21		EI	0..*	O	O		Message Profile Identifier	The field can be used, as desired, to indicate a particular set of fields as supported within the context of a particular jurisdiction.

Example:

```
MSH|^~\&|OurEHR^89898989^AppID|Good Health
Hospital^5799000^HPID|STATE^14^StateAppID|VRDept|20110403091330-
6||ADT^A04^ADT_A04|1223334498|P|2.5.1|NE|NE|USA||EN^English^HL70
296||BR01.67
```

5.2 SFT – SOFTWARE SEGMENT

The software segment provides information about the sending application, or other applications that manipulate the message before the receiving application processes the message.

Table 41. Software Segment (SFT)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/Comments
1		XON	[1..1]	R	R		Software Vendor Organization	
2	1..15#	ST	[1..1]	R	R		Software Certified Version or Release Number	
3	1..20#	ST	[1..1]	R	R		Software Product Name	
4	1..20#	ST	[1..1]	R	R		Software Binary ID	
5		TX	[0..1]	O	O		Software Product Information	
6		TS	[0..1]	RE	RE		Software Install Date	

```
Example:
SFT|1|Level Seven Healthcare Software,
Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|Our EHR
System|56734||20080817
```

5.3 MSA – ACKNOWLEDGEMENT SEGMENT

The Message Response Segment (MSA) contains the information sent to acknowledge the information sent in one of the birth and fetal death reporting messages.

Table 42. Acknowledgement Segment (MSA)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	2..2	ID	[1..1]	R	R	HL70008	Acknowledgment Code	Acknowledgment code indicating receipt of message. (Refer to *HL7 Table 0008 - Acknowledgment Code* for valid values.)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
2	1..199 =	ST	[1..1]	R	R		Message Control ID	Identifier that enables the sending system to associate this response with the message for which it is intended. This value will be the MSH.10 message control ID from the message being acknowledged.
3		ST	[0..0]	O	O		Text Message	Deprecated as of *HL7 Version 2.4*. See ERR segment.
4		NM	[0..1]	O	O		Expected Sequence Number	
5		ID	[0..0]	O	O		Delayed Acknowledgment Type	Deprecated as of *HL7 Version 2.2* and the detail was withdrawn and removed from the standard as of *HL7 Version 2.5*.
6		CWE	[0..0]	O	O		Error Condition	Deprecated as of *HL7 Version 2.4*. See ERR segment.

```
Example:
MSA|CA|20070701132554000008
```

5.4 ERR – ERROR SEGMENT

The ERR segment is used to add error comments to acknowledgment messages.

Table 43. Error Segment (ERR)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1		ELD	[0..0]	O	O		Error Code and Location	Deprecated as of *HL7 Version 2.5*. See ERR-2 Error Location and ERR-3 HL7 Error Code fields.
2		ERL	[0..*]	O	O		Error Location	Identifies the location in a message related to the identified error, warning or message

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
3		CWE	[1..1]	R	R	HL70357	HL7 Error Code	Identifies the HL7 (communications) error code.
4	1..1	ID	[1..*]	R	R	HL70516	Severity	Identifies the severity of an application error. Knowing if something is Error, Warning, or Information is intrinsic to how an application handles the content.
5		CWE	[0..1]	O	O	HL70533	Application Error Code	Application specific code identifying the specific error that occurred. Note that Hl7 table 0533 has no suggested values. It is always a user defined table, and will generally contain locally defined codes.
6	1..80#	ST	[0..10]	O	O		Application Error Parameter	Additional information to be used, together with the Application Error Code, to understand a particular error condition/warning/etc.
7	1..2048#	TX	[0..1]	O	O		Diagnostic Information	Information that may be used by help desk or other support personnel to diagnose a problem.
8	1..250#	TX	[0..1]	O	O		User Message	The text message to be displayed to the application user.
9	1..20=	IS	[0..0]	O	O		Inform Person Indicator	Not expected to be supported.
10		CWE	[0..0]	O	O		Override Type	Not expected to be supported.
11		CWE	[0..0]	O	O		Override Reason Code	Not expected to be supported.
12		XTN	[0..*]	O	O		Help Desk Contact Point	Lists phone, e-mail, fax, and other relevant numbers for helpdesk support related to the specified error.

```
Example:
ERR||OBR^1|100^Segment sequence error^HL70357|E|||Missing
required OBR segment|Email help desk for further information on
this error||||^NET^Internet^helpdesk@hl7.org
```

5.5 EVN – EVENT TYPE SEGMENT

The EVN segment is used to communicate necessary trigger event information to receiving applications.

Table 44. Event Type Segment (EVN)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	3	ID	[0..0]	B	B	0003	Event Type Code	Not expected to be supported, since the needed content is carried in MSH.9.
2	26	TS	[1..1]	R	R		Recorded Date/Time	Most systems will default to the system date/time when the transaction was entered, but they should also permit an override.
3	26	TS	[0..0]	O	O		Date/Time Planned Event	Not expected to be supported.
4	3	IS	[1..1]	R	R	0062	Birth and Fetal Death Reporting Event Reason Code	Used to specify whether a report refers to a live birth or to a fetal death.
5	250	XCN	[0..0]	O	O	0188	Operator ID	Not expected to be supported.
6	26	TS	[0..0]	O	O		Event Occurred	Not expected to be supported.
7	241	HD	[0..0]	O	O		Event Facility	Not expected to be supported.

```
Example:
EVN||201103221204||LB
```

5.6 PID – PATIENT IDENTIFICATION SEGMENT

The Patient Identification Segment (PID includes basic demographics regarding the newborn. For fetal death reporting, it includes the name or other identification information for the fetus.

Table 45. Patient Identification Segment (PID)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	1..4	SI	[1..1]	R	R		Set ID – PID	Literal Value: '1'.
2		CX	[0..0]	B	B		Patient ID	Deprecated as of *HL7 Version 2.3.1*. See PID-3 Patient Identifier List.
3		CX	[1..*]	R	R		Patient Identifier List	Field used to convey all types of patient/person identifiers. Use of the Medical Record Number is expected if the birth or fetal death takes place in a hospital, or the baby is admitted to one.
4		CX	[0..0]	B	B		Alternate Patient ID – PID	Deprecated as of *HL7 Version 2.3.1*. See PID-3.
5		XPN	[1..1]	R	R		Patient Name	New born name. In the case of fetal death reporting, a name may be provided at the discretion of the parents. 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.
6		XPN	[0..1]	O	O		Mother's Maiden Name	Not expected to be supported.
7		TS	[0..1]	R	R		Date/Time of Birth	Newborn's date and time of birth, or (for fetal death reporting) the delivery date and time of delivery of the fetus. Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]
8	1..20 =	IS	[0..1]	R	R	HL70001	Administrative Sex	Sex of the newborn or of the fetus.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
9		XPN	[0..0]	O	O		Patient Alias	Deprecated as of *HL7 Version 2.4*. See PID-5 Patient Name.
10		CWE	[0..*]	O	O	HL70005	Race	Not expected to be supported
11		XAD	[0..*]	CE	CE		Patient Address	Address type code = Birth Address. Only use the field, if the birth or fetal delivery does not take place in a healthcare facility. When used, the field captures the place of birth, or the place of fetal delivery. Street address, city, state and zip code are expected. If descriptive information is provided instead of an address, the Other Geographic Designation component of the XAD data type is used. Note, either PID.11 or ROL.11 may be used to record the place of birth or delivery depending on circumstances.
12	1..20 =	IS	[0..0]	O	O		County Code	Deprecated as of *HL7 Version 2.3*. See PID-11 - Patient Address, component 9 County/Parish Code.
13		XTN	[0..*]	O	O		Phone Number – Home	Not expected to be supported.
14		XTN	[0..*]	O	O		Phone Number – Business	Not expected to be supported.
15		CWE	[0..*]	O	O	PHVS_Language_ISO_639-2_Alpha3	Primary Language	Not expected to be supported.
16		CWE	[0..1]	O	O	HL70002	Marital Status	Not expected to be supported.
17		CWE	[0..1]	O	O	HL70006	Religion	Not expected to be supported.
18		CX	[0..1]	O	O		Patient Account Number	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
19		ST	[0..0]	O	O		SSN Number – Patient	Deprecated as of *HL7 Version 2.3.1*. See PID-3 Patient Identifier List.
20		DLN	[0..0]	O	O		Driver's License Number – Patient	Deprecated as of *HL7 Version 2.5*. See PID-3 Patient Identifier List.
21		CX	[0..*]	O	O		Mother's Identifier	Not expected to be supported.
22		CWE	[0..*]	O	O	HL70189	Ethnic Group	Not expected to be supported.
23	1..250#	ST	[0..1]	O	O		Birth Place	Not expected to be supported.
24		ID	[0..1]	RE	RE	HL70136	Multiple Birth Indicator	Indicates whether the baby or fetus was part of a multiple birth.
25		NM	[0..1]	CE	CE		Birth Order	Indicate the order delivered in the pregnancy of the baby or fetus, aka "Set Number". Leave the field empty for singleton births or deliveries.
26		CWE	[0..*]	O	O	HL70171	Citizenship	Not expected to be supported.
27		CWE	[0..1]	O	O	HL70172	Veterans Military Status	Not expected to be supported.
28		CWE	[0..0]	O	O		Nationality	Deprecated as of *HL7 Version 2.4*. See PID-10 Race, PID-22 Ethnic Group, and PID-26 Citizenship.
29		TS	[0..1]	O	O		Patient Death Date and Time	Not expected to be supported.
30	1..1	ID	[0..1]	O	O	HL70136	Patient Death Indicator	Not expected to be supported.
31		ID	[0..1]	O	O	HL70136	Identity Unknown Indicator	Not expected to be supported
32		IS	[0..*]	O	O	HL70445	Identity Reliability Code	Not expected to be supported
33		TS	[0..1]	O	O		Last Update Date/Time	Not expected to be supported
34		HD	[0..1]	O	O		Last Update Facility	Not expected to be supported
35		CWE	[0..1]	O	O	PHVS_Animal_CDC	Species Code	Not expected to be supported

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
36		CWE	[0..1]	O	O	Local	Breed Code	Not expected to be supported
37		ST	[0..1]	O	O		Strain	Not expected to be supported
38		CWE	[0..2]	O	O	HL70429	Production Class Code	Not expected to be supported
39		CWE	[0..*]	O	O	Tribal Citizenship Value Set	Tribal Citizenship	Not expected to be supported

```
Example:
PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||||N
```

5.7 NK1 – NEXT OF KIN SEGMENT

The Next of Kin Segment (NK1) is used to capture identification and other relevant information for the mother.

Table 46. Next of Kin Segment (NK1)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	4	SI	[1..1]	R	R		Set ID - NK1	Use “1”.
2	250	XPN	[0..1]	R	R		Name	Current legal name of the mother
3	250	CE	[0..1]	O	O	0063	Relationship	Not expected to be supported.
4	250	XAD	[0..1]	RE	RE		Address	Current address for the mother.
5	250	XTN	[0..*]	O	O		Phone Number	Not expected to be supported.
6	250	XTN	[0..*]	O	O		Business Phone Number	Not expected to be supported.
7	250	CE	[0..1]	O	O	0131	Contact Role	Not expected to be supported.
8	8	DT	[0..1]	O	O		Start Date	Not expected to be supported.
9	8	DT	[0..1]	O	O		End Date	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
10	60	ST	[0..1]	O	O		Next of Kin / Associated Parties Job Title	Not expected to be supported.
11	20	JCC	[0..1]	O	O	0327/ 0328	Next of Kin / Associated Parties Job Code/Class	Not expected to be supported.
12	250	CX	[0..1]	O	O		Next of Kin / Associated Parties Employee Number	Not expected to be supported.
13	250	XON	[0..1]	O	O		Organization Name - NK1	Not expected to be supported.
14	250	CE	[0..1]	O	O	0002	Marital Status	Not expected to be supported.
15	1	IS	[0..1]	O	O	0001	Administrative Sex	Not expected to be supported.
16	26	TS	[0..1]	O	O		Date/Time of Birth	Not expected to be supported.
17	2	IS	[0..1]	O	O	0223	Living Dependency	Not expected to be supported.
18	2	IS	[0..1]	O	O	0009	Ambulatory Status	Not expected to be supported.
19	250	CE	[0..1]	O	O	0171	Citizenship	Not expected to be supported.
20	250	CE	[0..1]	O	O	0296	Primary Language	Not expected to be supported.
21	2	IS	[0..1]	O	O	0220	Living Arrangement	Not expected to be supported.
22	250	CE	[0..1]	O	O	0215	Publicity Code	Not expected to be supported.
23	1	ID	[0..1]	O	O	0136	Protection Indicator	Not expected to be supported.
24	2	IS	[0..1]	O	O	0231	Student Indicator	Not expected to be supported.
25	250	CE	[0..1]	O	O	0006	Religion	Not expected to be supported.
26	250	XPN	[0..1]	O	O		Mother's Maiden Name	Not expected to be supported.
27	250	CE	[0..1]	O	O	0212	Nationality	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
28	250	CE	[0..1]	O	O	0189	Ethnic Group	Not expected to be supported.
29	250	CE	[0..1]	O	O	0222	Contact Reason	Not expected to be supported.
30	250	XPN	[0..1]	O	O		Contact Person's Name	Not expected to be supported.
31	250	XTN	[0..1]	O	O		Contact Person's Telephone Number	Not expected to be supported.
32	250	XAD	[0..1]	O	O		Contact Person's Address	Not expected to be supported.
33	250	CX	[0..1]	RE	RE		Next of Kin/Associated Party's Identifiers	The mother's medical record number.
34	2	IS	[0..1]	O	O	0311	Job Status	Not expected to be supported.
35	250	CE	[0..1]	O	O	0005	Race	Not expected to be supported.
36	2	IS	[0..1]	O	O	0295	Handicap	Not expected to be supported.
37	16	ST	[0..1]	O	O		Contact Person Social Security Number	Not expected to be supported.
38	250	ST	[0..1]	O	O		Next of Kin Birth Place	Not expected to be supported.
39	2	IS	[0..1]	O	O	0099	VIP Indicator	Not expected to be supported.

```
Example:
NK1|1|Johnson^Susanna^J^III^^^^^^^^^^MD|1830 Sunshine
Drive^^Beautiful City^HerState^86534-
1111^H||||||||||||||||||||||||||||9876546688^^^^MRN
```

5.8 PV1 – PATIENT VISIT SEGMENT

The Patient Identification Segment (PID) is a required segment for the ADT messages. It is used to support data elements that appear to be related to the birth or delivery encounter.

Table 47. Patient Visit Segment (PV1)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	4	SI	[0..0]	O	O		Set ID - PV1	Not expected to be supported.
2	1	IS	[1..1]	R	R	0004	Patient Class	This field is used by systems to categorize patients by site. It does not have a consistent industry-wide definition. Use "I" for live births and deliveries that take place in an acute care or birth facility. Use "N" for births and deliveries taking place in other settings.
3	80	PL	[0..0]	O	O		Assigned Patient Location	Not expected to be supported.
4	2	IS	[0..0]	O	O	0007	Admission Type	Not expected to be supported.
5	250	CX	[0..0]	O	O		Preadmit Number	Not expected to be supported.
6	80	PL	[0..0]	RE	RE		Prior Patient Location	This field is being used to capture information about a facility the mother was transferred from prior to birth or delivery. Use Location Description to provide the name of the facility.
7	250	XCN	[0..0]	O	O	XCN	Attending Doctor	Not expected to be supported.
8	250	XCN	[0..0]	O	O	XCN	Referring Doctor	Not expected to be supported.
9	250	XCN	[0..0]	O	O	XCN	Consulting Doctor	Not expected to be supported.
10	3	IS	[0..0]	O	O	IS	Hospital Service	Not expected to be supported.
11	80	PL	[0..0]	O	O	PL	Temporary Location	Not expected to be supported.
12	2	IS	[0..0]	O	O	IS	Preadmit Test Indicator	Not expected to be supported.
13	2	IS	[0..0]	O	O	IS	Re-admission Indicator	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
14	6	IS	[0..0]	O	O	IS	Admit Source	Not expected to be supported.
15	2	IS	[0..0]	O	O	IS	Ambulatory Status	Not expected to be supported.
16	2	IS	[0..0]	O	O	IS	VIP Indicator	Not expected to be supported.
17	250	XCN	[0..0]	O	O	XCN	Admitting Doctor	Not expected to be supported.
18	2	IS	[0..0]	O	O	IS	Patient Type	Not expected to be supported.
19	250	CX	[0..0]	O	O	CX	Visit Number	Not expected to be supported.
20	50	FC	[0..1]	RE	RE	0064	Financial Class	Indicates the principle source of payment for the delivery.
21	2	IS	[0..0]	O	O	IS	Charge Price Indicator	Not expected to be supported.
22	2	IS	[0..0]	O	O	IS	Courtesy Code	Not expected to be supported.
23	2	IS	[0..0]	O	O	IS	Credit Rating	Not expected to be supported.
24	2	IS	[0..0]	O	O	IS	Contract Code	Not expected to be supported.
25	8	DT	[0..0]	O	O		Contract Effective Date	Not expected to be supported.
26	12	NM	[0..0]	O	O		Contract Amount	Not expected to be supported.
27	3	NM	[0..0]	O	O		Contract Period	Not expected to be supported.
28	2	IS	[0..0]	O	O	0073	Interest Code	Not expected to be supported.
29	4	IS	[0..0]	O	O	0110	Transfer to Bad Debt Code	Not expected to be supported.
30	8	DT	[0..0]	O	O		Transfer to Bad Debt Date	Not expected to be supported.
31	10	IS	[0..0]	O	O	0021	Bad Debt Agency Code	Not expected to be supported.
32	12	NM	[0..0]	O	O		Bad Debt Transfer Amount	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
33	12	NM	[0..0]	O	O		Bad Debt Recovery Amount	Not expected to be supported.
34	1	IS	[0..0]	O	O	0111	Delete Account Indicator	Not expected to be supported.
35	8	DT	[0..0]	O	O		Delete Account Date	Not expected to be supported.
36	3	IS	[0..0]	O	O	0112	Discharge Disposition	Not expected to be supported.
37	47	DLD	[0..0]	O	O	0113	Discharged to Location	Not expected to be supported.
38	250	CE	[0..0]	O	O	0114	Diet Type	Not expected to be supported.
39	2	IS	[0..0]	O	O	0115	Servicing Facility	Not expected to be supported.
40	1	IS	[0..0]	O	O	0116	Bed Status	Not expected to be supported.
41	2	IS	[0..0]	O	O	0117	Account Status	Not expected to be supported.
42	80	PL	[0..0]	O	O		Pending Location	Not expected to be supported.
43	80	PL	[0..0]	O	O		Prior Temporary Location	Not expected to be supported.
44	26	TS	[0..0]	O	O		Admit Date/Time	Not expected to be supported.
45	26	TS	[0..0]	O	O		Discharge Date/Time	Not expected to be supported.
46	12	NM	[0..0]	O	O		Current Patient Balance	Not expected to be supported.
47	12	NM	[0..0]	O	O		Total Charges	Not expected to be supported.
48	12	NM	[0..0]	O	O		Total Adjustments	Not expected to be supported.
49	12	NM	[0..0]	O	O		Total Payments	Not expected to be supported.
50	250	CX	[0..0]	O	O	0203	Alternate Visit ID	Not expected to be supported.
51	1	IS	[0..0]	O	O	0326	Visit Indicator	Not expected to be supported.

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
52	250	XCN	[0..0]	O	O	0010	Other Healthcare Provider	Not expected to be supported.

```
Example:
PV1||I||^^^^^^^^Simple Birth Clinic||||||||||||||PI
```

5.9 ROL – ROLE SEGMENT

The ROL segment is used to communicate birth attendant and birth facility information to receiving applications. The value of ROL.03 Role-ROL indicates which of the two the segment refers to.

Table 48. Role Segment (ROL)

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	60	EI	[0..1]	O	O	01206	Role Instance ID	Not expected to be supported
2	2	ID	[1..1]	R	R	00816	Action Code	Used to capture the intent of the communication. The value "LI" indicates that role information is being linked to the birth.
3	250	CE	[1..1]	O	O	0443	Role-ROL	Used to indicate the role the person or organization is playing in the birth.
4	250	XCN	[1..*]	R	R	01198	Role Person	Records name and identifier for both birth attendant and birth facility. The repeating field supports multiple identifiers (national and state) for birth facility or birth attendant. The National Provider ID (NPI) used within the facility is the preferred identifier type for the birth attendant.
5	26	TS	[0..1]	O	O	01199	Role Begin Date/Time	Not expected to be supported
6	26	TS	[0..1]	O	O	01200	Role End Date/Time	Not expected to be supported
7	250	CE	[0..1]	O	O	01201	Role Duration	Not expected to be supported

Seq	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
8	250	CE	[0..1]	O	O	01205	Role Action Reason	Not expected to be supported
9	250	CE	[0..1]	O	O	01510	Provider Type	Not expected to be supported
10	250	CE	[0..1]	O	O	01461	Organization Unit Type	Not expected to be supported
11	250	XAD	[0..1]	CE	CE	00679	Office/Home Address/Birthplace	This field is used to capture the place of birth or fetal delivery when the event takes place within a healthcare facility. (Note, the field is also used to record the place where mother and baby are taken to when the birth takes place within a conveyance in route to the hospital.) When used, the field, records address information for the birth facility. County and city town or location should be included. Note, either PID.11 or ROL.11 may be used to record the place of birth or delivery depending on circumstances.
12	250	XTN	[0..1]	O	O	00678	Phone	Not expected to be supported.

```
Example (birth attendant):
ROL||LI|ATT|888-003^Xxwalshingham^Albert^DR^^Good Health
Hospital^^^NPI
```

```
Example (facility):
ROL||LI|FAC|Good Health Hospital||||||300 Main
St^^Metropolis^Rhode Island^03443^B
```

5.10 OBX – OBSERVATION/RESULT SEGMENT

The Observation/Result Segment (OBX) contains information regarding a single observation related to the person. It will be used to convey information related to the newborn or fetus, to the mother, or to pregnancy and delivery that is not conveyed in one of the other segments within this message design. A list of the observation codes that are expected to be supported is provided.

Table 49. Observation/Result Segment (OBX)

Ref	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
1	1..4	SI	[1..1]	R	R		Set ID – OBX	For the first repeat of the OBX segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.
2	2..3	ID	[0..1]	R	R	HL70125	Value Type	This field identifies the data type used for OBX-5. Conditional statement: If OBX-5 is populated, OBX-2 is required. See *Section 5.8.1, HL7 Table 0125* for the data types that will be supported for this field and OBX-5.
3		CWE	[1..1]	R	R	Birth or Fetal Death Report Observation Identifier Value Set	Observation Identifier	Unique identifier for the type of observation. This field provides a code for the type of observation.
4	1..20 =	ST	[0..1]	O	O		Observation Sub-ID	I
5	1..55 #	Var	[0..1]	R	R	Various, based on OBX.03	Observation Value	The content of the observation. The data type will vary depending on observation ID.
6		CWE	[0..1]	CE	CE	Unified Code for Units of Measure (UCUM)	Units	UCUM® is an HL7-approved code system and shall be used for units as described in the appropriate HITSP Interoperability Specification. The UCUM unit of measure for values without a unit of measure is “1”. Harmonized Conditional statement: If the data type in OBX 2 is "NM" or "SN" and the OBX-11 observation result status is not ‘X’ then this field is required.
7		ST	[0..1]	O	O		References Range	Not expected to be supported.
8		CWE	[0..*]	O	O		Abnormal Flags	Not expected to be supported.

Ref	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
9		NM	[0..1]	O	O		Probability	Not expected to be supported.
10		ID	[0..1]	O	O	HL70080	Nature of Abnormal Test	Not expected to be supported.
11	1..1	ID	[1..1]	R	R	HL70085	Observation Result Status	
12		TS	[0..1]	O	O		Effective Date of Reference Range	Not expected to be supported.
13	20=	ST	[0..1]	O	O		User-Defined Access Checks	Not expected to be supported.
14		TS	[0..1]	O	O		Date/Time of the Observation	Not expected to be supported.
15		CWE	[0..1]	O	O	Local	Producer's Reference	Not expected to be supported.
16		XCN	[0..*]	O	O		Responsible Observer	Not expected to be supported.
17		CWE	[0..1]	O	O	HL7 V3 Observation Method	Observation Method	Not expected to be supported.
18		EI	[0..*]	O	O		Equipment Instance Identifier	Not expected to be supported.
19		TS	[0..1]	O	O		Date/Time of the Analysis	Not expected to be supported.
20		(TBD)	[0..0]	O	O		Reserved for harmonization with *Version 2.6*.	Not expected to be supported.
21		(TBD)	[0..0]	O	O		Reserved for harmonization with *Version 2.6*.	Not expected to be supported.
22		(TBD)	[0..0]	O	O		Reserved for harmonization with *Version 2.6*.	Not expected to be supported.
23		XON	[0..1]	O	O		Performing Organization Name	Not expected to be supported.

Ref	Len	DT	Cardinality	Electronic Health Record Sender	Vital Records Receiver	Value Set	HL7 Element Name	Description/ Comments
24		XAD	[0..1]	O	O		Performing Organization Address	Not expected to be supported.
25		XCN	[0..1]	O	O		Performing Organization Medical Director	Not expected to be supported.

Example:

OBX|1|CE|12345-6^Abnormal conditions of the newborn: Assisted ventilation^LN||N^No^HL70136

5.10.1 Birth & Fetal Death Reporting Observation types

The following table shows the set of observation types that is currently supported for the 2003 Revision of the US Standard Certificate of Live Birth (BC) and the 2003 Revision of the US Standard Report of Fetal Death (FD). The observations for the certificate and report are shown within a single table, since there is considerable overlap between the two types of reporting. The list of items is required for live birth and fetal death reporting in the United States.

The items within Table 53 have been sorted in the order of their occurrence within the US Standard Certificate of Live Birth. The first column is the Logical Observation Identifiers Names and Codes (LOINC) Concept Code. LOINC is a standard and clinical terminology that identifies medical observations. The LOINC concept code specifically refers to the question on the 2003 Revision of the US Standard Certificate of Live Birth and the 2003 Revision of the US Standard Report of Fetal Death (FD). The 2003 Revision of the US Standard Certificate of Live Birth and the US Standard Report of Fetal Death (FD) can be downloaded from the Centers for Disease Control and Prevention (CDC)/National Center for Health Statistics website at: http://www.cdc.gov/nchs/nvss/vital_certificate_revisions.htm. Each LOINC concept code has a short textual description in the second column. Additional information on the LOINC code can be found on the LOINC search website at: http://search.loinc.org. HL7 Version 3 Standard Data Types are defined in Column 3. Column 4 in Table 53 describes the coded indication and the purpose of the data element in detail.

In addition to the LOINC concept codes that represent the question on the certificate, detailed value sets have been included in Chapter 6 to provide the answer sets that are required by the US Standard Certificate of Live Birth and the US Standard Report of Fetal Death (FD.) The value sets are defined by HL7 Version 3 or the CDC/ Public Health Information Network Vocabulary Access and Distribution System (PHIN VADS). The PHIN VADS value sets are available at: https://phinvads.cdc.gov/vads/. The specific HL7 value sets that are applicable to this implementation are included. Additionally, PHIN VADS object identifiers (OIDs) are included in Column 5. Column 6 provides the name of the value sets that are referenced in Chapter 6.

The numbers in the last two columns (BC and FD) refer to the item numbers on the US Standard Certificate of Live Birth (BC) and the US Standard Report of Fetal Death (FD).

Table 50. Live Birth & Fetal Death Reporting Observation Types

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
73766-8	Place where birth occurred	CNE	Coded indication of the type of place where the birth or delivery occurred. The associated value set defines the allowable values for the observation.	PHIN VADS 2.16.840.1.1142 22.4.11.7124	Birth or Delivery Occurred (NCHS)	26	7
73765-0	Planned to deliver at home	CE	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.	HL7 0532	Expanded yes/no indicator	26	7
73764-3	Birth attendant title	CNE	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. The associated value set defines the allowable values for the observation.	PHIN VADS 2.16.840.1.1142 22.4.11.7111	Birth Attendant Titles (NCHS)	27	14
73763-5	Mother was transferred for maternal medical or fetal indications for delivery	CE	Boolean indicator (Yes/No/Unknown) that indicates if the mother was transferred from another facility prior to delivery. Transfers include hospital to hospital, birth facility to hospital, etc. Does not include home to hospital.	HL7 0532	Expanded yes/no indicator	28	35
73777-5	Name of facility mother transferred from	XON	The name of the facility the mother was transferred from. The facility name is only provided if the mother was transferred from another facility for maternal or fetal indications for delivery.	N/A	N/A	28	35
69044-6	Date first prenatal visit	DT	The date a physician or other health care professional first examined and/or counseled the pregnant woman for the pregnancy.	N/A	N/A	29a	23a
73776-7	No prenatal care	CE	Boolean indicator (Yes/No) that allows notation that no prenatal care was received by the mother.	HL7 0532	Expanded yes/no indicator	29a	23a

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
68492-8	Date last prenatal visit	DT	The date of the last prenatal care visit recorded in the records. The precision of reporting will be to the day (including month, day and year).	N/A	N/A	29b	23b
68493-6	Prenatal visits for this pregnancy	NM	The total number of visits recorded in the record.	N/A	N/A	30	24
3137-7	Body height	NM	The mother's height. If the value is provided in feet, it is expected that the inch component of the height be expressed as a fraction of a foot. If the value is provided in inches, it is expected that the full height value is included. Note, a unit of measure must be provided in OBX.06.	N/A	N/A	31	25
56077-1	Body weight ^ pre current pregnancy	NM	The mother's weight before becoming pregnant. Note, a unit of measure must be provided in OBX.06. It is expected that weight is measured in pounds.	N/A	N/A	32	26
69461-2	Body weight^ at delivery	NM	The mother's weight at the time of delivery. Note, a unit of measure must be provided in OBX.06. It is expected that weight is measured in pounds.	N/A	N/A	33	27
11638-4	Births.still living	NM	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.	N/A	N/A	35a	29a
68496-9	Live births.now dead	NM	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.	N/A	N/A	35b	29b
68499-3	Date last live birth	DT	The date of birth of the last live-born infant (month and year) excluding this delivery. Includes live-born infants now living and	N/A	N/A	35c	29c

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
			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.)				
69043-8	Other pregnancy outcomes	NM	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.	N/A	N/A	36a	30a
68500-8	Date last other pregnancy outcome	DT	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)	N/A	N/A	36b	30b
8665-2	Date last menstrual period	DT	The date the mother's last normal menstrual period began. (month, day and year.)	N/A	N/A	38	32
73775-9	Risk Factors in this Pregnancy	CNE	Selected medical risk factors of the mother during this pregnancy	PHIN VADS 2.16.840.1.1142 22.4.11.7126	Pregnancy Risk Factors (NCHS)	41	36
68497-7	Previous cesarean deliveries	NM	The number of previous cesarean deliveries.	N/A	N/A	41	36
72519-2	Infections present &or treated during this pregnancy for live birth	CNE	Coded representation of infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment	PHIN VADS 2.16.840.1.1142 22.4.11.6070	Infections During Pregnancy - Live Birth (NCHS)	42	N/A
73769-2	Infections present and treated during the pregnancy for fetal death	CNE	Coded representation of infections present at the time of the pregnancy diagnosis or a confirmed diagnosis during the pregnancy with or without documentation of treatment	PHIN VADS 2.16.840.1.1142 22.4.11.7135	Infections During Pregnancy Fetal Death (NCHS)	N/A	37
73814-6	Obstetric procedures	CNE	Selected medical treatments or invasive / manipulative	PHIN VADS 2.16.840.1.1142	Obstetric Procedures	43	N/A

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
	performed		procedures performed during this pregnancy specifically for management of labor and / or delivery.	22.4.11.7136	(NCHS)		
73820-3	Successful external cephalic version	CE	Boolean indication (Y/N) of external cephalic version was successful	HL7 0532	Expanded yes/no indicator	43	N/A
73774-2	Onset of labor	CNE	Serious complications experienced by the mother associated with labor and delivery	PHIN VADS 2.16.840.1.1142 22.4.11.7123	Onset Labor (NCHS)	44	N/A
73813-8	Characteristics of labor and delivery	CNE	Information about the course of labor and delivery.	PHIN VADS 2.16.840.1.1142 22.4.11.7117	Labor and Delivery Character-istics (NCHS)	45	N/A
73761-9	Fetal Presentation at Birth	CNE	Describes the different presentations (orientations within the mother's womb) that a fetus may be in prior to delivery.	PHIN VADS 2.16.840.1.1142 22.4.11.7113	Fetal Presenta-tions (NCHS)	46	38
73762-7	Final Route and Method of Delivery	CNE	Coded indication of the route by which the infant or fetus was delivered.	PHIN VADS 2.16.840.1.1142 22.4.11.7118	Delivery Routes (NCHS)	46	38
73760-1	If cesarean, a trial of labor was attempted	CE	Boolean indication (Yes/No/Unknown/Not Applicable) of whether a trial of labor was attempted when the final route and method of delivery is a cesarean.	HL7 0532	Expanded yes/no indicator (NCHS)	46	38
73759-3	Hysterotomy or hysterectomy was performed at delivery	CE	Boolean indication (Yes/No/Unknown) of whether a hysterotomy or hysterectomy was performed.	HL7 0532	Expanded yes/no indicator (NCHS)	N/A	38
73781-7	Maternal morbidity	CE	Coded indication of whether a serious complications experienced by the mother was associated with labor and delivery.	PHIN VADS 2.16.840.1.1142 22.4.11.7119	Maternal morbidities (NCHS)	47	39
8339-4	Body weight^at birth	NM	The infant’s or fetus’s weight at delivery. The preferred unit of measure is grams.	N/A	N/A	49	18c

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
			Notwithstanding, a unit of measure must be provided in OBX.06.				
11884-4	Gestational age	NM	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. Note, a unit of measure must be provided in OBX.06.	N/A	N/A	50	18d
9274-2	Score^5M post birth	NM	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. The associated value set defines the allowable values for the observation.	N/A	N/A	51	N/A
9271-8	Score^10M post birth	NM	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, it is necessary to enter the infant's Apgar score at 10 minutes. Otherwise the value may be omitted. The associated value set defines the allowable values for the observation.	N/A	N/A	51	N/A
57722-1	Birth plurality	NM	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.	N/A	N/A	52	33
73773-4	Number of infants in this delivery born	NM	Specify the number of live born in this delivery.	N/A	N/A	52	NA

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
	alive						
73772-6	Number of fetal deaths delivered	NM	Specify the number of fetal deaths in this delivery.	N/A	N/A	N/A	33
73771-8	Birth order	NM	If not single birth, specify born 1st, 2nd, etc. – For multiple deliveries, the order this infant was delivered in the set. Include all live births and fetal losses.	N/A	N/A	53	34
73812-0	Abnormal conditions of the newborn	CNE	Disorders or significant morbidity experienced by the newborn infant	PHIN VADS 2.16.840.1.1142 22.4.11.7121	Newborn Abnormal Conditions (NCHS)	54	N/A
73780-9	Congenital anomalies of the newborn	CNE	Malformations of the newborn diagnosed prenatally or after delivery	PHIN VADS 2.16.840.1.1142 22.4.11.7122	Newborn Congenital Anomalies (NCHS)	55	40
73779-1	Down syndrome karyotype status	CE	Coded indication of whether the newborn has a diagnosis of Down syndrome, Trisomy 21, confirmed or pending.	PHIN VADS 2.16.840.1.1142 22.4.11.7116	Karyotype Down Syndrome (NCHS)	55	40
73778-3	Suspected chromosomal disorder karyotype status	CE	Coded indication of whether the newborn has a diagnosis of suspected chromosomal disorder is confirmed or pending (may include Trisomy 21).	PHIN VADS 2.16.840.1.1142 22.4.11.7115	Karyotype Suspected Chromoso-mal Disorder (NCHS)	55	40
73758-5	Infant was transferred within 24 hours of delivery	CE	Boolean indicator (Yes/No/Unknown) that indicates whether the infant was transferred to a facility within 24 hours after delivery	HL7 0532	Expanded yes/no indicator	56	N/A
73770-0	Name of facility infant transferred to	XON	The name of the facility the infant was transferred to. (Only value if the infant was transferred within 24 hours of delivery.)	N/A	N/A	56	N/A
73757-7	Infant living at time of report	CE	Boolean indicator (Yes/No/Unknown) that provides information on whether or not the infant is known to be living at the time of report. The respondent is expected to answer "Yes" if the infant has already	HL7 0532	Expanded yes/no indicator	57	N/A

LOINC Concept Code (Question)	Concept Name (Question)	Data Type	Description	Value Set (Answer)	Value Set Name	BC Item	FD Item
			been discharged to home care. The value "UNK" is used if the infant has been transferred and the status is unknown.				
73756-9	Infant is being breastfed at discharge	CE	Boolean indicator (Yes/No/Unknown) that provides information on whether the infant is being breast-fed at discharge from the hospital.	HL7 0532	Expanded yes/no indicator	58	N/A
76060-3	Initiating cause of death or condition	CD	Coded value that indicates one or more diseases, injuries, or complications that were implicated as the initiating cause of fetal death.	PHIN VADS 2.16.840.1.11422 2.4.11.7422	Fetal Death Cause or Condition (NCHS)	N/A	18a
76061-1	Death cause other significant conditions	CD	Coded value that provides information on a significant condition or conditions that contributed to death, but did not result in the underlying cause that is elsewhere described	PHIN VADS 2.16.840.1.11422 2.4.11.7422	Fetal Death Cause or Condition (NCHS)	N/A	18b
73811-2	Estimated time of fetal death	CE	Item to indicate when the fetus died with respect to labor and assessment. A coded indication that is used to specify when the fetus died with respect to labor and assessment. The associated value set defines the allowable values for the observation.	PHIN VADS 2.16.840.1.1142 22.4.11.7112	Fetal Death Time Points (NCHS)	N/A	18e
73768-4	Autopsy was performed	CE	Coded indication of whether or not an autopsy was performed or planned.	PHIN VADS 2.16.840.1.1142 22.4.11.7137	Autopsy Examina-tion (NCHS)	N/A	18f
73767-6	Histological placental examination was performed	CE	Coded indication of whether or not a histological placental examination was performed or planned.	PHIN VADS 2.16.840.1.1142 22.4.11.7138	Histologica l Placental Examina-tion (NCHS)	N/A	18f

6.Code Systems and Value Sets

Successful message implementation requires that transmitted messages (message instances) contain valid values for coded fields. It is important to note that code sets are relatively dynamic and subject to change between publications of these implementation guides. Therefore, it is important to verify the code sets in the repository, e.g. PHIN VADS.

Every code value passed in a message instance is drawn from a code system that has a globally unique identifier, such as an OID. In general, the coded values allowed in a field (a) may be drawn from more than one code system, and (b) may be a subset of the codes from a given coding system. Combining (a) and (b) makes it possible for the allowed code value to be a combination of multiple subsets drawn from multiple coding systems. In most cases, only a subset of the codes defined in a code system are legal for use in a particular message.

The subsets of the codes that are legal for a particular field is identified by an HL7 construct known as a "value set." A value set is a collection of coded values drawn from code systems. Value sets serve to identify the specific set of coded values for the message from the universe of coded values across all coding systems.

The segment tables in previous sections identify the value set or coding system used for each supported field containing a coded value. Fields that use the data type CWE require that messages include the code, drawn from *HL7 0396*, that uniquely defines the coding system, as well as the coded value itself. Some of these pre-coordinated value sets must be updated, or new ones created, as new needs are identified.

Value sets are identified by a unique identifier also, but this identifier is not transmitted in the message. The identifier or code for the coding system from which the value is derived is sent in the message. However, the value set identifier is useful and important when vocabulary items are modified or replaced.

6.1 VOCABULARY SUMMARY

This section describes the various value sets/code systems used in this implementation guide. This section also provides information about the source of the vocabulary and an identifier for the vocabulary. In Table 54, the terms in the first column, Value Set/Code System Name, corresponds with the sixth column in Table 53, Value Set Name. The second and third column corresponds to the code system source and system identifier. Finally, the last column describes the type of information that is found in the value set.

Table 51. Value Set/Code System Summary

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
Autopsy Examination (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7137	The value set contains the list of values used to indicate whether or not an autopsy was performed.
Birth Attendant Titles (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7111	The value set contains the list of titles used by persons (attendant) responsible for delivering a child/fetus. The attendant at birth/delivery is defined as the individual physically present at the delivery who is responsible for the delivery.
Birth or Delivery Occurred (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7124	The value set contains the list of values used to indicate the type of place where birth or delivery occurred.
Delivery Routes (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7118	The value set contains the list of the routes by which the infant or fetus was delivered.
Fetal Death Cause or Condition (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7422	The value sets contains the list of values used to report initiating cause or condition or other significant causes or conditions contributing to fetal death.
Fetal Death Time Points (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7112	The value set contains a list of items to **indicate when the fetus died with respect to labor and assessment.**
Fetal Presentations (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7113	The value set contains the list of the different presentations (orientations within the mother's womb) that a fetus may be in prior to delivery.
Histological Placental Examination (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7138	The value set contains the list of values used to indicate whether or not a histological placental examination was performed.

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
Infections During Pregnancy - Live Birth (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.6070	The value set contains the list of selected infections that the mother had or was treated for during the course of this pregnancy in the event of a live birth.
Infections Present Treated Fetal Death (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7135	The value set contains the list of selected infections that the mother had or was treated for during the course of this pregnancy in the event of a fetal death.
Karyotype Down Syndrome (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7116	The value set contains the list of values that indicate whether the newborn/fetus is confirmed or pending if there is a diagnosis of Down syndrome, Trisomy 21.
Karyotype Suspected Chromosomal Disorder (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7115	The value set contains the list of values that indicate whether the newborn/fetus is confirmed or pending if there is a diagnosis of suspected chromosomal disorder (may include Trisomy 21).
Labor and Delivery Characteristics (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7117	The value set contains the list of options to indicate information about the course of labor and delivery.
Maternal Morbidities (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7119	The value set contains the list of possible maternal morbidity values when serious complications were experienced by the mother associated with labor and delivery
Newborn Abnormal Conditions (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7121	The value set contains the list of values used to indicate specific disorders or significant morbidity experienced by the newborn infant.
Newborn Congenital Anomalies (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7122	The value set contain the list of values used to specify malformations of the newborn diagnosed prenatally or after delivery.
Obstetric Procedures (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7136	The value set contains the list of values used to specify selected medical treatments or invasive / manipulative procedures performed during this pregnancy specifically for management of labor and / or delivery.
Onset Labor (NCHS)	PHIN VADS	2.16.840.1.1142 22.4.11.7123	The value set contains the list of values used to indicate serious complications experienced by the mother associated with labor and delivery.

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
Pregnancy Risk Factors (NCHS)	PHIN VADS	2.16.840.1.114222.4.11.7126	The value set contains the list of values used to indicate selected medical risk factors of the mother during this pregnancy.
HL70001	HL7 Version 2.5.1	2.16.840.1.113883.12.1 (code system)	Administrative Sex. Also available from PHIN VADS as: PHVS_AdministrativeSex_HL7_2x
HL70008	HL7 Version 2.5.1	2.16.840.1.113883.12.8 (code system)	Acknowledgment code Also available from PHIN VADS as: PHVS_AcknowledgmentCode_HL7_2x
HL70062	HL7 Version 2.5.2	2.16.840.1.114222.4.11.7164	Birth and Fetal Death Reporting Event Reason. Indicates whether the report refers to a live birth or to a fetal death.
HL70064	HL7 Version 2.5.2	2.16.840.1.114222.4.11.7163	Birth and Fetal Death Financial Class A collection of principal sources of payment at the time of delivery.
HL70076	HL7 Version 2.5.1	2.16.840.1.113883.12.76 (code system)	Message type Also available from PHIN VADS as: PH_MessageType_HL7_2x
HL70085	HL7 Version 2.5.1	2.16.840.1.113883.12.85 (code system)	Observation Result Status Also available from PHIN VADS as: PHVS_ObservationResultStatus_HL7_2x
HL70103	HL7 Version 2.5.1	2.16.840.1.113883.12.103 (code system)	Processing ID. Also available from PHIN VADS as: PHVS_ProcessingID_HL7_2x
HL70104	HL7 Version 2.5.1	2.16.840.1.113883.12.104 (code system)	Version ID. Also available from PHIN VADS as: PH_VersionID_HL7_2x
HL70125	HL7 Version 2.5.1	2.16.840.1.113883.12.125 (code system)	Value Type (The supported values are listed below) Also available from PHIN VADS as: PH_ValueType_HL7_2x
HL70136	HL7 Version 2.5.1	2.16.840.1.113883.12.136 (code system)	Yes/No Indicator Also available from PHIN VADS as: PHVS_YesNo_HL7_2x

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70155	HL7 Version 2.5.1	2.16.840.1.113883.12.155 (code system)	Accept/application acknowledgment condition Also available from PHIN VADS as: PH_AcceptApplicationAcknowledgmentConditions_HL7_2x
HL70203	HL7 Version 2.5.1	2.16.840.1.113883.12.203 (code system)	Identifier type. Also available from PHIN VADS as: PH_IdentifierType_HL7_2x
HL70207	HL7 Version 2.5.1	2.16.840.1.113883.12.207 (code system)	Processing mode. Also available from PHIN VADS as: PHVS_ProcessingMode_HL7_2x
HL70287	HL7 Version 2.5.1	2.16.840.1.113883.18.3	Problem/Goal Action Code (constrained) Indicates – in a required field – the action associated with the player of the role.
HL70301	HL7 Version 2.7	2.16.840.1.113883.12.301 (code system)	Universal ID type Also available from PHIN VADS as: PH_UniversalIdType_HL7_2x
HL70354	HL7 Version 2.5.1	2.16.840.1.113883.12.354 (code system)	Message structure Also available from PHIN VADS as: PH_MessageStructure_HL7_2x
HL70357	HL7 Version 2.5.1	2.16.840.1.113883.12.357 (code system)	Message Error Condition Codes Also available from PHIN VADS as: PHVS_MessageErrorConditionCodes_HL7_2x
HL70360	HL7 Version 2.5.1	2.16.840.1.113883.12.360 (code system)	Degree/license/certificate Also available from PHIN VADS as: PHVS_DegreeLicenseCertificate_HL7_2x

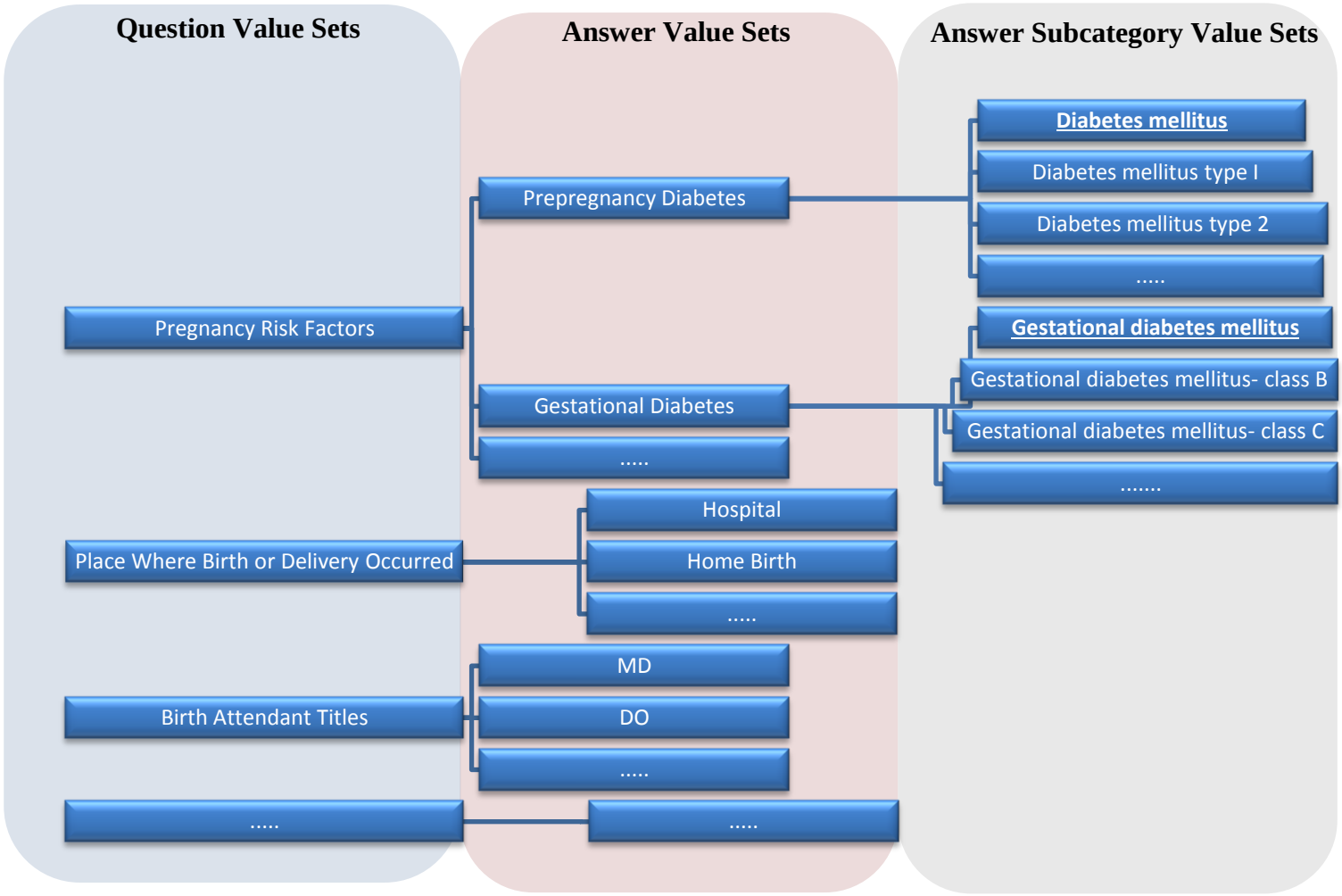
Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70396	HL7 http://www.hl7.org/special/committees/vocab/table_0396/index.cfm	2.16.840.1.113883.12.396 (code system)	HL7 Table 0396 defines the standard coding systems recognized by HL7. The table defines a mechanism by which locally defined codes can be transmitted. Any code/coding system not defined in HL7 Table 0396 is considered a "local" coding system from the Hl7 perspective. Coding systems that are identified in this implementation guide will be identified according to the recommended HL7 nomenclature from table 0396 as "99ELR-zzz" where "zzz" represents a string identifying the specific non-standard coding system. To maintain backwards compatibility with the 2.3.1 ELR implementation Guide, coding systems defined locally (i.e., not identified in this guide) and not defined in HL7 Table 0396 can continue to identify the coding system as "L". It is strongly suggested that implementers instead adopt the use of "99zzz" approach to identifying local coding systems since HL7 has indicated that use of the "L" for local coding systems is retained only for backwards compatibility, and its use may be withdrawn in a subsequent 2.x version. Note that the local use of "99zzz" should not collide with any of the "locally" defined coding systems identified in this implementation guide. HL7 now maintains HL7 table 0396 "real time". This means that values may be added to the table at any time so that implementers can have an up-to-date source of truth for the codes to be used to identify coding systems in any 2.x message. Users of this IG should acquire the latest version of HL7 table 0396. The latest version of HL7 table 0396 (independent of HL7 version) is available for download from HL7 at: http://www.hl7.org/special/committees/vocab/table_0396/index.cfm. Also available from PHIN VADS as: PH_CodingSystem_HL7_2x

Value Set/Code System Name	Value Set/Code System Source	Value Set/Code System Identifier	Description
HL70399 (COUNTRY)	HL7 Version 2.5.1	2.16.840.1.114222.4.5.300 (Pre-2014 code system) 2.16.840.1.114222.4.11.7162 (Post-2014 code system)	A list of country codes. Use 2.16.840.1.114222.4.5.300 FIPS 10-4 until the end of 2013. Use 2.16.840.1.114222.4.11.7162 Geopolitical Entities and Codes (GEC) 2014 and onwards.
HL70516	HL7 Version 2.5.1	2.16.840.1.113883.12.516 (code system)	Error severity Also available from PHIN VADS as: PHVS_ErrorSeverity_HL7_2x
HL70532	HL7 Version 2.5.1	2.16.840.1.113883.12.532 (code system)	Expanded Yes/No Indicator (The supported values are listed below) Also available from PHIN VADS as: PH_ExpandedYesNo_HL7_2x
HL70533	HL7 Version 2.5.1	2.16.840.1.113883.12.533 (code system)	Application error code Note that Hl7 table 0533 has no suggested values. It is always a user defined table, and will generally contain locally defined codes.
Unified Code for Units of Measure (UCUM)	Regenstrief Institute, Inc. http://www.regenstrief.org/medinformatics/ucum	2.16.840.1.113883.3.88.12.80.29	Units of measure are relevant for time intervals.

6.2 ANSWER VALUE SETS

The following answer value set tables shows the vocabulary value sets for the answers that are currently supported for the 2003 Revision of the US Standard Certificate of Live Birth (BC) and the 2003 Revision of the US Standard Report of Fetal Death (FD). For each BC or FD question value set, there exists a set of valid answers that correlate to the BC or FD (Figure 4). Tables in Section 6.2 correlate to answers to questions in the BC or FD described in the Value Set/Code System Summary in Section 6.1.

Figure 4. Overview of Value Set Hierarchy



The authoritative list of value sets has been included in this IG. Each table's header in section 6.2 contains the name and OID of the answer value set. The first and second column correlates to the SNOMED concept code and name of the coded answer. The concept name has the type of SNOMED category in parenthesis. The SNOMED answer concept has is the aggregated answer code. The aggregated answer code has a value set of valid terms that could be coded for the single answer choice. This subcategory value set is shown in the third gray category in Figure 4. The aggregate answer name in is underlined in the subcategory value set. The aggregate answer name correlates closely with the answer choice on the paper BC or FD. The third column is a description that matches the exact language of the answer on the paper BC and FD. The fourth and fifth column correlates to the subcategory value set name and OID that can be found in PHIN VADS. The subcategory list can be viewed by searching on this OID in the PHIN VADS repository. Note that there is an expanded list of codes that are appropriate to answer the question and are associated with the aggregate OID code. Lastly there are comments and the Edit Specification Attributes for the implementers. The Edit Specifications Attributes are processing variables that are used to collect and process vital statistics data.

6.2.1 Birth or Delivery Occurred

Value Set	Birth Location (VPD) - 2.16.840.1.114222.4.11.3122
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3122
Description	Infant's birth place location answer list

Table 52 Birth or Delivery Occurred

6.2.2 Birth Attendant Titles

Value Set	Birth Attendant Titles (NCHS) 2.16.840.1.114333.4.11.7111
Code System	Snomed ct, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7111
Description	The value set contains the list of titles used by persons (attendant) responsible for delivering a child/fetus. The attendant at birth/delivery is defined as the individual physically present at the delivery who is responsible for the delivery.

6.2.3 Pregnancy Risk Factors

Value Set	Pregnancy Risk Factors (NCHS) 2.16.840.1.114222.4.11.7126
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7126
Description	The value set contains the list of values used to indicate selected medical risk factors of the mother during this pregnancy.

6.2.4 Infections During Pregnancy - Live Birth

Value Set	Infections During Pregnancy - Live Birth (NCHS) 2.16.840.1.114222.4.11.6070
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6070
Description	INFECTIONS PRESENT AND/OR TREATED DURING THIS PREGNANCY FOR LIVE BIRTH

6.2.5 Infections Present Treated Fetal Death

Value Set	Infections During Pregnancy Fetal Death (NCHS) 2.16.840.1.114222.4.11.7135
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7135
Description	The value set contains the list of selected infections that the mother had or was treated for during the course of this pregnancy for fetal death.

6.2.6 Obstetric Procedures

Value Set	Obstetric Procedures (NCHS) 2.16.840.1.114222.4.11.7136
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7136
Description	The value set contains the list of values used to specify selected medical treatments or invasive / manipulative procedures performed during this pregnancy specifically for management of labor and / or delivery.

6.2.7 Onset Labor

Value Set	Onset Labor (NCHS) 2.16.840.1.114222.4.11.7123
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7123
Description	The value set contains the list of values used to indicate serious complications experienced by the mother associated with labor and delivery

6.2.8 Labor and Delivery Characteristics

Value Set	Labor and Delivery Characteristics (NCHS) 2.16.840.1.114222.4.11.7117
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7117
Description	The value set contains the list of options to indicate information about the course of labor and delivery.

6.2.9 Fetal Death Cause or Condition

Value Set	Fetal Death Cause or Condition (NCHS) 2.16.840.1.114222.4.11.7422
Code System	SNOMED CT, PHIN VS, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.
Description	The value sets contains the list of values used to report initiating cause or condition or other signficant causes or conditions contributing to fetal death.

6.2.10 Fetal Presentation

Value Set	Fetal Presentations (NCHS) 2.16.840.1.114222.4.11.7113
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7113
Description	The value set contains the list of the different presentations (orientations within the mother's womb) that a fetus may be in prior to delivery

6.2.11 Delivery Routes

Value Set	Delivery Routes (NCHS) 2.16.840.1.114222.4.11.7118
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7118
Description	The value set contains the list of the possible routes by which the infant or fetus may be delivered.

6.2.12 Maternal Morbidities

Value Set	Maternal Morbidities (NCHS) 2.16.840.1.114222.4.11.7119
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7119
Description	The value set contains the list of possible maternal morbidity values when serious complications were experienced by the mother associated with labor and delivery.

6.2.13 Newborn Abnormal Conditions

Value Set	Newborn Abnormal Conditions (NCHS) 2.16.840.1.114222.4.11.7121
Code System	PHIN VS (CDC Local Coding System), SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7121
Description	The value set contains the list of values used to indicate specific disorders or significant morbidity experienced by the newborn infant.

6.2.14 Newborn Congenital Anomalies

Value Set	Newborn Congenital Anomalies (NCHS) 2.16.840.1.114222.4.11.7122
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7122
Description	The value set contain the list of values use to specify malformations of the newborn diagnosed prenatally or after delivery.

6.2.15 Karyotype Down Syndrome

Value Set	Karyotype Down Syndrome (NCHS) 2.16.840.1.114222.4.11.7116
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7116
Description	The value set contains the list of values that indicate whether the newborn/fetus is confirmed or pending if there is a diagnosis of Down syndrome, Trisomy 21.

6.2.16 Karyotype Suspected Chromosomal Disorder

Value Set	Karyotype Suspected Chromosomal Disorder (NCHS) 2.16.840.1.114222.4.11.7115
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7115
Description	The value set contains the list of values that indicate whether the newborn/fetus is confirmed or pending if there is a diagnosis of suspected chromosomal disorder (may include Trisomy 21).

6.2.17 Fetal Death Time Points

Value Set	Fetal Death Time Points (NCHS) 2.16.840.1.114222.4.11.7112
Code System	SNOMED CT, NullFlavor
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7112
Description	The value set contains a list of items to indicate when the fetus died with respect to labor and assessment.

6.2.18 Autopsy Examination

Value Set	Autopsy Examination (NCHS) 2.16.840.1.114222.4.11.7137
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7137
Description	The value set contains the list of values used to indicate whether or not an autopsy was performed.

6.2.19 Histological Placental Examination

Value Set	Histological Placental Examination (NCHS) 2.16.840.1.114222.4.11.7138
Code System	SNOMED CT
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7138
Description	The value set contains the list of values used to indicate whether or not a histological placental examination was performed.

6.2.20 HL7 Table 0001 – Administrative Sex (User Defined)

The values are used to indicate the valid values for the sex of a person.

Table 53. Administrative Sex - HL7 0001

Value	Description	Comment
F	Female	
M	Male	
UNK	Unknown	In cases where the appropriate sex code has not yet been determined, code as “unknown”.

6.2.21 HL7 Table 0062 – Birth and Fetal Death Event Reason Code (User Defined)

The values are used to distinguish the report of a live birth from a fetal death.

Table 54. Birth and Fetal Death Event Reason - HL7 0062

Value	Description	Comment
LB	Live Birth	
FD	Fetal Death	

6.2.22 HL7 Table 0064 – Birth and Fetal Death Financial Class (User Defined)

Value Set	Birth and Fetal Death Financial Class (NCHS) 2.16.840.1.114222.4.11.7163
Code System	Source of Payment Typology PHDSC
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7163
Description	The value set contains the list of values used to indicate the principle source of payment for the labor and delivery. Note, the Public Health Data Consortium Source of Payment Typology is being used as the primary source for codes within the value set.

6.2.23 HL7 Table 0125 – Value Type

Value Set	Value Type (HL7) 2.16.840.1.114222.4.11.1059
Code System	Value type (HL7)
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.1059.
Description	HL7 table 0125 contains the list of formats of the observation value in OBX-3.

6.2.24 HL7 Table 0155 – Accept/Application Acknowledgment Conditions

Value Set	Accept Application Acknowledgment Conditions (HL7) 2.16.840.1.114222.4.11.3344
Code System	Accept/application acknowledgment conditions
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3344
Description	Accept Application Acknowledgment Conditions (HL7) based on HL7 2.5 table 0155

6.2.25 HL7 Table 0287 – Problem/Goal Action Code

Value Set	Problem Goal Action Code (HL7) 2.16.840.1.114222.4.11.6000
Code System	Problem Goal Action Code (HL7)
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6000
Description	Problem Goal Action Code (HL7) - HL7 Table 0287

6.2.26 HL7 Table 0301 - Universal ID Type

Table 55. Universal ID Type - HL70301 Constrained from the Full HL7 Table

Value	Description	Usage	Comments
ISO	An International Standards Organization Object Identifier	R	Used as the Universal ID Type in the CNN, EI and HD data types.

6.2.27 HL7 Table 0443 – Provider Role (User Defined)

Table 56. Provider Role - HL70443 User Defined

Value	Description	Usage	Comments
ATT	Birth Attendant	R	
FAC	Birth Facility	R	

6.2.28 HL7 Table 0532 – Expanded Yes/No Indicator (HL7 Defined)

Value Set	Expanded Yes No (HL7) 2.16.840.1.114222.4.11.820
Code System	Expanded Yes No Indicator (HL7)
Source	PHIN Vocabulary Access and Distribution System
Source URL	https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.820
Description	HL7 Table 0532 that contains Yes, No, and some flavors of null.

7. Example Birth Information Messages

The examples provided in this section are handcrafted and as such are subject to human error. **Examples should not be used as the basis for implementing the messages in the implementation guide.** Examples are provided to illustrate the use of the messages.

7.1 SAMPLE FOR BIRTH

```
MSH|^~\&|OurEHR^89898989^AppID|Good Health
   Hospital^5799000^HPID|STATE^14^StateAppID|VRDept|201104030913|
   |ADT^A04^ADT_A04|1223334498|P|2.5.1|NE|NE|USA||EN^English^HL70
   296||BR01.67
SFT|1|Level Seven Healthcare Software,
   Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|Our EHR
   System|56734||20080817
EVN| |201103141705||LB
PID|1||123456688^^^^MRN||Johnson^Baby||20110313|F|||||||||||||N
NK1|1|Johnson^Susanna^J^III^^^^^^^^^^MD|1830 Sunshine
   Drive^^Beautiful City^HerState^86534-
   1111^^H|||||||||||||||||||||||||||9876546688^^^^MRN
PV1||I||^^^^^^^^Simple Birth Clinic||||||||||||||PI
ROL||AD|ATT|888-003^Xxwalshingham^Albert^DR^^Good Health
   Hospital^^^NPI
ROL||AD|FAC|Good Health Hospital|||||||300 Main
   St^^Metropolis^Rhode Island^03443^B
OBX|1|CE|73766-8^Birth/delivery location type
   ^LN||22232009^Hospital^SCT||||||F
OBX|2|CE|73765-0^Planned home birth
   indicator^LN||UNK^Unknown^HL70532||||||F
OBX|3|CE|73764-3^Attendants's Title^LN||76231001^Doctor of
   Osteopathy^SCT||||||F
OBX|4|CE|73763-5^Mother transferred for maternal medical or fetal
   indications for delivery?^LN||Y^Yes^HL70532||||||F
OBX|5|TS|69044-6^Date first prenatal visit^LN||20100526||||||F
OBX|6|CE|73776-7^No Prenatal Care
   Indicator^LN||N^No^HL70532||||||F
OBX|7|TS|68492-8^Date last prenatal visit^LN||20100526||||||F
OBX|8|NM|68492-8^Prenatal visits for this pregnancy^LN||8
OBX|9|NM|73776-7^Body height^LN||66|in
OBX|10|NM|56077_1^Body weight-pre current pregnancy^LN||112|lb
OBX|11|NM|68494-4^Body weight-at delivery^LN||144|lb
OBX|12|NM|11638-4^Births.still living^LN||2
```

```
OBX|13|NM|68499-3^Live births.now dead^LN||0
OBX|14|TS|68499-3^Date last live birth^LN||20090926
OBX|15|NM|69043-8^Other pregnancy outcomes||0
OBX|16|TS|8665-2^Date last normal menses began||20100418
OBX|17|CE|73775-9^Risk factors in this
  pregnancy^LN||48194001^Pregnancy-induced hypertension
  (disorder)^SCT||||||F
OBX|18|CE|73775-9^Risk factors in this
  pregnancy^LN||65046005^Infertility Therapy
  (procedure)^SCT||||||F
OBX|19|CE|73775-9^Risk factors in this
  pregnancy^LN||58533008^Artificial insemination
  (procedure)^SCT||||||F
OBX|20|CE|72519-2^Infections present and treated during this
  pregnancy for live birth^LN||260413007^None (qualifier
  value)^SCT||||||F
OBX|21|CE|73814-6^Obstetric procedures^LN||260413007^None
  (qualifier value)^SCT||||||F
OBX|22|CE|73774-2^Onset of labor||260413007^None (qualifier
  value)^SCT||||||F
OBX|23|CE|73813-8^Characteristics of labor and
  delivery^LN||634621000124113^Steroids (glucocorticoids) for
  fetal lung maturation (procedure)^SCT||||||F
OBX|24|CE|73761-9^Fetal presentation at
  Birth^LN||70028003^Cephalic^SCT||||||F
OBX|25|CE|73762-7^Final Route and Method of
  Delivery^LN||48782003^Delivery normal (finding)^SCT||||||F
OBX|26|CE|73781-7^Maternal Morbidity^LN||260413007^None
  (qualifier value)^SCT||||||F
OBX|27|NM|8339-4^Body weight at birth^LN||8.1|lb
OBX|28|NM|11884-4^Obstetric estimate of gestation^LN||38|wk
OBX|29|NM|9274-2^Apgar Score: 5 Minute^LN||9
OBX|30|NM|57722-1^Plurality^LN||1
OBX|31|CE|73812-0^Abnormal conditions of the
  Newborn^LN||260413007^None (qualifier value)^SCT||||||F
OBX|32|CE|73758-5^Infant Transferred^LN||N^No^HL70532||||||F
OBX|33|CE|73757-7^Infant living at time of
  report^LN||Y^Yes^HL70532||||||F
OBX|34|CE|73756-9^Breastfed at discharge^LN||Y^Yes^HL70532||||||F
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7.2 SAMPLE FOR FETAL DEATH

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MSH|^~\&|OurEHR^89898990^AppID|Good Health
   Hospital^5799000^HPID|STATE^14^StateAppID|VRDept|201105311013|
   |ADT^A04^ADT_A04|1223334498|P|2.5.1|NE|NE|USA||EN^English^HL70
   296||BR01.67
SFT|1|Level Seven Healthcare Software,
   Inc.^L^^^^&2.16.840.1.113883.19.4.6^ISO^XX^^^1234|1.2|Our EHR
   System|56734||20080817
EVN| |201105302355||FD
PID|1||987645432^^^^MRN||~^^^^^^U||201105302349|M||||||||||||N
NK1|1|Smith^Jane^S|23 Front St^^River Town^HerState^44134-
   1111^^H|||||||||||||||||||||||||||123343897^^^^MRN
PV1||I||^^^^^^^^Simple Birth Clinic||||||||||||||PI
ROL||AD|ATT|888-003^Xxwalshingham^Albert^DR^^Good Health
   Hospital^^^NPI
ROL||AD|FAC|Good Health Hospital|||||||300 Main
   St^^Metropolis^Rhode Island^03443^B
OBX|1|CE|73766-8^Birth/delivery location type
   ^LN||22232009^Hospital^SCT||||||F
OBX|2|CE|73765-0^Planned home birth
   indicator^LN||N^No^HL70532||||||F
OBX|3|CE|73764-3^Attendants's Title^LN||309343006^Medical
   Doctor^SCT||||||F
OBX|4|CE|73763-5^Mother transferred for maternal medical or fetal
   indications for delivery?^LN||N^No^HL70532||||||F
OBX|5|TS|69044-6^Date first prenatal visit^LN||20100528||||||F
OBX|6|CE|73776-7^No Prenatal Care
   Indicator^LN||N^No^HL70532||||||F
OBX|7|TS|68492-8^Date last prenatal visit^LN||20100624||||||F
OBX|8|NM|68492-8^Prenatal visits for this pregnancy^LN||10
OBX|9|NM|73776-7^Body height^LN||58|in
OBX|10|NM|56077_1^Body weight-pre current pregnancy^LN||94lb
OBX|11|NM|68494-4^Body weight-at delivery^LN||128|lb
OBX|12|NM|11638-4^Births.still living^LN||2
OBX|13|NM|68499-3^Live births.now dead^LN||0
OBX|14|TS|68499-3^Date last live birth^LN||20061001
OBX|15|NM|69043-8^Other pregnancy outcomes||1
OBX|16|TS|8665-2^Date last normal menses began||20100423
OBX|17|CE|73775-9^Risk factors in this
   pregnancy^LN||65046005^Infertility Therapy
   (procedure)^SDM||||||F
OBX|18|CE|73775-9^Risk factors in this
   pregnancy^LN||58533008^Artificial insemination
   (procedure)^SCT||||||F
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OBX|19|CE|73769-2^Infections present treated during the pregnancy
   for fetal death^LN||187192000^Toxoplasmosis (disorder)^SCT
   ||||||F
OBX|20|CE|73761-9^Fetal presentation at Birth^LN||6096002^Breech
   Presentation^SCT||||||F
OBX|21|CE|73762-7^Final Route and Method of
   Delivery^LN||48782003^Delivery normal (finding)^SCT||||||F
OBX|22|CE|73781-7^Maternal Morbidity^LN||116859006^Transfusion of
   blood product^SCT||||||F
OBX|23|CE|73781-7^Maternal Morbidity^LN||309904001^Intensive care
   unit^SCT||||||F
OBX|24|NM|8339-4^Body weight at birth^LN||1200|gm
OBX|25|NM|11884-4^Obstetric estimate of gestation^LN||39|wk
OBX|26|NM|57722-1^Plurality^LN||1
OBX|27|CE|73780-9^Congenital anomalies of the
   Newborn^LN||260413007^None (qualifier value)^SCT||||||F
OBX|28|CE|76060-3^Initiating cause of death or condition^LN||
415105001^Placental abruption^SCT||||||F

OBX|29|CE| PHC1300^Death cause other significant
conditions^LN||260413007^ Other Fetal
Conditions/Disorders^CDCPHINVS||||||F
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