

*North Carolina Local Implementation  
HL7 2.5.1 Immunization Messaging Guide for  
VXU & ACK Transfer Specifications*

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This document is the NCIR local Implementation Guide released for the purpose of pilot end-to-end testing. We expect to release the next version of this document once the pilot phase is complete.

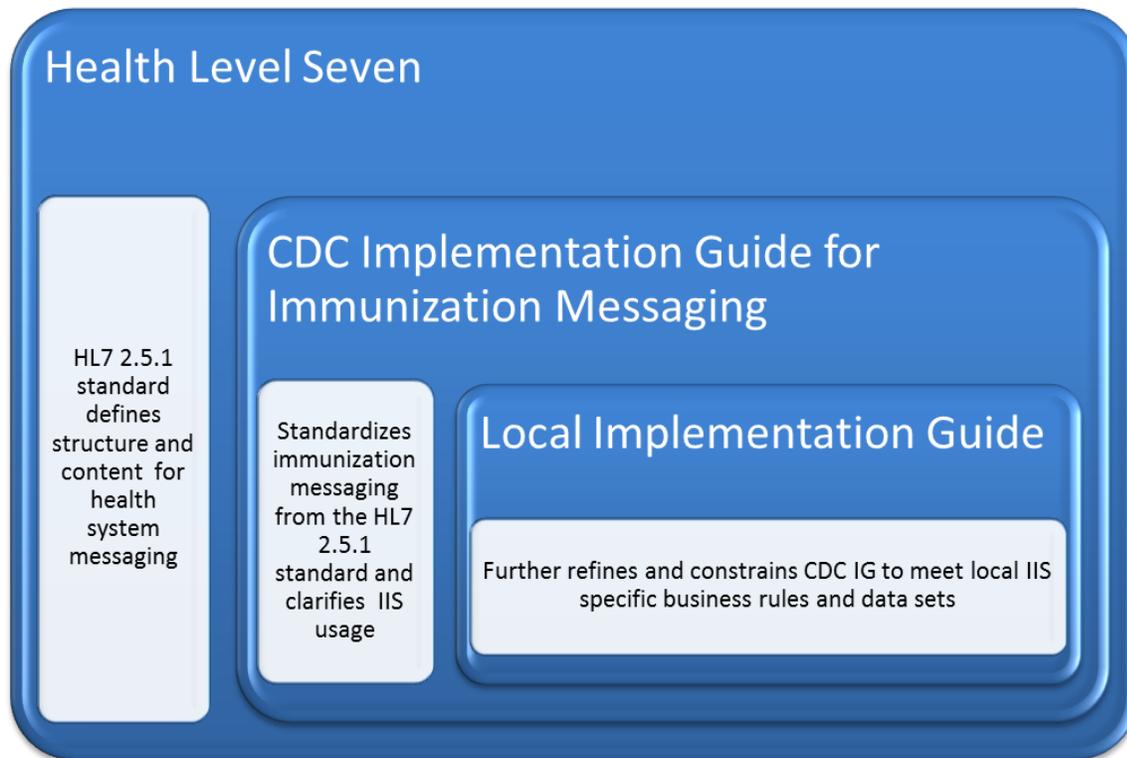
Note to reviewer: Please review the entire document and send all your questions related to VXU at one time. This allows NCIR to efficiently address issues during your developer and BA review.

## Table of Contents

<b>1.</b>	<b>INTRODUCTION .....</b>	<b>4</b>
	<b>INTENDED AUDIENCE .....</b>	<b>5</b>
	<b>SCOPE .....</b>	<b>5</b>
<b>2.</b>	<b>ACTORS, GOALS, AND MESSAGING TRANSACTIONS .....</b>	<b>7</b>
<b>3.</b>	<b>HL7 MESSAGING INFRASTRUCTURE .....</b>	<b>8</b>
<b>4.</b>	<b>HL7 DATA TYPES .....</b>	<b>12</b>
<b>5.</b>	<b>SEGMENTS AND MESSAGE DETAILS .....</b>	<b>13</b>
	<b>BHS—BATCH HEADER SEGMENT .....</b>	<b>19</b>
	BHS FIELD DEFINITIONS.....	20
	<b>BTS—BATCH TRAILER SEGMENT .....</b>	<b>25</b>
	BTS FIELD DEFINITIONS .....	25
	<b>ERR—ERROR SEGMENT (ACK ONLY).....</b>	<b>27</b>
	ERR FIELD DEFINITIONS .....	29
	<b>FHS—FIELD HEADER SEGMENT .....</b>	<b>31</b>
	FHS FIELD DEFINITIONS.....	32
	<b>FTS—FILE TRAILER SEGMENT .....</b>	<b>37</b>
	FTS FIELD DEFINITIONS .....	37
	<b>MSA—MESSAGE ACKNOWLEDGEMENT SEGMENT (ACK ONLY).....</b>	<b>39</b>
	MSA FIELD DEFINITIONS .....	39
	<b>MSH—MESSAGE HEADER SEGMENT .....</b>	<b>41</b>
	MSH FIELD DEFINITIONS .....	43
	<b>NK1—NEXT OF KIN SEGMENTS (VXU ONLY) .....</b>	<b>54</b>
	NK1 FIELD DEFINITIONS .....	57
	<b>OBX—OBSERVATION RESULT SEGMENT (VXU ONLY).....</b>	<b>63</b>
	OBX FIELD DEFINITIONS .....	66
	<b>ORC—ORDER REQUEST SEGMENT .....</b>	<b>77</b>
	ORC FIELD DEFINITIONS .....	79
	<b>PD1—PATIENT DEMOGRAPHIC SEGMENT (VXU ONLY).....</b>	<b>83</b>
	PD1 FIELD DEFINITIONS .....	84
	<b>PID—PATIENT IDENTIFIER SEGMENT (VXU ONLY) .....</b>	<b>87</b>
	PID FIELD DEFINITIONS .....	90
	<b>RXA-- PHARMACY/TREATMENT ADMINISTRATION SEGMENT (VXU ONLY).....</b>	<b>100</b>
	RXA FIELD DEFINITIONS.....	103
	<b>RXR-- PHARMACY/TREATMENT ROUTE SEGMENT .....</b>	<b>114</b>
	RXR FIELD DEFINITIONS .....	114
<b>6.</b>	<b>MESSAGES FOR TRANSMITTING IMMUNIZATION INFORMATION .....</b>	<b>117</b>
	<b>SEND IMMUNIZATION HISTORY--VXU.....</b>	<b>119</b>
	<b>ACKNOWLEDGING A MESSAGE—ACK .....</b>	<b>121</b>
	<b>APPENDIX A: CODE TABLES .....</b>	<b>122</b>
	<b>APPENDIX B: VACCINE AND TRADE NAME LISTING .....</b>	<b>145</b>
	<b>APPENDIX C: GUIDANCE ON VACCINE DEFERRAL – CLIENT COMMENTS AND REFUSALS .....</b>	<b>153</b>
	<b>SECTION 1 – DESCRIPTION AND EXAMPLES .....</b>	<b>153</b>
	<b>SECTION 2 -CLIENT COMMENT LIST.....</b>	<b>153</b>
	<b>APPENDIX D: GUIDANCE ON USAGE AND EXAMPLE MESSAGES.....</b>	<b>156</b>

## 1. Introduction

In order for different health information systems to exchange data, the structure and content of the data to be exchanged must be standardized. Three controlling documents define how the **NCIR** HL7 data exchange interface works. They are arranged in a hierarchy of documents, each refining and constraining the HL7 Standard.



**Figure 1: HL7 Controlling Document Hierarchy**

The first document is the HL7 2.5.1 standard developed by Health Level Seven, a not-for-profit ANSI-accredited standards developing organization. This standard defines the structure and content of immunization messages, but leaves many specific implementation details undecided. Beneficial information on HL7 and a copy of the HL7 message standard can be obtained from the Health Level Seven website at <http://www.hl7.org>.

The second document is the CDC's **HL7 2.5.1 Implementation Guide for Immunization Messaging, Release 1.3** (CDC IG). This guide gives specific instructions regarding how to report to immunization information systems, but still leaves some implementation decisions to each state IIS. This guide and other technical information can be obtained from the CDC website at <http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>

The third document is this document. It finalizes all implementation decisions and defines exactly what **NCIR** will and will not accept. It is written in accordance with the standards set in the first two documents. This local implementation guide has taken great care to point out differences from the CDC IG by adding additional columns to the tables. In cases where this guide differs from the CDC IG, this guide will provide both the CDC IG column followed by the local usage specification. This effort will prove highly useful in the larger interoperability effort for Electronic Health Record Systems, Indian Health Services, and any other electronic exchange that may span multiple IIS. Providing this information will allow the implementers of external systems to accurately compare the CDC IG with a local implementation guide, and compare differences between two different local implementation guides much easier than in the past.

### Intended Audience

This Local IG is intended for technical groups from IIS and EHR-S that must implement these guidelines. The reader of this Local IG should have a solid HL7 foundation and be very familiar with the contents of the CDC IG (<http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>). Chapters 2 and 3 of the CDC IG provide HL7 foundational concepts and set the stage for this Local IG. This document assumes the reader is already familiar with HL7 and is interested in understanding NCIR specific specifications. The goal of this Local IG is to provide an unambiguous specification for creating and interpreting messages for the NCIR.

### Scope

This Local IG is intended to facilitate the exchange of immunization records between external Health Systems and **NCIR** and will only contain information related to **VXU** and its associated response **ACK** transmission types. Other Transmission Types, such as, QBP, RSP, and ADT will be covered in a separate LIG document. Therefore, all usage, descriptions, rules, and examples in this document will pertain strictly to **VXU** and **ACK**. Individual Segment Types will be noted with an “XXX Only” if the Segment type is only used for that particular Transmission Type (VXU but not ACK) This document includes following workflows:

- sending and receiving immunization histories for individuals
- sending and receiving demographic information about the individuals
- acknowledging receipt of immunization histories reporting errors in the messaging process
- Sending observations about an immunization event (this may include funding, reactions, forecasts and evaluations).

## Organization and Flow

This Local IG is designed to mirror the organization and flow of the CDC IG. This chapter of the guide defines the high-level use cases supported by **NCIR**. The subsequent chapters define how **NCIR** implements those use cases. Finally, this guide has appendices for the code tables and example messages.

It is important to note this guide adheres to the CDC IG on several key aspects including

- Data type specifications from chapter 3 of the CDC IG have not been redefined and usage has not been changed
- Standardized vocabulary is supported as specified in the CDC IG
- To the extent possible, data sets and business rules will adhere to the CDC IG.

In cases where differences exist between this guide and the CDC IG the differences will be clearly defined in the appropriate sections of this guide.

## 2. Actors, Goals, and Messaging Transactions

Chapter 2 of the CDC IG defines actors (entities) that may be involved in sending or receiving immunization-related messages. It describes what actors are and how use cases (goals) can be associated to those actors. Finally, it associates specific HL7 messages with these use cases.

There are nine use cases defined in Chapter 2 of the CDC IG. The use cases covered in this Local Implementation guide are listed below.

<b>Use Case</b>	<b>Goal</b>	<b>Supported by <i>NCIR</i></b>
Send Immunization History	To send an immunization history for an individual client from one system to another.	Yes
Receive Immunization History	To receive an unsolicited immunization history. It may be an update or a new record.	Yes
Send Demographic Data	To send demographic data about a person. It may be an update or a new record.	Yes
Accept Demographic Data	To accept demographic data about a person. It may be an update or a new record.	Yes
Acknowledge Receipt	To acknowledge receipt of a message. This can be an immunization history, request for immunization history, demographic update, observation report or request for personal id. It may indicate success or failure. It may include error messages.	Yes
Report Error	To send error messages related to submitted messages. These errors could result of rejection of message or parts of message.	Yes

### 3. HL7 Messaging Infrastructure

The CDC IG contains basic descriptions of terms and definitions that are used in both the CDC IG and this guide. To avoid potentially ambiguous situations, the majority of the terms and definitions will not be redefined in this guide.

A key attribute to HL7 fields, components, and sub-components is the Usage Code. In the table below are the acceptable Usage Codes used in this implementation guide.

Usage Code	Interpretation	Comment
R	Required	<p>A conforming sending application shall populate all "R" elements with a non-empty value.</p> <p>Conforming receiving application shall process the information conveyed by required elements.</p> <p>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.</p>
RE	Required but may be empty	<p>The element may be missing from the message, but it must be sent by the sending application if there is relevant data.</p> <p>A conforming sending application should 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.</p> <p>Receiving applications will be expected to process 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).</p>

Usage Code	Interpretation	Comment
C	Conditional	<p>An element with a conditional usage code has an associated condition predicate that determines the operational requirements (usage code) of the element. If the condition predicate associated with the element is true, follow the rules for <b>a</b> which shall be one of “R”, “RE”, “O” or “X”: If the condition predicate associated with the element is false, follow the rules for <b>b</b> which shall be one of “R”, “RE”, “O”, or “X”. <b>a</b> and <b>b</b> can be valued the same.</p> <p>Note: When C (O/X), or similar is used, a condition predicate will not be provided.</p>
CE	Conditional but may be empty	<p>This usage has an associated condition predicate. This predicate is an attribute within the message.</p> <p><b>If the predicate is satisfied:</b></p> <p>If the conforming sending application knows the required values for the element, then the application must send the element.</p> <p>If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application should be capable of knowing the element (when the predicate is true) for all ‘CE’ elements.</p> <p>If the element is present, the conformant receiving application shall process or ignore the values of that element. If the element is not present.</p> <p>The conformant receiving application shall not raise an error due to the presence or absence of the element.</p> <p><b>If the predicate is not satisfied:</b></p>

Usage Code	Interpretation	Comment
		<p>The conformant sending application shall not populate the element.</p> <p>The conformant receiving application may raise an application error if the element is present.</p>
O	Optional	<p>This element may be present if specified in local profile. Local partners may develop profiles that support use of this element. In the absence of a profile, conformant sending applications will not send the element.</p> <p>Conformant receiving applications will ignore the element if it is sent, unless local profile specifies otherwise. Conformant receiving applications may not raise an error if it receives an unexpected optional element.</p>
X	Not Supported	<p>The element is not supported. Sending applications should not send this element. Receiving applications should ignore this element</p>

Usage Code	Interpretation	Comment
		if present. A receiving application may raise an error if it receives an unsupported element. Any profile based on this Guide should not specify use of an element that is not supported in this Guide.

#### 4. HL7 Data Types

Understanding this document requires knowledge of HL7 data types listed in chapter 4 of CDC IG (<http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>).

Data type definitions and descriptions are not repeated here and the LIG highlights the difference in usage of field within respective segments. The LIG may tighten usage, but will not loosen.

Any differences between NCIR and the CDC IG will be clearly defined within each Segment table contained within this document. A separate column titled 'NCIR Usage' was created to highlight any and all HL7 Data Type changes decided upon by NCIR.

Example:

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	1	ST	[1..1]		Batch Field Separator	R	R	The BHS.1 field shall be
2	3	ST	[1..1]		Batch Encoding Characters	R	R	The BHS.2 field shall be ^~\&

## 5. Segments and Message Details

This chapter will contain specifications for each segment used with a **VXU or ACK** transmission. It will indicate which fields are supported or required and describe any constraints on these fields. Chapter 6 will address how these building blocks are assembled into specific messages that meet the use cases listed in Chapter 2.

**Table 5-1 Message Segments for VXU and/or ACK**

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
BHS (Batch Header Segment)	The Batch Header Segment wraps a group of 1 or more messages. These may be a mixture of acceptable message types. This segment is not required for real-time messaging. That is, a stream of messages may be sent without a BHS. A system may choose to require BHS for all groups of messages, but should specify this requirement in	Any	Optional	Optional	Used at the beginning of any batch of messages. Used in both VXU and ACK messages.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
	a local implementation Guide.				
BTS (Batch Trailer Segment)	The BTS segment defines the end of a batch. It is required if the message has a matching BHS.	Any	Required if message starts with BHS.	C (if txn starts with BHS)	Used to mark the end of any batch of messages. If the batch of messages starts with a BHS, then this segment is required.
ERR (Error Segment)	The error segment reports information about errors in processing the message. The segment may repeat. Each error will have its' own ERR segment.	ACK	Ability to create and process is required for conformant systems.	Required	Used to return information about errors.
FHS (File Header Segment)	The file header segment may be used to group one or more batches of messages. This is a purely optional segment, even if batches are sent. Its' use is not anticipated for use in real-time transactions. Any system that anticipates its use should specify this in a	Any	Optional	Optional	Used to mark the beginning of a file of batches.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
	local implementation Guide.				
FTS (File Trailer Segment)	The FTS segment defines the end of a file of batches. It is only used when the FHS segment is used.	Any	Required to terminate a file of batches. (Matches FHS)	C (if txn starts with FHS)	Used to mark the end of a file of batches. If a file of batches has an FHS at the beginning, then this segment is required.
MSA (Message Acknowledgement Segment)	This segment is included in the query response (RSP) and acknowledgment (ACK) messages. It contains information used to identify the receiver's acknowledgement response to an identified prior message.	ACK	Ability to create and process is required for conformant systems.	Required	
MSH (Message Segment Header)	The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.	All	Ability to create and process is required for conformant systems.	Required	This begins every message and includes information about the type of message, how to process it, and by whom it was created.

<b>Segment (Name/Role)</b>	<b>Definition</b>	<b>Message Usage</b>	<b>CDC IG Usage</b>	<b>NCIR Usage</b>	<b>Note</b>
NK1 (Next of Kin Segment)	The NK1 segment contains information about the patient's next of kin or other related parties. Any associated parties may be identified.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to carry information about the next of kin for a client. Also carries the client's address/contact information when relationship 'self' is used.
OBX (Observation Result Segment)	The observation result segment has many uses. It carries observations about the object of its parent segment. In the VXU/RSP it is associated with the RXA or immunization record. The basic format is a question and an answer.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to report one atomic part of an observation.
ORC (Order Request Segment)	The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). While not all immunizations recorded in	VXU	Ability to create and process is required for conformant systems.	Required (Each order group must have one ORC segment)	Used to give information about a group of one or more orders (typically RXA).

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
	an immunization message are able to be associated with an order, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.				
PD1 (Patient Demographic Segment)	The patient additional demographic segment contains demographic information that is likely to change about the patient. In immunization messages, this is information about the need to protect the client's information, how they should be part of reminder efforts and their current status in the IIS.	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	Used to give information about a patient. A primary use in immunization messages is to give information about privacy and whether contact is allowed.
PID (Patient Identifier Segment)	This segment contains permanent patient identifying and demographic information that, for the most part, is	VXU	Ability to create and process is required for conformant systems.	Required	Used to carry information about the patient/client.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
	not likely to change. Used by all applications as the primary means of communicating patient identification information frequently.				
RXA	Pharmacy/Treatment Administration Segment	VXU	Ability to create and process is required for conformant systems.	Required (Each order group must have one RXA segment)	
RXR	Pharmacy/Treatment Route Segment	VXU	Ability to create and process is required for conformant systems.	Required but may be empty	

## BHS—Batch Header Segment

*Table 5-2 Batch Header Segment (BHS)*

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	1	ST	[1..1]		Batch Field Separator	R	R	The BHS.1 field shall be
2	3	ST	[1..1]		Batch Encoding Characters	R	R	The BHS.2 field shall be ^~\&
3		HD	[0..1]		Batch Sending Application	O	O	
4		HD	[0..1]		Batch Sending Facility	O	R	
5		HD	[0..1]		Batch Receiving Application	O	X	
6		HD	[0..1]		Batch Receiving Facility	O	R	
7		TS	[0..1]		Batch Creation Date/Time	O	O	Use (yyyymmdd) format
8	40	ST	[0..1]		Batch Security	O	X	
9	20	ST	[0..1]		Batch Name/ID/Type	O	O	
10	80	ST	[0..1]		Batch Comment	O	O	
11	20	ST	[0..1]		Batch Control ID	O	O	
12	20	ST	[0..1]		Reference Batch Control ID	O	O	

Example:

BHS|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20091010134335||||

---

## BHS Field Definitions

### *BHS-1 Batch Field Separator*

**Definition:** This field contains the separator between the segment ID and the first real field, BHS-2-batch encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the segment. NCIR requires the | symbol.

BHS|

↑

Separator

#### ***Inbound –***

If BHS-1 field is missing or has a value other than the one specified, reject the message and send an error: "BHS-1: Batch field separator missing or invalid"

#### ***Outbound –***

NCIR sends "|" (pipe symbol). This field contains the separator between the segment ID and the first real field, BHS-2-batch encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the segment

### *BHS-2 Batch Encoding Characters*

**Definition:** This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator. NCIR requires the ^~\& character set.

BHS|^~\&|

#### ***Inbound –***

If BHS-2 field is missing or has values other than the ones specified, reject the message and send an error: "BHS-2: Batch Encoding Characters missing or invalid."

---

**Outbound –**

NCIR sends ^~\&. This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator. Outbound NCIR requires the ^~\& character set.

***BHS-3 Batch Sending Application***

**Definition:** Name of sending application. Values: NCIR will use “NCIR”. This field is an optional convenience.

BHS|^~\&|NCIR|

**Inbound –**

Batch sending application

**Outbound –**

NCIR will use “NCIR” followed by the current version number of the registry (e.g. BHS|^~\&|NCIR8.9.0).

***BHS-4 Batch Sending Facility***

**Definition:** identifies for whom the message is being sent. Value: “Organization Short Name”.

BHS|^~\&|NCIR|NCIR-SHORT-ORG|

**Inbound –**

Contact NCIR staff for value of FHS-4, BHS-4 and MSH-4. This will be provided as part of onboarding process.

1. If the field is blank, send an informational error message “BSH-4: Batch Sending Facility missing.”

---

2. BHS-4 will match the value in MSH-4 when the sending organization is the same as owning organization. Use the NCIR short name of the organization, e.g. NCIR-SHORT-ORG. NCIR will provide the NCIR short name at the time of onboarding.

3. This field must match MSH-4. When the Provider Organization owning the information is different than the organization transmitting the message, (BHS-4 is different than MSH-4); an informational warning message is sent:

```
ERR||MSH^3^4^^^0^0|102^Data type error^HL70357^^|E|||BHS-4 does not match MSH-4|||
```

***Outbound –***

When sending, NCIR will use “NCIR”

```
BHS|^~\&|NCIR8.9.0|NCIR
```

***BHS-5 Batch Receiving Application***

***Definition:*** This field is not used. NCIR does not populate this field and will ignore value if sent.

***BHS-6 Batch Receiving Facility***

***Definition:*** Identifies the message receiver.

```
BHS|^~\&|Sending Application|NCIR-SHORT-ORG||NCIR|
```

***Inbound –***

When sending data to NCIR, use “NCIR.” If this field has other value or it is blank, return an informational error message: "BHS-6: Batch Receiving Facility missing or invalid."

***Outbound –***

For batch, it will send out the org the user is logged in.

For Webservices, it will send out the owning org.

---

NCIR will use the short Provider Organization name assigned when the provider first registers with the NCIR database and NCIR-Web interface.

### ***BHS-7 Batch Creation Date/Time***

**Definition:** Date and time the message was created. NCIR ignores any time component. See the TS data type.

BHS|^~&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335|

#### ***Inbound –***

Date and time the message was created (yyyymmdd)

#### ***Outbound –***

Date and time the message was created (yyyymmdd)

### ***BHS-8 Batch Security***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

### ***BHS-9 Batch Name/ID/Type***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

### ***BHS-10 Batch Comment***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

---

### ***BHS-11 Batch Control ID***

**Definition:** This field is used to uniquely identify a particular batch. If received, save value and echo back in ACK BHS-12 to enable cross reference. For NCIR purposes, the answering batch will contain ACK messages for VXU. That is, BHS-12 of ACK will echo back the value in BHS-11 of VXU.

BHS|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335|||**batch001**|

#### ***Inbound –***

Provide a value that is used to identify the batch. Provide unique batch id.

#### ***Outbound –***

NCIR will send unique batch ID. Batch id will be generated in the following format: yyyymmddhhmmssb00.

BHS|^~\&|NCIR8.9.0|NCIR||110038|20130225174751.394-0500|||**20130225174751b00**|

### ***BHS-12 Reference Batch Control ID***

**Definition:** This field contains the value of BHS-11-batch control ID when this batch was originally transmitted. Not present if this batch is being sent for the first time.

#### ***Inbound –***

Null for VXU

#### ***Outbound –***

BHS-12 of ACK will contain BHS-11 of VXU:

BHS|^~\&|NCIR8.9.0|NCIR||110038|20130225174751.394-0500|||**20130225174751b00**|

---

## BTS—Batch Trailer Segment

*Table 5-3 Batch Trailer Segment (BTS)*

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	10	ST	[0..1]		Batch Message Count	O	O	
2	80	ST	[0..1]		Batch Comment	O	O	
3	100	NM	[0..1]		Batch Totals	O	X	

Example:

BTS|1|free text

## BTS Field Definitions

### *BTS-1 Batch Message Counts*

**Definition:** This field contains the count of the individual messages contained within the batch.

BTS|1|

#### **Inbound –**

Inconsistency in inbound count is ignored and is not validated with actual number of messages.

#### **Outbound –**

Populates count of messages when sending out.

BTS|2||

---

### ***BTS-2 Batch Comments***

**Definition:** Free text, which can be included for convenience, has no effect on processing.

BTS|1|free text

#### ***Inbound –***

This field is not used.

#### ***Outbound –***

NCIR will ignore value if sent.

### ***BTS-3 Batch Totals***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

#### ***Inbound –***

This field is not used.

#### ***Outbound –***

NCIR will ignore value if sent.

---

## **ERR—Error Segment (ACK Only)**

*Note to providers and EHR vendors: Providers need a method to capture and display the acknowledgement (ACK messages) returned from the NCIR (in response to VXU messages). Some EHR's make this available in real time and ask user to review before closing the chart for the patient. Doing so is also a best practice and avoids inventory accountability errors and other errors needing work later. The acknowledgement also serves as proof of Meaningful Use submission.*

*Discuss with your vendor early in the process of interface development about options to handle acknowledgement processing. At the minimum, providers would need a way to check errors/warnings once a day if real time capture and display is not an option.*

*Three types of acknowledgements are returned from the NCIR. They are*

- *Acknowledgement to indicate that the message processing was “Successful”. No further action is needed for this.*
- *Acknowledgement to indicate transaction was rejected because of an “Error”. Some examples of this are a required field like First Name is missing or birth date is invalid or HL7 message construction was incorrect (like say MSH segment was missing). Acknowledgements that contain “Errors” usually require an IT fix by your EHR vendor and need action from EHR vendor. The “Error” type acknowledgement should be rare in production.*
- *Acknowledgement to indicate that the transaction was partially processed because of a “Warning”. The warnings are usually user errors but sometimes may need EHR vendor involvement to fix. The warnings usually need to be reviewed by user (in real time or at least once a day)\_ to avoid inventory mismatches or data errors. An example of warning would be “No match found for lot number ....”(user error) or invalid CVX code causing a dose to be not processed (EHR vendor fix may be needed).*

*Note: NCIR will send ACK with FHS, BHS, FTS and BTS segments, even if the transaction is sent in real time.*

**Table 5-4 Error Segment (ERR)**

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1		ELD	[0..0]		Error Code and Location	X	X	Not supported for Version 2.5 and above.
2	18	ERL	[0..1] <sup>1</sup>		Error Location	RE	RE	If an error involves the entire message (e.g. the message is not parse-able.) then location has no meaning. In this case, the field is left empty.
3		CWE	[1..1]	0357	HL7 Error Code	R	R	
4	2	ID	[1..1]	0516	Severity	R	R	
5		CWE	[0..1]	0533	Application Error Code	O	O	
6	80	ST	[0..1]		Application Error Parameter	O	X	
7	2048	TX	[0..1]		Diagnostic Information	O	X	
8	250	TX	[0..1]		User Message	O	O	This field may contain free text that may be displayed to a user. It is not intended for any further processing.
9	20	IS	[0..1]	0517	Inform Person Indicator	O	X	
10		CWE	[0..1]	0518	Override Type	O	X	
11		CWE	[0..1]	0519	Override Reason Code	O	X	
12		XTN	[0..1]		Help Desk Contact Point	O	X	

---

## Examples:

Warning message: ERR||PD1^1^16^0^0|102^Data type error^HL70357^^|W|||PD1-16: Defaulted to A.||||

Error Message: ERR||PID^1^7^2^0|102^Data type error^HL70357^^|E|||PID-7: Date of birth invalid or missing.||||

Application Error: ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533||OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.|||||

## ERR Field Definitions

### *ERR-2 Error Location*

**Definition:** Identifies the location in a message related to the identified error, warning or message. Each error will have an ERR, so no repeats are allowed on this field (e.g. OBX^10^5^^1^0). This field may be left empty if location is not meaningful. For example, if the message or segment is unable to be parsed, an ERR to that effect may be returned.

**NOTE:** For application level errors (ERR-3 is 207), ERR-2 (field location) is not populated.

ERR||PD1^1^16^^^

Error Location is ERL Data type and above example states that the error is in the PD1 segment, first segment occurrence within the message and in the sixteenth field of the segment.

### *ERR-3 HL7 Error Code*

**Definition:** Identifies the HL7 (communications) error code. Refer to HL7 Table 0357 – Message Error Condition Codes for valid values. When transaction accepted without error or warning, this field value will be zero. If transaction rejected or has warning, the status code will be populated with a value other than 0 per HL7 table 0357.

ERR||PD1^1^16^0^0|102^Data type error^HL70357^^^|

ERR|||207^Application Internal Error^HL70357^^^|

---

<sup>1</sup> This Guide does not support repeat of this field. It assumes that each error will be contained in one ERR segment. If the same error occurs more than once, there will be one ERR for each.

---

#### ***ERR-4 Severity***

**Definition:** Identifies the severity of an application error. Knowing if something is Error, Warning or Information is intrinsic to how an application handles the content. Valid values are: W - warning, I - information, E – error

ERR||PD1^1^16^0^0|102^Data type error^HL70357^^|W|

#### ***ERR-5 Application Error Code***

**Definition:** Application specific code identifying the specific error that occurred. Refer to User-Defined Table 0533. For application specific error, ERR-3 will be 207 and this field (ERR-5) will be populated based on a value from User Defined table 0533.

**NOTE:** ERR-5 is populated only for application level errors (i.e. when ERR-3 = 207) and not for HL7 level errors (values other than 207 in ERR-3).

ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533|

#### ***ERR-8 User Message***

**Definition:** The text message to be displayed to the application user.

ERR||PID^1^7^2^0|102^Data type error^HL70357^^|E||||PID-7: Date of birth invalid or missing.||||

ERR|||207^Application Internal Error^HL70357^^|W|207.5^DateInvalid^HL70533||||OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.

## FHS—Field Header Segment

*Table 5-5 File Header Segment (FHS)*

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	1	ST	[1..1]		File Field Separator	R	R	The FHS.1 field shall be
2	4	ST	[1..1]		File Encoding Characters	R	R	The FHS.2 field shall be ^~\&
3		HD	[0..1]		File Sending Application	O	O	
4		HD	[0..1]		File Sending Facility	O	R	
5		HD	[0..1]		File Receiving Application	O	X	
6		HD	[0..1]		File Receiving Facility	O	O	
7		TS	[0..1]		File Creation Date/Time	O	O	
8	40	ST	[0..1]		File Security	O	X	
9	20	ST	[0..1]		File Name/ID	O	O	
10	80	ST	[0..1]		File Header Comment	O	O	
11	20	ST	[0..1]		File Control ID	O	O	
12	20	ST	[0..1]		Reference File Control ID	O	O	

---

## FHS Field Definitions

### *FHS-1 File Field Separator*

**Definition:** This field contains the separator between the segment ID and the first real field, FHS-2-batch encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the segment. NCIR requires the | symbol.

FHS|

↑

Separator

#### ***Inbound –***

If FHS-1 field is missing or has a value other than the one specified, reject the message and send an error: "FHS-1: File field separator missing or invalid"

#### ***Outbound –***

NCIR sends “|” (pipe symbol). This field contains the separator between the segment ID and the first real field, FHS-2-file encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the segment

### *FHS-2 File Encoding Characters*

**Definition:** This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator. NCIR requires the ^~\& character set.

FHS|^~\&|

#### ***Inbound –***

If FHS-2 field is missing or has values other than the ones specified, reject the message and send an error: "FHS-2: File Encoding Characters missing or invalid."

---

**Outbound –**

NCIR sends ^~\&. This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator. Outbound NCIR requires the ^~\& character set.

***FHS-3 Batch Sending Application***

**Definition:** Name of sending application. Values: NCIR will use “NCIR”. This field is an optional convenience.

FHS|^~\&|NCIR|

**Inbound –**

Provide the Batch sending application

**Outbound –**

NCIR will use “NCIR” followed by the current version number of the registry (e.g. FHS|^~\&|NCIR8.9.0).

***FHS-4 Batch Sending Facility***

**Definition:** identifies for whom the message is being sent. Value: “Organization Short Name”.

FHS|^~\&|NCIR|NCIR-SHORT-ORG|

**Inbound –**

Contact NCIR staff for value of FHS-4, BHS-4 and MSH-4. These must be the owning organization and provided as part of onboarding process. .

1. If the field is blank, send an informational error message “FHS-4: File Sending Facility missing.”

---

2. Usually FHS-4 matches the value in MSH-4 (i.e., sending organization is the same as owning organization). Use the NCIR short name of the organization e.g., NCIR-SHORT-ORG. NCIR will provide the NCIR short name at the time of onboarding.

3. When the Provider Organization owning the information is different than the organization transmitting the message, (FHS-4 is different than MSH-4); an error message is sent:

```
ERR||MSH^3^4^^^0^0|102^Data type error^HL70357^^^|E||||FHS-4 does not match MSH-4||||
```

***Outbound –***

When sending, NCIR will use “NCIR”

```
FHS|^~\&|NCIR|
```

***FHS-5 Batch Receiving Application***

***Definition:*** This field is not used. NCIR does not populate this field and will ignore value if sent.

***FHS-6 Batch Receiving Facility***

***Definition:*** Identifies the message receiver.

```
FHS|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|
```

***Inbound –***

When sending data to NCIR use “NCIR” If this field has other value or it is blank, return an informational error message: "FHS-6: Batch Receiving Facility missing or invalid."

***Outbound –***

For batch, NCIR will send out the org the user is logged in.

For Webservices, NCIR will send out the owning org.

---

NCIR will use the short Provider Organization name assigned when the provider first registers with the NCIR database and NCIR-Web interface.

### ***FHS-7 Batch Creation Date/Time***

**Definition:** Date and time the message was created. NCIR ignores any time component. See the TS data type.

FHS|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335|

#### ***Inbound –***

Date and time the message was created (yyyymmdd)

#### ***Outbound –***

Date and time the message was created (yyyymmdd)

### ***FHS-8 Batch Security***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

### ***FHS-9 Batch Name/ID/Type***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

### ***FHS-10 Batch Comment***

**Definition:** This field is not used. NCIR does not populate this field and will ignore value if sent.

---

### ***FHS-11 Batch Control ID***

**Definition:** This field is used to uniquely identify a particular file. If received, save value and echo back in ACK FHS-12 to enable cross reference. For NCIR purposes, the answering batch will contain ACK messages.

FHS|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335|||file001|

#### ***Inbound –***

Used to identify unique file id.

#### ***Outbound –***

NCIR will send unique file ID. File id will be generated in the following format: yyymmddhhmmssf00. It will be echoed back in ACK FHS-12 to enable cross reference:

FHS|^~\&|NCIR8.9.0|NCIR||110038|20130225174751.394-0500|||20130225174751f00|

### ***FHS-12 Reference Batch Control ID***

**Definition:** This field contains the value of FHS-11-file control ID when this file was originally transmitted. Not present if this file is being sent for the first time.

#### ***Inbound –***

Null for VXU

#### ***Outbound –***

FHS-12 of ACK will contain FHS-11 of VXU:

FHS|^~\&|NCIR8.9.0|NCIR||110038|20130225174751.394-0500|||20130225174751f00|

---

## FTS—File Trailer Segment

*Table 5-6 File Trailer Segment (FTS)*

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	10	NM	[0..1]		File Batch Count	○	○	
2	80	ST	[0..1]		File Trailer Comment	○	○	

## FTS Field Definitions

### *FTS-1 File Batch Count*

**Definition:** The number of files contained in this transmission. NCIR will always send one batch per file. Providers can only send one batch per file.

#### ***Inbound –***

There would be a value of 1 in this field.

FTS|1

#### ***Outbound –***

NCIR will always send a value of 1 in this field since there is only one batch per file.

### *FTS-2 File Trailer Comment*

**Definition:** Free text, which may be included for convenience, but has no effect on processing.

---

FTS|1|**free text**

***Inbound*** –

If text sent, it will not be processed.

***Outbound*** –

NCIR does not populate this field.

## MSA—Message Acknowledgement Segment (ACK Only)

*Table 5-7 Message Acknowledgement Segment (MSA)*

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	ID	[1..1]	0008	Acknowledgment Code	R	R	
2	20	ST	[1..1]		Message Control ID	R	R	
3	80	ST	[0..1]		Text Message	X	X	
4	15	NM	[0..1]		Expected Sequence Number	O	X	
5			[0..1]		Delayed Acknowledgment Type	O	X	
6		CE	[0..0]	0357	Error Condition	X	X	

## MSA Field Definitions

### *MSA-1 Acknowledgment Code*

**Definition:** This is a required field. Acknowledgment code is given to receiver's response to a message. AA (Application Accept) means the message was processed normally. AR (Application Rejected) indicates message was rejected. AE (Application Error) means an error prevented normal processing –warning messages are sent. The optional ERR segment will be included when MSA-1 is an AR or AE.

Example 1: MSA|AA|1|||

Example 2: MSA|AR|1|||

ERR||PID^1^7^2^0|102^Data type error^HL70357^^^|E|||PID-7: Date of birth invalid or missing.||||

---

Example 3: MSA|AE|1|||  
ERR||PD1^1^16^0^0|102^Data type error^HL70357^^|W|||PD1-16: Defaulted to A.||||

### ***MSA-2 Message Control ID***

**Definition:** This is a required field. This field contains the message control ID from MSH-10 from the message being acknowledged. This allows the sending system to associate this response with the message being responded to.

Example 1: MSA|AA|1|||

## MSH—Message Header Segment

*Table 5-8 Message Header Segment (MSH)*

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	1	ST	[1..1]		Field Separator	R	R	The MSH.1 field shall be
2	4	ST	[1..1]		Encoding Characters	R	R	The MSH.2 field shall be ^~\&
3		HD	[0..1]	0361	Sending Application	RE	RE	No constraint
4		HD	[0..1]	0362	Sending Facility	RE	R	
5		HD	[0..1]	0361	Receiving Application	RE	O	No constraint
6		HD	[0..1]	0362	Receiving Facility	RE	RE	
7		TS	[1..1]		Date/Time Of Message	R	R	
8	40	ST	[0..1]		Security	O	X	
9	15	MSG	[1..1]	0076	Message Type	R	R	
10	20	ST	[1..1]		Message Control ID	R	R	
11	3	PT	[1..1]	0103	Processing ID	R	R	
12		VID	[1..1]	0104	Version ID	R	R	2.5.1
13	15	NM	[0..1]		Sequence Number	O	X	
14	180	ST	[0..1]		Continuation Pointer	O	X	

15	2	ID	[0..1]	0155	Accept Acknowledgement Type	RE	RE	
16	2	ID	[0..1]	0155	Application Acknowledgment Type	RE	X	
17	3	ID	[0..1]	0399	Country Code	O	X	Use 3 character country code from ISO 3166. If is empty, assume USA
18	16	ID	[0..1]	0211	Character Set	O	X	blank defaults to ASCII printable
19		CE	[0..1]		Principal Language Of Message	O	X	blank
20	20	ID	[0..1]	0356	Alternate Character Set Handling Scheme	O	X	blank
21		EI	[0..*]		Message Profile Identifier	O	O	This field will be required for use whenever a Profile is being used.

---

## MSH Field Definitions

### *MSH-1 Field Separator*

**Definition:** This is a required field. It determines the field separator in effect for the rest of this message. NCIR requires the HL7 field separator of “|”.

**Inbound –**

Error message sent if field is missing or invalid: “Transaction is invalid. Field Separator missing or invalid.”

**Outbound –**

NCIR sends out the HL7 field separator of “|”.

### *MSH-2 Encoding Characters*

**Definition:** This is a required field. This field determines the component separator, repetition separator, escape character, and sub-component separator in effect for the rest of this message. NCIR requires the HL7 values of ^~\&.

MSH|^~\&|

**Inbound –**

Error message sent if field is missing or invalid (values other than the ones specified above): “MSH-2: Encoding Characters missing or invalid.”

**Outbound –**

NCIR sends out the HL7 values of ^~\&.

---

### ***MSH-3 Sending Application***

**Definition:** Name of the sending application. NCIR will use “NCIR”. This field is an optional convenience.

MSH|^~\&|NCIR|

#### ***Inbound –***

Name of the sending application.

#### ***Outbound –***

When sending, NCIR will use “NCIR” followed by the current version number of the registry.

MSH|^~\&|NCIR8.9.0|

### ***MSH-4 Sending Facility***

**Definition:** This is a required field. This field identifies for whom the message is being sent (the owner of the message information).

MSH|^~\&|NCIR|NCIR-SHORT-ORG|

#### ***Inbound –***

Contact NCIR staff for value of FHS-4, BHS-4 and MSH-4 and will be provided as part of onboarding process. These must be the owning organization.

1. If the field is blank, send an error message and reject the message: “MSH-4: Sending Facility missing.”

2. MSH-4 is the owning organization. For web services, NCIR staff will provide the Sending Facility (MSH-4) value during onboarding process. For Batch, the Sending Facility is the organization user is logged in to submit the batch job. The following edit applies.

---

3. Use the NCIR short name of the organization (e.g., NCIR-SHORT-ORG). NCIR will provide the NCIR short name at the time of onboarding.

4. MSH-4 (owning organization) value generally matches the sending organization in FHS-4/BHS-4. When the Provider Organization owning the information is different than the organization transmitting the message, an error message is shown:  
ERR||MSH^3^4^^0^0|102^Data type error^HL70357^^|E|||FHS-4 does not match MSH-4||| or ERR||MSH^3^4^^0^0|102^Data type error^HL70357^^|E|||BHS-4 does not match MSH-4|||.

5. Hub (Vendor/Client or Parent/Child) setup: An organization defined as a Vendor (or parent) can be set to make a single connection to NCIR, where all the client (or child) organizations can submit files using this connection. In this scenario, the client (or child) organization's organization id and short name must be used in MSH-4. A vendor organization may not submit data for any organization that is not defined as a client (or child) to their organization. NC HIE may submit data for any organization.

***Outbound –***

When sending, NCIR will use “NCIR”.

***MSH-5 Receiving Application***

***Definition:*** This field is optional.

***Inbound –***

This field is not used. NCIR does not populate this field and will ignore value if sent.

***Outbound –***

NCIR will not populate this field when sending a message.

---

### ***MSH-6 Receiving Facility***

**Definition:** Identifies the message receiver.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||**NCIR**|

#### ***Inbound –***

When sending data to NCIR, use “NCIR.” If value other than "NCIR" reject the message with error: "MSH-6: Message not intended for NCIR."

#### ***Outbound –***

NCIR will send out the owning organization.

When sending, NCIR will use the short Provider Organization name assigned when the provider first registers with the NCIR database and NCIR-Web interface.

### ***MSH-7 Date/Time Of Message***

**Definition:** This is a required field. Date and time the message was created. NCIR ignores any time component. See the TS data type. (yyyymmdd)

#### ***Inbound –***

Message rejection will result if an invalid date or the date is missing: “MSH-7: Date of Message missing or invalid”

#### ***Outbound –***

Date the message was created (yyyymmdd)

---

### ***MSH-8 Security***

**Definition:** This field is not used. NCIR does not populate this field.

***Inbound –***

This field is not used. NCIR will ignore value if sent.

***Outbound –***

NCIR will not populate this field

### ***MSH-9 Message Type***

**Definition:** This is a required field. Within HL7, the triggering event is considered to be the real-world circumstance causing the message to be sent.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335||**VXU^V04^VXU\_V04**|

***Inbound –***

Values accepted for VXU message: **VXU^V04^VXU\_V04**.

If field is missing or invalid (values other than the ones specified above), reject the message and send an error message: “MSH-9: Required field. Please enter valid values.

***Outbound –***

Values sent out for VXU: **VXU^V04^VXU\_V04**

---

### **MSH-10 Message Control ID**

**Definition:** This is a required field. The message control ID is a string (which may be a number) uniquely identifying the message among all those ever sent by the sending system. It is assigned by the sending system and echoed back in the ACK message sent in response in MSA-2.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335||VXU^V04^VXU\_V04|1|

#### **Inbound –**

If field is empty, the message will be rejected and an error message will be sent: “MSH-10: Message Control-id missing.”

#### **Outbound –**

For NCIR the string is the date and time of the transaction and the order of the message in a batch (last 2 digits)- Ex: the following message was sent on 07/03/2012 at 16:41:30 and it was the first message in the batch: 2012070316413000

MSH|^~\&|NCIR8.9.0^|NCIR^|110038^|20130225174751.398-0500||VXU^V04^VXU\_V04|2013022517475101|

### **MSH-11 Processing ID**

**Definition:** This is a required field. The processing ID to be used by NCIR is P for production processing. NCIR will always send out a value of “P” in this field.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|

#### **Inbound –**

For incoming messages, the value in this field must always be “P”. If not “P” or if the field is blank, reject transaction and send an error message: “MSH-11: Processing Id missing or invalid.”

#### **Outbound –**

NCIR will always send out a value of “P” in this field.

---

### ***MSH-12 Version ID***

**Definition:** This is a required field. For example, use a value of “2.5.1” to indicate HL7 Version.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|2.5.1|

#### ***Inbound –***

NCIR will accept the value “2.5.1”. If there is no version number found in the MSH segment, or the value is not 2.5.1, the file will not be processed. Error message will be sent “File Rejected. MSH-12: Version Id missing.”

If the case of mixed HL7 transactions, the file will be rejected and error message sent: "FILE REJECTED - MIXED HL7 VERSIONS. HL7 VERSION 2.5.1 REQUIRED. "

#### ***Outbound –***

Providers submitting information to NCIR must communicate by HL7 2.5.1 only. For these providers, NCIR will also return files in version 2.5, indicated in MSH-12. Providers not submitting information to NCIR may request to download client updates by HL7 version 2.5.1, or 2.4.

### ***MSH-13 Sequence Number***

**Definition:** This field is not used. NCIR does not populate this field.

#### ***Inbound –***

This field is not used. NCIR will ignore value if sent.

#### ***Outbound –***

NCIR will not populate this field.

---

### ***MSH-14 Continuation Number***

**Definition:** This field is not used. NCIR does not populate this field.

#### ***Inbound –***

This field is not used. NCIR will ignore value if sent.

#### ***Outbound –***

NCIR will not populate this field.

### ***MSH-15 Accept Acknowledgment Type***

**Definition:** This field controls whether an acknowledgement is generated for the message sent. NCIR suggests a value of AL to ask that acknowledgements always be sent for each message. If the field is empty, NCIR will assume the value of ER.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|2.5.1||AL|

#### ***Inbound –***

**Send AL for real time processing.** If the field is empty, NCIR will assume the value of ER. For values accepted, refer to table 0155.

AL - ACK is always sent out.

NE - NCIR will never send out an ACK message

ER - NCIR will send an ACK message when there are warnings/errors

SU - NCIR will send an ACK message only for successful completion.

**Note that for real time processing, using a value other than AL will result in not receiving response for certain conditions Always set to AL for real time processing to receive acknowledgement.**

---

***Outbound –***

NCIR sends NE to never receive an ACK back.

***MSH-16 Application Acknowledgment Type***

***Definition:*** This field is not used. NCIR does not populate this field.

***Inbound –***

This field is not used. NCIR does not populate this field and will ignore value if sent.

***Outbound –***

NCIR will not populate this field.

***MSH-17 Country Code (ID) 00017***

***Definition:*** This field is not used. NCIR does not populate this field.

***Inbound –***

This field is not used. NCIR will ignore value if sent.

***Outbound –***

NCIR will not populate this field.

***MSH-18 Character Set***

***Definition:*** This field is not used. NCIR does not populate this field.

---

***Inbound –***

This field is not used. NCIR will ignore value if sent.

***Outbound –***

NCIR will not populate this field.

***MSH-19 Principle Language of Message***

***Definition:*** This field is not used. NCIR does not populate this field.

***Inbound –***

This field is not used. NCIR will ignore value if sent.

***Outbound –***

NCIR will not populate this field.

***MSH-20 Alternate Character Set Handling Scheme***

***Definition:*** This field is not used. NCIR does not populate this field.

***Inbound –***

This field is not used. NCIR will ignore value if sent.

***Outbound –***

NCIR will not populate this field.

---

***MSH-21 Message Profile Identifier (EI) 01598***

***Definition:*** Message Profile Identifier. This field is optional for VXU Messages.

***Inbound –***

This field is not used. NCIR will ignore value if sent for VXU.

***Outbound –***

NCIR will not populate this field for the VXU transaction.

## NK1—Next of Kin Segments (VXU Only)

The NK1 segment contains information about the patient's related parties. Any associated parties may be identified. Utilizing NK1-1-set ID, multiple NK1 segments can be sent to patient accounts.

*Table 5-9-Next of Kin Segment (NK1)*

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	4	SI	[1..1]		Set ID - NK1	R	R	
2		XPN	[1..*]		Name	R	R	The first instance is the legal name and is required.
3		CE	[1..1]	0063	Relationship	R	R	
4		XAD	[0..*]	0289	Address	RE	RE	The first instance shall be the primary address.
5		XTN	[0..*]		Phone Number	RE	RE	The first instance shall be the primary phone number.
6		XTN	[0..*]		Business Phone Number	O	X	
7		CE	[0..1]	0131	Contact Role	O	X	
8	8	DT	[0..1]		Start Date	O	X	
9	8	DT	[0..1]		End Date	O	X	
10	60	ST	[0..1]		Next of Kin / Associated Parties Job Title	O	X	
11		JCC	[0..1]	0327/ 0328	Next of Kin / Associated Parties Job Code/Class	O	X	
12		CX	[0..1]		Next of Kin / Associated	O	X	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
					Parties Employee Number			
13		XON	[0..1]		Organization Name - NK1	O	X	
14		CE	[0..1]	0002	Marital Status	O	X	
15	1	IS	[0..1]	0001	Administrative Sex	O	X	
16		TS	[0..1]		Date/Time of Birth	O	X	
17	2	IS	[0..1]	0223	Living Dependency	O	X	
18	2	IS	[0..1]	0009	Ambulatory Status	O	X	
19		CE	[0..1]	0171	Citizenship	O	X	
20		CE	[0..1]	0296	Primary Language	O	O	
21	2	IS	[0..1]	0220	Living Arrangement	O	X	
22		CE	[0..1]	0215	Publicity Code	O	O	
23	1	ID	[0..1]	0136	Protection Indicator	O	X	
24	2	IS	[0..1]	0231	Student Indicator	O	X	
25		CE	[0..1]	0006	Religion	O	X	
26		XPN	[0..1]		Mother's Maiden Name	O	X	
27		CE	[0..1]	0212	Nationality	O	X	
28		CE	[0..1]	0189	Ethnic Group	O	X	
29		CE	[0..1]	0222	Contact Reason	O	X	
30		XPN	[0..1]		Contact Person's Name	O	X	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
31		XTN	[0..1]		Contact Person's Telephone Number	O	X	
32		XAD	[0..1]		Contact Person's Address	O	X	
33		CX	[0..1]		Next of Kin/Associated Party's Identifiers	O	X	
34	2	IS	[0..1]	0311	Job Status	O	X	
35		CE	[0..1]	0005	Race	O	X	
36	2	IS	[0..1]	0295	Handicap	O	X	
37	16	ST	[0..1]		Contact Person Social Security Number	O	X	
38		ST	[0..1]		Next of Kin Birth Place	O	X	
39	2	IS	[0..1]		VIP Indicator	O	O	

**Example:**

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^^|1234 W MAIN ST^^ANYTOWN^NC^27850 ^^M^^NC091^^|^PRN^PH^  
 ^919^5551234^^||||||||||||||ENG^English||02|||||||||||||

Business Rule:

If NK1segment is missing and client age is less than 18 years, the following warning message will be returned. "NK1-Responsible person required in the NCIR. No NK1 segment provided."

If NK1 segment is missing, the client is 18 years or older, and if there is no address or phone number in PID-11 and/or PID-13, the following warning message will be returned:  
 "Contact address and/or phone number required. Please send address and/or phone number."

---

## NK1 Field Definitions

### ***NK1-1 Set ID - NK1***

**Definition:** This is a required field. Sequential number format. Use “1” for the first NK1 within the message, “2” for the second, and so forth. Although this field is required by HL7, NCIR will ignore its value, and there is no requirement that the record for the same responsible person keep the same sequence number across multiple messages, in the case that information from the same record is transmitted more than once.

NK1|1|

#### ***Inbound –***

Use “1” for the first NK1 within the message, “2” for the second, and so forth.

If more than 4 responsible persons are sent in inbound, only 4 NK1 segments will be accepted and a warning message will be generated: "NK1: Only up to 4 responsible persons accepted."

#### ***Outbound –***

NCIR will send the sequential number of the NK1 segment. ("1" for the first NK1 segment,"2" for the second and so forth)

### ***NK1-2 Name***

**Definition:** Name of the responsible person who cares for the client.

NK1|1|Last Name^First Name^Middle Name^^^L^|

#### ***Inbound –***

Supply name in Last Name^First Name format. If no name is provided in this field but the segment has an address, populate this field with “NO LAST NAME” and store the address. Send a warning message: “NK1-2: Name was not provided.” The new Responsible Person created will have an “Unknown” relationship to the client.

---

**Outbound –**

NCIR will send out the name of the responsible person.

**NK1-3 Relationship**

**Definition:** Relationship of the responsible person to the client. See data type CE and Table 0063 in the HL7 tables. Use the first three components of the CE data type, for example |MTH^Mother^HL70063|.

NK1|1|Last Name^First Name^Middle Name^^^L^|**MTH^MOTHER^HL70063^^^**|

**Inbound –**

If no relationship or invalid relationship, default to Unknown and send warning message: “NK1-3: Relationship missing or invalid. Defaulted to “Unknown.”

If two or more responsible persons with the same relationship are sent, only one person per relationship type is saved. NCIR will send a warning message if more than one responsible person per relationship is sent: “NK1-3: Only one responsible person per relationship type is accepted”.

NCIR will accommodate all values from CDC table 0063 along with the current values in NCIR UI

**Outbound –**

NCIR will send out the relationship of responsible person and refer to HL70063 for values sent..

**NK1-4 Address**

**Definition:** Responsible person’s mailing address.

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^^|**1234 W MAIN ST^^ANYTOWN^NC^27850^^M^^NC091^^**|

**Inbound –**

If empty, there will be a warning message.

---

NCIR will accept up to 4 responsible persons. NCIR accepts street address, other designation, city, state, zip, address type and county in the XAD data type. Please provide at least one responsible person for each client with address and/or phone number. Always send address and phone number every time even if only one of them is changed.

If name is provided without address or phone number, reject segment and send error message: "NEITHER ADDRESS, NOR TELEPHONE SPECIFIED. NK1 SEGMENT IGNORED."

If the name, address and phone number are not provided, reject segment and send error message: "NEITHER LAST NAME, ADDRESS, NOR TELEPHONE SPECIFIED. NK1 SEGMENT IGNORED".

If county code (NK1-4.9 - HL70289 table) is not valid, NCIR returns error message,"NK1-4: County code invalid. Code ignored. If client resides within the state, submit the county of the responsible person using 0289 table values. If the responsible person resides out of state, use ZZ999 for county. A blank or empty value in county field translates to "unknown".

If State (NK1-4.4) is invalid, the following warning message is returned " NK1-4 Invalid state code (XX). No value stored."

Use 'M' for Address type (NK1-4.7 - HL70190 table). If Address type is not 'M', the warning message "NK1-4: Invalid Address Type: <address type>. Defaulting to M." is returned.

#### ***Outbound –***

NCIR will send out the responsible person's address, if there is one.

### ***NK1-5 Phone Number***

**Definition:** Responsible person's phone number. If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively.

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^^|1234 W MAIN ST^^ANYTOWN^NC^27850^^M^^NC091^^|^PRN^PH^  
^^919^5551234^^|

#### ***Inbound –***

If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively (e.g.|^PRN^^^919^5551234^1234555^|

---

If NK1-5.2 (Telecommunication use code) is not a valid value from the HL7 0201 table, send warning message: “NK1-5: INVALID TELECOMMUNICATIONS USE CODE, PHONE NUMBER IGNORED”.

If NK1-5.2 (Telecommunication use code) is not PRN, send warning message and ignore phone number: “NK1-5: NCIR only accepts PRN (Primary residence number), PHONE NUMBER IGNORED”.

If NK1-5.2 (Telecommunication use code) is PRN and NK1-5.7 (Local Number) is missing, send warning message: “NK1-5: Phone number missing or invalid”.

If NK1-5.6 (Area/City Code) is non blank value but is not numeric, send warning message: “NK1: Phone number missing or invalid”.

If NK1-5.7 (Local Number) is non blank value but is not numeric, send warning message: “NK1: Phone number missing or invalid”.

Use ‘PH’ for NK1-5.3 (Telecommunication equipment type) .

***Outbound –***

When PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively (e.g. |^PRN^^^919^5551234^1234555^|

***NK1-20 Primary Language***

***Definition:*** Indicates the responsible person's primary language.

NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^^|1234 W MAIN  
ST^^ANYTOWN^NC^27850^^M^^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||||||||**ENG^English^HL70296**||02|||||||  
|||||||Y

---

***Inbound –***

Accepted languages in UI: English, Hmong, Somali, and Spanish. Please refer to table 0296.

If other values, default to "English" and send warning message: "NK1-20: Primary language of responsible person <resp person> defaulted to English."

***Outbound –***

Send the responsible person's language that is set in UI.

***NK1-22 Publicity Code***

***Definition:*** NK1-22 Controls whether recall/reminder notices are sent for the responsible person. NCIR will recognize "01" to indicate no recall/reminder notices or "02" recall/reminder notices are sent. If no value provided or invalid value, default to "02."

NK1|1|LAST^FIRST^MIDDLE^^L^|MTH^MOTHER^HL70063^^|1234 W MAIN  
ST^^ANYTOWN^NC^27850^^M^NC091^^|PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||||||ENG^English||02|

***Inbound –***

NCIR will recognize "01" to indicate no recall/reminder notices or "02" recall/reminder notices are sent.

If client is deceased, irrespective of what is sent, default to 01.

If client not deceased and no value provided or invalid value, default to "02."

***Outbound –***

NCIR will send value "01" or "02" to indicate whether reminder notices are sent for the RP. If client deceased, "01" is sent out to prevent notices for deceased client.

---

### **NK1-39 VIP Indicator**

**Definition:** Indicates whether Responsible person is identified as a “Primary” Responsible person.

```
NK1|1|LAST^FIRST^MIDDLE^^^L^|MTH^MOTHER^HL70063^^|1234 W MAIN  
ST^^ANYTOWN^NC^27850^^M^^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|02|||||||||ENG^English||02|||||||||Y
```

#### ***Inbound –***

This field is used to indicate if the responsible person is the primary responsible person. ***The primary responsible person decides the responsible person used in reminder/recall, reports as well as an input for client match in some cases.***

Values: "Y" - RP is primary; "N" – RP is not primary.

If more than one primary responsible person, NCIR will save only one as primary responsible person (logic based on a scoring system).

***The county corresponding to primary responsible person is stored as the county of residence if no county is provided in the PID-11 (client address).***

***Note on NK1-39 and responsible person: NCIR users have the ability to mark one responsible person as primary. However, no field exists within HL7 2.5.1 that allows a responsible person to be marked as primary. Hence this field is used to indicate the same. If your EHR is not able to use this field to mark a responsible person as primary, your users can continue to mark the responsible person in the NCIR if necessary.***

#### ***Outbound –***

Set to Y if the responsible person is set in UI as primary contact.

---

## OBX—Observation Result Segment (VXU Only)

The observation result segment has many uses. It carries observations about the object of its parent segment. In the VXU it is associated with the RXA or immunization record. The basic format is a question (OBX-3) and an answer (OBX-5).

The examples listed below are categorized based on information OBX conveys in NCIR context

### *Funding Source:*

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|||20121219|

OBX|2|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^NIP008^^|||||F|||20130401

### *Eligibility Code:*

OBX|3|CE|64994-7^vaccine fund pgm elig cat^LN|1|V02^Medicaid^HL70064|||||F|||20130401|||VXC41^per visit^CDCPHINVS

### *VIS presented and published dates:*

*An OBX segment identifying the vaccine should precede VIS Publication date. Single antigen vaccines are identified using OBX-3 of 30956-7 and Combo vaccine components are identified using OBX-3 of 38890-0 After OBX segment identifying the vaccine, send OBX segment with OBX-3 value of 29768-9 for VIS publication date and OBX-3 value of 29769-7 for VIS presentation date. Each VIS Date in a Combination Vaccine should be identified individually: All OBX segments related to VIS dates are tied together using OBX-4 value (See example below for single and combo vaccine).*

*Example: For a single antigen: [Note OBX-4 value tying the segments together.]*

RXA|0|1|20091010|20091010|03^MMR^CVX^MMR II^MMR II^VTN|0.5|ML||00^New immunization record^NIP0017832-1^Lemon^Mike^A|^|^SITE-99999|||||LOTABC123|20111001|MSD^^MVX|||CP

OBX|1|CE|**30956-7^vaccine type^LN**|1|03^MMR^CVX|||||F|||20120223<CR>

OBX|2|TS|29768-9^VIS Publication Date^LN|1|20080110|||||F|||20120223<CR>

OBX|3|TS|29769-7^VIS Presentation Date^LN|1|20091010|||||F|||20120223<CR>

*Example: For a combo vaccine,*

RXA|0|1|20091010|20091010|22^DTP-Hib^CVX^TETRAMUNE^Tetramune^VTN|0.5|ML||00^New immunization record^NIP0017832-1^Lemon^Mike^A|^|^|^SITE-99999||||EZ342|20111001|MSD^^MVX|||CP

OBX|1|TS|38890-0^Component Vaccine Type^LN|1|107^DTaP^CVX|||||F

OBX|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20070517|||||F|||20091010|||||

OBX|3|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|1|20091010|||||F|||20091010|||||

OBX|4|TS|38890-0^Component Vaccine Type^LN N|2|17^Hib^CVX|||||F

OBX|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|20140204|||||F|||20091010|||||

OBX|6|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|2|20091010|||||F|||20091010|||||

*Comments/Reaction/Special Indication:*

OBX|1|CE|30945-0^Contraindication^LN|1|91930004^Allergy Egg^SCT^^^|||||F|||20100101|  
 OBX|1|CE|31044-1^Reaction^LN|2|39579001^Anaphylaxis^CDCPHINVS^^^|||||F|||20100101|  
 OBX|1|CE|59785-6^Special^LN|3|VXC7^Rabies Exposure^CDCPHINVS^^^|||||F|||20100101|  
 OBX|1|CE|59784-9^Disease with presumed immunity^LN^^^|4|371111005^Immunity: Measles^SCT^^^|||||F|||20121219|||||20201231|||||

*Table 5-10 Observation Segment (OBX)*

SEQ	LEN	Data Type	Cardinality	Value Sets	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	4	SI	[1..1]		Set ID – OBX	R	R	
2	2	ID	[1..1]	0125	Value Type	R	R	CE, NM, DT, or TS
3		CE	[1..1]		Observation Identifier	R	R	This indicates what this observation refers to. It poses the question that is answered by OBX-5.

4	20	ST	[1..1]		Observation Sub-ID	R	R	
5		Varies <sup>2</sup>	[1..1]		Observation Value	R	R	This is the observation value and answers the question posed by OBX-3
6		CE	[0..1]		Units	CE	X	If the observation in OBX-5 requires an indication of the units, they are placed here.
7	60	ST	[0..1]		References Range	O	X	
8	5	IS	[0..1]	0078	Abnormal Flags	O	X	
9	5	NM	[0..1]		Probability	O	X	
10	2	ID	[0..1]	0080	Nature of Abnormal Test	O	X	
11	1	ID	[1..1]	0085	Observation Result Status	R	R	Constrain to F
12		TS	[0..1]		Effective Date of Reference Range Values	O	X	
13	20	ST	[0..1]		User Defined Access Checks	O	X	
14		TS	[1..1]		Date/Time of the Observation	RE	RE	Required for certain observations.
15		CE	[0..1]		Producer's Reference	O	X	
16		XCN	[0..1]		Responsible Observer	O	X	
17		CE	[0..1]		Observation Method	O	RE	If OBX-3 is 64994-7 field must contain value VXC41.
18		EI	[0..1]		Equipment Instance Identifier	O	X	

19		TS	[0..1]		Date/Time of the Analysis	O	O	
20			[0..1]		Reserved for harmonization with V2.6	O	X	
21			[0..1]		Reserved for harmonization with V2.6	O	X	
22			[0..1]		Reserved for harmonization with V2.6	O	X	
23		XON	[0..1]		Performing Organization Name	O	X	
24		XAD	[0..1]		Performing Organization Address	O	X	
25		XCN	[0..1]		Performing Organization Medical Director	O	X	

<sup>2</sup> The length of the observation field is variable, depending upon value type. See *OBX-2 value type*.

## OBX Field Definitions

### ***OBX-1 Set ID - OBX***

**Definition:** This is a required field. Sequential numbers. Use "1" for the first OBX within the message, "2" for the second, and so forth.  
OBX|1|

#### ***Inbound –***

If not a numeric value, reject the message and send an error message: "OBX-1: Set ID – OBX invalid. Please enter a numeric value."

---

If missing, reject the message and send error message: "OBX-1: Set ID – OBX missing."

***Outbound –***

NCIR will send the sequence number.

***OBX-2 Value Type***

***Definition:*** This is a required field. This field contains the data type which defines the format of the observation value in OBX-5.

OBX|1|CE|

***Inbound –***

For incoming PO-NCIR data, Data Exchange accepts CE, TS, NM, DT.

If field is missing or invalid, reject message and send error: "OBX-2: Value Type missing or invalid."

***Outbound –***

NCIR will send out values of CE for Coded Entry, TS for Timestamp, NM for Number, and DT for Date, depending on what is actually sent in OBX-5.

***OBX-3 Observation Identifier***

***Definition:*** This indicates what this observation refers to. It poses the question that is answered by OBX-5.

OBX|1|CE|30963-3^Vaccine purchased with^LN|

***Inbound –***

If not a valid value (other than the values identified) or empty field, send an error message and reject the segment with message: "Invalid OBX segment. OBX-3 Observation Id missing or invalid."

For each administered vaccine (state or privately purchased), an OBX segment carrying vaccine funding information (state supplied or privately purchased) is required. That is, OBX segment with OBX-3 = 30963-3 and OBX-5 = state supplied (VXC1 or VXC2) or privately purchased (PHC70) is required.

For each state supplied vaccine administered, eligibility code is also required. Eligibility code is exchanged using an OBX segment (OBX-3 = 64994-7). If multiple state supplied doses were administered on a given day, then each RXA segment must be accompanied by an OBX segment carrying its eligibility code. The set of valid NCIR eligibility code is provided in the table below corresponding to OBX-3 value of 64994-7. For privately purchased vaccine, eligibility code is optional and may be sent along with each dose and will be stored if sent.

For each administered vaccine (state supplied or privately purchased), provide VIS published date and VIS presented date using an OBX segment. An OBX segment before the VIS dates identifies the vaccine component for which the VIS dates apply. The OBX-3 value used to identify the vaccine varies based on whether the vaccine is single antigen or combo vaccine as noted below. For an example of submitting VIS dates for single antigen and combo vaccine, refer above under OBX segment..

For Single antigen vaccines: Use OBX-3 value of 30956-7 (Vaccine Type) to identify a single antigen vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value of 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date and all three OBX segments share the same OBX-4 value grouping the segments.

For Combo vaccines: Use OBX-3 value of 38890-0 (Component Vaccine Type) to identify the combo vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date and all three OBX share the same OBX-4 value grouping the segments.

The table below lists the values used in OBX for Inbound HL7 message.

For Historical vaccine, funding information and eligibility code are not applicable and hence not needed.

OBX-3 value	Corresponding valid OBX-5 value
29769-7	yyyymmdd0000^Date Vaccine Information Statement Presented^NIP003^^^
29768-9	yyyymmdd0000^Date Vaccine Information Statement Published^NIP003^^^
30963-3	PBF^Public Funds^NIP008^^^
	PVF^Private Funds^NIP008^^^
	PHC70^Private Funds^CDCPHINVS^^^
	VXC1^Federal Funds^CDCPHINVS^^^

OBX-3 value	Corresponding valid OBX-5 value
	VXC2^State Funds^CDCPHINVS^^^
38890-0	Use CVX code for the component. Each vaccine group is associated with a group of OBX, using the OBX-4 observation sub-id. OBX 1 CE 38890-0^Component Vaccine Type^LN 1 21^Varicella^CVX     F<CR> ..... OBX 4 CE 38890-0^Component Vaccine Type^LN 2 03^MMR^CVX     F<CR>
30956-7	Use CVX code for the vaccine OBX 1 CE 30956-7^vaccine type^LN 1 03^MMR^CVX     F<CR> OBX 1 CE 30956-7^vaccine type^LN 1 45^Hep B, unspecified formulation^CVX     F<CR>
64994-7 59784-9 , 59785-6 , 30945-0, 31044-1	CH01^North Carolina Health Choice^HL70064
	IS00^Insured ^HL70064
	IS01^Underinsured (No FQHC RHC)^HL70064
	V02^Medicaid^HL70064
	V03^Not Insured^HL70064
	V04^American Indian Alaskan Native^HL70064
	NC02^Title X Uninsured Unaccompanied Minor^HL70064 *
	For client comment specific OBX-5 values. See Appendix

\* NC02 Title X Uninsured Unaccompanied Minor may only be accepted when owning organization has the Title X indicator set.

**Outbound –**

NCIR sends out a number of vaccination related information through OBX. Depending on information sent out, a value from table below will be sent out in OBX-3. NCIR sends out funding source (state supplied or privately purchased), eligibility code, and VIS information presented and published for each administered dose. NCIR also sends out recommendations and series information depending on set up in the NCIR. Refer to table below for values sent in OBX-3 and corresponding OBX-5.

OBX-3 value	Corresponding valid OBX-5 value
29769-7	yyyymmdd0000^Date Vaccine Information Statement Presented^NIP003^^^
29768-9	yyyymmdd0000^Date Vaccine Information Statement Published^NIP003^^^
30963-3	PBF^Public Funds^NIP008^^^
	PVF^Private Funds^NIP008^^^
	PHC70^Private Funds^CDCPHINVS^^^
	VXC1^Federal Funds^CDCPHINVS^^^
	VXC2^State Funds^CDCPHINVS^^^
30979-9	Vaccines due next: first triplet CVX code (required) and second triplet can record CPT code, vaccine group code, or trade name ID e.g.  85^HepA^CVX^90730^HepA^C4   45^HepB^CVX^90731^HepB^C4
30980-7	Date vaccine due: yyyymmdd
59777-3	Latest date to give: yyyymmdd
30981-5	Earliest date to give: yyyymmdd
30973-2	Vaccine due next dose number in series (numerical value, e.g. 1, 2,3)
30982-3	Reason applied by forecast logic to project this vaccine: ACIP schedule
38890-0	Use CVX code for the component. Each vaccine group is associated with a group of OBX, using the OBX-4 observation sub-id. OBX 1 CE 38890-0^Component Vaccine Type^LN 1 21^Varicella^CVX     F<CR> ..... OBX 4 CE 38890-0^Component Vaccine Type^LN 2 03^MMR^CVX     F<CR>
30956-7	Use CVX code for the vaccine OBX 1 CE 30956-7^vaccine type^LN 1 03^MMR^CVX     F<CR>
30973-2	Dose Number in Series (numerical value, e.g. 1,2,3)

OBX-3 value	Corresponding valid OBX-5 value
64994-7	CH01^North Carolina Health Choice^HL70064
	IS00^Insured ^HL70064
	IS01^Underinsured (No FQHC RHC)^HL70064
	V02^Medicaid^HL70064
	V03^Not Insured^HL70064
	V04^American Indian Alaskan Native^HL70064
	NC02^Title X Uninsured Unaccompanied Minor^HL70064 *
59784-9 , 59785-6, 30945-0, 31044-1	For client comment specific OBX-5 values. See Appendix

#### ***OBX-4 Observation Sub-ID***

**Definition:** If the OBX is used for sending out Series Information and Recommendations (on the Outbound), the number in this field groups together related OBX segments. For example, a single recommendation for DTP/aP is sent in a grouped set of five OBX segments, all with the same sub-identifier in OBX-4. The sub-identifier increments sequentially.

##### ***Inbound –***

NCIR does not store this field but is accepted in the message to combine related OBX segments.

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|

##### ***Outbound –***

OBX-4 is used to combine related OBX segments.

---

## OBX-5 Observation Value

**Definition:** This is a required field and is used for reporting the value associated with OBX-3. See Appendix C for additional information on submitting Vaccine Deferrals.

Examples:

*Vaccine Funding Information:*

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|

*Eligibility code:*

OBX|2|64994-7^Vaccine fund pgm elig cat^LN|1|V02^Medicaid|||||F|||20130503||VXC41^per visit^CDCPHINVS|||||||

*Vaccine identification segment* followed by VIS date presented and published.

Single-Antigen Vaccine

OBX|1|CE|30956-7^vaccine type^LN|1|03^MMR^CVX|||||F|||20120223<CR>  
OBX|2|TS|29768-9^VIS Publication Date^LN|1|20080110|||||F|||20120223<CR>  
OBX|3|TS|29769-7^VIS Presentation Date^LN|1|20091010|||||F|||20120223<CR>

Combination Vaccine

*(Each component in a Combination Vaccine should be identified individually and followed by VIS date presented and published.*

OBX|1|TS|38890-0^Component Vaccine Type^LN|1|107^DTaP^CVX|||||F  
OBX|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20070517|||||F|||20091010|||||||  
OBX|3|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|1|20091010|||||F|||20091010|||||||  
OBX|4|TS|38890-0^Component Vaccine Type^LN N|2|17^Hib^CVX|||||F  
OBX|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|20140204|||||F|||20091010|||||||  
OBX|6|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|2|20091010|||||F|||20091010|||||||

*Contraindications, Immunity, special indication and reactions:*

OBX|5|CE|59784-9^Disease with presumed immunity^LN^^|1|371111005^Immunity: Measles^SCT^^^|  
OBX|1|CE|30945-0^Contraindication^LN|2|91930004^Allergy Egg^SCT^^^|||||F|||20100101|  
OBX|1|CE|31044-^Reaction^LN|3|39579001^Anaphylaxis^CDCPHINVS^^^|||||F|||20100101|  
OBX|1|CE|59785-6^Special^LN|4|VXC7^Rabies Exposure^CDCPHINVS^^^|||||F|||20100101|

**Inbound –**

---

If invalid or field is empty, reject the message and send an error message.

For each administered vaccine (state or privately purchased), an OBX segment carrying vaccine funding information (state supplied or privately purchased) is required. That is, OBX segment with OBX-3 = 30963-3 and OBX-5 = state supplied (VXC1 or VXC2) or privately purchased (PHC70) is required.

For each state supplied vaccine administered, eligibility code is also required. Eligibility code is exchanged using an OBX segment (OBX-3 = 64994-7). If multiple state supplied doses were administered on a given day, then each RXA segment must be accompanied by an OBX segment carrying its eligibility code. The set of valid NCIR eligibility code is provided in the table below corresponding to OBX-3 value of 64994-7. For privately purchased vaccine, eligibility code is optional and may be sent along with each dose and will be stored if sent.

For each administered vaccine (state supplied or privately purchased), provide VIS published date and VIS presented date using an OBX segment. Use an OBX segment to identify the vaccine component for which the VIS date applies. The OBX-3 value used to identify vaccine depends on whether vaccine is single antigen or combo vaccine.

For Single antigen vaccines: Use OBX-3 value of 30956-7 (Vaccine Type) to identify a single antigen vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value of 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date. All three OBX segments share the same OBX-4 value grouping the segments.

For Combo vaccine: Use OBX-3 value of 38890-0 (Component Vaccine Type) to identify the combo vaccine for which the VIS applies. This is followed by an OBX segment where OBX-3 value of 29769-7 is submitted for VIS presented date and a segment where OBX-3 value of 29768-9 is submitted for VIS published date and all three OBX share the same OBX-4 value grouping the segments.

The table above lists the values used in OBX for Inbound HL7 message.

For Historical vaccine, funding information and eligibility code are not applicable and hence not needed.

### ***Outbound –***

The values sent out in OBX-5 correspond to the question in OBX-3. The values are listed in the table included under OBX-3. In the example below, it provides the CVX code for the component.

```
OBX|1|CE|38890-0^Component Vaccine Type^LN|1|21^Varicella^CVX|||||F<CR>
```

```
OBX|4|CE|38890-0^Component Vaccine Type^LN|2|03^MMR^CVX|||||F<CR>
```

---

### ***OBX-11 Observation Result Status***

**Definition:** This field contains the observation result status. This field is constrained to ' F'  
OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|

#### ***Inbound –***

Records the observation result status.

#### ***Outbound –***

Records the observation result status.

### ***OBX-14 Date/Time of the Observation***

**Definition:** Records the time of the observation. NCIR ignores any time component. (yyyymmdd)  
1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS|||||F|||20121219|

#### ***Inbound –***

Records the time of the observation (yyyymmdd). This is a required field for certain observations. When required, populate it with observation date, else the segment will be rejected without this field.

**If OBX-14 is missing, or if OBX-14 is before the client birth date, then the message will be rejected with the error: “OBX-14: Required field. Enter valid date.”**

The following OBX-3 Observation scenarios require an Observation Date in OBX-14:

- 31044-1^Reaction^LN
- 29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN
- 29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN
- 30945-0^Vaccination contraindication/precaution^LN^^

- 59784-9^Disease with presumed immunity^LN^^
- 64994-7^vaccine fund pgm elig cat^LN

**Outbound –**

Records the time of the observation (yyyymmdd).

**OBX-17 Observation Method**

**Definition:** Records the method for capturing funding program eligibility. This field is constrained to VXC40 or VXC41.

OBX|2|CE|64994-7^vaccine fund pgm elig cat^LN|1|NC02^TITLE X^HL70064|||||F|||20130401|||VXC41^per visit^CDCPHINVS

**Inbound –**

Records the method for capturing funding program eligibility.

**Outbound –**

Records the method for capturing funding program eligibility.

**OBX-19 Date/Time of the Analysis**

**Definition:** This field is used for comment end date.

OBX|4|CE|59784-9^Disease with presumed immunity^LN^^|1|371111005^Immunity:  
Measles^SCT^^|||||F|||20121219|||||20201231|||||

**Inbound –**

This field is used to collect observation end date. Comment end date (yyyymmdd) is optional and must be after Applies-To Date (effective date – OBX-14). If before, ignore the value and send warning message: "OBX-19: Comment end date is before applies-to date. Date ignored"

**Outbound –**

---

NCIR will populate this field with client comments end date if available.

## ORC—Order Request Segment

The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). Each RXA must be associated with one ORC, based on HL7 2.5.1 standard.

Example 1: immunization from Inventory

```
ORC|RE||1|||||^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^||12345^Clinician Last^Clinician First^||||1234^Organization Site^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^^
```

Example 2: historical immunization:

```
ORC|RE||1|
```

Example 3: refusal/religious exemption:

```
ORC|RE||9999|
```

**Table 5-11 Common Order Segment (ORC)**

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	ID	[1..1]	0119	Order Control	R	R	use RE
2		EI	[0..1]		Placer Order Number	RE	X	See Guidance below.
3		EI	[1..1]		Filler Order Number	R	R	See Guidance below.
4		EI	[0..1]		Placer Group Number	O	X	
5	2	ID	[0..1]	0038	Order Status	O	X	
6	1	ID	[0..1]	0121	Response Flag	O	X	
7		TQ	[0..0]		Quantity/Timing	X	X	
8		EIP	[0..1]		Parent	O	X	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
9		TS	[0..1]		Date/Time of Transaction	O	X	
10		XCN	[0..1]		Entered By	RE	O	This is the person that entered this immunization record into the system.
11		XCN	[0..1]		Verified By	O	X	
12		XCN	[0..1]		Ordering Provider	RE	RE	This shall be the provider ordering the immunization. It is expected to be empty if the immunization record is transcribed from a historical record.
13		PL	[0..1]		Enterer's Location	O	X	
14		XTN	[0..1]		Call Back Phone Number	O	X	
15		TS	[0..1]		Order Effective Date/Time	O	X	
16		CE	[0..1]		Order Control Code Reason	O	X	
17		CE	[0..1]		Entering Organization	O	O	This is the provider organization that entered this record/order.
18		CE	[0..1]		Entering Device	O	X	
19		XCN	[0..1]		Action By	O	X	
20		CE	[0..1]	0339	Advanced Beneficiary Notice Code	O	X	
21		XON	[0..1]		Ordering Facility Name	O	X	
22		XAD	[0..1]		Ordering Facility Address	O	X	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
23		XTN	[0..1]		Ordering Facility Phone Number	O	X	
24		XAD	[0..1]		Ordering Provider Address	O	X	
25		CWE	[0..1]		Order Status Modifier	O	X	
26		CWE	[0..1]	0552	Advanced Beneficiary Notice Override Reason	O	X	
27		TS	[0..1]		Filler's Expected Availability Date/Time	O	X	
28		CWE	[0..1]	0177	Confidentiality Code	O	X	
29		CWE	[0..1]	0482	Order Type	O	X	
30		CNE	[0..1]	0483	Enterer Authorization Mode	O	X	
31		CWE	[0..1]		Parent Universal Service Identifier	O	X	

## ORC Field Definitions

### *ORC-1 Order Control*

**Definition:** Determines the function of the order segment. The value for VXU is RE.

ORC|RE|

---

***Inbound –***

Constrained to RE

***Outbound –***

If empty field or value other than RE, NCIR defaults to RE.

***ORC-3 Filler Order Number***

***Definition:*** NCIR will use this value to identify the order within provider organization sent orders.

ORC|RE||1|||||^|12345^Clinician Last^Clinician First^|||1234^Organization Site^^^|

***Inbound –***

NCIR suggests that providers send their immunization identifier in this field. If a refusal/religious exemption is sent, value has to be "9999".

NCIR will store the value at the immunization level and use the Filler Order Number to pull the immunization associated with it.

If value is missing, do not process the immunization and send error message "ORC-3: Filler Order Number missing."

***Outbound –***

NCIR will send Immunization ID in this field. For refusals or religious exemptions, NCIR will send out "9999"

ORC|RE||105193813|

***ORC-10 Entered By***

***Definition:*** (Entered By) - Optional field.

---

***Inbound –***

If available, provide the name of the person entering the immunization into your system. This is an optional field and NCIR will store the value at the immunization level and use it to pull the immunization associated with it.

***Outbound –***

NCIR will not populate this field.

***ORC-12 Ordering Provider***

**Definition:** NCIR will provide the names of the clinicians set up in the NCIR for your organization. ORC-12 will be empty for historical immunizations (inbound and outbound).

|ID^Last Name^First Name|

***Inbound –***

Provider should send last name and first name of the ordering provider.

ORC|RE||1|||^^^|^Clinician Last^Clinician First^|

Ensure that the list of ordering providers set up in the NCIR and the EHR are up to date before sending data to the NCIR. NCIR on request can provide you a list of ordering providers set up for your organization in the NCIR.

For an administered dose, populate this field with an ordering provider from the list. If no match is found in the NCIR, default to Unknown  
For an historical dose, this field can be empty.

***Outbound –***

NCIR will send out the Ordering Authority selected in the UI for the immunization.



## PD1—Patient Demographic Segment (VXU Only)

The Patient Demographic Segment contains patient demographic information that may change from time to time. There are three primary uses for in Immunization Messages. These include indicating whether the person wants his/her data protected, whether the person wants to receive recall/reminder notices and the person's current status in the registry.

PD1||||||||||02|N||||A|20121218134335||||

**Table 5-12-Patient Demographic Segment (PD1)**

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	2	IS	[0..1]	0223	Living Dependency	O	X	
2	2	IS	[0..1]	0220	Living Arrangement	O	X	
3	250	XON	[0..1]		Patient Primary Facility	O	X	
4	250	XCN	[0..1]		Patient Primary Care Provider Name & ID No.	O	X	
5	2	IS	[0..1]	0231	Student Indicator	O	X	
6	2	IS	[0..1]	0295	Handicap	O	X	
7	2	IS	[0..1]	0315	Living Will Code	O	X	
8	2	IS	[0..1]	0316	Organ Donor Code	O	X	
9	1	ID	[0..1]	0136	Separate Bill	O	X	
10	250	CX	[0..1]		Duplicate Patient	O	X	
11	250	CE	[0..1]	0215	Publicity Code	RE	RE	
12	1	ID	[0..1]	0136	Protection Indicator	RE	RE	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
13	8	DT	[0..1]		Protection Indicator Effective Date	CE	X	
14	250	XON	[0..1]		Place of Worship	O	X	
15	250	CE	[0..1]	0435	Advance Directive Code	O	X	
16	1	IS	[0..1]	0441	Immunization Registry Status	RE	RE	
17	8	DT	[0..1]		Immunization Registry Status Effective Date	C(RE/X)	C(RE/X)	If the registry status field is filled, then this should be valued.
18	8	DT	[0..1]		Publicity Code Effective Date	CE	X	
19	5	IS	[0..1]	0140	Military Branch	O	X	
20	2	IS	[0..1]	0141	Military Rank/Grade	O	X	
21	3	IS	[0..1]	0142	Military Status	O	X	

## PD1 Field Definitions

### PD1-11 Publicity Code

**Definition:** Use NK1 to specify choice at responsible person level. . PD1|||||||02|

NCIR will recognize "01" to indicate no recall/reminder notices or "02" recall/reminder notices are sent.

---

***Inbound –***

Submit 02 if client not deceased; 01 if client is deceased. Use NK1 to set preferences as NCIR does not set these notices at client level.

***Outbound –***

NCIR will always send "02" unless client is deceased.

***PD1-12 Protection Indicator***

***Definition:*** Controls visibility of records to other organizations. Indicates whether or not consent has been given (or assumed) for record sharing. In NCIR, it is not allowed to opt out. This field is always set to **N** - sharing IS allowed.

PD1|||||||02|**N**|

***Inbound –***

Value: "N". Any other value is ignored and default to "N". Send warning message: "PID-12: Protection indicator defaulted to N" if a non-null value other than 'N' is provided.

***Outbound –***

Value: "N"

***PD1-16 Immunization Registry Status***

***Definition:*** Identifies the status of the patient to the sending organization. See table 0441..

PD1|||||||02|**N**|||**A**|

***Inbound –***

If this field is empty or invalid (a value other than A, I, or P, is provided), default to Active and send a warning message: "PD1-16: Required field. <> is an invalid value. Defaulted to A."

---

If P is provided, client deceased status will reflect in all organizations

***Outbound –***

Values A, I, or P will be returned depending on whether the client is set active, Inactive or permanently deceased respectively in the NCIR for the organization.

***PD1-17 Immunization Registry Status Effective Date (DT) 01570***

***Definition:*** Effective date for registry status reported in PD1-16. Format is YYYYMMDD.

PD1||||||||||02|N||||A|20121218134335|

***Inbound –***

This field is not used by NCIR. If provided, NCIR will accept the value, but the data will not be used.

***Outbound –***

NCIR will not send any value in this field.

## PID—Patient Identifier Segment (VXU Only)

The PID is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

```
PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|1234 W MAIN ST^^ANYTOWN^NC^27850^^M^^NC091^^|
|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||2186-5^Not Hispanic or Latino^HL70189||N|1||||N|||||
```

Table 5-13-Patient Identifier Segment (PID)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1	4	SI	[0..1]		Set ID - PID	RE	RE	
2		CX	[0..0]		Patient ID	X	X	
3		CX	[1..*]	0203	Patient Identifier List	R	RE	
4		CX	[0..0]		Alternate Patient ID - 00106	X	X	
5		XPN	[1..*]		Patient Name	R	R	The first repetition shall contain the legal name. Multiple given names or initials are separated by spaces.
6		XPN	[0..1]		Mother's Maiden Name	RE	RE	
7		TS	[1..1]		Date/Time of Birth	R	R	Required, must have month, day and year.
8	1	IS	[0..1]	0001	Administrative Sex	RE	RE	M= male, F = female, U = not determined/unspecified/unknown.
9		XPN	[0..0]		Patient Alias	X	X	This field should not be used. It was supported in earlier implementations.
10		CE	[0..*]	0005	Race	RE	RE	

11		XAD	[0..*]		Patient Address	RE	RE	The first repetition should be the primary address.
12	4	IS	[0..0]	0289	County Code	X	X	County belongs in address field.
13		XTN	[0..*]		Phone Number - Home	RE	RE	The first instance shall be the primary phone number. Only one item is allowed per repetition.
14		XTN	[0..*]		Phone Number - Business	O	X	
15		CE	[0..1]	ISO0639	Primary Language	O	RE	Use ISO 0639.
16		CE	[0..1]	0002	Marital Status	O	X	
17		CE	[0..1]	0006	Religion	O	X	
18		CX	[0..1]		Patient Account Number	O	X	
19	16	ST	[0..0]		SSN Number - Patient	X	X	
20		DLN	[0..0]		Driver's License Number - Patient	X	X	
21		CX	[0..0]		Mother's Identifier	X	X	
22		CE	[0..1]	0189	Ethnic Group	RE	RE	First triplet shall contain code from table 0189.
23	60	ST	[0..1]		Birth Place	O	X	Use may be specified locally.

24	1	ID	[0..1]	0136	Multiple Birth Indicator	RE	RE	The acceptable values are Y and N. If the status is undetermined, then field shall be empty.
25	2	NM	[0..1]		Birth Order	CE	C(RE/O)	If Multiple Birth Indicator is populated with Y, then this field should contain the number indicating the person's birth order, with 1 for the first child born and 2 for the second.
26		CE	[0..1]	0171	Citizenship	O	X	
27		CE	[0..1]	0172	Veterans Military Status	O	X	
28		CE	[0..1]	0212	Nationality	O	X	
29		TS	[0..1]		Patient Death Date and Time	C(RE/X)	C(RE/X)	If PID-30 (Patient Death Indicator) is valued 'Y', populate this field.
30	1	ID	[0..1]	0136	Patient Death Indicator	RE	RE	
31	1	ID	[0..1]	0136	Identity Unknown Indicator	O	X	
32	20	IS	[0..1]	0445	Identity Reliability Code	O	X	
33		TS	[0..1]		Last Update Date/Time	O	X	May be locally specified.
34		HD	[0..1]		Last Update Facility	O	X	Use is locally specified.
35		CE	[0..1]	0446	Species Code	O	X	
36		CE	[0..1]	0447	Breed Code	O	X	
37	80	ST	[0..1]		Strain	O	X	
38		CE	[0..1]	0429	Production Class Code	O	X	
39		CWE	[0..1]	0171	Tribal Citizenship	O	X	

---

## PID Field Definitions

### ***PID-1 Set ID - PID***

**Definition:** (*optional*) This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^||||||2186-5^Not Hispanic or Latino^HL70189||N|1||||N|||||

#### ***Inbound –***

Send the literal value '1'.

#### ***Outbound –***

NCIR will populate with sequence number.

### ***PID-3 Patient Identifier List***

**Definition:** Sub-components 1 (ID), 4 (Assigning Authority/Table 0363) and 5 (Identifier Type Code /Table 0203) are required in the PID-3 field if populated. This is a repeating field where a provider can send the NCIR Client ID, NCIR Organization Chart Number and/or NCIR Secondary Chart Number.

#### ***Inbound –***

Sub-components 1 (ID), 4 (Assigning Authority/Table 0363) and 5 (Identifier Type Code/Table 0203) are required in the PID-3 field. A provider organization can send two different identifiers.: their EMR system's Chart Number, and/or Group Chart Number if available.

If chart number is sent in subcomponent 1, use PI in subcomponent 5.

If group chart number is sent in subcomponent 1, use PT in subcomponent 5.

---

Submit Provider's NCIR-SHOR-ORG for subcomponent 4 (Assigning Authority). This is the same value provided for use with MSH-4. Identify the value provider organization uses to populate the Chart Number field in the NCIR. Sending this value in the NCIR Data Exchange transaction (using PI as identifier type code) will cause the least disruption.

Note: The NCIR organization Chart Number and NCIR Secondary Chart Number are stored for a client when a VXU transaction for the client is sent or when the user enters the client directly in the NCIR. This is subsequently used for matching VXU or QBP queries.

PID|1||1234567890^^^NCA^SR^~CHART123^^^NCIR-SHORT-ORG^PI^~SECOND123^^^NCIR-SHORT-ORG^PT^|

***Outbound –***

When NCIR is sending to an outside system, NCIR will send the client's NCIR Client ID (SR) and Chart Number (PI) when it is available. Group Chart Number (PT) will be sent in addition to Chart Number and Client ID if available.

***PID-5 Patient Name***

***Definition:*** Patient Name is recorded in PID-5 (Last name^First name^Middle name)

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|

***Inbound –***

Record legal patient name in PID-5 (Last name^First name^Middle name)

NCIR will reject a client record with 'NO FIRST NAME' entered as the first name .

If field is empty or first name or last name is found in the junk names table, message will be rejected and an error message will be sent out: "PID-5:Patient name required"

Use 'L' (legal) for Name type code (PID-5.7).

If multiple names are provided, the name other than legal name will be ignored (only the first three components are used by NCIR Last Name^First Name^Middle Name)

***Outbound –***

---

NCIR will send the last name, first name, and if available, the middle name. Only the first three components are used by NCIR.

### ***PID-6 Mother's Maiden Name***

**Definition:** In this context, where the mother's name is used for client identification, NCIR uses only last name and first name.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|**Last Name^First Name^Middle Name^^^^^|**

#### ***Inbound –***

If Mother's Maiden Name is not provided and the incoming record is a new client or an existing client without Mother's maiden name, send a warning message: "PID-6: Please provide mother's maiden name. Field is used in matching process when no other client identifier supplied." **Note: This warning is not returned if NCIR has Mother's Maiden Name already from another source.**

#### ***Outbound –***

NCIR sends out only the last name and first name of mother's maiden name (e.g. |Last Name^First Name^^^|)

### ***PID-7 Date/Time of Birth***

**Definition:** This is a required field. Give the year, month, and day of birth (YYYYMMDD). NCIR ignores any time component.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|**20110219|**

#### ***Inbound –***

1. If client matched to existing client and incoming birth date > existing immunization date on the client, send error message and pend client for later review.
2. If incoming birth date > any of the incoming dose date, reject the transaction with error message: "PID-7: DOB is later than immunization date. Transaction rejected"
3. If field is missing or invalid, reject with error message: "PID-7: Date of birth invalid or missing."

#### ***Outbound –***

---

NCIR sends out the year, month, and day of birth (YYYYMMDD).

### ***PID-8 Administrative Sex***

**Definition:** Use F (Female), M (Male), or U (Unknown). If empty or has a value other than F, M, U, default to U and send a warning message: "PID-8: Invalid value. If Blank - Defaulted to U".

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F|

#### ***Inbound –***

If empty or has a value other than F, M, U, default to U and send a warning message: "PID-8: Invalid value. Defaulted to U."

#### ***Outbound –***

Returns either F, M, or U

### ***PID-10 Race***

**Definition:** This field refers to the patient's race. Refer to User-defined Table 0005 - Race for suggested values.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|

#### ***Inbound –***

Refer to HL7005 table for list of valid Race values. NCIR does not accept Hispanic or Latino as a race option. Submit it in the Ethnic Group PID-22.

#### ***Outbound –***

When sending data to provider, HL7005 table is used to plug in a race code value.

---

## ***PID-11 Patient Address***

**Definition:** This field previously contained the mailing address of the patient. Address is accepted in NK1 and not in PID-11. Do not populate this field.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|1234 W MAIN ST^^ANYTOWN^NC^27850 ^^M^^NC091^^|

### ***Inbound –***

Local implementations have the flexibility to accept address here or in NK1. NCIR accepts patient (client) address in PID-11 and responsible person address and phone number in the NK1. As part of address, NCIR accepts street address, other designation, city, state, zip, address type and county in the XAD data type.

The county field (PID-11.9) is used as County of residence. If county code (PID-11.9- HL70289 table) is not valid, send warning message, "PID-11: County code invalid. Code ignored." . If client resides within the state, submit the county using 0289 table values. If person resides out of state, use ZZ999 for county. A blank or empty value in county field translates to "unknown".

Provide an address and/or phone number for each client 18 years or older in either NK1 or in PID-11/PID-13. If client is 18 years or older and neither NK1 or PID-11/PID-13 is populated, the following warning is returned. "Contact address and/or phone number required. Please send address and/or phone number."

For clients with age less than 18 years, responsible person in NK1 is required, even when PID-11/PID-13 is populated. Refer to NK1 for details.

If State (PID-11.4) is invalid, the following warning message is returned " PID-11.4 Invalid state code (XX). No value stored."

Use 'M' for Address type (PID-11.7 - HL70190 table). If Address type is not 'M', the warning message "PID-11: Invalid Address Type: <address type>. Defaulting to M." is returned.

### ***Outbound –***

NCIR will not populate this field.

---

### ***PID-13 Phone Number - Home***

**Definition:** This field previously contained the email address and phone number of the patient. This is now recorded in the NK1 in NCIR, See comments for PID-11

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|1234 W MAIN ST^^ANYTOWN^NC^27850 ^^M^^NC091^^|^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|

#### ***Inbound –***

Use 'PRN' as telecommunication use code (XPN-2) from HL70201 table.

If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NCIR will use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively (e.g.^PRN^^^919^5551234^1234555^|

If PID-13.2 (Telecommunication use code) is not a valid value from the HL7 0201 table, send warning message: "PID-13: INVALID TELECOMUNICATIONS USE CODE".

If PID-13.2 (Telecommunication use code) is not PRN, send warning message and ignore phone number: "PID-13: NCIR only accepts PRN (Primary residence number), PHONE NUMBER IGNORED".

If PID-13.2 (Telecommunication use code) is PRN and PID-13.7 (Local Number) is missing, send warning message: "PID-13: Phone number missing or invalid".

If PID-13.6 (Area/City Code) is non blank value but is not numeric, send warning message: "PID-13: Phone number missing or invalid".

If PID-13.7 (Local Number) is non blank value but is not numeric, send warning message: "PID-13: Phone number missing or invalid".

***Use 'PH' for PID-13.3 (Telecommunication equipment type).***

---

**Outbound –**

NCIR will not populate this field.

***PID-15 Primary Language***

**Definition:** Local implementations have the flexibility to accept primary language here or in the NK1 segment. NCIR will use NK1 to specify primary language.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||

**Inbound –**

Provide primary language in NK1 and do not populate this field while sending to the NCIR.

**Outbound –**

NCIR will not populate this field.

***PID-22 Ethnic Group***

**Definition:** This field further defines the patient's ancestry. Refer to User-defined Table 0189 - Ethnic Group.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|||**2186-5^Not Hispanic or Latino^HL70189|**

**Inbound –**

If incoming value does not conform to HL7 table (0189), default it to Unknown and send a warning message: "PID-22: Invalid value." If blank, it will default to "Unknown."

---

**Outbound -**

Send out if a value is stored in the NCIR. Refer to HL70189 table for values. If blank in the NCIR, send out "Unknown."

**PID-24 Multiple Birth Indicator**

**Definition:** Use Y to indicate that the client was born in a multiple birth and N to indicate client not born in a multiple birth.

- the patient was part of a multiple birth = Y
- the patient was a single birth = N
- multiple birth status is undetermined = Empty

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|2186-5^Not Hispanic or Latino^HL70189||N|

**Inbound –**

If value other than Y, N, or empty, ignore the value and send warning message: "PID-24: Multiple Birth Indicator invalid. Field is ignored."

**Outbound –**

NCIR will populate with Y or N if available.

**PID-25 Birth Order**

**Definition:** Relevant when client was born in a multiple birth. Use 1 for the first born, 2 for the second, etc.

**Inbound –**

If PID-24 field is set to Y and PID-25 is not populated, send warning message: "PID-25: Client born in a multiple birth. Field must be populated."

---

If field is populated, the value will be stored.

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|2186-5^Not Hispanic or Latino^HL70189||Y|2|

***Outbound –***

NCIR will populate with value if available (e.g. 1, 2).

***PID-29 Patient Death Date and Time***

***Definition:*** The date of death, if client is deceased. Give the year, month, and day (YYYYMMDD). NCIR ignores any time component.

***Inbound –***

Populate death date if patient is deceased. If a death date is sent, then the Patient Death Indicator in PID-30 must indicate a value of “Y” for permanently inactive/deceased. If a deceased date is populated, then the deceased status will be reflected in all organizations associated with the client.

If death date is sent but the Patient Indicator in PID-30 is not set to Y, NCIR will default the Patient Death indicator to Y, reflect the deceased status of the patient in all organizations and send a warning message: “PID-30: Death date is present. Patient Death indicator defaulted to Y.”

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|2186-5^Not Hispanic or Latino^HL70189||N|1|||20130909|

***Outbound –***

NCIR will send if value stored.

***PID-30 Patient Death Indicator***

***Definition:*** This field indicates whether the patient is deceased. Refer to HL7 Table 0136 - Yes/no Indicator for valid values.

- 
- The patient is deceased = Y
  - The patient is not deceased = N
  - Status is undetermined = Empty

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005||^PRN^PH^ncirxyz@yourorg.com^^919^5551234^^|186-5^Not Hispanic or Latino^HL70189||N|1|||20130909|Y|

***Inbound –***

Populate Y or N to indicate whether patient is deceased or not. Even if death date is not known, PID-30 (death indicator) can be set as Y if patient is deceased. If death date is missing but PID-30 is populated with Y, the deceased status of the patient will be reflected in all organizations and a warning message will be sent: "PID-29: No Death Date is provided."

***Outbound –***

NCIR will send Y if Patient Death Indicator is set to Y. If patient is not deceased, this field will be set to N.

---

## RXA-- Pharmacy/Treatment Administration Segment (VXU Only)

The RXA segment carries pharmacy administration data. It is a child of an ORC segment, which is a repeating segment in the VXU message. Because ORC segments are allowed to repeat, an unlimited numbers of vaccinations may be included in a message. Each RXA must be preceded by an ORC.<sup>2</sup>

Examples:

RXA can carry administered dose (inventory dose), historical dose or parent refusal and religious exemptions.

Inventory dose:

```
RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|ML||00^New  
Immunization^|12345^Clinician Last^Clinician First^|^SITE-12345|||testlot1|20151226|MSD||CP|A||||
```

Historical dose:

```
RXA|0|1|20110607|20110607|20^DTaP^CVX^Certiva^VTN|999|||01^Historical^|CP|A|
```

Parent Refusal and Religious exemptions:

```
RXA|0|1|20120828|20120828|03^MMR^CVX^|999|||00^parent refusal^NIP002||RE|A|
```

```
RXA|0|1|20120828|20120828|03^MMR^CVX^|999|||01^Religious Exemption^NIP002||RE|A|
```

---

<sup>2</sup> The HL7 Version 2.5.1 document clearly indicates that any RXA must be associated with an ORC. In the case of immunization, each immunization will have its own ORC.

Table 5-14 Pharmacy/Treatment Administration (RXA)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	4	NM	[1..1]		Give Sub-ID Counter	R	R	Constrain to 0 (zero)
2	4	NM	[1..1]		Administration Sub-ID Counter	R	R	Constrain to 1
3		TS	[1..1]		Date/Time Start of Administration	R	R	
4		TS	[0..1]		Date/Time End of Administration	RE	RE	If populated, this should be the same as Start time (RXA-3)
5		CE	[1..1]	0292	Administered Code	R	R	CVX code is strongly preferred.
6	20	NM	[1..1]		Administered Amount	R	R	If administered amount is not recorded, use 999.
7		CE	[0..1]		Administered Units	CE	C(R/O)	If previous field is populated by any value except 999, it is required.
8		CE	[0..1]		Administered Dosage Form	O	X	
9		CE	[0..*]	NIP 0001	Administration Notes	RE	C(R/O)	The primary use of this field it to convey if this immunization record is based on a historical record or was given by the provider recording the immunization. All systems should be able to support this use. Other uses of this field are permitted, but need to be specified locally.
10		XCN	[0..1]		Administering Provider	RE	RE	This is the person who gave the administration or the vaccinator. It is not the ordering clinician.
11		LA2	[0..1]		Administered-at Location	RE	RE	The Facility value will be sent in the first subcomponent of component 4.

12	20	ST	[0..1]		Administered Per (Time Unit)	O	X	
13	20	NM	[0..1]		Administered Strength	O	X	
14		CE	[0..1]		Administered Strength Units	O	X	
15	20	ST	[0..*]		Substance Lot Number	RE	C(R/O)	
16		TS	[0..1]		Substance Expiration Date	CE	C(RE/O)	If the lot number is populated, this field should be valued.
17		CE	[0..*]	0227	Substance Manufacturer Name	RE	C(R/O)	
18		CE	[0..*]	NIP002	Substance/Treatment Refusal Reason	C	C(R/X)	If the Completion status is RE, then this shall be populated
19		CE	[0..1]		Indication	O	X	
20	2	ID	[0..1]	0322	Completion Status	RE	RE	If this field is not populated, it is assumed to be CP or complete. If the Refusal reason is populated, this field shall be set to RE.
21	2	ID	[0..1]	0323	Action Code - RXA	RE	RE	
22		TS	[0..1]		System Entry Date/Time	O	X	
23	5	NM	[0..1]		Administered Drug Strength Volume	O	X	
24		CWE	[0..1]		Administered Drug Strength Volume Units	O	X	

---

25		CWE	[0..1]		Administered Barcode Identifier	O	X	
26	1	ID	[0..1]	0480	Pharmacy Order Type	O	X	

## RXA Field Definitions

### *RXA-1 Give Sub-ID Counter*

**Definition:** Constrain to 0 (zero).

RXA|0|

**Inbound –**

Populate with "0". If other values are sent or field is empty, NCIR defaults to "0".

**Outbound –**

Sends out "0".

### *RXA-2 Administration Sub-ID Counter*

**Definition:** This field is used to track multiple RXA under an ORC. Since each ORC has only one RXA in immunization messages, constrain to 1.

RXA|0|1|

**Inbound –**

Populate with "1". If other values are sent or field is empty, NCIR defaults to "1".

---

**Outbound –**

Sends out "1".

***RXA-3 Date/Time Start of Administration***

**Definition:** This is a required field. Begin Date the vaccine was given, or refusal date. NCIR ignores any time component.

RXA|0|1|20121219|

**Inbound –**

Send dose administration date.

If vaccination/refusal date is before DOB, an error message will be sent out and the segment will be ignored.

If vaccination/refusal date is after death date, an error message will be sent out and the segment will be ignored.

If incoming dose/refusal date is before both incoming DOB and existing DOB, an error message will be sent out and the segment will be ignored.

If a historical dose with estimated dose date, populate RXA-20 with DE to indicate estimated date in RXA-3

**Outbound –**

Vaccination/refusal date. If a historical dose with estimated dose date, populate RXA-20 with DE to indicate estimated date in RXA-3

***RXA-4 Date/Time End of Administration***

**Definition:** This is a required field. End Date the vaccine was given. (e.g., Same value as RXA-3).

RXA|0|1|20121219|20121219|

---

## ***RXA-5 Administered Code***

**Definition:** This field identifies the vaccine administered/offered. See Appendix B for a cross-reference table of RXA-5 code values.

Example 1:

|21^Varicella^CVX^90716^Varicella^CPT|

Example 2: Administered dose (inventory dose) requires CVX code in first triplet and Vaccine trade name in second triplet.

|110^DTaP/Polio/Hep B^CVX^PEDIARIX^PEDIARIX^VTN|

|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|

### ***Inbound –***

This field always records CVX code in the first triplet. The second triplet can record CPT, Vaccine group code, or Vaccine trade name code.

**For an administered dose (dose administered in your organization), first triplet should be a CVX code and second triplet should be the corresponding Vaccine Trade Name code (VTN). Refer to Appendix to get a list of vaccine trade names.**

**For a historical dose, first triplet may be a CVX code. The second triplet is optional. If CVX code is unknown for a historical dose, the first triplet may be left blank, and the second triplet may then contain one of the following values: CPT code, Vaccine Group code or Vaccine trade name code.**

Segment will be rejected and error message sent out if:

- 1) Value in RXA-5 is invalid (e.g. first triplet is not a valid CVX code or CVX code missing for inventory/non-deducting doses): “RXA-5: Administered code invalid or missing.”
- 2) Value in first triplet (CVX) does not correspond to value in the second triplet (CPT): “RXA-5: Administered code invalid or missing.”
- 3) HL7 2.5 requires an RXA to include a OBX segment. In cases where a client has no dose history, but does have a client comment (i.e., Allergy), use the following: Client comments can be sent without a dose use the following sample where ‘CCYYMMDD’ represent the current date:

RXA|0|1|CCYYMMDD| CCYYMMDD |998^No Vaccine Administered^CVX|999|||^No vaccine Administered^^

Refer to Appendix C for further guidance on submitting vaccine deferrals.

### ***Outbound –***

---

For administered dose (state or privately purchased), the field will contain CVX code in first triplet and CPT code in second triplet.

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^IPOL^VTN|0.5|ML||00^New^^^|

For historical/non-deducting doses, this field will send out CVX code in the first triplet. The second triplet may be CPT, Vaccine group code, or trade name ID.

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella Live^VTN|999||01^Historical Immunization^|  
RXA|0|1|20090414|20090414|107^DTaP, unspecified formulation^CVX^DTP/aP^DTP/aP^VGC|0.5|ML||00^New^^^|  
RXA|0|1|20090414|20090414|107^DTaP, unspecified formulation^CVX^^|0.5|ML||00^New^^^|

If CVX is unknown for historical doses, the first triplet will be blank

For refusal and religious exemptions, the field indicates the code of vaccine or vaccine group: Refer to appendix for vaccine group codes.

RXA|0|1|20120828|^MMR^VGC|999|||||||||00^PARENTAL REFUSAL^NIP002^^|RE|||||  
RXA|0|1|20120828|^MMR^VGC|999|||||||||01^RELIGIOUS EXEMPTION^NIP002^^|RE|||||  
RXA|0|999|20110425|20110425|03^MMR^CVX^^|999|||||||||00^PARENTAL REFUSAL^NIP002|RE|A|  
RXA|0|999|20110425|20110425|28^DT^CVX^^|999|||||||||01^RELIGIOUS EXEMPTION^NIP002|RE|A|

### ***RXA-6 Administered Amount***

**Definition:** Administered Amount; required field.

Examples:

Administered Dose (inventory dose) :

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|

Historical, parent refusal or religious exemptions:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999|

***Inbound –***

---

For administered dose, provide the administered amount. For historical, parent refusals, and religious exemptions provide value "999."  
If historical, refusals, or religious exemptions have a value different than "999" or missing, a warning message is returned and default to "999"

***Outbound –***

For historical doses, parent refusals, and religious exemptions, NCIR will send out a value of "999"  
For inventory and non-deducting doses, NCIR will send out existing dose amount in the NCIR

***RXA-7 Administered units***

***Definition:*** Administered Units: required field.

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|**ML**|

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999||

***Inbound –***

Provide the administered units (ml or caps) for administered dose and leave empty for historical dose. NCIR will ignore the field if anything is sent while RXA-6 has a value of 999.

***Outbound –***

For historical doses, NCIR will leave this field blank. For inventory dose, this field will be ml or caps. Non-deducting will behave as inventory doses and send what exists in UI.

Example: Historical dose:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999||

Example: Inventory dose:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|**ML**|

---

## ***RXA-9 Administration Notes***

**Definition:** NCIR will recognize 00 to indicate Administered Vaccine, 01 to indicate Historical Record.

Examples:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|ML||00^New Immunization|

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|999|||01^Historical Immunization|

### ***Inbound –***

For administered vaccine, send “00” and for historical dose, send “01”. If other than "01" or "00" sent, an error message will be generated: "RXA-9: Administration Notes invalid or missing."

### ***Outbound –***

NCIR return “00” for inventory and non-deducting dose and “01” for historical dose. When sending, NCIR will include the corresponding immunization id in the second repeating segment.

## ***RXA-10 Administering Provider***

**Definition:** Identifies the name of the administering clinician (VEI).

|^Clinician Last^Clinician First^Clinician Middle^|

### ***Inbound –***

Ensure that the list of ordering providers set up in the NCIR and the EHR are up to date before sending data to the NCIR. NCIR on request can provide you a list of ordering providers set up for your organization in the NCIR.

1. For an administered dose, populate this field with an administering provider in the NCIR.
2. If historical dose, value is ignored.
3. If it is an inventory dose and RXA-10 is missing, return a warning message.

---

4. If value provided matches an existing administering provider in the NCIR, the same is stored in the NCIR. If name do not match a value in the NCIR, default to Unknown in NCIR.

(e.g. Id^Last Name^First Name)

***Outbound –***

If historical dose, NCIR will not populate. For non-deducting or inventory dose, NCIR will send the Administered By value if available.

(e.g. Id^Last Name^First Name)

***RXA-11 Administered-at Location***

***Definition:*** NCIR will use this field to identify the facility where the vaccine was administered.

Example 1 – Inventory: |^^^SITE-99999^^^^^^^^^^|

Example 2 – Historical: |^^^PROVIDING ORGANIZATION^^^^^^^^^^|

***Inbound –***

When the dose is historical, the Administered-at Location is stored as free text without any validation.

For an administered (inventory) dose, the location is specified in the fourth component (facility) of RXA-11 field. Within the fourth component, the first sub-component is used to identify the location. For an inventory dose, provide the string "SITE-" followed by site id where the dose was administered. Refer to example 1 above for inventory dose. NCIR will provide the site id's in your organization as part of the onboarding process.

***Outbound –***

NCIR will send out the provider site name and site id where the dose was administered. This value is populated in the first subcomponent of component 4 (Facility) of RXA-11. The provider site name is followed by a hyphen, "-" and the Site Id for Inventory doses. For historical doses, the Provider name text will be sent, or this field may be left empty if value not available.

---

### ***RXA-15 Substance Lot Number***

**Definition:** Manufacturer's lot number for the vaccine. Required for inventory deduction. For historical doses, this field may be left blank.

Example:

RXA|0|1|20121219|20121219|03^MMR^CVX^MMR II^Measles, mumps, and rubella live^VTN|0.5|ML||00^New  
Immunization^|12345^Clinician Last^Clinician First^Clinician Middle^~~~~~OEI^^^SITE-1234|||testlot1|

#### ***Inbound –***

For historical doses/refusals, this field may be left blank. This field should be populated with lot # for the administered vaccine.

#### ***Outbound –***

For historical doses/refusals, this field is left blank and lot number is populated for administered vaccine.

### ***RXA-16 Substance Expiration Date***

**Definition:** Identifies the date the lot expires in the YYYYMMDD format. For historical doses, this field may be left blank.

e.g. |testlot1|20151226|

#### ***Inbound –***

For historical doses/refusals, this field may be left blank. For administered dose, provide the expiration date of the lot.

#### ***Outbound –***

NCIR will send out the lot expiration date for administered dose. For historical doses/refusals, this field will be left blank.

---

### ***RXA-17 Substance Manufacturer Name***

**Definition:** Vaccine manufacturer from Table 0227. RXA-17 is required for inventory deduction.

e.g. |testlot1|20151226|MSD^Merck^MVX|

#### ***Inbound –***

For historical doses/refusals, this field may be left blank. For administered dose, provide the vaccine manufacturer code. Refer to Appendix for list of values.

#### ***Outbound –***

For historical doses/refusals, this field is left blank. For administered dose, vaccine manufacturer code is returned.

### ***RXA-18 Substance/Treatment Refusal Reason***

**Definition:** When applicable, this field displays the reason the patient refused the vaccine. See table NIP002. Any entry in this field indicates that the patient did not take the substance. The vaccine that was offered should be recorded in RXA-5. Do not record contraindications, immunities or reactions in this field or if the dose was administered to the client. NCIR accepts two types of refusals, namely parental refusal and other is religious exemption.

Examples:

RXA|0|999|20110425|20110425|03^MMR^CVX^^|999|||||||||00^PARENTAL REFUSAL^NIP002|RE|A|20121128113754

RXA|0|999|20110425|20110425|28^DT^CVX^^|999|||||||||01^RELIGIOUS EXEMPTION^NIP002|RE|A|20121128113754.

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## ***RXA-20 Completion Status***

**Definition:** This field records the value PA for doses which are partially administered. If this field is not populated, it is assumed to be CP or complete. Populated with RE if Refusal Reason field is populated.

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^IPOL^VTN|0.5|ML||00^New^^^|12345^Clinician Last^Clinician First^Clinician Middle |^^SITE-21959^|||Z1234A|20200101|PMC^PMC^MVX^^^||**CP**

### ***Inbound –***

If dose was successfully administered, use CP. Other values accepted are: PA (Partially Accepted), CP (Completed), RE (Refused), NA (Not Administered), and DE (Date estimated). If blank, NCIR will default to CP.

### ***Outbound –***

NCIR will populate with PA, CP, RE, NA or DE.

## ***RXA-21 Action Code – RXA***

**Definition:** This field indicates the action expected by the sending system. It can facilitate update or deletion of immunization records.

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella Live^VTN|999|ML||01^Historical Immunization^|12345^Clinician Last^Clinician First^Clinician Middle ||||testlot1|20151226|MSD||**CP|A**

### ***Inbound –***

1. For both add or update of record, specify A for add. NCIR will add or update depending on whether record exists or not.
2. To delete an existing immunization in NCIR specify a value of “D”. In addition to requiring that the owning org of the incoming transaction own the existing immunization, NCIR limits that no more than 5% of all incoming immunizations can be flagged as delete and no more than 50 total per job. Maximum of 50 deletes are allowed per organization through web services. Not processed after the limit.
3. Delete for historical doses does not require the owning requirement
4. If delete of immunization through Data exchange is desired, request that delete feature be turned on during onboarding process.

---

***Outbound –***

Not Applicable

## RXR-- Pharmacy/Treatment Route Segment

The Pharmacy/Treatment Route segment contains the alternative combination of route, site, administration device, and administration method that are prescribed as they apply to a particular order.

*Table 5-15 Pharmacy/Treatment Route (RXR)*

SEQ	LEN	Data Type	CDC IG Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
1		CE	[1..1]	0162	Route	R	R	
2		CWE	[0..1]	0163	Administration Site	RE	RE	
3		CE	[0..1]	0164	Administration Device	O	X	
4		CE	[0..1]	0165	Administration Method	O	X	
5		CE	[0..1]		Routing Instruction	O	X	
6		CWE	[0..1]	0495	Administration Site Modifier	O	X	

### Example:

RXR| IM^Intramuscular^HL70162|LA^Left Arm^HL70163|||

## RXR Field Definitions

### *RXR-1 Route*

**Definition:** This field is the route of administration. Refer to User-Defined Table 0162 - Route of Administration for valid values.

|SC^Subcutaneous^HL70162]; |IM^Intramuscular^HL70162|

---

***Inbound –***

Acceptable Administration Site values are listed in Table 0162.

For historical dose, field is not applicable.

For inventory (administered) dose, provide the route of administration in this field. If incoming inventory immunization contains a missing Route or invalid

- Return a Warning response: “RXR-1: Route missing or invalid”

***Outbound –***

For non-deducting/inventory doses values: See Table 0162.

***RXR-2 Administration Site***

***Definition:*** This field contains the site of the administration route. Acceptable Administration Site values are listed in Table 0163.

Example: |LA^Left Arm^HL70163|

***Inbound –***

Acceptable Administration Site values are listed in Table 0163

For historical dose, field is not applicable.

For administered (inventory) dose, provide administration site from Table 0163 in Appendix.

1. If incoming immunization has RXR-1 Route value “PO” (by mouth), then RXR-2 may be blank. NCIR will automatically populate the value “mouth” on the immunization site.
2. If incoming immunization contains a missing Administration Site
  - 1.1 Return a Warning response that a valid Administration Site was not provided
  - 1.2 Process Immunization as inventory
  - 1.3 Record Administration Site “Unknown” with the immunization

- 
3. If incoming immunization contains an invalid Administration Site
    - 2.1 Return an Error response that a valid Administration Site was not provided
    - 2.2 Process Immunization as inventory
    - 2.3 Record Administration Site "Unknown" with the immunization

***Outbound –***

For non-deducting/inventory doses values: See Table 0163

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## 6. Messages for Transmitting Immunization Information

Note: This chapter specifies NCIR message specifications and points out differences from CDC IG. Remember that it is acceptable to further constrain the CDC IG, but not acceptable to loosen the CDC IG.

The CDC IG contains no local business rules. Local business rules can be vitally important to a successful interface between an external system and your specific IIS.

This chapter describes each of the messages built from the segments described in Chapter 5, Segments and Message Details. The Segments are built using the Data Types specified in Chapter 4. Readers are referred to these chapters for specifics on these components.

### Send Immunization History--VXU

Systems may send unsolicited immunization records using a VXU. This may be a record that is new to NCIR or may be an update to an existing record. See Appendix D for example messages that illustrate the processing of this message.

The changes made by NCIR are defined below:

- 1) Local Business rules
  - a. NCIR had some local business rules which are technically outside of HL7 but add value for the sending system to better understand how to exchange data with NCIR.

NCIR applies the following local business rules to VXU messages:

- 1) Any vaccines with a vaccination date prior to the patient’s birth date will be rejected.
- 2) Any vaccines with a vaccination date after the patient’s death date will be rejected.
- 3) Any vaccines with a vaccination date into the future will be rejected as invalid and will not be processed.
- 4) If Incoming birth date is greater than an existing immunization for the client, the incoming client will be pended.
- 5) An organization defined as a Vendor can submit files for organizations defined as their Client. An organization may not submit data for any other organization if that other organization is not defined as a client to their organization. HIE may submit data for any organization.
- 6) If there is no version number found in the MSH segment, or the value is not 2.5.1, the file will not be processed. Error message will be sent.
- 7) If death date is sent but the Patient Indicator in PID-30 is not set to Y, default the Patient Death indicator to Y, reflect the correct status of the patient in all organizations and send a warning message.

A warning message will be sent out if OBX-5 value sets the coverage violation indicator: “OBX-05: Financial Class: A state supplied dose was provided when a private dose should have been provided.” This occurs when publicly funded vaccine lot is administered to a patient who does not have a corresponding eligibility code.

**9. If Observation date (OBX-14) provided in OBX segment is before birth date, the transaction is rejected.**

**Table 6-1-Supported Messages**

Message	Purpose	Related Messages	Associated Profiles	NCIR Supported
VXU	Send Immunization History	ACK		Yes
ACK	Send Message Acknowledgement	VXU, ADT, QBP		Yes

## Send Immunization History--VXU

Systems may send NCIR unsolicited immunization records using a VXU. This may be a record that is new to NCIR or may be an update to an existing record. The following table lists the segments that are part of a VXU.

Table 6-2 VXU Segment Usage is written in the context of a single transaction not a file of transactions.

**Table 6-2--VXU Segment Usage**

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0.. 1]	[0.. 1]	O	O	NCIR will always return this segment on outbound file.
BHS	[0.. 1]	[0.. 1]	O	O	NCIR will always return this segment on outbound file.
MSH	[1..1]	[1..1]	R	R	
SFT	[0..*]		O	X	
PID	[1..1]	[1..1]	R	R	
PD1	[0..1]	[0..1]	RE	RE	NCIR needs PD1 to determine status of the client.
NK1	[0..*]	[0..4]	RE	RE	
PV1	[0..1]	[0..1]	RE	X	NCIR requires Eligibility information be sent in the OBX segment. The PV1 is ignored if sent.
PV2	[0..1]		O	X	
GT1	[0..*]		O	X	
<b>Begin Insurance Group</b>	[0..*]		O	X	
IN1	[0..1]		O	X	
IN2	[0..1]		O	X	

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
IN3	[0..1]		O	X	
<b>End Insurance Group</b>					
<b>Begin Order group</b>	[0..*]	[1..*]	RE	R	NCIR requires at least one RXA per VXU.
ORC	[1..1]	[1..1]	R	R	One per RXA
TQ1	[0..1]		O	X	
TQ2	[0..1]		O	X	
RXA	[1..1]	[1..1]	R	R	
RXR	[0..1]	[0..1]	RE	RE	
<b>Begin Observation Group</b>	[0..*]	[0..*]	RE	RE	
OBX	[0..*]	[0..*]	R	R	
NTE	[0..1]		RE	X	
<b>End Observation Group</b>					
<b>End Order Group</b>					
BTS	[0.. 1]	[0.. 1]	O	C	NCIR will always return this segment on outbound file. (if txn starts with FHS)
FTS	[0.. 1]	[0.. 1]	O	C	NCIR will always return this segment on outbound file. (if txn starts with FHS)

## Acknowledging a Message—ACK

The ACK returns an acknowledgement to the sending system. This may indicate errors in processing.

**Table 6-3 Message Acknowledgement Segment (ACK)**

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0.. 1]	[0.. 1]	O	O	NCIR will always return this segment on outbound file.
BHS	[0.. 1]	[0.. 1]	O	O	NCIR will always return this segment on outbound file.
MSH	[1..1]	[1..1]	R	R	
SFT	[0..1}		O	X	
MSA	[1..1]	[1..1]	R	R	
ERR	[0..*]	[0..*]	RE	C	(Include if any errors)
<b>End Order Group</b>					
BTS	[0.. 1]	[0.. 1]	O	C	NCIR will always return this segment on outbound file. (if txn starts with BHS)
FTS	[0.. 1]	[0.. 1]	O	C	NCIR will always return this segment on outbound file. (if txn starts with BHS)

**Note:** For the general acknowledgment (ACK) message, the value of MSH-9-2-Trigger event is equal to the value of MSH-9-2-Trigger event in the message being acknowledged. The value of MSH-9-3-Message structure for the general acknowledgment message is always ACK.

## Appendix A: Code Tables

### HL7 Values

Appendix Type	Table	Name	Value	Description
HL7	0001	Sex		
	0001		F	Female
	0001		M	Male
	0001		U	Unknown
HL7	0003	Event Type		
	0003		A31	ADT/ACK - Update patient information
	0003		V04	VXU - Unsolicited vaccination record update
User	0005	Race		
	0005		1002-5	American Indian or Alaska Native
	0005		2028-9	Asian
			2076-8	Native Hawaiian or Other Pacific Islander
	0005		2054-5	Black or African-American
	0005		2106-3	Caucasian
	0005		2131-1	Other
	0005		<empty field>	Unknown
HL7	0008	Acknowledgment Code		
	0008		AA	Application Accept
	0008		AE	Application Error
	0008		AR	Application Reject
User	0063	Relationship		
	0063		BRO	Brother
	0063		CHD	Child
	0063		DOM	Life Partner
	0063		EMC	Emergency Contact
	0063		EXF	Extended Family
	0063		FCH	Foster Child
	0063		FTH	Father
	0063		GRD	Guardian
	0063		GRP	Grandparent
	0063		MTH	Mother
	0063		OAD	Other Adult
	0063		OTH	Other
	0063		PAR	Parent
	0063		SCH	Stepchild
	0063		SEL	Self
	0063		SIB	Sibling
	0063		SIS	Sister
	0063		SPO	Spouse
	0063		UNK	Unknown
HL7	0064	Eligibility Code	CH01	North Carolina Health Choice
	0064		IS00	Insured
	0064		IS01	Underinsured (No FQHC/RHC)

Appendix Type	Table	Name	Value	Description
	0064		V02	Medicaid
	0064		V03	Not Insured
	0064		V04	American Indian/Alaskan Native
	0064		NC02	Title X Uninsured Unaccompanied Minor
HL7	0076	Message Type		
	0076		ACK	General acknowledgment message
	0076		ADT	ADT message
	0076		QBP	Query by Parameter
	0076		RSP	Response to Query by parameter
	0076		VXU	Unsolicited vaccination record update
HL7	0085	Observation result status codes		
	0085		F	Final
HL7	0103	Processing ID		
	0103		P	Production
HL7	0104	Version ID		
	0104		2.5.1	Release 2.5.1 April 2007
HL7	0119	Order Control		
			RE	Observations to follow
HL7	0125	Value Type		
	0125		CE	Coded Entry
	0125		NM	Number
	0125		DT	Date
	0125		TS	Time Stamp
HL7	0136	Yes/No Indicator		
	0136		Y	Yes
	0136		N	No
HL7	0155	Accept/Application Acknowledgment Conditions		
	0155		AL	Always
	0155		NE	Never
	0155		ER	Error/reject conditions only
	0155		SU	Successful completion only
HL7	0162	Route of Administration		
	0162		ID	Intradermal
	0162		IM	Intramuscular
	0162		NS	Nasal
	0162		IV	Intravenous
	0162		OTH	Other
	0162		PO	Oral
	0162		SC	Subcutaneous
	0162		TD	Transdermal
HL7	0163	Administrative Site		
	0163		LT	Left Thigh
	0163		LA	Left Arm
	0163		LD	Left Deltoid
	0163		LG	Left Gluteous Medius
	0163		LVL	Left Vastus Lateralis

Appendix Type	Table	Name	Value	Description
	0163		LLFA	Left Lower Forearm
	0163		RA	Right Arm
	0163		RT	Right Thigh
	0163		RVL	Right Vastus Lateralis
	0163		RG	Right Gluteous Medius
	0163		RD	Right Deltoid
	0163		RLFA	Right Lower Forearm
	0163		BN	Bilateral Nares
	0163		LN	Left Nares
	0163		RN	Right Naris
User	0189	Ethnic Group		
	0189		2135-2	Hispanic
	0189		2186-5	Not Hispanic or Latino
	0189		<empty field>	Unknown
HL7	0190	Address Type		
	0190		M	Mailing
HL7	0200	Name type		
	0200		L	Legal name
HL7	0201	Telecommunication use code		
	0201		PRN	Primary residence number
HL7	0203	Identifier Type		
	0203		PI	Patient internal identifier
	0203		SR	State registry ID
	0203		PT	Group Chart Number
User	0215	Publicity Code		
	0215		01	No reminder/recall
	0215		02	Yes reminder/recall – any method
HL7	0227	Manufacturers of vaccines (code = MVX)		
	0227		AB	Abbott Laboratories
	0227		AD	Adams Laboratories
	0227		ALP	Alpha Therapeutic Corporation
	0227		AP	Aventis Pastuer ( <b>Inactive</b> now mapped to PMC and values are sent out as PMC)
	0227		AR	Armour ( <b>Inactive</b> – now mapped to CEN and values are sent out as CEN)
	0227		AVB	Aventis Behring LLC ( <b>Inactive</b> – now mapped to CSL and values are sent out as CSL)
	0227		AVI	Aviron
	0227		BA	Baxter ( <b>Inactive</b> – now mapped to BAH and values are sent out as BAH)
	0227		BAH	Baxter Healthcare Corporation
	0227		BAY	Bayer
	0227		BP	Berna ( <b>Inactive</b> – now mapped to BPC and values are sent out as BPC)
	0227		BPC	Berna Products Corporation
	0227		CEN	Centeon L.L.C. ( <b>Inactive</b> – now mapped to AVB and values are sent out as AVB)

Appendix Type	Table	Name	Value	Description
	0227		CHI	Chiron Corporation ( <b>Inactive</b> – now mapped to NOV and values are sent out as NOV)
	0227		CNJ	Cangene Corporation
	0227		CON	Connaught ( <b>Inactive</b> – now mapped to PMC and values are sent out as PMC)
	0227		CSL	CSL Biotherapies
	0227		DVC	DynPort Vaccine Company, LLC
	0227		EVN	Evans ( <b>Inactive</b> – now mapped to WJ and values are sent out as PWJ)
	0227		GEO	GeoVax Labs, Inc
	0227		GRE	Greer Laboratories
	0227		IAG	Immuno International AG ( <b>Inactive</b> – now mapped to BAH and values are sent out as BAH)
	0227		IDB	ID Biomedical
	0227		IM	Merieux ( <b>Inactive</b> – now mapped to PMC and values are sent out as PMC)
	0227		INT	Intercell Biomedical
	0227		IUS	Immuno-US
	0227		JPN	The Research foundation for Microbial Diseases of Osaka U.
	0227		KGC	Korea Green Cross
	0227		LED	Lederle ( <b>Inactive</b> – now mapped to WAL and values are sent out as WAL)
	0227		MA	Massachusetts Public Health ( <b>Inactive</b> – now mapped to MBL and values are sent out as MBL)
	0227		MBL	Massachusetts Biologic Laboratories
	0227		MED	MedImmune, Inc.
	0227		MIL	Miles ( <b>Inactive</b> – now mapped to BAY and values are sent out as BAY)
	0227		MIP	BioPort Corporation
	0227		MSD	Merck & Co., Inc.
	0227		NAB	North American Biologicals, Inc.
	0227		NAV	North American Vaccine ( <b>Inactive</b> – now mapped to BAH and values are sent out as BAH)
	0227		NVX	Novavax, Inc
	0227		NYB	New York Blood Center
	0227		NOV	Novartis Pharmaceutical Corporation
	0227		OTC	Organon Teknika
	0227		ORT	Ortho-Clinical Diagnostics
	0227		PD	Parkedale Pharmaceuticals (formerly Parke Davis)
	0227		PFR	Pfizer, Inc.
	0227		PMC	Sanofi Pasteur (formerly Aventis Pasteur, Pasteur Merieux Connaught)
	0227		PRX	Praxis Biologics ( <b>Inactive</b> – now mapped to WAL and values are sent out as WAL)
	0227		PSC	Protein Sciences Corporation
	0227		PWJ	Powderject Pharmaceutical ( <b>Inactive</b> – now mapped to NOV and values are sent out as NOV)
	0227		SA	United States Army Medical Research ( <b>Inactive</b> – now mapped to USA and values are sent out as USA)
	0227		SCL	Biocene Sclavo
	0227		SKB	Glaxo SmithKline
	0227		SI	Swiss Serum and Vaccine Inst. ( <b>Inactive</b> – now mapped to BPC and values are sent out as BPC)
	0227		SOL	Solvay Pharmaceuticals
	0227		TAL	Talecris Biotherapeutics (includes Bayer Biologicals)

Appendix Type	Table	Name	Value	Description
	0227		USA	United States Army Medical Research
	0227		WA	Wyeth-Ayerst ( <b>Inactive</b> – now mapped to WAL and values are sent out as WAL)
	0227		WAL	Wyeth-Ayerst
	0227		VXG	VaxGen
	0227		ZLB	ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Company)
	0227		OTH	Other
	0227		UNK	Unknown manufacturer
User	0289	County (North Carolina only)		
	0289		NC001 or 37001	Alamance
	0289		NC003 or 37003	Alexander
	0289		NC005 or 37005	Alleghany
	0289		NC007 or 37007	Anson
	0289		NC009 or 37009	Ashe
	0289		NC011 or 37011	Avery
	0289		NC013 or 37013	Beaufort
	0289		NC015 or 37015	Bertie
	0289		NC017 or 37017	Bladen
	0289		NC019 or 37019	Brunswick
	0289		NC021 or 37021	Buncombe
	0289		NC023 or 37023	Burke
	0289		NC025 or 37025	Cabarrus
	0289		NC027 or 37027	Caldwell
	0289		NC029 or 37029	Camden
	0289		NC031 or 37031	Carteret
	0289		NC033 or 37033	Caswell
	0289		NC035 or 37035	Catawba
	0289		NC037 or 37037	Chatham

Appendix Type	Table	Name	Value	Description
	0289		NC039 or 37039	Cherokee
	0289		NC041 or 37041	Chowan
	0289		NC043 or 37043	Clay
	0289		NC045 or 37045	Cleveland
	0289		NC047 or 37047	Columbus
	0289		NC049 or 37049	Craven
	0289		NC051 or 37051	Cumberland
	0289		NC053 or 37053	Currituck
	0289		NC055 or 37055	Dare
	0289		NC057 or 37057	Davidson
	0289		NC059 or 37059	Davie
	0289		NC061 or 37061	Duplin
	0289		NC063 or 37063	Durham
	0289		NC065 or 37065	Edgecombe
	0289		NC067 or 37067	Forsyth
	0289		NC069 or 37069	Franklin
	0289		NC071 or 37071	Gaston
	0289		NC073 or 37073	Gates
	0289		NC075 or 37075	Graham
	0289		NC077 or 37077	Granville
	0289		NC079 or 37079	Greene
	0289		NC081 or 37081	Guilford
	0289		NC083 or 37083	Halifax
	0289		NC085 or 37085	Harnett

Appendix Type	Table	Name	Value	Description
	0289		NC087 or 37087	Haywood
	0289		NC089 or 37089	Henderson
	0289		NC091 or 37091	Hertford
	0289		NC093 or 37093	Hoke
	0289		NC095 or 37095	Hyde
	0289		NC097 or 37097	Iredell
	0289		NC099 or 37099	Jackson
	0289		NC101 or 37101	Johnston
	0289		NC103 or 37103	Jones
	0289		NC105 or 37105	Lee
	0289		NC107 or 37107	Lenoir
	0289		NC109 or 37109	Lincoln
	0289		NC111 or 37111	McDowell
	0289		NC113 or 37113	Macon
	0289		NC115 or 37115	Madison
	0289		NC117 or 37117	Martin
	0289		NC119 or 37119	Mecklenburg
	0289		NC121 or 37121	Mitchell
	0289		NC123 or 37123	Montgomery
	0289		NC125 or 37125	Moore
	0289		NC127 or 37127	Nash
	0289		NC129 or 37129	New Hanover
	0289		NC131 or 37131	Northampton
	0289		NC133 or 37133	Onslow

Appendix Type	Table	Name	Value	Description
	0289		NC135 or 37135	Orange
	0289		NC137 or 37137	Pamlico
	0289		NC139 or 37139	Pasquotank
	0289		NC141 or 37141	Pender
	0289		NC143 or 37143	Perquimans
	0289		NC145 or 37145	Person
	0289		NC147 or 37147	Pitt
	0289		NC149 or 37149	Polk
	0289		NC151 or 37151	Randolph
	0289		NC153 or 37153	Richmond
	0289		NC155 or 37155	Robeson
	0289		NC157 or 37157	Rockingham
	0289		NC159 or 37159	Rowan
	0289		NC161 or 37161	Rutherford
	0289		NC163 or 37163	Sampson
	0289		NC165 or 37165	Scotland
	0289		NC167 or 37167	Stanly
	0289		NC169 or 37169	Stokes
	0289		NC171 or 37171	Surry
	0289		NC173 or 37173	Swain
	0289		NC175 or 37175	Transylvania
	0289		NC177 or 37177	Tyrrell
	0289		NC179 or 37179	Union
	0289		NC181 or 37181	Vance

Appendix Type	Table	Name	Value	Description
	0289		NC183 or 37183	Wake
	0289		NC185 or 37185	Warren
	0289		NC187 or 37187	Washington
	0289		NC189 or 37189	Watauga
	0289		NC191 or 37191	Wayne
	0289		NC193 or 37193	Wilkes
	0289		NC195 or 37195	Wilson
	0289		NC197 or 37197	Yadkin
	0289		NC199 or 37199	Yancey
	0289		ZZ998 or 37998	Unknown
	0289		ZZ999 or 37999	Out of State
HL7	0292	Vaccines Administered (CVX Codes)		
	0292		54	Adeno T4
	0292		55	Adeno T7
	0292		82	Adeno, unspecified formulation
	0292		24	Anthrax
	0292		19	BCG
	0292		26	Cholera
	0292		28	DT-Peds
	0292		20	DTaP
	0292		106	DTaP, 5 pertussis antigen
	0292		110	DTaP-HepB-Polio
	0292		50	DTaP-Hib
	0292		120	DTap-Hib-IPV
	0292		130	DTap-IPV
	0292		107	DTaP, unspecified formulation
	0292		01	DTP
	0292		22	DTP-Hib
	0292		111	FLU-Nasal
	0292		16	FLU whole cell
	0292		85	Hep A, unspecified formulation
	0292		45	Hep B, unspecified formulation
	0292		52	HepA-Adult
	0292		104	HepA-HepB Adult

Appendix Type	Table	Name	Value	Description
	0292		83	HepA-Ped 2 dose
	0292		84	HepA-Peds
	0292		43	HepB-Adult
	0292		44	HepB-Dialysis
	0292		08	HepB-Peds
	0292		51	HepB-Hib
	0292		17	Hib, unspecified formulation
	0292		47	Hib-HbOC
	0292		148	Hib-MenCY-TT
	0292		49	Hib-OMP
	0292		46	Hib-PRP-D
	0292		48	Hib-PRP-T
	0292		165	HPV9
	0292		118	HPV, Bivalent
	0292		62	HPV, quadrivalent
	0292		137	HPV, unspecified formulation
	0292		151	Influenza nasal, unspecified formulation
	0292		135	Influenza, High-Dose Seasonal
	0292		166	Influenza, intradermal, IIV4, pres-free
	0292		155	Influenza, recombinant, seasonal, IM, pf
	0292		158	Influenza, seasonal, IIV4 IM
	0292		161	Influenza, seasonal, IIV4, IM, pf, peds
	0292		150	Influenza, seasonal, IIV4, IM, pres-free
	0292		141	Influenza, seasonal, injectable
	0292		144	Influenza, seasonal, intradermal, p-free
	0292		149	Influenza, seasonal, LAIV4, IN
	0292		153	Influenza, seasonal, MDCK, IM, pres-free
	0292		140	Influenza, seasonal, preservative free
	0292		88	Influenza, unspecified formulation
	0292		134	Japanese Encephalitis IM
	0292		39	Japanese Encephalitis SC
	0292		129	Japanese Encephalitis, unspecified
	0292		66	Lyme
	0292		147	MCV4, unspecified formulation
	0292		05	Measles
	0292		04	Measles-Rubella
	0292		162	Meningococcal B, recombinant
	0292		163	Meningococcal B, OMV
	0292		164	Meningococcal B, unspecified formulation
	0292		103	Meningococcal C conjugate
	0292		136	Meningococcal conjugate MCV4O
	0292		114	Meningococcal conjugate MCV4P
	0292		32	Meningococcal Polysaccharide MPSV4
	0292		108	Meningococcal, unspecified formulation
	0292		03	MMR
	0292		94	MMRV
	0292		07	Mumps

Appendix Type	Table	Name	Value	Description
	0292		127	Novel Influenza-H1N1-09
	0292		128	Novel Influenza-H1N1-09 all formulations
	0292		125	Novel Influenza-H1N1-09, nasal
	0292		126	Novel Influenza-H1N1-09, preseve-free
	0292		11	Pertussis
	0292		23	Plague
	0292		133	Pneumococcal Conjugate 13
	0292		100	Pneumococcal Conjugate 7
	0292		33	Pneumococcal Polysaccharide 23
	0292		109	Pneumococcal, unspecified formulation
	0292		89	Polio, unspecified formulation
	0292		10	Polio-Inject
	0292		02	Polio-Oral
	0292		90	Rabies, unspecified formulation
	0292		40	Rabies-ID
	0292		18	Rabies-IM
	0292		116	Rotavirus pentavalent
	0292		119	Rotavirus, monovalent
	0292		74	Rotavirus, tetravalent
	0292		122	Rotavirus, unspecified formulation
	0292		06	Rubella
	0292		38	Rubella-Mumps
	0292		75	Smallpox
	0292		138	Td (adult)
	0292		09	TD (adult), adsorbed
	0292		139	Td (adult), unspecified formulation
	0292		113	Td adult preservative free
	0292		115	Tdap
	0292		35	Tetanus
	0292		112	Tetanus toxoid, unspecified formulation
	0292		91	Typhoid, unspecified formulation
	0292		53	Typhoid-AKD
	0292		41	Typhoid-HP
	0292		25	Typhoid-Oral
	0292		101	Typhoid-ViCPs
	0292		105	Vaccinia (smallpox), diluted
	0292		21	Varicella
	0292		37	Yellow fever
	0292		121	Zoster vaccine, live
HL7	0296	Primary Language		
	0296		ENG	English
	0296		HMN	Hmong
	0296		SOM	Somali
	0296		SPA	Spanish
HL7	0322	Completion Status		
	0322		CP	Complete
	0322		RE	Refused

Appendix Type	Table	Name	Value	Description
	0322		NA	Not Administered
	0322		PA	Partially Administered
	0322		DE	Date Estimated
HL7	0323	Action Code		
	0323		A	Add
	0323		D	Delete
HL7	0357	Message error status codes		
	0357		100	Segment sequence error
	0357		101	Required field missing
	0357		102	Data type error
	0357		103	Table value not found
	0357		200	Unsupported message type
	0357		201	Unsupported event code
	0357		202	Unsupported processing ID
	0357		203	Unsupported version ID
	0357		204	Unknown key identifier
	0357		205	Duplicate key identifier
	0357		206	Application record locked
	0357		207	Application internal error
HL7	0363	Assigning Authority		
	0363		NCA	North Carolina Authority
HL7	0441	Immunization Registry Status		
	0441		A	Active
	0441		I	Inactive
	0441		P	Permanently Inactive-Deceased
HL7	0516	Error Severity		
	0516		W	Warning
	0516		I	Information
	0516		E	Error
	0533		207.4	Record pended. The client matched has existing immunizations given earlier than incoming birth date.
	0533		207.5	OBX-5 The VIS publication date was not found for this vaccine or vaccine group. No data saved.
	0533		207.6	ERROR: Delete refusal transactions are not permitted for this organization.
	0533		207.7	Record rejected. Comment must be deleted by owning provider organization.
	0533		207.8	Record rejected. No matching comment was found to delete.
	0533		207.9	The incoming delete immunization does not match an existing immunization in NCIR. This delete was not processed.
	0533		207.10	The sending provider organization does not own the existing matched inventory immunization. This delete was not processed.
	0533		207.11	RXA-6 DEDUCT ERROR. Dose size greater the 2 times the vaccine lot dose quantity. Immunization processed as Owned Non-deducting

Appendix Type	Table	Name	Value	Description
	0533		207.12	The incoming client matches an existing candidate. Existing candidate client id is <client-id>.
	0533		207.13	The incoming client matches more than one existing candidate. Existing candidate client ids include <client-ids>.
	0533		207.14	NK1-20: Primary language of responsible person <last name> defaulted to English.
	0533		207.15	INFORMATIONAL Message. Incoming Immunization Likely a match to existing Immunization
	0533		207.16	Inventory immunization is a duplicate of another incoming inventory immunization.
	0533		207.17	PV1:20 Provide eligibility code in OBX
	0533		207.18	Information error - Invalid street address <Street Address>. No Address values stored.
	0533		207.20	NK1-4 Informational error - Invalid city <City>. No value stored.
	0533		207.21	NK1-4 Informational error - Invalid state code <State>. No value stored.
	0533		207.22	PID-3 Record Rejected - Invalid first name <First Name>.
	0533		207.23	PID-3 Record Rejected - Invalid Last Name <Last Name>.
	0533		207.24	PID-3 Informational error - Invalid middle name <Middle Name>). No value stored.
	0533		207.26	Informational error - Invalid responsible party first name <First Name>. No value stored.
	0533		207.27	Informational error - Invalid responsible party middle name <Middle Name>. No value stored.
	0533		207.28	Informational error - Invalid responsible party last name <Last Name>. No value stored.
	0533		207.29	PID-6 Informational error - Invalid mother's first name <First Name> . No value stored.
	0533		207.30	PID-6 Informational error - Invalid mother's maiden name <Last Name>. No value stored.
	0533		207.35	Message rejected. Client first name must be greater than one character in length.
	0533		207.36	Message rejected. Client last name must be greater than one character in length.
	0533		207.37	Informational error - Invalid administered by last name <Last Name>. No value stored.
	0533		207.38	PID-5 Message rejected. <Last Name> is not a valid last name.
	0533		207.39	PID-5 Message rejected. <First Name> is not a valid first name.
	0533		207.40	DEDUCT ERROR. Lot has insufficient inventory for inventory deduction. Immunization processed as Owned Non-deducting.
	0533		207.41	RXA-16 DEDUCT WARNING. Vaccine Lot Expiration Date does not match
	0533		207.42	DEDUCT WARNING. Immunization Date is after Lot Expiration.
	0533		207.43	DEDUCT WARNING: Reactivating the inactive vaccine lot. Immunization processed as Owned Non deducting.
	0533		207.44	Record rejected. This comment matches another comment in incoming file.
	0533		207.45	Record rejected. This reaction matches another reaction for same immunization in incoming file.
	0533		207.46	INFORMATIONAL Message. Incoming Immunization saved but might be a duplicate
	0533		207.47	Rejected Inventory. Incoming is a duplicate of an existing immunization.

Appendix Type	Table	Name	Value	Description
	0533		207.48	Inventory Warning. Incoming is possibly a duplicate of an existing immunization.
	0533		207.49	Record rejected. This immunization matches another immunization in incoming file. The incoming immunization that this system retained may be identified by the following characteristics -> <Vaccination Date> + <CPT Code> + <TradeName>.
	0533		207.50	The incoming delete immunization does not match an existing immunization. This delete was not processed.
	0533		207.53	No Vaccine Lot Found with Search Args: Site Id: <Site Id> + TradeName: <TradeName> + LotNum: <Lot Number>+
	0533		207.54	No Vaccine Lot Found with Search Args: Site Id: <Site Id> + TradeName: <TradeName> + LotNum: <Lot Number> + Fund Code: <Fund Code>. Setting to Owned Non Deducting
	0533		207.55	ERROR: Maximum number of Web Service delete refusal transactions has been exceeded.
	0533		207.56	ERROR: Maximum number of delete refusal transactions has been exceeded in this file.
	0533		207.57	ERROR: Maximum number of Web Service delete immunization transactions has been exceeded.
	0533		207.58	ERROR: Maximum number of delete immunization transactions has been exceeded in this file.
	0533		207.59	Only up to 4 responsible persons accepted.
	0533		207.60	DEDUCT INFO: Multiple matching vaccine lots found, using the oldest. Vaccine Lot id:<Vaccine Lot ID>
	0533		207.63	DEDUCT ERROR. Not valid Multiplier for Vaccine Lot. Immunization processed as Owned Non-deducting.
	0533		207.65	INFORMATIONAL ERROR: Immunization is being combined with another incoming inventory immunization.
	0533		207.66	INFORMATIONAL ERROR: Immunization is being combined with another incoming immunization.
	0533		207.67	MSH-4 Record rejected. The provider organization that initiated this data exchange is not identified as a parent or vendor of the organization that it labeled as the "SENDING PROVIDER ORGANIZATION" for this record.
	0533		207.68	Informational error - Trade Name <Trade Name> not produced by manufacturer <Manufacturer>. Defaulting to unknown manufacturer.
	0533		207.70	TradeNameId Not found for <Manufacturer ID> + <Vaccine ID> + <CVX Code> + <CPT Code>.
	0533		207.72	OBX-05:Eligibility code NC02 is only valid if the owning organization is Title X Eligible. Eligibility ignored.
	0533		207.73	OBX-05: Financial Class: A state supplied dose was provided when a private dose should have been provided.
	0533		207.76	ERROR: Delete immunization transactions are not permitted for this organization.
	0533		207.77	PID-13: Please provide patient phone number in NK1 segment.
	0533		207.79	Eligibility required. Immunization processed as owned non-deduct.
	0533		207.80	Cannot Deduct quantity 0. Incomplete Vaccine and/or Trade Name set up. Contact DX Helpdesk to correct set up.
	0533		207.82	Record rejected. Both owning provider organization id and initiating provider organization id are 0.
	0533		207.87	Informational error - Invalid Suffix <Name Suffix>. No value Stored.
	0533		207.88	The incoming client information has been saved <client id> for review by a State BA, who will decide the appropriate existing client to match to.

Appendix Type	Table	Name	Value	Description
	0533		207.89	The incoming client information has NOT been saved because of the \"Record Rejected\" error(s).
	0533		207.92	PID-11: Invalid Address Type: <Address Type>. Defaulting to M.
	0533		207.93	Number of candidates exceeds the limit submitted in RCP-2 or system limit of 20.
	0533		207.96	NK1-Responsible person required in the NCIR. No NK1 segment provided.
	0533		207.97	Contact address and/or phone number required. Please send address and/or phone number.
NIP	NIP001	Immunization information source		
	NIP001		00	New immunization record
	NIP001		01	Historical information – source unspecified
NIP	NIP002	Substance Refusal Reason		
	NIP002		00	Parental Refusal
	NIP002		01	Religious Exemption
NIP	NIP003	Observation identifiers		Use in OBX-3)
	NIP003		29768-9	Date Vaccine Information Statement Published
	NIP003		29769-7	Date Vaccine Information Statement Presented
	NIP003		64994-7	Vaccine funding program (Eligibility code) See table 0064.
	NIP003		30956-7	Vaccine Type (Vaccine group or family) CVX codes values from table HL70292.
	NIP003		38890-0	Component Vaccine Type CVX codes values from table HL70292.
	NIP003		30963-3	Funds vaccine purchased with See Immunization Funding Source values below.
	NIP003		30945-0	Vaccination contraindication/precaution See Contraindications, Precautions below.
	NIP003		31044-1	Reaction See Reaction Codes below.
	NIP003		59784-9	Disease with presumed immunity See Evidence of Immunity below.
	NIP003		59785-6	Indications to immunize See Vaccination Special Indications below
NIP	NIP003	Immunization Funding Source (OBX-3 LOINC code: <b>30963-3</b> )		
	CDCPHINVS		PHC70	Private funds
	CDCPHINVS		VXC1 or VXC2	State-supplied funds
NIP	NIP004	Contraindications, Precautions (OBX-3 LOINC code: <b>30945-0</b> )		
	L		01	Recipient condition – unspecified
	L		02	Household condition – unspecified
	L		11	Collapse or shock like state within 48 hours of previous dose of DTP/DTaP
	L		12	Convulsions (sits, seizures) within 3 days of previous dose of DTP/DTaP

Appendix Type	Table	Name	Value	Description
	L		13	Persistent, inconsolable crying lasting 3 hours within 48 hours of previous dose of DTP/DTaP
	L		14	Current diarrhea, moderate to severe
	L		17	Fever >= 40.5° C (105° F) within 48 hours of previous dose of DTP/DTaP
	L		18	Guillain-Barré Syndrome (GBS) within 6 weeks after DTP/DTaP
	L		23	Recent or simultaneous administration of an antibody-containing blood product (immune globulin)
	L		38	Otitis media (ear infection) moderate to severe (with or without fever)
	L		42	Household contact of infant < 6 months
	L		43	High risk condition of influenza
	L		R1	Clinician has decided to repeat the DTaP series
	L		R2	Clinician has decided to repeat the Hep B series
	L		R3	Clinician has decided to repeat the HIB series
	L		R4	Clinician has decided to repeat the Polio series
	L		R5	Clinician has decided to repeat the MMR series
	L		R6	Clinician has decided to repeat the Pneumococcal series
	L		R7	Clinician has decided to repeat the Varicella series
	L		R8	Clinician has decided to repeat the Meningo series
	L		R9	Clinician has decided to repeat the Rotavirus series
	L		R10	Clinician has decided to repeat the HPV series
	L		R11	Clinician has decided to repeat the HepA series
	L		R12	Clinician has decided to repeat the Zoster series
	L		R13	Clinician has decided to repeat the Influenza series
	SCT		91930004	Allergy to egg ingestion (anaphylactic)
	SCT		294847001	Allergy to gelatin (anaphylactic)
	SCT		294468006	Allergy to neomycin (anaphylactic)
	SCT		294466005	Allergy to streptomycin (anaphylactic)
	SCT		27624003	Chronic illness
	SCT		77386006	Pregnancy (in recipient) – refer to CDC guidelines for vaccinating pregnant women
	SCT		302215000	Thrombocytopenia
	SCT		161461006	Thrombocytopenia purpura (history)
	CDCPHINVS		VXC18	Allergy to baker's yeast (anaphylactic)
	CDCPHINVS		VXC19	Allergy to Thimerosal - refer to package insert (anaphylactic)
	CDCPHINVS		VXC20	Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic)
	CDCPHINVS		VXC22	Encephalopathy within 7 days of previous dose of DTP or DTAP
	CDCPHINVS		VXC23	Current fever with moderate-to-severe illness
	CDCPHINVS		VXC24	Current acute illness, moderate to severe (with or without fever)
	CDCPHINVS		VXC26	Unstable neurologic disorder, until neurological status clarified and stabilized
	CDCPHINVS		VXC27	Immunodeficiency due to any cause
		(OBX-3 LOINC code: <b>59784-9</b> )		
	L		33	Immunity: Varicella – Evidence prior to 7/1/2015, Laboratory-tested or history of varicella disease (Chicken pox)

Appendix Type	Table	Name	Value	Description
	L		44	Immunity: Varicella – Laboratory-tested Confirmation
	SCT		371111005	Immunity: Measles protective antibody titer serologically proven
	SCT		371112003	Immunity: Mumps
	SCT		278968001	Immunity: Rubella
	SCT		371113008	Immunity: Varicella - Serology-tested Confirmed Protective Antibody
	SCT		38907003	Immunity: Varicella – Provider Verified History
	CDCPHINVS	(OBX-3 LOINC code: <b>59785-6</b> )	VXC7	Client has been exposed to rabies
NCIR	NCIR001	Reaction Codes (OBX-3 LOINC code: <b>31044-1</b> )		
	NCIR001		81308009	Encephalopathy within 7 days
	NCIR001		VXC13	Guillain-Barre syndrome (GBS) within 6 weeks
	NCIR001		VXC9	Persistent inconsolable crying lasting 3 hours or more within 48 hours
	NCIR001		VXC10	Collapse or shock-like state within 48 hours of dose
	NCIR001		VXC11	Convulsions (fits, seizures) within 72 hours of dose
	NCIR001		VXC12	Fever of >40.5C (105F) within 48 hours
	NCIR001		39579001	Allergic reaction to this vaccine or to any of its unlisted vaccine components (anaphylactic)
NCIR	VTN	Vaccine Trade Name (VTN)	ACEL-IMUNE	Acel-Imune
	VTN		ACTHIB	ActHib
	VTN		ADACEL	ADACEL
	VTN		ADENO T4	ADENO T4
	VTN		ADENO T7	ADENO T7
	VTN		AFLURIA PRES-FREE	AFLURIA PRES-FREE
	VTN		AFLURIA	AFLURIA
	VTN		AGRIFLU PRES-FREE	AGRIFLU PRES-FREE
	VTN		ANTHRAX	ANTHRAX
	VTN		ATTENUVAX	ATTENUVAX
	VTN		BCG-CANCER	BCG-CANCER
	VTN		BCG-TB	BCG-TB
	VTN		BERNA/TY21A	BERNA/TY21A
	VTN		BEXSERO	BEXSERO
	VTN		BIAVAX II	BIAVAX II
	VTN		BOOSTRIX	BOOSTRIX
	VTN		CERTIVA	CERTIVA
	VTN		CERVARIX	CERVARIX
	VTN		CHOLERA-I	CHOLERA-I
	VTN		CHOLERA-O	CHOLERA-O
	VTN		COMVAX	COMVAX
	VTN		DAPTACEL	DAPTACEL
	VTN		DECAVAC	DECAVAC

Appendix Type	Table	Name	Value	Description
	VTN		DIPHTHERIA	DIPHTHERIA
	VTN		DRYVAX	DRYVAX
	VTN		DT	DT
	VTN		DTP	DTP
	VTN		ENGERIX-B ADULT	ENGERIX-B ADULT
	VTN		ENGERIX-B DIALYSIS	ENGERIX-B DIALYSIS
	VTN		ENGERIX-B PEDS	ENGERIX-B PEDS
	VTN		FLU NASAL, UNSPECIFIED	Influenza nasal, unspecified formulation
	VTN		FLUARIX IIV4 PRES-FREE	FLUARIX IIV4 PRES-FREE
	VTN		FLUARIX PRES-FREE	FLUARIX PRES-FREE
	VTN		FLUBLOK RIV3 PRES-FREE	FLUBLOK RIV3 PRES-FREE
	VTN		FLUCELVAX IIV3 PRES-FREE	FLUCELVAX IIV3 PRES-FREE
	VTN		FLULAVAL	FLULAVAL
	VTN		FLULAVAL IIV4	FLULAVAL IIV4
	VTN		FLULAVAL IIV4 PRES-FREE	FLULAVAL IIV4 PRES-FREE
	VTN		FLUMIST LAIV4	FLUMIST LAIV4
	VTN		FLUMIST	FLUMIST
	VTN		FLUVIRIN PRES-FREE	FLUVIRIN PRES-FREE
	VTN		FLUVIRIN	FLUVIRIN
	VTN		FLUZONE HIGH-DOSE	FLUZONE HIGH-DOSE
	VTN		FLUZONE IIV4	FLUZONE IIV4
	VTN		FLUZONE IIV4 P-FREE, PED	FLUZONE IIV4 P-FREE, PED
	VTN		FLUZONE IIV4 PRES-FREE	FLUZONE IIV4 PRES-FREE
	VTN		FLUZONE ID IIV4 PF	Fluzone Intradermal IIV4 Pres-Free
	VTN		FLUZONE INTRADERMAL PF	Fluzone Intradermal Pres-Free
	VTN		FLUZONE PRES-FREE	FLUZONE PRES-FREE
	VTN		FLUZONE	FLUZONE

Appendix Type	Table	Name	Value	Description
	VTN		GARDASIL	GARDASIL
	VTN		GARDASIL 9	GARDASIL 9
	VTN		H1N1 CSL P-FREE .25	H1N1 CSL P-FREE .25
	VTN		H1N1 CSL P-FREE .5	H1N1 CSL P-FREE .5
	VTN		H1N1 CSL	H1N1 CSL
	VTN		H1N1 IDB	H1N1 IDB
	VTN		H1N1 MEDIMMUNE, NASAL	H1N1 MEDIMMUNE, NASAL
	VTN		H1N1 NOVARTIS P-FREE	H1N1 NOVARTIS P-FREE
	VTN		H1N1 NOVARTIS	H1N1 NOVARTIS
	VTN		H1N1 SANOFI P-FREE .25	H1N1 SANOFI P-FREE .25
	VTN		H1N1 SANOFI P-FREE .5	H1N1 SANOFI P-FREE .5
	VTN		H1N1 SANOFI	H1N1 SANOFI
	VTN		HAVRIX- ADULT	HAVRIX-ADULT
	VTN		HAVRIX-PEDS 2 DOSE	HAVRIX-PEDS 2 DOSE
	VTN		HAVRIX-PEDS 3 DOSE	HAVRIX-PEDS 3 DOSE
	VTN		HIBERIX	HIBERIX
	VTN		HIB-TITER	HIB-TITER
	VTN		IMOVAX RABIES ID	IMOVAX RABIES ID
	VTN		IMOVAX RABIES IM	IMOVAX RABIES IM
	VTN		INFANRIX	INFANRIX
	VTN		IPOL	IPOL
	VTN		IXIARO	IXIARO
	VTN		JE-VAX	JE-VAX
	VTN		KINRIX	KINRIX
	VTN		LYMERIX	LYMERIX
	VTN		MCV4, UNSPECIFIED	MCV4, unspecified formulation
	VTN		MEASLES	MEASLES
	VTN		MEASLES- RUBELLA (MERU)	MEASLES-RUBELLA (MERU)
	VTN		MENACTRA	MENACTRA
	VTN		MENHIBRIX	MENHIBRIX
	VTN		MENOMUNE	MENOMUNE

Appendix Type	Table	Name	Value	Description
	VTN		MENVEO	MENVEO
	VTN		MERUVAX II	MERUVAX II
	VTN		MMR II	MMR II
	VTN		M-R-VAX	M-R-VAX
	VTN		MUMPS	MUMPS
	VTN		MUMPS- RUBELLA (MURU)	MUMPS-RUBELLA (MURU)
	VTN		MUMPSVAX	MUMPSVAX
	VTN		OMNIHIB	OMNIHIB
	VTN		ORIMUNE	ORIMUNE
	VTN		PEDIARIX	PEDIARIX
	VTN		PEDVAXHIB	PEDVAXHIB
	VTN		PENTACEL	PENTACEL
	VTN		PLAGUE	PLAGUE
	VTN		PNEUMOVAX 23	PNEUMOVAX 23
	VTN		PNU-IMUNE 23	PNU-IMUNE 23
	VTN		PREVNAR 13	PREVNAR 13
	VTN		PREVNAR 7	PREVNAR 7
	VTN		PROHIBIT	PROHIBIT
	VTN		PROQUAD	PROQUAD
	VTN		QUADRACEL	QUADRACEL
	VTN		RABAVERT	RABAVERT
	VTN		RECOMBIVAX- PEDS	RECOMBIVAX-PEDS
	VTN		RECOMBIVAX- ADULT	RECOMBIVAX-ADULT
	VTN		RECOMBIVAX- DIALYSIS	RECOMBIVAX-DIALYSIS
	VTN		ROTARIX	ROTARIX
	VTN		ROTASHIELD	ROTASHIELD
	VTN		ROTATEQ	ROTATEQ
	VTN		RUBELLA	RUBELLA
	VTN		TD	TD
	VTN		TD- MASSBIOLAB	TD-MASSBIOLAB
	VTN		TD-PRES- FREE	TD-PRES-FREE
	VTN		TENIVAC	TENIVAC
	VTN		TETRAMUNE	TETRAMUNE
	VTN		TRIHIBIT	TRIHIBIT
	VTN		TRIPEDIA	TRIPEDIA
	VTN		TRUMENBA	TRUMENBA
	VTN		TT	TT
	VTN		TWINRIX	TWINRIX

Appendix Type	Table	Name	Value	Description
	VTN		TYPHIM VI	TYPHIM VI
	VTN		TYPHOID	TYPHOID
	VTN		TYPHOID-AKD	TYPHOID-AKD
	VTN		VACCINIA, DILUTED	VACCINIA, DILUTED
	VTN		VAQTA-ADULT	VAQTA-ADULT
	VTN		VAQTA-PEDS 2 DOSE	VAQTA-PEDS 2 DOSE
	VTN		VAQTA-PEDS 3 DOSE	VAQTA-PEDS 3 DOSE
	VTN		VARIVAX	VARIVAX
	VTN		YF-VAX	YF-VAX
	VTN		ZOSTAVAX	ZOSTAVAX
NCIR	CPT	Vaccines Administered (CPT Codes)		
	CPT		90476	Adeno T4
	CPT		90477	Adeno T7
	CPT		90581	Anthrax
	CPT		90586	BCG-BC
	CPT		90585	BCG-TB
	CPT		90725	Cholera-Inject
	CPT		90592	Cholera-Oral
	CPT		90719	Diphtheria
	CPT		90702	DT-Peds
	CPT		90700	DTaP
	CPT		90723	DTaP/Polio/Hep B
	CPT		90721	DTaP-Hib
	CPT		90698	Dtap-Hib-IPV
	CPT		90696	DTaP-IPV
	CPT		90701	DTP
	CPT		90720	DTP-Hib
	CPT		90659	FLU whole cell
	CPT		90660	FLU-Nasal
	CPT		90632	HepA Adult
	CPT		90633	HepA Ped-2 dose
	CPT		90634	HepA Ped-3 dose
	CPT		90636	HepA-HepB Adult
	CPT		90743	HepB adolescent – 2 dose
	CPT		90746	HepB-Adult
	CPT		90740	HepB-Dialysis 3 dose
	CPT		90747	HepB-Dialysis 4 dose
	CPT		90748	HepB-Hib
	CPT		90744	HepB-Peds
	CPT		90645	Hib-HbOC
	CPT		90644	Hib-MenCY-TT

Appendix Type	Table	Name	Value	Description
	CPT		90647	Hib-OMP
	CPT		90646	Hib-PRP-D
	CPT		90648	Hib-PRP-T
	CPT		90651	HPV9
	CPT		90650	HPV, bivalent
	CPT		90649	HPV, quadrivalent
	CPT		90630	Influenza, intradermal, IIV4, pres-free
	CPT		90687	Influenza, seasonal, IIV4, IM (Age >= 6 M < 3Y)
	CPT		90688	Influenza, seasonal, IIV4, IM (Age = 3 Y & up)
	CPT		90685	Influenza, seasonal, IIV4, IM, pf, peds (Age >= 6 M < 3Y)
	CPT		90686	Influenza, seasonal, IIV4, IM, pres-free (Age = 3 Y & up)
	CPT		90672	Influenza, seasonal, LAIV4, IN
	CPT		90661	Influenza, seasonal, MDCK, IM, pres-free
	CPT		90673	Influenza, recombinant, seasonal, IM, pf
	CPT		90655	Influenza, seasonal, preservative free (Age >= 6 M < 3Y)
	CPT		90656	Influenza, seasonal, preservative free (Age = 3 Y & up)
	CPT		90657	Influenza, seasonal, injectable (Age >= 6 M < 3Y)
	CPT		90658	Influenza, seasonal, injectable (Age = 3 Y & up)
	CPT		90654	Influenza, seasonal, intradermal, p-free
	CPT		90662	Influenza, High-Dose Seasonal
	CPT		90735	Japanese Encephalitis SC
	CPT		90738	Japanese Encephalitis IM
	CPT		90665	Lyme
	CPT		90705	Measles
	CPT		90708	Measles-Rubella
	CPT		90621	Meningococcal B, recombinant
	CPT		90620	Meningococcal B, OMV
	CPT		90734	Meningococcal conjugate MCV4
	CPT		90733	Meningococcal polysaccharide MPSV4
	CPT		90707	MMR
	CPT		90710	MMRV
	CPT		90704	Mumps
	CPT		90663	Novel Influenza-H1N1-09 all formulations
	CPT		90727	Plague
	CPT		90669	Pneumococcal Conjugate 7
	CPT		90670	Pneumococcal Conjugate 13
	CPT		90732	Pneumococcal Polysaccharide 23
	CPT		90713	Polio IPV
	CPT		90712	Polio oral
	CPT		90676	Rabies-ID
	CPT		90675	Rabies-IM
	CPT		90726	Rabies, NOS
	CPT		90680	Rotavirus, tetravalent (if date administered prior to 02/03/2006)
	CPT		90680	Rotavirus, pentavalent (if date administered on or after 02/03/2006)
	CPT		90706	Rubella
	CPT		90709	Rubella-Mumps
	CPT		90718	Td

Appendix Type	Table	Name	Value	Description
	CPT		90714	Td – adult preservative free (if date administered on or after 07/01/2005)
	CPT		90715	Tdap
	CPT		90703	Tetanus
	CPT		90714	Typhoid, unspecified formulation (if date administered prior to 07/01/2005)
	CPT		90693	Typhoid-AKD
	CPT		90692	Typhoid-HP
	CPT		90690	Typhoid-Oral
	CPT		90691	Typhoid-ViCPS
	CPT		90716	Varicella
	CPT		90717	Yellow Fever
	CPT		90736	Zoster vaccine, live
	CPT		90728	Deleted BCG code
	CPT		90730	Deleted HepA code
	CPT		90745	Deleted HepB
	CPT		90731	Deleted HepB code
	CPT		90737	Deleted Hib code
	CPT		90724	Deleted Influenza code
	CPT		90726	Deleted Rabies

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## Appendix B: Vaccine and Trade Name Listing

### Important tips before starting:

- Verify that the list of Trade names and associated NCIR Trade name codes are in the EHR system.
- If your Trade Names are not mapped correctly to NCIR Trade Name code in your EHR, the inventory will not be decremented correctly.
- For Administered Vaccines (state supplied or privately purchased vaccines), EHR has to send CVX Code and NCIR Trade Name Code in the first and second triplet respectively. Otherwise, the vaccine inventory will not be decremented.
- For Historical vaccines, providing CVX code in the first triplet is recommended. If first triplet populated, the second triplet need not be populated for historical vaccines. If CVX code is not known, any of the three other codes from the below table can be used in the second triplet such as: Vaccine Group Code, Trade name or CPT Code for recording historical dose. However, sending CVX in the first triplet is recommended whenever possible and where CVX not available, first triplet must be empty.
- Each vaccine group (ex DTAP) has an unspecified vaccine (ex DTAP unspecified vaccine - CVX 107) to capture historical record of a vaccine administered from the vaccine group when the exact vaccine or Trade name is not known. These unspecified codes are to be used only for recording historical vaccines and only in cases where vaccine name or trade name is not known and only for recording historical vaccines.
- Once you have set up your EHR system, Provide listing of Vaccine and Trade Name tables from the EHR to NCIR Technical Data Analyst for review as noted in NCIR onboarding process.
- The relationship table below could be interpreted as follows. Each vaccine group can have one or more vaccine names. Each vaccine has a CVX code assigned. Each Vaccine can be produced by multiple manufacturers and hence each vaccine can have one or more Trade Names. For example, DTAP vaccine has INFANRIX, CERTIVA, TRIPEDIA and ACEL-IMUNE.
- Some vaccines have different CPT codes based on age of administration and dosage. For Examples, Influenza seasonal preservative (90655 - 6months to 3 years and 90656 - 3 years and above)

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
Adeno	Adeno T4	54	Adeno T4	ADENO T4	90476			WAL
Adeno	Adeno T7	55	Adeno T7	ADENO T7	90477			WAL
Adeno	Adenovirus, unspecified formulation	82						
Anthrax	Anthrax	24	Anthrax	ANTHRAX	90581			MIP
BCG	BCG-BC	19	BCG-Cancer	BCG-CANCER	90586			OTC
BCG	BCG-TB	19	BCG-TB	BCG-TB	90585			OTC
Cholera	Cholera-Inject	26	Cholera-I	CHOLERA-I	90725			CHI
Cholera	Cholera-Oral		Cholera-O	CHOLERA-O	90592			CHI
DTP/aP	DT-Peds	28	DT	DT	90702			PMC
DTP/aP	DTP	01	DTP	DTP	90701			PMC
DTP/aP	DTP-Hib	22	Tetramune	TETRAMUNE	90720			WAL
DTP/aP	DTaP	20	Acel-Imune	ACEL-IMUNE	90700			WAL
DTP/aP	DTaP	20	Certiva	CERTIVA	90700			BAH
DTP/aP	DTaP	20	Infanrix	INFANRIX	90700			SKB
DTP/aP	DTaP	20	Tripedia	TRIPEDIA	90700			PMC
DTP/aP	DTaP,5 pertussis antigens	106	DAPTACEL	DAPTACEL				PMC
DTP/aP	DTaP-Hib	50	TriHIBit	TRIHIBIT	90721			PMC
DTP/aP	DTaP-IPV	130	KINRIX	KINRIX	90696			SKB
DTP/aP	DTaP-IPV	130	QUADRACEL	QUADRACEL	90696			PMC
DTP/aP	DTaP/Polio/Hep B	110	Pediarix	PEDIARIX	90723			SKB
DTP/aP	Dtap-Hib-IPV	120	Pentacel	PENTACEL	90698			PMC
DTP/aP	DTaP, unspecified formulation	107						
Diphtheria	Diphtheria		Diphtheria	DIPHThERIA	90719			PD
Encephalitis	Japanese Encephalitis IM	134	Ixiaro	IXIARO	90738			INT
Encephalitis	Japanese Encephalitis SC	39	JE-Vax	JE-VAX	90735			JPN
Encephalitis	Japanese Encephalitis, unspecified	129						
Flu H1N1-09	Novel Influenza-H1N1-09	127	H1N1 CSL	H1N1 CSL	90663			CSL
Flu H1N1-09	Novel Influenza-H1N1-09	127	H1N1 IDB	H1N1 IDB	90663			SKB
Flu H1N1-09	Novel Influenza-H1N1-09	127	H1N1 Novartis	H1N1 NOVARTIS	90663			NOV
Flu H1N1-09	Novel Influenza-H1N1-09	127	H1N1 Sanofi	H1N1 SANOFI	90663			PMC
Flu H1N1-09	Novel Influenza-H1N1-09 all formulations	128			90663			

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
Flu H1N1-09	Novel Influenza-H1N1-09, nasal	125	H1N1 MedImmune, Nasal	H1N1 MEDIMMUNE, NASAL	90663			MED
Flu H1N1-09	Novel Influenza-H1N1-09, preserve-free	126	H1N1 CSL P-Free .25	H1N1 CSL P-FREE .25	90663			CSL
Flu H1N1-09	Novel Influenza-H1N1-09, preserve-free	126	H1N1 CSL P-Free .5	H1N1 CSL P-FREE .5	90663			CSL
Flu H1N1-09	Novel Influenza-H1N1-09, preserve-free	126	H1N1 Novartis P-Free	H1N1 NOVARTIS P-FREE	90663			NOV
Flu H1N1-09	Novel Influenza-H1N1-09, preserve-free	126	H1N1 Sanofi P-Free .25	H1N1 SANOFI P-FREE .25	90663			PMC
Flu H1N1-09	Novel Influenza-H1N1-09, preserve-free	126	H1N1 Sanofi P-Free .5	H1N1 SANOFI P-FREE .5	90663			PMC
HEPA	HepA-Adult	52	Havrix-Adult	HAVRIX-ADULT	90632		1mL -	SKB
HEPA	HepA-Adult	52	VAQTA-Adult	VAQTA-ADULT	90632		1mL -	MSD
HEPA	HepA-HepB Adult	104	Twinrix	TWINRIX	90636			SKB
HEPA	HepA-Ped 2 Dose	83	Havrix-Peds 2 Dose	HAVRIX-PEDS 2 DOSE	90633		0mL - 1mL	SKB
HEPA	HepA-Ped 2 Dose	83	VAQTA-Peds 2 Dose	VAQTA-PEDS 2 DOSE	90633		0mL - 1mL	MSD
HEPA	HepA-Peds	84	Havrix-Peds 3 Dose	HAVRIX-PEDS 3 DOSE	90634			SKB
HEPA	HepA-Peds	84	VAQTA-Peds 3 Dose	VAQTA-PEDS 3 DOSE	90634			MSD
HEPA	Hep A, unspecified formulation	85						
HEPB	DTaP/Polio/Hep B	110	Pediarix	PEDIARIX	90723			SKB
HEPB	HepA-HepB Adult	104	Twinrix	TWINRIX	90636			SKB
HEPB	HepB-Adult	43	Engerix-B Adult	ENGERIX-B ADULT	90746		1mL - 2mL	SKB
HEPB	HepB-Adult	43	Recombivax-Adult	RECOMBIVAX-ADULT	90746	16Y -	1mL -	MSD
HEPB	HepB-Dialysis 3 dose	44	Recombivax-Dialysis	RECOMBIVAX-DIALYSIS	90740			MSD
HEPB	HepB-Dialysis 4 dose	44	Engerix-B dialysis	ENGERIX-B DIALYSIS	90747		2mL -	SKB
HEPB	HepB-Hib	51	Comvax	COMVAX	90748			MSD
HEPB	HepB-Peds	08	Engerix-B Peds	ENGERIX-B PEDS	90744		0mL - 1mL	SKB
HEPB	HepB-Peds	08	Recombivax-Peds	RECOMBIVAX-PEDS	90744		0mL - 1mL	MSD
HEPB	Hep B, unspecified formulation	45						
HIB	DTP-Hib	22	Tetramune	TETRAMUNE	90720			WAL
HIB	DTaP-Hib	50	TriHIBit	TRIHIBIT	90721			PMC
HIB	Dtap-Hib-IPV	120	Pentacel	PENTACEL	90698			PMC

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
HIB	HepB-Hib	51	Comvax	COMVAX	90748			MSD
HIB	Hib-HbOC	47	Hib-TITER	HIB-TITER	90645			WAL
HIB	Hib-MenCY-TT	148	MENHIBRIX	MENHIBRIX	90644			SKB
HIB	Hib-OMP	49	PedvaxHIB	PEDVAXHIB	90647			MSD
HIB	Hib-PRP-D	46	ProHIBit	PROHIBIT	90646			PMC
HIB	Hib-PRP-T	48	OmniHib	OMNIHIB	90648			PMC
HIB	Hib-PRP-T	48	ActHib	ACTHIB	90648			PMC
HIB	Hib-PRP-T	48	Hiberix	HIBERIX	90648			SKB
HIB	Hib, unspecified formulation	17						
HPV	HPV9	165	Gardasil 9	GARDASIL 9	90651			MSD
HPV	HPV, Bivalent	118	Cervarix	CERVARIX	90650			SKB
HPV	HPV, quadrivalent	62	Gardasil	GARDASIL	90649			MSD
HPV	HPV, unspecified formulation	137						
Influenza	FLU whole cell	16			90659			
Influenza	FLU-Nasal	111	FluMist	FLUMIST	90660			MED
Influenza	Influenza nasal, unspecified formulation	151	Influenza nasal, unspecified formulation	FLU NASAL, UNSPECIFIED				
Influenza	Influenza, High-Dose Seasonal	135	Fluzone High-Dose	FLUZONE HIGH-DOSE	90662			PMC
Influenza	Influenza, intradermal, IIV4, pres-free	166	Fluzone Intradermal IIV4 Pres-free	FLUZONE ID IIV4 PF	90630			PMC
Influenza	Influenza, recombinant, seasonal, IM, pf	155	Flublok RIV3 Pres-Free	FLUBLOK RIV3 PRES-FREE	90673			PSC
Influenza	Influenza, seasonal, IIV4, IM	158	FluLaval IIV4	FLULAVAL IIV4	90687	6M-3Y		IDB
Influenza	Influenza, seasonal, IIV4, IM	158	Fluzone IIV4	FLUZONE IIV4	90687	6M-3Y		PMC
Influenza	Influenza, seasonal, IIV4, IM	158	FluLaval IIV4	FLULAVAL IIV4	90688	3Y-		IDB
Influenza	Influenza, seasonal, IIV4, IM	158	Fluzone IIV4	FLUZONE IIV4	90688	3Y-		PMC
Influenza	Influenza, seasonal, IIV4, IM, pf, peds	161	Fluzone IIV4 P-Free, Ped	FLUZONE IIV4 P-FREE, PED	90685	6M-3Y		PMC
Influenza	Influenza, seasonal, IIV4, IM, pres-free	150	Fluarix IIV4 Pres-Free	FLUARIX IIV4 PRES-FREE	90685	6M-3Y		SKB
Influenza	Influenza, seasonal, IIV4, IM, pres-free	150	FluLaval IIV4 Pres-Free	FLULAVAL IIV4 PRES-FREE	90686	3Y-		IDB
Influenza	Influenza, seasonal, IIV4, IM, pres-free	150	Fluarix IIV4 Pres-Free	FLUARIX IIV4 PRES-FREE	90686	3Y-		SKB

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
Influenza	Influenza, seasonal, IIV4, IM, pres-free	150	Fluzone IIV4 Pres-Free	FLUZONE IIV4 PRES-FREE	90685	6M-3Y		PMC
Influenza	Influenza, seasonal, IIV4, IM, pres-free	150	Fluzone IIV4 Pres-Free	FLUZONE IIV4 PRES-FREE	90686	3Y-		PMC
Influenza	Influenza, seasonal, LAIV4, IN	149	FluMist LAIV4	FLUMIST LAIV4	90672			MED
Influenza	Influenza, seasonal, MDCK, IM, pres-free	153	Flucelvax IIV3 Pres-Free	FLUCELVAX IIV3 PRES-FREE	90661			NOV
Influenza	Influenza, seasonal, injectable	141	AFLURIA	AFLURIA	90657	6M-3Y		CSL
Influenza	Influenza, seasonal, injectable	141	AFLURIA	AFLURIA	90658	3Y-		CSL
Influenza	Influenza, seasonal, injectable	141	FluLaval	FLULAVAL	90657	6M-3Y		IDB
Influenza	Influenza, seasonal, injectable	141	FluLaval	FLULAVAL	90658	3Y-		IDB
Influenza	Influenza, seasonal, injectable	141	Fluzone	FLUZONE	90657	6M-3Y		PMC
Influenza	Influenza, seasonal, injectable	141	Fluzone	FLUZONE	90658	3Y-		PMC
Influenza	Influenza, seasonal, injectable	141	Fluvirin	FLUVIRIN	90657	6M-3Y		NOV
Influenza	Influenza, seasonal, injectable	141	Fluvirin	FLUVIRIN	90658	3Y-		NOV
Influenza	Influenza, seasonal, intradermal, p-free	144	Fluzone Intradermal Pres-Free	FLUZONE INTRADERMAL PF	90654			PMC
Influenza	Influenza, seasonal, preservative free	140	AFLURIA Pres-Free	AFLURIA PRES-FREE	90655	6M-3Y		CSL
Influenza	Influenza, seasonal, preservative free	140	AFLURIA Pres-Free	AFLURIA PRES-FREE	90656	3Y-		CSL
Influenza	Influenza, seasonal, preservative free	140	Fluvirin Pres-Free	FLUVIRIN PRES-FREE	90655	6M-3Y		NOV
Influenza	Influenza, seasonal, preservative free	140	Fluvirin Pres-Free	FLUVIRIN PRES-FREE	90656	3Y-		NOV
Influenza	Influenza, seasonal, preservative free	140	Fluzone Pres-Free	FLUZONE PRES-FREE	90655	6M-3Y		PMC

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
Influenza	Influenza, seasonal, preservative free	140	Fluzone Pres-Free	FLUZONE PRES-FREE	90656	3Y-		PMC
Influenza	Influenza, seasonal, preservative free	140	Agriflu Pres-Free	AGRIFLU PRES-FREE	90655	6M-3Y		NOV
Influenza	Influenza, seasonal, preservative free	140	Agriflu Pres-Free	AGRIFLU PRES-FREE	90656	3Y-		NOV
Influenza	Influenza, seasonal, preservative free	140	Fluarix Pres-Free	FLUARIX PRES-FREE	90655	6M-3Y		SKB
Influenza	Influenza, seasonal, preservative free	140	Fluarix Pres-Free	FLUARIX PRES-FREE	90656	3Y-		SKB
Influenza	Influenza, unspecified formulation	88						
LYME	Lyme	66	LYMERix	LYMERIX	90665			SKB
Measles	Measles	05	Attenuvax	ATTENUVAX	90705			MSD
Measles	Measles	05	Measles	MEASLES	90705			MSD
Measles	Measles-Rubella	04	M-R-VAX	M-R-VAX	90708			MSD
Measles	Measles-Rubella	04	Measles-Rubella (MERU)	MEASLES-RUBELLA (MERU)	90708			MSD
MeningB	Meningococcal B, recombinant	162	Trumenba	TRUMENBA	90621			PFR
MeningB	Meningococcal B, OMV	163	Bexsero	BEXSERO	90620			NOV
MeningB	Meningococcal B, unspecified formulation	164						
Meningo	Hib-MenCY-TT	148	MENHIBRIX	MENHIBRIX	90644			SKB
Meningo	Meningococcal C conjugate	103						
Meningo	Meningococcal Polysaccharide MPSV4	32	MENOMUNE	MENOMUNE	90733			PMC
Meningo	Meningococcal conjugate MCV4O	136	Menveo	MENVEO	90734			NOV
Meningo	Meningococcal conjugate MCV4P	114	Menactra	MENACTRA	90734			PMC
Meningo	MCV4, unspecified formulation	147	MCV4, unspecified formulation	MCV4, UNSPECIFIED				
Meningo	Meningococcal, unspecified formulation	108						
MMR	MMR	03	MMR II	MMR II	90707			MSD
MMR	MMRV	94	ProQuad	PROQUAD	90710			MSD
Mumps	Mumps	07	Mumps	MUMPS	90704			MSD

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
<b>Mumps</b>	Mumps	07	Mumpsvox	MUMPSVAX	90704			MSD
<b>Mumps</b>	Rubella-Mumps	38	Biavax II	BIAVAX II	90709			MSD
<b>Mumps</b>	Rubella-Mumps	38	Mumps-Rubella (MURU)	MUMPS-RUBELLA (MURU)	90709			MSD
<b>Pertussis</b>	Pertussis	11						
<b>Plague</b>	Plague	23	Plague	PLAGUE	90727			GRE
<b>Pneumococcal Conjugate</b>	Pneumococcal Conjugate 13	133	Prevnar 13	PREVNAR 13	90670			PFR/WAL
<b>Pneumococcal Conjugate</b>	Pneumococcal Conjugate 7	100	Prevnar 7	PREVNAR 7	90669			WAL
<b>Pneumococcal Conjugate</b>	Pneumococcal, unspecified formulation	109						
<b>Pneumo Poly 23</b>	Pneumococcal Polysaccharide 23	33	PNU-IMUNE 23	PNU-IMUNE 23	90732			WAL
<b>Pneumo Poly 23</b>	Pneumococcal Polysaccharide 23	33	Pneumovax 23	PNEUMOVAX 23	90732			MSD
<b>Polio</b>	DTaP-IPV	130	KINRIX	KINRIX	90696			SKB
<b>Polio</b>	DTaP/Polio/Hep B	110	Pediarix	PEDIARIX	90723			SKB
<b>Polio</b>	Dtap-Hib-IPV	120	Pentacel	PENTACEL	90698			PMC
<b>Polio</b>	Polio-Inject	10	IPOL	IPOL	90713			PMC
<b>Polio</b>	Polio-Oral	02	ORIMUNE	ORIMUNE	90712			WAL
<b>Polio</b>	Polio, unspecified formulation	89						
<b>Rabies</b>	Rabies-ID	40	Imovax Rabies ID	IMOVAX RABIES ID	90676			PMC
<b>Rabies</b>	Rabies-IM	18	Imovax Rabies IM	IMOVAX RABIES IM	90675			PMC
<b>Rabies</b>	Rabies-IM	18	RabAvert	RABAVERT	90675			NOV
<b>Rabies</b>	Rabies, unspecified formulation	90			90726			
<b>Rotavirus</b>	Rotavirus pentavalent	116	ROTATEQ	ROTATEQ	90680			MSD
<b>Rotavirus</b>	Rotavirus, monovalent	119	Rotarix	ROTARIX				SKB
<b>Rotavirus</b>	Rotavirus,tetravalent	74	RotaShield	ROTASHIELD	90680			WAL
<b>Rotavirus</b>	Rotavirus, unspecified formulation	122						
<b>Rubella</b>	Measles-Rubella	04	M-R-VAX	M-R-VAX	90708			MSD
<b>Rubella</b>	Measles-Rubella	04	Measles-Rubella (MERU)	MEASLES-RUBELLA (MERU)	90708			MSD
<b>Rubella</b>	Rubella	06	Meruvax II	MERUVAX II	90706			MSD
<b>Rubella</b>	Rubella	06	Rubella	RUBELLA	90706			MSD

VACCINE GROUP CODE	NCIR VACCINE NAME	CVX CODE	NCIR TRADE NAME	NCIR TRADE NAME CODE	CPT CODE	CPT AGE	DOSAGE	Manufacturer Code
Rubella	Rubella-Mumps	38	Biavax II	BIAVAX II	90709			MSD
Rubella	Rubella-Mumps	38	Mumps-Rubella (MURU)	MUMPS-RUBELLA (MURU)	90709			MSD
Smallpox	Smallpox	75	Dryvax	DRYVAX				WAL
Smallpox	Vaccinia (smallpox), diluted	105	Vaccinia, diluted	VACCINIA, DILUTED				
TD	Td (adult)	138						
TD	Td (adult), adsorbed	09	Td	TD	90718			PMC
TD	Td (adult), adsorbed	09	Td-MassBioLab	TD-MASSBIOLAB	90718			MBL
TD	Td adult preservative free	113	DECAVAC	DECAVAC	90714			PMC
TD	Td adult preservative free	113	TENIVAC	TENIVAC	90714			PMC
TD	Td adult preservative free	113	Td-Pres-Free	TD-PRES-FREE	90714			MBL
TD	Tdap	115	Adacel	ADACEL	90715			PMC
TD	Tdap	115	Boostrix	BOOSTRIX	90715			SKB
TD	Td (adult), unspecified formulation	139						
Tdap/Pertussis	Tdap	115	Adacel	ADACEL	90715			PMC
Tdap/Pertussis	Tdap	115	Boostrix	BOOSTRIX	90715			SKB
Tetanus	Tetanus	35	TT	TT	90703			PMC
Tetanus	Tetanus toxoid, unspecified formulation	112						
Typhoid	Typhoid-AKD	53	Typhoid-AKD	TYPHOID-AKD	90693			
Typhoid	Typhoid-HP	41	Typhoid	TYPHOID	90692			WAL
Typhoid	Typhoid-Oral	25	Berna/Ty21a	BERNA/TY21A	90690			BPC
Typhoid	Typhoid-ViCPs	101	Typhim Vi	TYPHIM VI	90691			PMC
Typhoid	Typhoid, unspecified formulation	91			90714			
Varicella	MMRV	94	ProQuad	PROQUAD	90710			MSD
Varicella	Varicella	21	Varivax	VARIVAX	90716			MSD
Yellow Fever	Yellow Fever	37	YF-VAX	YF-VAX	90717			PMC
Zoster	Zoster vaccine, live	121	Zostavax	ZOSTAVAX	90736			MSD

## Appendix C: Guidance on Vaccine Deferral – Client Comments and Refusals

### Section 1 – Description and Examples

There are two types of vaccine deferral: Refusal (including client/parent refusal or religious exemption), and Client Comment (valid medical condition). These two deferral scenarios are submitted in differing format, as shown in the examples below. Client comment values are submitted in OBX-3.

*Note the difference in submission protocol between parent refusal, religious exemption and client comments. Parent refusals and religious exemption are sent in an RXA segment. Client comments (immunity, reactions, and special indications) are sent in an OBX segment. Since the OBX requires a corresponding RXA, client comments can be submitted by using the “No Vaccine Administered” RXA (see examples below).*

#### Parent Refusal and Religious Exemption:

Submit these scenarios in an RXA segment. (Reference Appendix A for NCIR accepted Parent Refusals and Religious Exemptions.)

Example:

```
RXA|0|999|20110425|20110425|03^MMR^CVX^^|999|||||||00^PARENTAL REFUSAL^NIP002|RE|A|
RXA|0|999|20110425|20110425|28^DT^CVX^^|999|||||||01^RELIGIOUS EXEMPTION^NIP002|RE|A|
```

#### Client Comments:

Client comments can be sent without a dose using the “No Vaccine Administered” RXA segment. In the following example, ‘CCYYMMDD’ represents the current date:

```
RXA|0|1|CCYYMMDD|CCYYMMDD|998^No Vaccine Administered^CVX|999|||^No vaccine Administered^^
```

Include the Client Comment/Reaction/Special Indication in the OBX corresponding to the “No Vaccine Administered” RXA segment (See Appendix A for NCIR accepted Client Comment, Reaction and Special Indication codes):

Example:

```
OBX|1|CE|30945-0^Contraindication^LN|1|91930004^Allergy Egg^SCT^^|F|||20100101|
OBX|1|CE|31044-1^Reaction^LN|2|39579001^Anaphylaxis^CDCPHINVS^^|F|||20100101|
OBX|1|CE|59785-6^Special^LN|3|VXC7^Rabies Exposure^CDCPHINVS^^|F|||20100101|
OBX|1|CE|59784-9^Disease with presumed immunity^LN^^|4|371111005^Immunity:
Measles^SCT^^|F|||20121219|||20201231|||
```

### Section 2 -Client Comment List

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
		Contraindications	
30945-0	01	L	Recipient condition - unspecified
30945-0	02	L	Household condition - unspecified
30945-0	11	L	Collapse or shock like State within 48 hours of previous dose of DTP/DTaP
30945-0	12	L	Convulsions (fits, seizures) within 3 days of previous dose of DTP/DTaP

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
30945-0	13	L	Persistent, inconsolable crying lasting 3 hours within 48 hours of previous dose of DTP/DTaP
30945-0	14	L	Current diarrhea, moderate to severe
30945-0	17	L	Fever $\geq 40.5^\circ\text{C}$ ( $105^\circ\text{F}$ ) within 48 hours of previous dose of DTP/DTaP
30945-0	18	L	Guillain-Barré Syndrome (GBS) within 6 weeks after DTP/DTaP
30945-0	23	L	Recent or simultaneous administration of an antibody-containing blood product (immune globulin)
30945-0	38	L	Otitis media (ear infection) moderate to severe (with or without fever)
30945-0	42	L	Household contact of infant < 6 months
30945-0	43	L	High risk condition for influenza
30945-0	VXC18	CDCPHINVS	Allergy to baker's yeast (anaphylactic)
30945-0	VXC19	CDCPHINVS	Allergy to Thimerosal - refer to package insert (anaphylactic)
30945-0	VXC20	CDCPHINVS	Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic)
30945-0	VXC22	CDCPHINVS	Encephalopathy within 7 days of previous dose of DTP or DTaP
30945-0	VXC23	CDCPHINVS	Current fever with moderate-to-severe illness
30945-0	VXC24	CDCPHINVS	Current acute illness, moderate to severe (with or without fever)
30945-0	VXC26	CDCPHINVS	Unstable neurologic disorder, until neurological status clarified AND stabilized
30945-0	VXC27	CDCPHINVS	Immunodeficiency due to any cause
30945-0	R1	L	Clinician has decided to repeat the DTaP series
30945-0	R2	L	Clinician has decided to repeat the Hep B series
30945-0	R3	L	Clinician has decided to repeat the HIB series
30945-0	R4	L	Clinician has decided to repeat the Polio series
30945-0	R5	L	Clinician has decided to repeat the MMR series
30945-0	R6	L	Clinician has decided to repeat the Pneumococcal series
30945-0	R7	L	Clinician has decided to repeat the Varicella series
30945-0	R8	L	Clinician has decided to repeat the Meningo Series
30945-0	R9	L	Clinician has decided to repeat the Rotavirus series
30945-0	R10	L	Clinician has decided to repeat the HPV series
30945-0	R11	L	Clinician has decided to repeat the HepA series

OBX-3 [LOINC coding system – LN]	OBX-5	OBX-5 Coding System	Description
30945-0	R12	L	Clinician has decided to repeat the Zoster series
30945-0	R13	L	Clinician has decided to repeat the Influenza series
30945-0	161461006	SCT	Thrombocytopenia purpura (history)
30945-0	27624003		Chronic illness
30945-0	294466005	SCT	Allergy to Streptomycin (anaphylactic)
30945-0	294468006	SCT	Allergy to neomycin (anaphylactic)
30945-0	294847001	SCT	Allergy to gelatin (anaphylactic)
30945-0	302215000	SCT	Thrombocytopenia
30945-0	77386006	SCT	Pregnancy (in recipient) - refer to CDC guidelines for vaccinating pregnant women
30945-0	91930004	SCT	Allergy to egg ingestion (anaphylactic)
		<b>IMMUNITY</b>	
59784-9	33	L	Immunity: Varicella – Evidence prior to 7/1/2015, Laboratory-tested or History of varicella disease (Chicken pox)
59784-9	44	L	Immunity: Varicella – Laboratory-tested Confirmation
59784-9	371111005	SCT	Immunity: Measles protective antibody titer serologically proven
59784-9	371112003	SCT	Immunity: Mumps
59784-9	278968001	SCT	Immunity: Rubella
59784-9	371113008	SCT	Immunity: Varicella – Serology-tested Confirmed Protective Antibody
59784-9	38907003	SCT	Immunity: Varicella – Provider Verified History
		<b>EXPOSURE TO RABIES</b>	
59785-6	VXC7	CDCPHINVS	Client has been exposed to rabies
		<b>REACTION CODE</b>	
31044-1	VXC9	CDCPHINVS	Persistent, inconsolable crying lasting > 3 hours within 48 hours of dose
31044-1	VXC10	CDCPHINVS	Collapse or shock-like state within 48 hours of dose
31044-1	VXC11	CDCPHINVS	convulsions (fits, seizures) within 72 hours of dose
31044-1	VXC12	CDCPHINVS	fever of > 40.5C (105F) within 48 hours of dose
31044-1	VXC13	CDCPHINVS	Guillain-Barre syndrome (GBS) within 6 weeks
31044-1	39579001	SCT	Allergic reaction to this vaccine or to any of its unlisted vaccine components (anaphylactic)
31044-1	81308009	SCT	ENCEPHALOPATHY within 7 DAYS

Note: State approved Medical Exemption and State approved Clinical studies for the vaccine groups are allowed to be entered only through the UI. If you receive data from the NCIR (either VXU back to your system

or RSP in response to QBP), you will receive the exemptions and clinical studies information from the NCIR. Please check QBP/RSP LIG for these codes.

## Appendix D: Guidance on Usage and Example Messages

**Example VXU -Basic transmission for new immunization administered and patient comment added:**

### Storyboard:

*Bart Patient (male), born 12/31/11 was administered a single dose of Varicella on 12/17/12. The vaccine was paid for with state funds and was deducted from the provider's inventory. Additionally, a patient comment was added to the child's record stating of a presumed immunity to Measles. The patient was brought into the provider's office by his mother, Carol Tester. They reside at 52 Main, Anycity, NC 27000. Kevin Clinician administered the following shot, added an accompanying comment, and recorded on 12/18/2012:*

- *Varicella Live(Varivax), lot # testlot1, vaccine expiration date of 12262015*
- *Comment: Immunity: Measles*

*Note that we will indicate the end of each segment with a <CR>. Segments may wrap around in this document. We will insert a blank line between each segment for increased readability.*

FHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||emrfile.txt|free text|file001|file001<CR>

BHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||batch name/id|free text|batch001|batch001<CR>

MSH|^~\&|COUNTY HD|NCIR-SHORT-  
ORG||IS|NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|2.5.1^|AL|||||msg\_profile\_id<CR>

PID|1||202^^^PI^|PATIENT^BART^A^^^L^|TESTER^CAROL^A^^^L^|20111231|M|||||||||2186-5^Not Hispanic  
or Latino^HL70189|N|1||||N|||||<CR>

PD1|||||||||02|N||||A|20121218134335||||<CR>

NK1|1|TESTER^CAROL^A^^^L^|MTH^MOTHER^HL70063^^|52 MAIN^^Anycity^NC^27850^^^|APRN^PH^  
^608^2246872^|eng^English||02|||||||||Y<CR>

ORC|RE||1|||||||||17952^KDS Org^^^|<CR>

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella Live^VTN|1.0|ML||00^New  
Immunization^|^Clinician^Kevin^SITE-  
22046|||testlot1|20151226|MSD^Merck^MVX||CP|A|||<CR>

RXR|IM^Intramuscular^HL70162|LA^Left Arm^HL70163|||<CR>

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|VXC2^State Funds^CDCPHINVS||||| F||20121217|<CR>

OBX|2|CE|30956-7^ VACCINE TYPE^LN|2|21^Varicella^CVX|||||F|||||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT  
PUBLISHED^LN|2|20111108|||||F||20110410|||||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT  
PRESENTED^LN|2|20110410|||||F||20110410|||||

OBX|5|CE|64994-7^Vaccine fund pgm elig cat^LN|3|V02^Medicaid^HL70064|||||F||20110410|||VXC41^per  
visit^CDCPHINVS|||||

OBX|2|CE|59784-9^Disease with presumed immunity^LN^^|4|371111005^Immunity:  
Measles^SCT^^|||||F||20121217|||20201231|||||<CR>

BTS|1|free text<CR>

FTS|1|free text<CR>

**Example VXU –Historical dose**

FHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||emrfile.txt|free text|file001|file001<CR>

BHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||batch name/id|free text|batch001|batch001<CR>

MSH|^~\&|COUNTY HD|Test  
Org^12345^IIS|NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^2.5.1^AL|||||msg\_profile\_id<CR>

PID|1||202^^PI^|PATIENT^BART^A^^L^|TESTER^CAROL^^L^|20111231|M|||||||2186-5^Not Hispanic  
or Latino^HL70189|N|1||||N|||||<CR>

PD1|||||||02|N|||A|20121218134335|||<CR>

ORC|RE||1|||||||17952^KDS Org^^|<CR>

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella  
Live^VTN|1.0|ML||01^Historical^|||||CP|A|||<CR>

**Example VXU – Private funded dose**

FHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||emrfile.txt|free text|file001|file001<CR>  
BHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||batch name/id|free text|batch001|batch001<CR>

MSH|^~\&|COUNTY HD|Test  
Org^12345^|IIS|NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|2.5.1^|AL|||msg\_profile\_id<CR>

PID|1||202^^^PI^|PATIENT^BART^A^^^L^|TESTER^CAROL^^^L^|20111231|M|||2186-5^Not  
Hispanic^HL70189|N|1|||N|||<CR>

PD1|||02|N|||A|20121218134335|||<CR>

ORC|RE||1|||17952^KDS Org^^^|<CR>

RXA|0|1|20121217|20121217|21^Varicella^CVX^Varivax^Varicella Live^VTN|1.0|ML||00^New  
Immunization^|^Clinician^Kevin^|^SITE-22046|||testlot1|20151226|MSD^Merck^MVX||CP|A|||<CR>

RXR||IM^Intramuscular^HL70162|LA^Left Arm^HL70163|||<CR>

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^CDCPHINVS^^^|  
F||20121217|<CR>

OBX|2|CE|30956-7^VACCINETYPE^LN|2|216Varicella|6CVX|||F|||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT  
PUBLISHED^LN|2|20111108|||F||20110410|||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT  
PRESENTED^LN|2|20110410|||F||20110410|||

OBX|5|CE|64994-7^Vaccine fund pgm elig cat^LN|3|IS00^Insured^HL70064|||F||20110410||VXC41^per  
visit^CDCPHINVS|||

**Example VXU – Combination Vaccine**

FHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||emrfile.txt|free text|file001|file001<CR>  
BHS|^~\&|IRPH|Test Org^12345||NCIR|20121218134335||batch name/id|free text|batch001|batch001<CR>

MSH|^~\&|COUNTY HD|Test  
Org^12345^|IIS|NCIR|20121218134335||VXU^V04^VXU\_V04|1|P^|2.5.1^|AL|||msg\_profile\_id<CR>

PID|1||202^^^PI^|PATIENT^BART^A^^^L^|TESTER^CAROL^^^L^|20111231|M|||2186-5^Not  
Hispanic^HL70189|N|1|||N|||<CR>

PD1|||02|N|||A|20121218134335|||<CR>

ORC|RE||1|||17952^KDS Org^^^|<CR>

RXA|0|1|20110108|20110108|120^Dtap-Hib-  
IPV^CVX^PENTACEL^VTN|0.5|ML||00^New^^^|76704^Smith^Games|^SITE-21959^||102321  
|20201010|PMC^PMC^MVX^^^|CP|||

RXR||IM^HL70162^^^|LA^HL70163^^^|

OBX|1|CE|30963-3^VACCINE PURCHASED WITH^LN|1|PBF^Public Funds^NIP008^^^|F||20110108|||

OBX|2|CE|64994-7^Vaccine fund pgm elig cat^LN|2|V02^Medicaid^HL70064|||||F|||20110108|||VXC41^per  
visit^CDCPHINVS|||||

OBX|3|CE|38890-0^COMPONENT VACCINE TYPE^LN|3|107^DTaP^CVX|||||F|||||

OBX|4|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|3|  
20070517|||||F|||20110108|||||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT  
PRESENTED^LN|3|20110108|||||F|||20110108|||||

OBX|9|CE|38890-0^COMPONENT VACCINE TYPE^LN|4|17^Hib, unspecified^CVX|||||F|||||

OBX|7|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|4|  
20140204|||||F|||20110108|||||

OBX|8|TS|29769-7^DATE VACCINE INFORMATION STATEMENT  
PRESENTED^LN|4|20110108|||||F|||20110108|||||

OBX|9|CE|38890-0^COMPONENT VACCINE TYPE^LN|5|89^Polio, unspecified^CVX|||||F|||||

OBX|10|TS|29768-9^DATE VACCINE INFORMATION STATEMENT  
PUBLISHED^LN|5|20111108|||||F|||20110108|||||

OBX|11|TS|29769-7^DATE VACCINE INFORMATION STATEMENT  
PRESENTED^LN|5|20110108|||||F|||20110108|||||

*The following ACK message is returned:*

FHS|^~\&|NCIR8.9.0|NCIR||TEST  
ORGANIZATION|20121217030558||55220.62172.17300.2012.12.17||file001

BHS|^~\&|NCIR8.9.0|NCIR||TEST ORGANIZATION  
|20121217030558||55220.62172.17300.2012.12.17||batch001

MSH|^~\&|NCIR8.9.0|NCIR||TEST ORGANIZATION |20121217030558||ACK^A08^ACK\_A08|1|P|2.5.1|||NE|||||

MSA|AA|1||||

BTS|1||

FTS|1|

---

**Example Warning Message**

FHS|^~\&|NCIR8.9.0|NCIR||TEST ORGANIZATION|20121217030558||55220.62172.17300.2012.12.17||file001

BHS|^~\&|NCIR8.9.0|NCIR|| TEST ORGANIZATION  
|20121217030558||55220.62172.17300.2012.12.17||batch001

MSH|^~\&|NCIR8.9.0|NCIR|| TEST ORGANIZATION |20121217030558||ACK^V04^ACK\_V04|1|P|2.5.1||NE||||

MSA|AE|1  
ERR||RXA^1^15^^|102^Data type error^HL70357^^|W||||Inventory) - Empty Manufacture Id Detected||||

BTS|1||  
FTS|1|

**Example Reject Message**

FHS|^~\&|NCIR8.9.0|NCIR||TEST ORGANIZATION|20121217030558||55220.62172.17300.2012.12.17||file001

BHS|^~\&|NCIR8.9.0|NCIR|| TEST  
ORGANIZATION|20121217030558||55220.62172.17300.2012.12.17||batch001

MSH|^~\&|NCIR8.9.0|NCIR|| TEST ORGANIZATION |20121217030558||ACK^A08^ACK\_A08|1|P|2.5.1||NE||||

MSA|AR|1

ERR|||207^Application Internal Error^HL70357^^|E|207.22^InvalidName^HL70533||Record Rejected - Invalid  
first name (1SAKIE).||||

BTS|1||  
FTS|1|

## VERSION HISTORY

Version #	Implemented By	Revision Date	Reason
1.0	Dave Rider	02/05/2013	Initial creation document based on peer feedback by HPES and NCIR community.
8.9.0	Maia Ouderkirk	08/26/2013	Release 8.9.0: Added new Flu VTN, CPT, CVX
8.9.1	Tawna	09/12/2013	Added disclaimer after title page and draft watermark.
	Tawna Chase	10/04/2013	Updated OBX section with funding code and eligibility information
	Sriram Venkataraman	10/23/2013	Review and updated throughout document.
	Tawna Chase	10/25/2013	Update based on state review. Correct reaction information and VTN information in appendix.
	Tawna Chase	11/7/2013	Update based on changes to QBP
8.9.2	Tawna Chase	01/17/2014	Update Appendix tables, Added sequence number to all PID-1 field, and updated error information for PD1-16
	Sriram Venkataraman	01/31/2014	Reviewed and updated multiple fields.
9.1.0	Sriram Venkataraman	03/01/2014	CVX, CPT, VTN and VGC review. Added comments for clarification.
	Maia Ouderkirk	03/07/2014	Table 0292 values updated CPT values updated
	Maia Ouderkirk	03/20/2014	Added table 0201 – Telecommunication use code Added table NIP001 – Immunization information source Added CDCPHINVS values – Immunization funding source
	Maia Ouderkirk	05/01/2014	Updated current Appendix B to Appendix C Added Appendix B: Vaccine and Trade Name Listing
	Maia Ouderkirk	06/03/2014	Updated current Appendix C to Appendix D Added Appendix C: Guidance on Vaccine Deferral
	Sriram Venkataraman	06/06/2014	Appendix tables and review/feedback of document
	Maia Ouderkirk	06/10/2014	Accept changes and Finalize version Release 9.1.0
9.1.1	Maia Ouderkirk	08/26/2014	Updated Table 0289 values to include FIPS County codes
	Sriram Venkataraman	08/27/2014	Review and feedback of changes for combo vaccine and changes to Client comments.
	Tawna Chase	09/08/2014	Updates made based on comments.
9.2.1	Maia Ouderkirk	10/14/2014	Added Table 0292 CVX value 161 – Vaccine: Influenza, seasonal, IIV4, IM, pf, peds Updated CPT 90685 description: Influenza, seasonal, IIV4, IM, pf, peds Added VTN: Fluzone IIV4, FluLaval IIV4 Pres-Free, Fluzone IIV4 P-Free, Ped

9.2.2	Tawna Chase	10/23/2014	Remove suppressed warning messages Added OBX-17 value "VXC40" County updates to PID and NK1
	Sriram Venkataraman	11/04/2014	Included County of residence changes, PID-11 and PID-13 and review, corrections and feedback of complete document..
	Tawna Chase	11/04/2014	Added Name type HL70200 table Added Address type HL70190 table Added error messages.
9.3.0	Sriram Venkataraman	12/15/2014	9.2.2 was not released since it was decided to release along with 9.3.0. Clarified NK1-39 and reviewed throughout.
9.3.1	Tawna Chase	1/09/2015	Updated contra and reaction descriptions
	Lacey Dean	2/06/2015	Added Table 0292 CVX value 162 – Vaccine: Meningococcal B, recombinant; 164- Vaccine: Meningococcal B, unspecified formulation; 165 – Vaccine: HPV9 Added CPT 90621 description: Meningococcal B, recombinant; CPT 90651: Human Papillomavirus 9-valent Vaccine Added VTN: Gardasil 9, Trumenba Added VGC: MeningB
9.4.0	Maia Ouderkirk	03/27/2015	Updated MSH-4 descriptions Updated OBX-4 descriptions Removed Email Address from examples Removed VGC values from the Appendix Added Appendix A HL7 table 0363
	Maia Ouderkirk	04/06/2015	Added Table 0292 CVX value 163 – Vaccine: Meningococcal B, OMV Added CPT 90620 description: Meningococcal B, OMV Added VTN: BEXSERO
	Sriram Venkataraman	04/13/2015	Reviewed CDC feedback and made few minor updates.
	Maia Ouderkirk	06/18/2015	Added VTN: QUADRACEL Added Immunity values: 38907003 (SCT), 33 (L), 44 (L)
9.5.0	Maia Ouderkirk	08/27/2015	Added Table 0292 CVX value 166 – Vaccine: Influenza, Intradermal, IIV4, pres-free Added CPT 90630 description: Influenza, Intradermal, IIV4, pres-free Added VTN: Fluzone Intradermal IIV4 Pres-Free