

*North Carolina Local Implementation
HL7 2.5.1 Immunization Messaging Guide for
QBP & RSP Transfer Specifications*

Version 9.5.0
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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 once the pilot phase is complete.

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

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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.

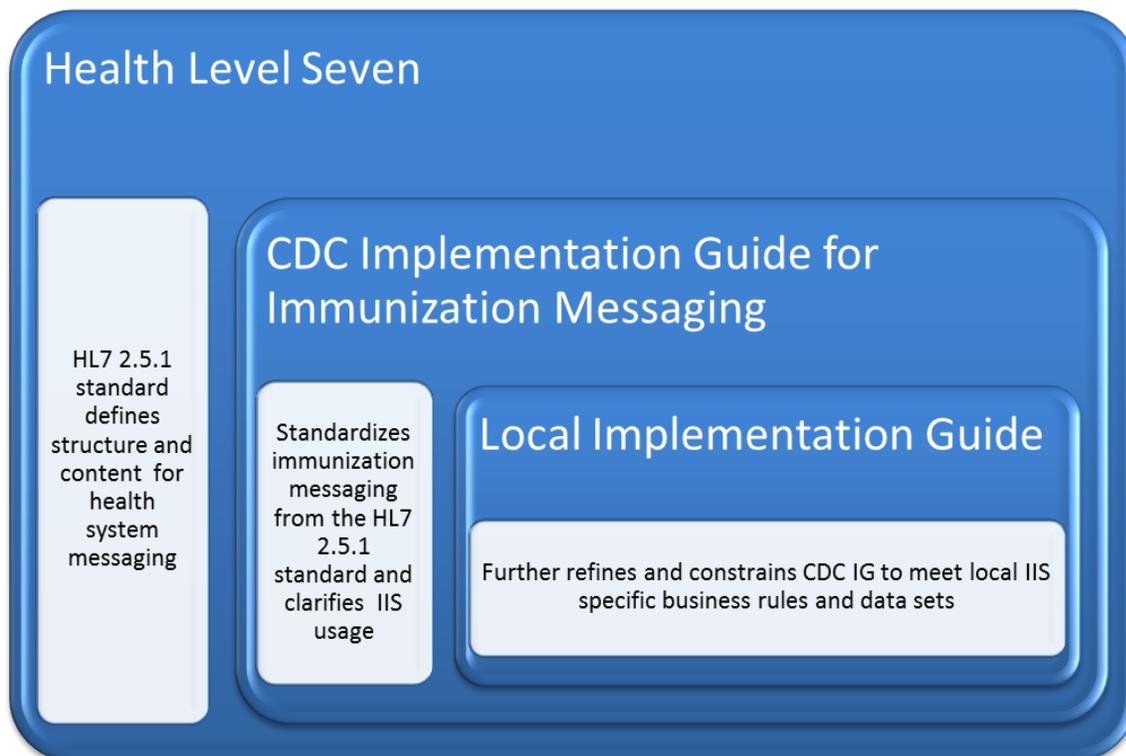


Figure 1: HL7 Controlling Document Hierarchy

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 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 **QBP** and its associated **RSP** transmission types. Other Transmission Types, such as, VXU, ADT, and ACK will be covered in a separate LIG document. Therefore, all usage, descriptions, rules, and examples in this document will pertain strictly to QBP and RSP. Individual Segment Types will be noted with an “XXX Only” if the Segment type is only used for that particular Transmission Type (RSP but not QBP). This document includes following workflows:

- Requesting immunization histories and recommendations for individuals
- Responding to requests for immunization histories by returning immunization histories and recommendations
- reporting errors in the messaging process

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 the **NCIR**. The subsequent chapters define how the **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.

Use Case	Goal	Supported by <i>NCIR</i>
Request Immunization History	To request an immunization history from another system.	Yes, will be by EHR
Return Immunization History	To return an immunization history to another system.	Yes
Accept Requested History	To accept an immunization history in response to a query for an immunization history from another system.	Yes, will be by EHR
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 a 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 which shall be one of “R”, “RE”, “O”, or “X”. a and 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>If the predicate is satisfied:</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>If the predicate is not satisfied:</p> <p>The conformant sending application shall not populate the element.</p>

Usage Code	Interpretation	Comment
		<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 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.</p>

4. HL7 Data Types

Understanding this document requires knowledge of HL7 data types listed in chapter 4 of the CDC IG. (<http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html>) Data type definitions and descriptions are not repeated here. This LIG highlights the difference in field usage 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 **QBP** or **RSP** transmission. The QBP is a real time web service transaction. NCIR does not permit batch QBP transactions. 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 QBP and/or RSP

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 a local implementation Guide.	Any	Optional	Optional	Used at the beginning of any batch of messages.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
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.	RSP	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 local implementation Guide.	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
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.	RSP	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.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
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.	RSP	Ability to create and process is required for conformant systems.	Required if available but may be empty	Used to carry information about the next of kin for a client.
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.	RSP	Ability to create and process is required for conformant systems.	Required if available but may be empty	Used to report one atomic part of an observation.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
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 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.	RSP	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).
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.	RSP	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.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
PID (Patient Identifier Segment)	This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change. Used by all applications as the primary means of communicating patient identification information frequently.	RSP	Ability to create and process is required for conformant systems.	Required	Used to carry information about the patient/client.
QAK (Query acknowledgement segment)	The QAK segment contains information sent with responses to a query.	RSP	Ability to create and process is required for conformant systems.	Required	
QPD	Query parameter definition	QBP, RSP	Ability to create and process is required for conformant systems.	Required	

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NCIR Usage	Note
RCP	Response control parameter segment	QBP	Ability to create and process is required for conformant systems.	Required	
RXA	Pharmacy/Treatment Administration Segment	RSP	Ability to create and process is required for conformant systems.	Required (Each order group must have one RXA segment)	
RXR	Pharmacy/Treatment Route Segment	RSP	Ability to create and process is required for conformant systems.	Required if available 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:

QBP: BHS|^~\&|EMR| NCIR-SHORT-ORG|NCIR|NCIR|20130315|||||

RSP: BHS|^~\&|NCIR8.9.0|NCIR||ORG SHORT NAME|||||

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 (ASCII 124).

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 | (ASCII 124).

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 ^~\&, (ASCII 94, 126, 92 and 38 respectively).

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 ^~\&, (ASCII 94, 126, 92 and 38 respectively). This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator.

BHS-3 Batch Sending Application

Definition: This field contains the name of the sending application. This field is an optional convenience

BHS|^~\&|NCIR|

Inbound –

Provide the Batch sending application if available.

Outbound –

NCIR will use “NCIR” followed by the current version number of the registry. (e.g. NCIR8.9.0)

BHS-4 Batch Sending Facility

Definition: This field contains the name of the sending facility, identifying for whom the message is being sent. Value: NCIR requires “Organization short name”.

Example: BHS|^~\&|Sending Application|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, an informational error message will be sent, “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. 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 if that sending org does not have permission to send on behalf of the owning org (Sending Org is a Vendor or Parent to the Owing Client or Child Org):

```
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: This field identifies the message receiver.

Example: 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 –

NCIR will send out the owning organization from the incoming query (MSH-4 of the QBP)

When sending, 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|^~\&|Sending Application|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. It will be echoed back in BHS-12-reference batch control ID if an answering batch is needed. That is, BHS-12 of RSP will contain the BHS-11 of QBP.

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.

Inbound –

Null for QBP

Outbound – NCIR sends out the BHS-11 value of the incoming QBP message.

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:

QBP: BTS|1|COMMENT|

RSP: BTS|1| |

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 the count of messages when sending out.

BTS-2 Batch Comments

Definition: Free text, which can be included for convenience, has no effect on processing. NCIR will not populate this field.

BTS|1|free text

Inbound – This field is not used.

Outbound – NCIR will not populate this field.

ERR—Error Segment (RSP Only)

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] ¹		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	

¹ 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.

Examples:

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

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

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^1^5^^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.

Outbound –

Since only one error segment per RSP is allowed, when multiple errors/warnings exist, only one will be sent out. Order for the error chosen to be sent out is:

1. An error that is causing the message to be rejected
2. Number of search results exceed maximum limit reached
3. Warning message.
4. If multiple message in same category occur, send the first occurrence.

This field may be left empty if location is not meaningful. For example, if it is unable to be parsed or the error/warning message applies to entire segment, this field may be empty. .

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, 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^^^|

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

ERR-3 is not populated for HL7 errors and only application levels errors use this field.

ERR-8 User Message

Definition: The text message to be displayed to the application user. This is not to be processed further by the receiving system

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

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	

Example:

QBP: FHS|^~\&|EMR|ORG SHORT NAME^999999||NCIR|20130315||||

RSP: FHS|^~\&|NCIR8.9.0|NCIR||ORG SHORT NAME||||

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|^~\&|NCIR8.9.2|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 RSP FHS-12 to enable cross reference. For NCIR purposes, the answering batch will contain RSP 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: yyyymmddhhmmssf00. 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 QBP

Outbound –

FHS-12 of RSP will contain FHS-11 of QBP:

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	○	○	

Example:

QBP: FTS|1|COMMENT

RSP: FTS|1|

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 (RSP Only)

The MSA segment will be included in the RSP in the scenario where:

- No records are found
- Exactly one match is found
- Multiple candidates are found with the total exceeding the maximum allowed
- Multiple candidates are found with the total less than the maximum allowed

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	

Example:

RSP: MSA|AA|QUERY_NAME|||

MSA Field Definitions

MSA-1 Acknowledgment Code

Definition: This is a required field. Acknowledgement 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|UNIQ1|||

MSH—Message Header Segment

The MSH segment will be included in the RSP in the scenario where:

- No records are found
- Exactly one match is found
- Multiple candidates are found with the total exceeding the maximum allowed
- Multiple candidates are found with the total less than the maximum allowed

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	The degree of precision must be at least to the minute, and the time zone must be included (format YYYYMMDDHHMM[SS[.S[S[S[S]]]])+/-ZZZZ).

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
8	40	ST	[0..1]		Security	O	X	
9	15	MSG	[1..1]		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.

Example:

RSP: MSH|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130315||RSP^K11^RSP_K11|20130315173457RM00|P^|2.5.1^|||NE|

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. Sending organization is decided depending on method of transmission. For web services, NCIR staff will provide the Sending Facility (MSH-4) value during onboarding process. For Batch, the sending organization 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/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|^~\&|NCIR8.9.2|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**|2010082411452311111||**QBP^Q11^QBP_Q11**|

Inbound –

Value accepted is QBP^Q11^QBP_Q11.

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 –

Value sent out for RSP: **RSP^K11^RSP_K11**.

MSH|^~\&|NCIR8.9.2|NCIR||ORGANIZATION^^|20131025114021.213-0400||**RSP^K11^RSP_K11**|

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 RSP message sent in response in MSA-2.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||**NCIR**|2010082411452311111||QBP^Q11^QBP_Q11|**20131025114021RM00**|

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^M||12345^|20130225174751.398-0500||RSP^K11^RSP_K11|20131025114021RM00
```

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|2010082411452311111||QBP^Q11^QBP_Q11|20131025114021RM00|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|2010082411452311111||QBP^Q11^QBP_Q11|20131025114021RM00||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. Please send NE in this field.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|2010082411452311111||QBP^Q11^QBP_Q11|20131025114021RM00||2.5.1|||NE

Inbound –

This field controls whether an acknowledgement is generated for the message sent. NCIR requires a value of NE.

If the field is empty, NCIR will default to NE. If a value other than NE is sent, a warning message will be provided: "MSH-15: Accept Acknowledgement Type invalid value. QBP accepts NE"

Outbound –

NCIR will send NE in this field.

MSH-16 Application Acknowledgment Type

Definition: This field contains the conditions under which application acknowledgements are required to be returned in response to a message.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||**NCIR**|2010082411452311111||QBP^Q11^QBP_Q11|20131025114021RM00||2.5.1|||NE|AL

Inbound –

Constrained to AL (Always). If field is empty, NCIR will default to AL. If value other than AL, a warning message will be sent: "MSH-16: Application Acknowledgment Type invalid value. QBP accepts AL"

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 required for the QBP (Query) Message and its three response Messages.

MSH|^~\&|NCIR|NCIR-SHORT-ORG||NCIR|2010082411452311111||QBP^Q11^QBP_Q11|20131025114021RM00||2.5.1|||NE|AL||||
Z34^CDCPHINVS

Inbound –The value accepted in this field is Z34^CDCPHINVS If the field is blank or it has a different value than the one accepted, the message will be rejected and an error sent: "MSH-21: Message Profile Identifier missing or invalid."

Outbound –

For RSP messages, the values sent in this field are:

Z32^CDCPHINVS (an exact match was found)

Z33^CDCPHINVS (no candidate was found)

Z31^CDCPHINVS (multiple candidate list).

If an error is returned (e.g. required field missing, search results exceed max limit), MSH-21 will not be populated.

NK1—Next of Kin Segments (RSP Only)

The NK1 segment will be included in the RSP in the scenario where:

- Exactly one match is found
- Multiple candidates are found with the total less than the maximum allowed

Definition:

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	O	X	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
					Parties Job Code/Class			
12		CX	[0..1]		Next of Kin / Associated Parties Employee Number	O	X	
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]	ISO0639	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	

SEQ	LEN	Data Type	Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Constraint
30		XPN	[0..1]		Contact Person's Name	O	X	
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 segment in RSP message:

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

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|

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^|

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^^^^|

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^^^|

Outbound –

NCIR will send out the responsible person's address, if there is one. NCIR sends out street address, other designation, city, state, zip, and address type of 'M' in NK1-4.

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^^^|^PRN^PH^
^^919^5551234^^|

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^^^|^PRN^PH^
^^919^5551234^^||||||||||||ENG^English^HL70296||02|||||||||||||Y

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^^^|^PRN^PH^
^919^5551234^^||||||||||||ENG^English||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^^^|^PRN^PH^
^919^5551234^^||||||||||||ENG^English||02|||||||||||||Y

Outbound –

NCIR will send the value "Y" to indicate a Primary Responsible Person, and "N", to indicate the Responsible person is not the primary.

OBX—Observation Result Segment (RSP Only)

The observation result segment has many uses. It carries observations about the object of its parent segment. In the RSP 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^^LN^^|1|PVF^Private Funds^NIP008^^|||||F|||20130401|

[Use HL7 2.5 code for privately purchased as this is HL7 2.5 LIG]

Eligibility Code:

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

Vaccine identification segment followed by VIS date presented and published.

Single-Antigen Vaccine

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

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|1|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|

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 ²	[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	

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

14		TS	[1..1]		Date/Time of the Observation	RE	RE	
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 VXC40 or 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	

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|

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.

Example: OBX|1|**CE**|

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|**

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, 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> OBX 1 CE 30956-7^vaccine type^LN 1 45^Hep B, unspecified formulation^CVX F<CR>
30973-2	Dose Number in Series (numerical value, e.g. 1,2,3)

OBX-3 value	Corresponding valid OBX-5 value
	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 *
64994-7	
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.

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

Outbound –

The values sent out in OBX-5 corresponds to the question in OBX-3. The values are listed in the table included under OBX-3.

Examples:

Vaccine Funding Information:

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

OBX|1|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private 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.date

Single-Antigen Vaccine

OBX|1|CE|38890-0^Component 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|1|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|

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|

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|

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

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|||||

Outbound –

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

ORC—Order Request Segment (RSP Only)

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	
9		TS	[0..1]		Date/Time of Transaction	O	X	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
10		XCN	[0..1]		Entered By	RE	RE	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	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
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 RSP is RE.

ORC|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^^^|

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.

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).

Outbound –

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

ORC-17 Entering Organization

Definition: *This field is not used but is considered optional.* This field identifies the organization that the enterer belonged to at the time he/she enters/maintains the order, such as medical group or department.

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

Outbound –

NCIR will send out the Entering Organization (org which user is logged in when entering the immunization)

PD1—Patient Demographic Segment (RSP 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	

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
11	250	CE	[0..1]	0215	Publicity Code	RE	RE	
12	1	ID	[0..1]	0136	Protection Indicator	RE	RE	
13	8	DT	[0..1]		Protection Indicator Effective Date	CE	X	If protection indicator is valued, then this field should be valued.
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	CE	O	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: NCIR does not allow choice at client level to decide receiving rem/recall. NCIR uses NK1 to send this information at responsible person level.

PD1|||||||02|

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**|

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**|

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**|

Outbound –

NCIR will not send any value in this field.

PID—Patient Identifier Segment (RSP Only)

The PID segment will be included in the RSP in the scenario where:

- Exactly one match is found
- Multiple candidates are found with the total less than the maximum allowed

Definition:

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.

Example:

RSP: PID|1||1234567890^^^PI^|Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|||||||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		XP	[1..*]		Patient Name	R	R	The first repetition shall contain the legal name. Multiple given names or initials are separated by spaces.
6		XP	[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 the Ethnic group.

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	RE	C(RE/X)	
30	1	ID	[0..1]	0136	Patient Death Indicator	CE	RE	If patient death date is populated, then this field should be populated.
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|||||||||2186-5^Not Hispanic or Latino^HL70189||N|1||||N|||||

Outbound –

NCIR will populate with sequence number.

PID-3 Patient Identifier List

Definition: Sub-components 1 (ID) and 5 (identifier type code see Table 0203) are required in the PID-3 field if populated. This is a repeating field and can send NCIR client id, NCIR organization chart # and/or NCIR secondary chart #.

PID|1||12870388^^^^SR^~CHART123^^^^PI^~SECOND123^^^^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^|

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^^^^^|

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|

Outbound –

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

PID-8 Administrative Sex

Definition: Values are F (Female), M (Male), or U (Unknown).

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

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|

Outbound –

When sending data to provider, HL70005 table is used to plug in a race code value.

PID-11 Patient Address

Definition: Address is returned in NK1 and not in PID-11. Local implementations have the flexibility to accept/send address here or in NK1. In NCIR, the address will be sent in the NK1.

Outbound –

NCIR will not populate this field.

PID-13 Phone Number - Home

Definition: Phone number is returned in the NK1 segment and not in PID-13 in the NCIR.

Outbound –

NCIR will not populate this field.

PID-15 Primary Language

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

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|||||||||2186-5^Not Hispanic or Latino^HL70189|

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|||||||||2186-5^Not Hispanic or Latino^HL70189||N|

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.

Outbound –

PID|1||1234567890^^^PI^||Last Name^First Name^Middle Name^^^L^|Last Name^First Name^Middle Name^^^|20110219|F||2106-3^White^HL7005|||||||||2186-5^Not Hispanic or Latino^HL70189||N|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.

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|||||||||2186-5^Not Hispanic or Latino^HL70189||N|1|||20130909|Y|

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.

QAK – Query Acknowledgement Segment (RSP Only)

The QAK segment will be included in the RSP in the scenario where:

- No records are found
- Exactly one match is found
- Multiple candidates are found with the total exceeding the maximum allowed
- Multiple candidates are found with the total less than the maximum allowed

Table 5-14-Query Acknowledgement Segment

SEQ	LEN	Data Type	CDC IG Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	32	ST	[1..1]		Query Tag	R	R	
2	2	ID	[0..1]	0208	Query Response Status	O	RE	
3		CE	[0..1]	0471	Message Query Name	O	R	
4	10	NM	[0..1]		Hit Count	O	X	
5	10	NM	[0..1]		This payload	O	X	
6	10	NM	[0..1]		Hits remaining	O	X	

Example:

RSP: QAK|QUERY_TAG|AA|Z34^Request Immunization History^HL70471|||

QAK Field Definitions

QAK-1 Query Tag

Definition: This field will return the value sent in QPD-2 (query tag) by the initiating system, and will be used to match response messages to the originating query. The responding system is required to echo it back as the first field in the query acknowledgement segment (QAK).

Outbound –

NCIR will send out the value submitted in QPD-2.

QAK-2 Query Response Status

Definition: This field allows the responding system to return a precise response status.

Outbound –

NCIR will send out values found in HL7 Table 0208 (OK, NF, AE, AR, and TM). NF indicates no candidate found matching the request. If search results exceed the system value or value in RCP-2, NCIR will send out TM. If AR (Application reject), AE(Application Error), or TM (Number of matches exceed system value) value is sent in this field, RSP will also return one ERR segment included

QAK-3 Message Query Name

Definition: This field contains the name of the query. This shall mirror the QPD-1 (Message Query Name) found in the query message that is being responded to.

Outbound –

NCIR will send out the QPD-1 value from the incoming query.

QPD – Query Parameter Definition

The QPD segment will be included in the RSP in the scenario where:

- No records are found
- Exactly one match is found
- Multiple candidates are found with the total exceeding the maximum allowed
- Multiple candidates are found with the total less than the maximum allowed

Definition:

The QPD segment in the query response (RSP) echoes the Query Parameter Definition (QPD) segment sent in the requesting query.

Table 5-15-Query Parameter Definition (QPD)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1		CE	[1..1]	0471	Message Query Name	R	R	
2	32	ST			Query Tag	R	R	Generated by the initiating system.
3		varies			User Parameters: Patient Identifiers List	R	RE	The specification of this sequence is found in the profile specific to the use case.
4					User Parameters: Patient Name		R	
5					User Parameters: Mother's Maiden Name		RE	
6					User Parameters: Patient Date of Birth		R	
7					User Parameters: Patient Sex		RE	

8					User Parameters: Patient Address		RE	
9					User Parameters: Patient Home Phone Number		X	
10					User Parameters: Patient Multiple Birth Indicator		RE	
11					User Parameters: Patient Birth Order		RE	
12							X	

Example:

QBP/RSP:

```
QPD|Z34^Request Immunization
History^HL70471|QUERY_TAG|99999999^^^SR^~88888888^^^PI^~77777777^^^PT^|CLIENT^FIRST^MIDDLE^^^
^|MAIDEN^MOTHERS^^^|20130315|F|1234 MICHIGAN AVE^^RALEIGH^NC^27615^^M^^^|Y|1|
```

QPD Field Definitions

QPD-1 Message Query Name

Definition: This field contains the name of the query. These names are assigned by the function-specific chapters of this specification. It is one to one with the conformance statement for this query name, and it is in fact an identifier for that conformance statement.

```
QPD|Z34^Request Immunization History^HL70471|
```

Inbound –

Value required: Z34^Request Immunization History ^HL70471.

Outbound –

NCIR will echo the value sent in QPD-1 of the QBP transaction

QPD-2 Query Tag

Definition: This field must be valued by the initiating system to identify the query, and may be used to match response messages to the originating query.

QPD|Z34^Request Immunization History^HL70471|**QUERY_TAG**|

Inbound –

This value should be unique to each query message instance. This field will be echoed back as first field in QAK.

Outbound –

NCIR will echo the value sent in QPD-2 of the QBP transaction, For QBP in outbound (RSP), this field will echo what was received in QPD-2 of the QBP transaction.

QPD-3 User Parameters: Patient Identifier List

Definition: This field contains the sending system Chart Number, Secondary Chart Number and/or NCIR client id.

QPD|Z34^Request Immunization History^HL70471|QUERY_TAG|**99999999^SR^~88888888^PI^~77777777^PT^**|

Inbound –

NCIR will use the provided patient identifier list value to match a candidate record. NCIR organization chart # or NCIR secondary chart # may be provided in this field to identify a client. Use PI for providing NCIR organization chart #, PT for NCIR secondary chart # and/or SR to provide NCIR client id (if known), Refer to example above.

Note: The NCIR organization chart # and NCIR secondary chart # 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. If no match is found based on chart # or secondary chart #, other values (like Name, DOB) will be used to identify the client. The NCIR client id is unique identifier assigned by NCIR and may also be used if your system stores it after the first retrieval from the NCIR.

Outbound –

NCIR will echo the value sent in QPD-3 of the QBP transaction. This field will echo what was received in the QPD-3 of the QBP transaction.

QPD-4 User Parameters: Patient Name

Definition: This field contains the client name. See the XPN data type.

QPD|Z34^Request Immunization

History^HL70471|QUERY_TAG|99999999^SR^~88888888^MPI^~77777777^PT^|CLIENT^FIRST^MIDDLE^*****|

Inbound –

This is a required field. Last name and first name are required in the first two components. If the Name Type Code component is included, use L-Legal.

Outbound –

NCIR will echo the value sent in QPD-4 of the QBP transaction.

QPD-5 User Parameters: Patient Mother's Maiden Name

Definition: This field contains the mother's maiden name. See the XPN data type.

QPD|Z34^Request Immunization

History^HL70471|QUERY_TAG|99999999^SR^~88888888^MPI^~77777777^PT^|CLIENT^FIRST^MIDDLE^
|MAIDEN^MOTHERS^**|

Inbound –

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

It is recommended that mother's maiden name be populated for best results. If provided, the mother's maiden name along with name, DOB, patient identifier list and other fields are used to get search results.

Outbound –

NCIR will echo the value sent in QPD-5 of the QBP transaction (regardless of what is used by NCIR for search).

QPD-6 User Parameters: Patient Date of Birth

Definition: This field contains the client date of birth.

QPD|Z34^Request Immunization
History^HL70471|QUERY_TAG|99999999^^^SR^~88888888^^^PI^~77777777^^^PT^|CLIENT^FIRST^MIDDLE^
^^^|MAIDEN^MOTHERS^^^|20130315|F|

Inbound –

This is a required field. Give the year, month, and day of birth (YYYYMMDD).

Outbound –

NCIR will echo the value sent in QDP-6 of the QBP transaction.

QPD-7 User Parameters: Patient Sex

Definition: This field contains the client gender. See Table 0001. Use values F, M, or U.

QPD|Z34^Request Immunization
History^HL70471|QUERY_TAG|99999999^^^SR^~88888888^^^PI^~77777777^^^PT^|CLIENT^FIRST^MIDDLE^
^^^|MAIDEN^MOTHERS^^^|20130315|F|

Inbound –

Provide the gender of the client.

Outbound –

NCIR will echo the value sent in QDP-7 of the QBP transaction.

QPD-8 User Parameters: Patient Address

Definition: This field contains the client address. See XAD data type

QPD|Z34^Request Immunization
History^HL70471|QUERY_TAG|99999999^^^SR^~88888888^^^PI^~77777777^^^PT^|CLIENT^FIRST^MIDDLE^
^^^|MAIDEN^MOTHERS^^^|20130315|F|1234 MICHIGAN AVE^^RALEIGH^NC^27615^^M^^NC091^^|Y|1|

Inbound –

Provide the client address to assist in identifying candidate clients. Providing address helps with search and is recommended.

Outbound –

NCIR will echo the value sent in QDP-8 of the QPD transaction.

QPD-10 User Parameters: Patient Multiple Birth Indicator

Definition: This field indicates Multiple Birth.

QPD|Z34^Request Immunization

History^HL70471|QUERY_TAG|99999999^SR^~88888888^PI^~77777777^PT^|CLIENT^FIRST^MIDDLE^
^^^|MAIDEN^MOTHERS^^^|20130315|F|1234 MICHIGAN AVE^^RALEIGH^NC^27615^^M^^NC091^^|Y|1|

Inbound –

Use Y to indicate that the client was born in a multiple birth, or N, if client was not born in a multiple birth.

Outbound –

NCIR will echo the value sent in QDP-10 of the QBP transaction.

QPD-11 User Parameters: Patient Birth Order

Definition: This field indicates Birth Order when client was born in a multiple birth.

QPD|Z34^Request Immunization

History^HL70471|QUERY_TAG|99999999^SR^~88888888^PI^~77777777^PT^|CLIENT^FIRST^MIDDLE^
^^^|MAIDEN^MOTHERS^^^|20130315|F|1234 MICHIGAN AVE^^RALEIGH^NC^27615^^M^^NC091^^|Y|1|

Inbound –

Use 1 for the first born, 2 for the second, etc.

Outbound –

NCIR will echo the value sent in QDP-11 of the QBP transaction.

RCP – Response Control Parameter Segment (QBP Only)

Definition: The RCP segment is used to restrict the amount of data that should be returned in response to query. It lists the segments to be returned.

Table 5-16-Response Control Parameter

SEQ	LEN	Data Type	CDC IG Cardinality	NCIR Cardinality	Value set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comments
1	1	ID	[0..1]	[0..1]	0091	Query Priority	RE	R	Constrain to empty or I. Immediate priority is expected.
2		CQ	[0..1]	[0..1]	0126	Quantity Limited Request	RE	RE	This field may contain a maximum number of records that may be returned. The first component contains the count and the second contains RD for records.
3		CE	[0..1]	[0..1]	0394	Response Modality	O	O	
4		TS	[0..1]	[0..1]		Execution and Delivery Time	O	X	
5	1	ID	[0..1]	[0..1]	0395	Modify Indicator	O	X	
6		SRT	[0..1]	[0..1]		Sort-by Field	O	X	
7		ID	[0..*]	[0..*]		Segment group inclusion	O	X	

Example:

QBP: RCP||20^RD|R|||

RCP Field Definitions

RCP-1 Query Priority

Definition: This field contains the time frame that the response is expected.

RCP||20^RD|R|||

Inbound –

NCIR constrains this field value to 'I', for immediate. Error message sent if field is missing or invalid (value other than I): "RCP-1: Query Priority is missing or invalid. Defaulting to I."

RCP-2 Quantity Limited Request (CQ) 00031

Definition: The maximum number of patients that may be returned.

RCP||20^RD&records&HL70126|

Inbound –

NCIR expects the quantity and units to be present. If RCP-2.1 has a value less or equal to 20, NCIR may send candidates up to this number. If RCP-2.1 has a value greater than 20, then NCIR system may return a maximum of 20 candidates. Error message sent if RCP-2.2 field is invalid: RCP-2.2: Required field missing or invalid value. Defaulted to RD. RCP-2.2 is data type CE. Valid Identifier and Coding System values in RCP-2.2-1 and RCP-2.2-3 sub-components are RD and HL70126, respectively. RCP-2.2-2 description is not validated. RCP-2.2 subcomponents are separated by the ampersand: &.

RCP-3 Response Modality (CE) 01440

Definition: This field specifies the timing and grouping of the response message(s). Refer to HL7 Table 0394 – Response modality

RCP||20^RD&records&HL70126|R^Real Time^HL70394|||

Inbound –

NCIR constrains RCP-3.1 value to 'R'. RCP-3.3 value must equal 'HL70394', if provided. Error message sent if RCP-3.1 or RCP-3.3 values are invalid: "RCP-3: Response Modality missing or invalid. Defaulting to R."

RXA-- Pharmacy/Treatment Administration Segment (RSP Only)

The RXA segment will be included in the RSP in the scenario where:

- Exactly one match is found

Definition:

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.³

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^|64859^Amash^Becky^W|^SITE-8911||||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|
```

³ 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 5-17 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 is 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: This field is constrained to 0 (zero).

RXA|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, this value is constrained to 1.

RXA|0|1|

Outbound –

Sends out "1".

RXA-3 Date/Time Start of Administration

Definition: This is a required field indicating the date the vaccine was given or refused.

RXA|0|1|20121219|

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 field indicates the End administration date. In the context of immunization, this field is equivalent to the Start date/time, and if populated, should equal the value in RXA-3.

RXA|0|1|20121219|20121219|

Outbound –

NCIR will send the same value as in RXA-3. If the RXA segment indicates a comment with an end date, that end date will be sent in RXA-4.

RXA-5 Administered Code

Definition: This field identifies the vaccine administered/offered.

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 will send out 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^^^|

If CVX is unknown for historical doses, the first triplet can 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: This field identifies the amount of vaccine administered.

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: This field identifies the type of units administered. Required field if RXA-6 is populated with a value other than 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: This field indicates whether the information being submitted in the RXA is an owned inventory dose, or if the information is historical.

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|

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: This field identifies the name of the administering clinician (VEI).

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

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: This field identifies the facility where the vaccine was administered.

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

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

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: This field identifies the manufacturer's lot number for the vaccine. NCIR does not support repetition of this field.

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|

Outbound –

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

RXA-16 Substance Expiration Date

Definition: This field identifies the date the lot expires in the YYYYMMDD format.

e.g. |testlot1|20151226|

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: This field identifies the vaccine manufacturer for an inventory dose. Refer to HL7 Table 0227. NCIR does not support repetition of this field.

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

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 is recorded in RXA-5

Outbound –

NCIR sends out two types of refusals namely parent refusals and religious exemptions. NCIR will send information on refusals in RXA-18, including Parent Refusals and Religious Exemptions.

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.

RXA-20 Completion Status

Definition: This field indicates the record completion status.

RXA|0|1|20110410|20110410|10^Polio injectable^CVX^IPOL^^VTN|0.5|ML||00^New^^^|76704^Smith^Games|^SITE-21959^|||Z1234A|20200101|PMC^PMC^MVX^^|^CP

Outbound –

NCIR will send CP (Complete), PA (Partially Administered), RE (Refused), NA (Not Administered), or DE (Date Estimated).

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.

Outbound –

NCIR will not populate this field for the RSP transaction.

RXR-- Pharmacy/Treatment Route Segment (RSP Only)

The RXR segment will be included in the RSP in the scenario where:

- Exactly one match is found

Definition:

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 5-18 Pharmacy/Treatment Route (RXR)

SEQ	LEN	Data Type	Cardinality	Value Set	ELEMENT NAME	CDC IG Usage	NCIR Usage	Comment
1	4	CE	[1..1]	HL7 0162	Route	R	R	
2	4	CWE	[0..1]	HL7 0163	Administration Site	RE	RE	
3		CE	[1..1]		Administration Device	O	X	
4		CWE	[0..1]		Administration Method	O	X	
5		CE	[1..1]	0292	Routing Instructions	O	X	
6	20	CWE	[1..1]	0495	Administration Site Modifier	O	X	

Example:

RSP: RXR|IM^HL70162^^|RA^HL70163^^|||

RXR Field Definitions

RXR-1 Route

Definition: This field is the route of administration. Refer to User-Defined Table 0162

|SC^Subcutaneous^HL70162|

Outbound –

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

RXR-2 Administration Site

Definition: This field contains the site of the administration route. Refer to HL7 Table 0163.

LD^Left Deltoid^HL70163^^

Outbound –

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

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.

Table 6-1-Supported Messages

Message	Purpose	Related Messages	Associated Profiles	NCIR Supported
QBP	Request Immunization History and Request Person Id	RSP	Z34^CDCPHINVS	Yes
RSP	Respond to Request for Immunization Record and Respond to Request for Person Id	QBP	Z31^CDCPHINVS Z32^CDCPHINVS Z33^CDCPHINVS ^CDCPHINVS (Error)	Yes
ACK	Send Message Acknowledgement	VXU, ADT, QBP		Yes, for messages that cannot be deciphered, ACK is sent out.

Request Immunization History--QBP

Systems may send a query for NCIR records using a QBP. This query request may identify no records, a single record or multiple records as a match to the information submitted in the query. See Appendix B for example messages that illustrate the processing of this message. The following table lists the segments that are part of a QBP.

Table 6-2 QBP– Query By Parameter/Segment Pattern Response

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0,1]	[0..1]	O	O	
BHS	[0,1]	[0..1]	O	O	
MSH	[1..1]	[1..1]	R	R	The MSH must include an identifier which indicates the Query Profile used.
QPD	[1..1]	[1..1]	R	R	
RCP	[1..1]	[1..1]	R	R	The Query Profile will list the segments that are expected to be returned in response to this query.
BTS	[0,1]	[0..1]	O	C	Include BTS if BHS is sent
FTS	[0,1]	[0..1]	O	C	Include FTS if FHS is sent

Respond to Request for Information--RSP

The RSP returns a response to the sending system and response depends on the results of the query. Three options exists which are no client found, multiple client found and one client matched. The format for each is listed below. This may indicate errors in processing.

- I. Response format (RSP) when no client matched the input query in QBP:
Z33: A query identifying no match returns an RSP with no Segment Pattern section.

Table 6-3-Segment Pattern Response (RSP): Z33 No match found or reject due to error in QBP

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0,1]	[0..1]	O	O	FHS segment always returned.
BHS	[0,1]	[0..1]	O	O	BHS segment always returned.
MSH	[1..1]	[1..1]	R	R	The MSH will indicate which query is being responded to and what Query Profile it was based on.
MSA	[1..1]	[1..1]	R	R	
[ERR]	[0..1]	[0..1]	O	O	If errors exist, then this segment is populated.
QAK	[1..1]	[1..1]	R	R	
QPD	[1..1]	[1..1]	R	R	This segment echoes the Query Parameter Definition Segment sent in the requesting query.
BTS	[0,1]	[0..1]	O	C	BTS segment always returned.
FTS	[0,1]	[0..1]	O	C	FTS segment always returned.

- II. Response (RSP) format when more than one client matches the input query submitted in QBP:
 Z31: A query identifying a list of candidates returns the client and responsible person demographic information in the Segment Pattern section to allow systems to identify the desired client and resubmit the query with more detailed client information.

Table 6-4-Segment Pattern Response (RSP): Z31 Candidate List

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
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FHS	[0,1]	[0..1]	O	O	FHS segment always returned.
BHS	[0,1]	[0..1]	O	O	BHS segment always returned.
MSH	[1..1]	[1..1]	R	R	
MSA	[1..1]	[1..1]	R	R	
[ERR]	[0..1]	[0..1]	O	C	If errors exist, then this segment is populated.
QAK	[1..1]	[1..1]	R	R	Query acknowledgement
QPD	[1..1]	[1..1]	R	R	This segment echoes the Query Parameter Definition Segment sent in the requesting query.
Begin Patient Identifier Group	[1..*]	[1..*]	R	R	Each message can have one or more patient identifier groups
PID	[1..1]	[1..1]	R	R	Each patient identifier group requires one PID
PD1	[0..1]	[0..1]	R	RE	Each patient identifier group may have 0 or 1 PD1
NK1	[0..*]	[0..4]	RE	RE	Each patient identifier group may have 0 to 4 responsible persons
End Patient Identifier Group					
BTS	[0,1]	[0..1]	O	C	BTS segment always returned.
FTS	[0,1]	[0..1]	O	C	FTS segment always returned.

- III. Response (RSP) format when exactly one client matches the query submitted by QBP:
 Z32: A query identifying one match returns the client and responsible person demographic information, and the client immunization history. Series and Immunization recommendations may also be sent depending on the provider preferences.

Table 6-5-Segment Pattern Response (RSP): Z32 Single Match

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0,1]	[0..1]	O	O	FHS segment always returned.
BHS	[0,1]	[0..1]	O	O	BHS segment always returned.
MSH	[1..1]	[1..1]	R	R	The MSH will indicate which query is being responded to and what Query Profile it was based on.
MSA	[1..1]	[1..1]	R	R	
[ERR]	[0..1]	[0..1]	O	C	If errors exist, then this segment is populated.
QAK	[1..1]	[1..1]	R	R	
QPD	[1..1]	[1..1]	R	R	This segment echoes the Query Parameter Definition Segment sent in the requesting query.
Begin Response Control Parameter					
Begin Patient Identifier Group	[1..1]	[1..1]			Exactly one patient identifier group will be sent
PID	[1..1]	[1..1]	R	R	

PD1	[0..1]	[0..1]	RE	RE	
NK1	[0..*]	[0..4]	RE	RE	
End Patient Identifier Group					
PV1	[0..1]	[0..1]	O	RE	PV1 is no longer used to send eligibility code information. Eligibility code is sent in OBX.
Begin Order Group	[0..*]	[0..*]			Each RSP can have zero or more orders
ORC	[1..1]	[1..1]	R	R	Required if client has immunization records (RXA). There is one ORC for each RXA
Begin Pharmacy Administration Group	[1..1]	[1..1]	R	R	Required if order group exists
RXA	[1..1]	[1..1]	R	R	
RXR	[0..1]	[0..1]	RE	RE	
OBX	[0..*]	[0..*]	RE	RE	
End Pharmacy Administration Group					
End Order Group					
End Response Control Parameter					
BTS	[0,1]	[0..1]	O	C	BTS segment always returned.

FTS	[0,1]	[0..1]	O	C	FTS segment always returned.
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IV: RSP format when an error is returned that prevented a query match submitted by QBP:
No client or responsible person demographic information, nor the client immunization history is returned.

Table 6-6-Segment Pattern Response (RSP): ^CDCPHINVS

Segment	CDC IG Cardinality	NCIR Cardinality	CDC IG Usage	NCIR Usage	Comment
FHS	[0,1]	[0..1]	O	O	FHS segment always returned.
BHS	[0,1]	[0..1]	O	O	BHS segment always returned.
MSH	[1..1]	[1..1]	R	R	The MSH will indicate which query is being responded to and what Query Profile it was based on.
MSA	[1..1]	[1..1]	R	R	
[ERR]	[0..1]	[0..1]	O	C	If errors exist, then this segment is populated.
QAK	[1..1]	[1..1]	R	R	
QPD	[1..1]	[1..1]	R	R	This segment echoes the Query Parameter Definition Segment sent in the requesting query.
BTS	[0,1]	[0..1]	O	C	BTS segment always returned.
FTS	[0,1]	[0..1]	O	C	FTS segment always returned.

Appendix A: Code Tables

HL7 Values

Appendix Type	Table	Name	Value	Description
User	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	091	Query Priority		
			I	Immediate Processing
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	0126	Quantity Limited request		
			RD	Records
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

Appendix Type	Table	Name	Value	Description
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
	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
HL7	0208	Query Response Status		
	0208		OK	Data found, no error
	0208		NF	No data found, no errors
	0208		AE	Application error
	0208		AR	Application Reject
	0208		TM	Too many candidates found
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 (Inactive now mapped to PMC and values are sent out as PMC)

Appendix Type	Table	Name	Value	Description
	0227		AR	Armour (Inactive – now mapped to CEN and values are sent out as CEN)
	0227		AVB	Aventis Behring LLC (Inactive – now mapped to CSL and values are sent out as CSL)
	0227		AVI	Aviron
	0227		BA	Baxter (Inactive – now mapped to BAH and values are sent out as BAH)
	0227		BAH	Baxter Healthcare Corporation
	0227		BAY	Bayer
	0227		BP	Berna (Inactive – now mapped to BPC and values are sent out as BPC)
	0227		BPC	Berna Products Corporation
	0227		CEN	Centeon L.L.C. (Inactive – now mapped to AVB and values are sent out as AVB)
	0227		CHI	Chiron Corporation (Inactive – now mapped to NOV and values are sent out as NOV)
	0227		CNJ	Cangene Corporation
	0227		CON	Connaught (Inactive – now mapped to PMC and values are sent out as PMC)
	0227		CSL	CSL Biotherapies
	0227		DVC	DynPort Vaccine Company, LLC
	0227		EVN	Evans (Inactive – now mapped to PWJ and values are sent out as PWJ)
	0227		GEO	GeoVax Labs, Inc
	0227		GRE	Greer Laboratories
	0227		IAG	Immuno International AG (Inactive – now mapped to BAH and values are sent out as BAH)
	0227		IDB	ID Biomedical
	0227		IM	Merieux (Inactive – 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 (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		MA	Massachusetts Public Health (Inactive – now mapped to MBL and values are sent out as MBL)
	0227		MBL	Massachusetts Biologic Laboratories
	0227		MED	MedImmune, Inc.
	0227		MIL	Miles (Inactive – 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 (Inactive – 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

Appendix Type	Table	Name	Value	Description
	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 (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		PSC	Protein Sciences Corporation
	0227		PWJ	Powderject Pharmaceutical (Inactive – now mapped to NOV and values are sent out as NOV)
	0227		SA	United States Army Medical Research (Inactive – 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. (Inactive – now mapped to BPC and values are sent out as BPC)
	0227		SOL	Solvay Pharmaceuticals
	0227		TAL	Talecris Biotherapeutics (includes Bayer Biologicals)
	0227		USA	United States Army Medical Research
	0227		WA	Wyeth-Ayerst (Inactive – now mapped to WAL and values are sent out as WAL)
	0227		WAL	Wyeth-Ayerst
	0227		OTH	Other
	0227		UNK	Unknown manufacturer
	0227		VXG	VaxGen
	0227		ZLB	ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Company)
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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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	0394	Response Modality		
	0394		R	Real Time
HL7	0441	Immunization Registry Status		
	0441		A	Active
	0441		I	Inactive
	0441		P	Permanently Inactive-Deceased

Appendix Type	Table	Name	Value	Description
HL7	0471	Query Name		
	0471		Z34	Request Immunization
HL7	0516	Error Severity		
	0516		W	Waning
	0516		I	Information
	0516		E	Error
NCIR	0533			
	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
	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>.

Appendix Type	Table	Name	Value	Description
	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.
	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.

Appendix Type	Table	Name	Value	Description
	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		207.72	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		207.87	Informational error - Invalid Suffix <Name Suffix>. No value Stored.

Appendix Type	Table	Name	Value	Description
	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.
	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.
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: 30963-3)		
	CDCPHIN VS		PHC70	Private funds
	CDCPHIN VS		VXC1/VXC2	State-supplied funds
NIP	NIP004	Refusals, Exemptions, Repeat Series (OBX-3 LOINC code:		

Appendix Type	Table	Name	Value	Description
		30945-0)		
	NIP004		ME01	State approved medical exemption for DTP/aP vaccine group
	NIP004		ME02	State approved medical exemption for Pediatric DT vaccine
	NIP004		ME03	State approved medical exemption for Hepatitis B vaccine group
	NIP004		ME04	State approved medical exemption for Hib vaccine group
	NIP004		ME05	State approved medical exemption for MMR vaccine group
	NIP004		ME06	State approved medical exemption for Polio vaccine group
	NIP004		ME07	State approved medical exemption for Adult Td vaccine group
	NIP004		ME08	State approved medical exemption for Varicella vaccine group
	NIP004		ME09	State approved medical exemption for Tdap vaccine group
	NIP004		CE01	State approved clinical studies exemption for Adult Td vaccine group
	NIP004		CE02	State approved clinical studies exemption for DTP/aP vaccine group
	NIP004		CE03	State approved clinical studies exemption for Hepatitis B vaccine group
	NIP004		CE04	State approved clinical studies exemption for Hib vaccine group
	NIP004		CE05	State approved clinical studies exemption for MMR vaccine group
	NIP004		CE06	State approved clinical studies exemption for Pediatric DT vaccine group
	NIP004		CE07	State approved clinical studies exemption for Polio vaccine group
	NIP004		CE08	State approved clinical studies exemption for Tdap vaccine group
	NIP004		CE09	State approved clinical studies exemption for Varicella vaccine group
	NIP004		CE10	State approved clinical studies exemption for Hepatitis A vaccine group
	NIP004		CE11	State approved clinical studies exemption for Rotavirus vaccine group
	NIP004		CE12	State approved clinical studies exemption for HPV vaccine group
	NIP004		CE13	State approved clinical studies exemption for Meningococcal vaccine group
	NIP004		CE14	State approved clinical studies exemption for Influenza vaccine group

Appendix Type	Table	Name	Value	Description
	NIP004		CE15	State approved clinical studies exemption for Pneumococcal vaccine group
NIP	NIP004	Contraindications, Precautions (OBX-3 LOINC code: 30945-0)		
	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
	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 $\geq 40.5^{\circ} \text{C}$ (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	Immune globulin (IG) administration, recent or simultaneous
	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)

Appendix Type	Table	Name	Value	Description
	CDCPHIN VS		VXC18	Allergy to baker's yeast (anaphylactic)
	CDCPHIN VS		VXC19	Allergy to thimerosal (anaphylactic)
	CDCPHIN VS		VXC20	Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic)
	CDCPHIN VS		VXC22	Encephalopathy within 7 days of previous dose of DTP
	CDCPHIN VS		VXC23	Current fever with moderate-to-severe illness
	CDCPHIN VS		VXC24	Current acute illness, moderate to severe (with or without fever)
	CDCPHIN VS		VXC26	Unstable neurologic disorder, until neurological status clarified and stabilized
	CDCPHIN VS		VXC27	Immunodeficiency due to any cause
		(OBX-3 LOINC code: 59784-9)		
	L		33	Immunity: Varicella – Evidence prior to 7/1/2015, Laboratory-tested or history of varicella disease (Chicken pox)
	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
		(OBX-3 LOINC code: 59785-6)		
	CDCPHIN VS		VXC7	Client has been exposed to rabies
NCIR	NCIR001	Reaction Codes (OBX-3 LOINC code: 31044-1)		
	NCIR001		81308009	ENCEPHALOPATHY within 7 DAYS
	NCIR001		VXC13	Guillain-Barre syndrome 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
	NCIR001		VXC11	Convulsions (fits, seizures) within 72 hours
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix Type	Table	Name	Value	Description
	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
	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	Influenze, seasonal, preservative free (Age >= 6 M < 3Y)
	CPT		90656	Influenze, 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

Appendix Type	Table	Name	Value	Description
	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
	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

Appendix B: Guidance on Usage and Example Messages

Example QBP - Basic immunization history request:

Storyboard:

Sending Organization "NCIR-SHORT-ORG" is requesting the immunization History for one of their patients. The immunization request is for Lisa Patricia Patient who meets the following patient criteria:

- Date of Birth: 01/29/2008
- State Registry ID = Test20130206-2
- Responsible Person = Helen Tester
- Address = 627 Packers Ave, Liberty NC 28000

The request is to return up to 20 patients that meet the criteria listed above and that all information is to be sent in Real Time.

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.

```
MSH|^~\&|Sending_Application|NCIR-SHORT-  
ORG|NCIR|NCIR|20100824||QBP^Q11^QBP_Q11|HL7251_QUERY_01|P^|2.5.1^|||NE|AL|||Z3  
4^CDCPHINVS<CR>
```

```
QPD|Z34^Request Immunization  
History^HL70471|HL7251_QUERY_01|^SR^~TEST20130206-  
2^PI^|PATIENT^LISA^PATRICIA^L^|TESTER^HELEN^|20080129|F|627 PACKERS  
AVE^LIBERTY^NC^28000^|N|||<CR>
```

```
RCP||20|R|||<CR>
```

Example RSP - Basic Z31, Z33 and Z32 response:

The following RSP message is returned for a Z33 no match response:

```
FHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500|||<CR>
```

```
BHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500|||<CR>
```

MSH|^~\&| NCIR8.9.0|NCIR^^|NCIR-SHORT-ORG|20130308150002.365-0500||RSP^K11^RSP_K11|20130308150002RM00|P^|2.5.1^^|NE|||||Z33^CDCPHINVS<CR>

MSA|AE|HL7251_QUERY_01<CR>

QAK|HL7251_QUERY_01|NF|Z34^Request Immunization History^HL70471|||<CR>

QPD|Z34^Request Immunization History^HL70471|HL7251_QUERY_01|^^^SR^~PATIENT ID^^^PI^|PATIENT^LISA^PATRICIA^^^L^|TESTER^HELEN^^^|20080129|F|627 PACKERS AVE^LIBERTY^NC^28000||||<CR>

BTS|1||<CR>

FTS|1|<CR>

The following RSP message is returned for a Z31 candidate list response:

FHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500||||<CR>

BHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500||||<CR>

MSH|^~\&| NCIR8.9.0|NCIR^^|NCIR-SHORT-ORG|20130308144910.932-0500||RSP^K11^RSP_K11|20130308144910RM00|P^|2.5.1^^|NE|||||Z31^CDCPHINVS<CR>

MSA|AE|HL7251_QUERY_01<CR>

QAK|HL7251_QUERY_01|AE|Z34^Request Immunization History^HL70471|||<CR>

QPD|Z34^Request Immunization History^HL70471|HL7251_QUERY_01|^^^SR^~PATIENT ID^^^PI^|PATIENT^LISA^PATRICIA^^^L^|TESTER^HELEN^^^|20080129|F|627 PACKERS AVE^LIBERTY^NC^28000||||<CR>

PID|1||111111111^^^SR^~^^^PI^~^^^PT^|PATIENT^LISA^PATRICIA^^^|TESTER^HELEN^ ^^|^20080129|F||2131-1^HL70005^^|2186-5^HL70189^^|N|0||||N||||||<CR>

PD1||||||||N||||A||||<CR>

NK1|1|TESTER^HELEN^MTH^MOTHER^HL70063^627 PACKERS
AVE^LIBERTY^NC^28385^M^PRN^919^5551234^|||||ENGLISH^ISO6392^||
02|||||Y<CR>

PID|1||222222222^SR^~^PI^~^PT^||PATIENT^LISA^PATRICIA^L^TESTER^HELEN
^20080129|F||2131-1^HL70005^|||||2186-5^HL70189^|N|0||||N|||||<CR>

PD1|||||N|||A|||<CR>

PID|1||333333333^SR^~^PI^~^PT^||PATIENT^LISA^PATRICIA^L^TESTER^HELEN
^20080129|F||2131-1^HL70005^|||||2186-5^HL70189^|N|0||||N|||||<CR>

NK1|1|PATIENT^LISA^PATRICIA^SEL^SELF^HL70063^627 PACKERS
AVE^LIBERTY^NC^28000^|||||ENGLISH^ISO6392^||02|||||N<CR>

NK1|1|TESTER^HELEN^MTH^MOTHER^HL70063^627 PACKERS
AVE^LIBERTY^NC^28385^M^PRN^919^5551234^|||||ENGLISH^ISO6392^||02
|||||Y<CR>

BTS|1||<CR>

FTS|1||<CR>

The following RSP message is returned for a Z34 single match response:

FHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500||||<CR>

BHS|^~\&| NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130308143807.257-0500||||<CR>

MSH|^~\&| NCIR8.9.0|NCIR^|NCIR-SHORT-ORG|20130308143807.258-
0500||RSP^K11^RSP_K11|20130308143807RM00|P^2.5.1^||NE||||Z34^CDCPHINVS<CR>

MSA|AE|HL7251_QUERY_01<CR>

ERR||PID^1^3^1^0|101^Required field missing^HL70357^W||||QPD-3: PATIENT IDENTIFIER
LIST REQUIRED||||<CR>

QAK|HL7251_QUERY_01|AE|Z34^Request Immunization History^HL70471||<CR>

QPD|Z34^Request Immunization
History^HL70471|HL7251_QUERY_01|SR^~PI^PATIENT^LISA^PATRICIA^TESTE
R^HELEN^L^20080129|F|627 PACKERS AVE^LIBERTY^NC^28000|||<CR>

PID|1||123456789^SR^~CLIENT IDENTIFIER^PI^~SECONDARY CLIENT
IDENTIFIER^PT^|PATIENT^LISA^PATRICIA^L^TESTER^HELEN^20080129|F||213
1-1^HL70005^|||2186-5^HL70189^|N|0||N|||<CR>

PD1|||||N|||A|||<CR>

NK1|1|TESTER^HELEN^MTH^MOTHER^HL70063^627 PACKERS
AVE^LIBERTY^NC^28385^M^PRN^919^5551234^|||||ENGLISH^ISO6392^||
02|||||Y<CR>

PV1||R|||||<CR>

ORC|RE||105193541|||||99999^TEST^CLINICIAN|||||<CR>

RXA|0|1|20100726|20100726|83^HepA ped-2 dose^CVX^90633^HepA ped-2
dose^C4|0.5|ML||00^76704^Smith^Games|^TAWNA'S TEST ORG-
21959^||AHABB123AA|20200101|SKB^GlaxSmithKline (SmithKline Beecham and
Glaxo Wellcome)^MVX^||CP|||

RXR|IM^INTRAMUSCULAR^HL70162^LT^LEFT THIGH^HL70163^|||

OBX|1|CE|30963-3^VACCINE PURCHASED WITH^LN|1|VXC1^Public
Funds^CDCPHINVS^|||F||20140922|||

OBX|2|CE|38890-0^COMPONENT VACCINE TYPE^LN|2|85^Hep A, unspecified
formulation^CVX^|||F||20140922|||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT
PUBLISHED^LN|2|20111025|||F||20140922|||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT
PRESENTED^LN|2|20100726|||F||20140922|||ORC|RE|9999|||<CR>

OBX|1|CE|30963-3^VACCINE PURCHASED WITH^LN|1|VXC1^Public
Funds^CDCPHINVS^|||F||20140918|||

OBX|2|CE|38890-0^COMPONENT VACCINE TYPE^LN|2|107^DTaP, unspecified
formulation^CVX^|||F||20140918|||

OBX|3|TS|29768-9^DATE VACCINE INFORMATION STATEMENT
PUBLISHED^LN|2|20070517|||F||20140918|||

OBX|4|TS|29769-7^DATE VACCINE INFORMATION STATEMENT
PRESENTED^LN|2|20110108|||F||20140918|||

OBX|5|CE|38890-0^COMPONENT VACCINE TYPE^LN|3|17^Hib, unspecified
formulation^CVX^|||F||20140918|||

OBX|6|TS|29768-9^DATE VACCINE INFORMATION STATEMENT
 PUBLISHED^LN|3|20140204|||||F|||20140918|||||||

OBX|7|TS|29769-7^DATE VACCINE INFORMATION STATEMENT
 PRESENTED^LN|3|20110108|||||F|||20140918|||||||

OBX|8|CE|64994-7^Vaccine fund pgm elig
 cat^LN|4|V02^Medicaid^HL70064|||||F|||20110108|||VXC41^per visit^CDCPHINVS|||||||

BTS|1||<CR>

FTS|1||<CR>

Example Response – Invalid required value and Fatal Error:

The following RSP message is returned for a QBP request sent with an invalid required value:

FHS|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130322185040.373-0400|||||<CR>

BHS|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130322185040.373-0400|||||<CR>

MSH|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|20130322185040.373-
 0400||RSP^K11^RSP_K11|20130322185040RM00|P^|2.5.1^^|NE|||||^CDCPHINVS<CR>

MSA|AR|QUERY_TAG<CR>

ERR||QPD^1^6^0^0|102^Data type error^HL70357^^^|E||||QPD-6: Invalid DOB.||||| <CR>

QAK|QUERY_TAG|AE|Z34^Request Immunization History^HL70471|||<CR>

QPD|Z34^Request Immunization
 History^HL70471|QUERY_TAG|^^^SR^~^^^PI^|PATIENT^LISA^PATRICIA^^^L^|
 TESTER^HELEN^^^|^ abcdefgh|F|627 PACKERS AVE^LIBERTY^NC^28000|||||<CR>

BTS|1||<CR>

FTS|1||<CR>

The following ACK message is returned for a QBP request sent resulting in a Fatal Error:

FHS|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|||||<CR>

BHS|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-ORG|||||<CR>

MSH|^~\&|NCIR8.9.0|NCIR||NCIR-SHORT-
ORG|20130322||ACK^V04^ACK|2013032218585600|P^|2.5.1^^||NE|<CR>

MSA|AR|QUERY_TAG1||||<CR>

ERR||MSH^1^2^1^^|102^Data type error^HL70357^^^|E||||MSH-2: Encoding Characters missing
or invalid.|||| <CR>

BTS|1||<CR>

FTS|1|<CR>

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 Chase	10/25/2013	Draft of 8.9.1 version
	Sriram Venkataraman	10/30/2013	Review of entire document and a number of updates and clarification.
	Tawna Chase	10/31/2013	Review state response
	Tawna Chase	11/6/2013	Final 8.9.1 Version
8.9.2	Tawna Chase	01/16/2014	Added sequence number to all PID-1 fields, updated error messages for RCP segment, added note about QBP transaction, added BN Bilateral Nares, LNLeft Naris, and RNNaris to HL70163 table
8.9.2	Sriram Venkataraman	1/31/2014	Reviewed and updated different fields.
9.1.0	Maia Ouderkirk	03/07/2014	Table 0292 values updated CPT values updated
	Maia Ouderkirk	03/20/2014	Added table 0201 – Telecommunication use code Added CDCPHINVS values – Immunization funding source
	Maia Ouderkirk	06/04/2014	Incorporated changes corresponding to VXU
9.1.1	Maia Ouderkirk	08/26/2014	Updated Table 0289 values to include FIPS County codes
	Sriram Venkataraman	09/02/2014	Client comment and error processing related feedback.
	Tawna Chase	09/18/2014	Update 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	10/23/2013	Remove suppressed messages Added OBX-17 value “VXC40” Added new error messages.
9.3.0	Tawna Chase	12/15/2014	9.2.2 was not released since it was decided to release along with 9.3.0. Included applicable county or residence changes
9.3.1	Tawna Chase	01/09/2015	Assed local contra code 18. Created version
	Lacey Dean	02/06/2015	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	04/14/2015	Review of CDC feedback changes and updated PID-12 to remove table and few minor changes.
	Maia Ouderkirk	06/18/2015	Added VTN: QUADRACEL Added Immunity values: 38907003 (SCT), 33 (L), 44 (L) Updated RCP-2 & RCP-3 processing
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