Wisconsin Immunization Registry

Implementation Guide for Immunization Messaging

HL7 Version 2.5.1 Release 1.5

Last Updated: April 4, 2024

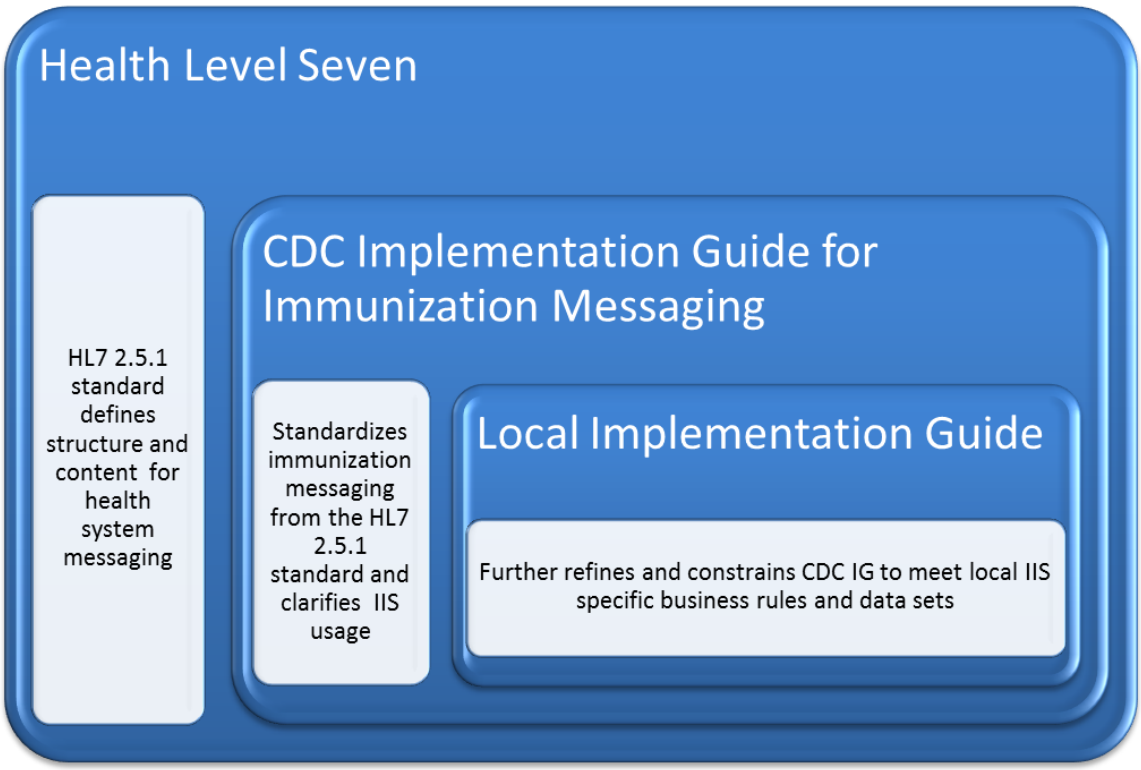
Introduction

The Wisconsin Immunization Registry (WIR) has made available an interactive user interface on the World Wide Web for authorized users to enter and update client immunization records. The Web interface makes WIR information and functions available on desktops around the State. However, some immunization providers already process and store similar data in their own information systems and may wish to keep using those systems while also participating in the Statewide central repository. Others may have different billing needs and may decide they don't want to enter data into two diverse systems. WIR has been enhanced to accept updates and queries utilizing the latest HL7 Version 2.5.1 messaging standards.

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

Understanding the Implementation Guide Hierarchy

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 **WIR** HL7 data exchange interface works. They are arranged in a hierarchy of documents, each refining and constraining the HL7 Standard.



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 1.5** (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, which finalizes all implementation decisions and defines exactly what **WIR** will and will not accept. It is written in accordance with the standards set in the first two documents.

The Health Level Seven (HL7) Standard

The ANSI HL7 standard is widely used for data exchange in the health care industry. The full standard is quite lengthy, covering a variety of situations in patient care and health care finance and no single application is likely to use all of its content. The CDC has worked with HL7 developers to create a set of messages that permit exchange of immunization data. This document covers the subset of HL7 that will be used for client and immunization records exchanged between WIR and outside systems.

- The basic unit transmitted in an HL7 implementation is the **message**.
- Messages are made up of several **segments**, each of which is one line of text, beginning with a three-letter code identifying the segment type.
- Segments are in turn made up of several **fields** separated by a delimiter character, "|".

```
MSH|^~\&|9999|||WIR|19991005032342+0000||VXU^V04^VXU_V04|682299|P|2.5.1|||ER|AL|||||Z22^CDCPHINVS
PID|||79928^^^WIA^PI||SMITH^MARY^T^^^^L|JOHNSON^^^^^^M|19951212|F
ORC|RE||1^EHR
RXA|0|1|19970903||106^DTaP^CVX^11793-2860-01^DAPTACEL VACCINE INJECTION 1 DOSE
VIAL^NDC|0.5|mL^MilliLiter^UCUM||00
```

The details of how HL7 messages are put together, for WIR purposes, will be explained later in this document. The example above shows the essentials of what an HL7 VXU message looks like. In this example, a message is being sent on behalf of Valley Clinic (organization ID 9999) to WIR. The message consists of four segments. NOTE: Valley Clinic may or may not be the actual transmitter of the message. The transmitter of the message will be identified by WIR from log-in information and not from an HL7 message, although the ID of the transmitter may be included in the message in the MSH segment.

- The Message Header segment (**MSH**) identifies the owner (**VALLEY CLINIC**) of the information being sent and the receiver (**WIR**). It also identifies the message as being of type **VXU.** The VXU is an Unsolicited Vaccination Record Update, which is one of the message types defined by HL7.
- The Patient Identification segment (**PID**) gives the client's name (MARY T SMITH), birth date (19951212, in YYYYMMDD format), and other identifying fields.
- The Order Request segment (ORC) tells that there was an Order Request with a filler order number of 1.
- The Pharmacy Administration segment (**RXA**) tells that a DTP vaccine, with CVX code 01, was administered on September 3, 1997 (formatted as 19970903). Many fields are optional and this example may have more information included in it.

HL7 New Structure

When the HL7 New Structure is utilized, specific field usage/functionality will differ. These updates are described throughout this document under the 'HL7 New Structure' sections. Discuss with your onboarding specialist to determine if the new structure should be utilized.

VXU Message Updated Fields:
MSH-4 the sender of the immunization data
MSH-22 the initiator of the immunization data
ORC-17 the owner of the immunization data

QBP Message Updated Fields:
MSH-4 the owner of the message
MSH-22 the initiator of the message

New Structure Classification
The Authorized Submitter concept has been introduced along with the HL7 New Structure. The Authorized Submitter has the authority to submit data on behalf of itself, Child organizations, and organizations set up as Authorized Submittees in WIR.

Organization Name	Organization ID	Site ID	Type	New Structure Classification
Des Auth Sub Ind	**168357**	331953	Independent	Authorized Submitter
Des Parent 1	**168457**	332053	Parent	Authorized Submittee
Des Child 4	**170557**	334153	Child	Authorized Submittee

Scenario	MSH-4	MSH-22	ORC-17	RXA-11

	Sending Facility	Sending Responsible Organization	Entering Organization	Administered-at Location
Des Auth Sub to IIS	168357	168357	168357	331953
Des Parent 1 to IIS	168357	168457	168457	332053
Des Parent 1 to IIS	168457	168457	168457	332053
Des Child 4 to IIS	168357	168457	170557	334153
Des Child 4 to IIS	168457	168457	170557	334153
Des Child 4 to IIS	170557	170557	170557	334153

```
MSH|^~\&|EHR Application|168357|WIRPH2|168357|20160301083000-
0600||VXU^V04^VXU_V04|6254|P|2.5.1|||ER|AL|||||Z22^CDCPHINVS|^^^^^WIA^PRN^^^168457|^^^^^WIA^XX^^^1
PID|1||666666^^^WIRPH2^PI||BAGGINS^BILBO^^^^^L^^^^^|WIR^TEST^^^^^M|19911212|M|||112 TEST
ST^^MADISON^WI^53704^^P^^||^PRN^^^^608^1555555^|||||||||2186-5^Non-Hispanic^CDCREC||||
PD1||||||||||||02^Reminder/recall -any method^HL70215|N||||A|
ORC|RE||0^DNM|||||||^ORDER^SHOT^THE^^MS^^^^^^^MR^^^^^^^^^^^^^^RN^^||^ORDER^SHOT^THE^^MS^^^^^^^OEI^^
^^^^^^^^^^RN^^|||||170557^^HL70362^^^||||
RXA|0|1|20100525||141^Influenza^CVX^19515-0893-07^Influenza^NDC|0.5|mL^milliliter^UCUM||00^New
immunization
record^NIP001|^NEEDLE^BIG^O^^DR^^^^^^^VEI^^^^^^^^MD^^|^^^334153||||DXTEST1|21200101|SKB^GlaxoSmith
Kline (SmithKline Beecham and Glaxo Wellcome)^MVX|||CP|A
RXR|C38238^Intradermal^NCIT|RD^Right Deltoid^HL70163
OBX|1|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^CDCPHINVS||||||F|||20060901|
```

Scope of This Document

The *WIR Implementation Guide (IG) for Immunization Messaging* documented here, supports automated exchange of data between the WIR and outside systems. This allows both the client and immunization records to be available in both systems, so as to avoid the need to enter data twice. The remainder of this document specifies how HL7 file messages are constructed for the purposes of WIR. It does not cover the methods that are used to transmit files between the WIR central repository and outside systems. It covers only a small subset of the very extensive HL7 standard. Files of messages constructed from the guidelines in this document will fall within the HL7 standard, but there is a wide variety of other possible HL7 messages that are outside the scope of this document. When writing your HL7 2.5.1 Message generators and parsers the *WIR Implementation Guide (IG) for Immunization Messaging* "trumps" both the HL7 Version 2.5.1 and CDC HL7 2.5.1 Guides. This is because WIR may legitimately further constrain the protocol specified in those guides, (i.e., make an optional field required) or ignore optional fields and segments. While WIR will parse all required fields and datum values for HL7 2.5.1 compliance and validity, it may choose not to retain the datum value.

Disclaimer:

WIR's Web Service and PHIN-MS transports are designed for "real-time" single messaging. Organizations should avoid sending a barrage of messages to WIR at a single given instance. If you have a large volume of messages that you need processed, WIR requests that you submit the file via the WIR User Interface.

References

- See Version 2.5 (2003) of the Health Level 7 standard for a full description of all messages, segments, and fields. Information regarding HL7 is at www.hl7.org.
- The National Immunization Program within the Center for Disease Control (www.cdc.gov/vaccines/programs/iis/stds/downloads/hl7guide-02-2011.pdf) has published an Implementation Guide for Immunization Data with the purpose of keeping the use of HL7 for immunization data as uniform as possible.

HL7 Message Types Used in WIR Transmissions

WIR supports two message types: VXU, and QBP.

WIR supports one response message type for VXU messages: ACK

WIR supports one response message type for QBP messages: RSP

The VXU is used for sending client data and immunizations.

The ACK is used to acknowledge to the sender that a message has been received.

The QBP is used to query for a client's demographic, immunization and recommendation information (recommendations according to the ACIP schedule.)

The RSP is used to acknowledge to the sender that a query has been received, and to submit the results of the query back to the sender.

Note: When sending messages to WIR, if your message contains segments that are NOT defined herein, your messages will NOT be rejected by WIR. In the event that your message contains extraneous segments, WIR will ignore the segment (and all corresponding datum values).

RECOMMENDATIONS:

Updating Client Demographics (when you do not have immunization data to report):

VXU (Unsolicited Vaccination Update):

The VXU^V04 (Unsolicited Vaccination Record Update) message for a demographic update must contain only 1 RXA segment and that segment must contain an RXA-5 administered code of `|998^No Vaccine Administered^CVX|`. Refer to "Appendix D – Example Segment" for a sample RXA segment. All other segments and fields used within the VXU message will be constructed in accordance with their specified segment details (see below).

A check will be done to verify the client exists in WIR. If the client already exists, then the demographic update will occur (*if the rest of the message passes all other business rules). If the client is NOT found in WIR, the message will be rejected, the client will NOT be added to WIR.

Message Segments: Field Specifications and Usage

HL7 Segment Structure

Each segment consists of several fields that are separated by "|", which is the field separator character. The tables below define how each segment is structured and contain the following columns:

1. SEQ — The ordinal position of the field in the segment. Since WIR does not use all possible fields in the HL7 standard, these are not always consecutive. When datum values are provided for fields NOT defined in this guide, WIR will ignore and NOT retain the datum value.
2. ELEMENT NAME — HL7 name for the field.
3. DATA TYPE — HL7 data type of the field.
4. VALUE SET — Name of the table giving valid values for the field.
5. LENGTH — Maximum length of the field
6. WIR CARDINALITY — The minimum and maximum number of repetitions permitted for the field, given in the format [X..Y], where X represents the minimum number of repetitions required, and Y represents the maximum number of repetitions allowed. A cardinality of the form [X..*] denotes an unlimited number of repetitions are permitted, with a minimum number of X repetitions required.
7. WIR USAGE — 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	Information
R – Required	The sending application SHALL populate "R" elements with a valid non-empty value.
RE – Required but may be empty	The sending application SHALL populate "RE" elements with a non-empty value if there is relevant data.
C(a/b) – Conditional	The sending application SHALL follow the usage of the "a" half of the conditional usage if the conditional predicate is true. The sending application SHALL follow the usage of the "b" half of the conditional usage if the conditional predicate is false. "a" and "b" shall be "R", "RE", "IX", or "X". "a" and "b" can be valued the same or differently.
IX – Not Supported in this Implementation	The sending application SHALL NOT populate "IX" elements.
X – Not Supported	The sending application SHALL NOT populate "X" elements.

8. CONDITIONAL PREDICATE — The condition which will be evaluated to determine the usage a conditional field will follow.

- **HL7 data types.** Each field has an HL7 data type. Data type specifications from Chapter 4 of the CDC IG have not been redefined and usage has not been changed, unless noted otherwise in Appendix A of this document.

- **Delimiter characters.** Field values of composite data types consist of several components separated by the **component separator**, "^". When components are further divided into sub-components, these are separated by the **sub-component separator**, "&". Some fields are defined to permit repetition separated by the **repetition character**, "~". When these special characters need to be included within text data, their special interpretations are prevented by preceding them with the **escape character**, "\". HL7 requires the use of these specific characters—no substitutions are allowed.

```
MSH|^~\&| …..
```

```
XXX|field1|component1^component2^subcomponent3.1&subcomponent3.2^component4| …..
YYY|repetition1~repetition2| …..
ZZZ|data includes escaped \|\~ special characters| …..
```

In the example above, the Message Header segment uses the field separator, "|", immediately after the "MSH" code that identifies the segment. This establishes what character serves as the field separator throughout the message. The next field, the four characters "^~\&", establishes, in order, the component separator character, the repetition character, the escape character, and the sub-component separator character that will apply throughout the message. The hypothetical "XXX" segment includes field1 with no internal structure, but the next field has several components separated by "^" and the third of these is made up of two sub-components separated by "&". The hypothetical "YYY" segment's first field permits repetition, in this example the two values "repetition1" and "repetition2". The hypothetical "ZZZ" segment's field has a text value that includes the characters "|~", and these are escaped to prevent their normal structural interpretation.

In WIR, sub-components, repetition and text values requiring the escape character will be rare. Components within fields are common, since names and addresses are represented this way.

Rules for Sending Systems

The following rules are used by sending systems to construct HL7 messages.

- Encode each segment in the order specified in the message format.
- Begin the segment with the 3-letter segment ID (for example RXA).
- Precede each field with the data field separator ("|").
- Use HL7 required encoding characters ("^~\&").
- Encode the data fields in the order given in the table defining segment structure.
- Encode the data field according to its HL7 data type format.
- Do not include any characters for fields not present in the segment. Since later fields in the segment are encoded by ordinal position, fields that are not present do not reduce the number of field separators in the segment. For example, when the second and third fields are not present, the field separators maintain the ordinal position of the fourth field: |field1|||field4
- Trailing separators may optionally be omitted. For example, |field1|field2||||| is equivalent to |field1|field2, when field3 and subsequent fields are not present.
- End each segment with the segment terminator always the carriage return character ASCII Hex 0D.

Rules for Receiving Systems

The following rules are used by receiving systems to process HL7 messages.

- Treat data segments that are expected but not present as if all data fields in the segment were not present.
- Require use of HL7 recommended Field Separator |, and Encoding characters ^~\& for encoding messages.
- Ignore any data segment that is included but not expected, rather than treating it as an error. The HL7 message types used by WIR may include many segments besides the ones in this document, and WIR ignores them. WIR will not send messages with segments not documented in this specification, but reserves the right to specify more segments at a later date. The rule to ignore unexpected segments facilitates this kind of change.
- Ignore data fields found but not expected within a segment.

Vaccination Update and Acknowledgement Profile (VXU/ACK)

VXU (Unsolicited Vaccination Record Update)

The following table describes the segments that are used to construct the VXU message type. Each segment is one line of text ending with a line termination character (a carriage return). The line termination character is required so that the HL7 messages are readable and printable. The messages may appear somewhat cryptic due to the scarcity of white space. (The standard has provisions for inclusion of binary data, but WIR will not use these features.)

Square brackets [ ] enclose optional segments and curly braces {} enclose segments that can be repeated. For example, PD1 and NK1 segments are optional for VXU messages; additionally, any number of NK1 segments could be included in VXU messages. The full HL7 standard allows additional segments within these message types, but they are ignored by WIR. In order to remain compliant with HL7, their use will not result in an error, but the recipient can ignore the content of the segments. The segments that are documented here are sufficient to support the WIR function of storing data for clients and their immunizations.

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	Every message begins with an MSH.
PID	[1..1]	R	Every VXU has one PID segment.
[PD1]	[0..1]	RE	Every VXU can have one PD1 segment.
[{NK1}]	[0..*]	RE	The PID segment in a VXU may have zero or more NK1 segments.
{Begin Order group	[1..*]	R	Each VXU must have one or more Order groups
ORC	[1..1]	R	The order group in a VXU must have one ORC segment.
RXA	[1..1]	R	Each ORC segment in a VXU must have one RXA segment. Every RXA requires an ORC segment.
[RXR]	[0..1]	RE	Every RXA segment in a VXU may have zero or one RXR segments.
[{Begin Observation Group	[0..*]	RE	Every RXA segment in a VXU may have zero or more observation groups
OBX	[1..1]	R	
End Observation Group}]			
End Order Group}			

The message segments below are needed to construct the VXU message type. Each segment is given a brief description excerpted from the HL7 standard. The tables define what fields make up each segment. Since WIR does not use all the fields that HL7 defines, there are sometimes gaps in the ordinal sequence of fields; fields which are not defined in the tables below are not supported by WIR and shall not be populated. Following HL7 rules, the gaps do not diminish the number of field separators within the segment. For example, if the second and third fields in a segment are not present, their field separators remain in order to indicate that the next field present is the fourth: field1|||field4.

Important: The use of double-quotes within a field to indicate deletion of a datum item is NOT SUPPORTED by WIR.

MSH Segment

The MSH segment defines the intent, source, destination and some specifics of the syntax of a message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Field Separator	ST		1..1	[1..1]	R	
2	Encoding Characters	ST		4..4	[1..1]	R	
3	Sending Application	HD	0361		[0..1]	RE	
4	Sending Facility	HD	0362		[1..1]	R	
5	Receiving Application	HD	0361		[0..1]	RE	
6	Receiving Facility	HD	0362		[0..1]	RE	
7	Date/Time of Message	TS_Z			[1..1]	R	
9	Message Type	MSG			[1..1]	R	
10	Message Control ID	ST		1..199	[1..1]	R	
11	Processing ID	PT			[1..1]	R	
12	Version ID	VID			[1..1]	R	
15	Accept Acknowledgement Type	ID	0155		[1..1]	R	
16	Application Acknowledgment Type	ID	0155		[1..1]	R	
21	Message Profile Identifier	EI			[1..*]	R	
22	Sending Responsible Organization	XON			[0..1]	RE	
23	Receiving Responsible Organization	XON			[0..1]	RE	

HL7 New Structure:

The MSH segment shall follow the specifications noted in the section above, with the following exceptions:

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
22	Sending Responsible Organization	XON			[0..1]	R	

Field Notes:

MSH-1 Field Separator (ST)

Determines the field separator in effect for the rest of this message. WIR requires the HL7 field separator of "|".

MSH-2 Encoding Characters (ST)

Determines the component separator, repetition separator, escape character, and sub-component separator in effect for the rest of this message. WIR requires the HL7 values of ^~\&.

MSH-3 Sending Application (HD)

Name of the sending application. This field is an optional convenience. See MSH-4 and MSH-6 for the fields principally used to identify sender and receiver of the message.

MSH-4 Sending Facility (HD)

Identifies for whom the message is being sent (the owner of the message information).

When the message is being sent to WIR use the WIR Provider ID of the Provider Organization that owns the information (e.g., |99999|). Contact the WIR Help Desk for the appropriate organization ID.

MSH-6 Receiving Facility (HD)

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

MSH-7 Date/Time of Message (TS_Z)

Date and time the message was created. The Time Zone is now required as of HL7 2.5.1 r1.5. The time zone shall be entered as the number of hours offset from UTC. E.g., Central Standard Time would be entered as -0600.

Example entry for 9:17:32 PM, April 11, 2016 in CST: `|20160411211732-0600|`

MSH-9 Message Type (MSG)

Three components of this field give the HL7 message type. Table 0076 (Message Code), Table 0003 (Trigger Event) and Table 0354 (Message Structure). Within HL7, the triggering event is considered to be the real-world circumstance causing the message to be sent. For Vaccination Update messages, WIR requires that this field be populated with the value "VXU^V04^VXU_V04".

MSH-10 Message Control ID (ST)

The message control ID is a unique identifier of the message among all messages sent by the sending system. It is assigned by the sending system and echoed back in the ACK message.

MSH-11 Processing ID (PT)

The processing ID to be used by WIR is **P** for production processing. If this field is <*null*>, an informational message is generated indicating that WIR is defaulting to **P**.

MSH-12 Version ID (VID)

This field contains the identifier of the version of the HL7 messaging standard used in constructing, interpreting, and validating the message. Only the first component need be populated.

Messages conforming to the specifications in this Guide shall indicate that the version is 2.5.1.

MSH-15 Accept Acknowledgement Type (ID)

This field controls whether a message acceptance acknowledgement is generated. WIR requires a value of ER in this field.

MSH-16 Application Acknowledgement Type (ID)

This field controls whether an application acknowledgement is generated in response to a message. WIR requires a value of AL in this field; WIR will **always** return an acknowledgement for the message sent.

MSH-21 Message Profile Identifier (EI)

Required for all messages as of HL7 2.5.1 r1.5. The message profile contains information about the grammar, syntax and the expected usage for a particular message. For VXU messages, WIR requires the value Z22^CDCPHINVS in this field.

MSH-22 Sending Responsible Organization (XON)

The Sending Responsible Organization identifies the organization responsible for submitting the message data to WIR. If populated, WIR requires that the 10th component be populated with the WIR Provider ID of the organization which submits the message. This ID must have a valid relationship to the Provider ID specified in MSH-4.

MSH-23 Receiving Responsible Organization (XON)

The Receiving Responsible Organization identifies the organization with is responsible for acting on the information contained within the message. If populated, WIR expects that the first component be populated with "Wisconsin Immunization Registry", the sixth component be populated with "WIA", the seventh component be populated with "XX", and the tenth component be populated with "1".

HL7 New Structure Field Notes:

The population of the MSH for VXU messages shall follow the specifications noted in the section above, with the following exceptions:

MSH-4 Sending Facility (HD)

Identifies who is sending the QBP/VXU message.

When the message is being sent to WIR use the WIR Provider ID of the Provider Organization that sends the information (e.g., |99999|). Contact the WIR Help Desk for the appropriate organization ID.

MSH-22 Sending Responsible Organization (XON)

The Sending Responsible Organization identifies the organization responsible for initiating the message data to WIR. WIR requires that the sixth component be populated with "WIA", the seventh component be populated with "PRN", and 10th component be populated with the WIR Provider ID of the organization which initiates the message. This ID must have a valid relationship to the Provider ID specified in MSH-4.

PID Segment

The PID segment 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.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - PID	SI			[1..1]	R	
3	Patient Identifier List	CX			[1..*]	R	
5	Patient Name	XPN			[1..1]	R	
6	Mother's Maiden Name	XPN_M			[0..1]	RE	
7	Date/Time of Birth	TS_NZ			[1..1]	R	
8	Administrative Sex	IS	0001		[1..1]	RE	
10	Race	CE	CDCREC		[0..1]	RE	
11	Patient Address	XAD			[0..1]	RE	
13	Phone Number - Home	XTN			[0..*]	RE	
22	Ethnic Group	CE	CDCREC		[0..1]	RE	
24	Multiple Birth Indicator	ID	0136		[0..1]	RE	
25	Birth Order	NM		1..2	[0..1]	C(RE/O)	If PID-24 is valued "Y"
26	Citizenship	CE	0171			RE	
29	Patient Death Date and Time	TS			[0..1]	C(RE/X)	If PID-30 is valued "Y"
30	Patient Death Indicator	ID	0136		[0..1]	RE	

Field Notes:

PID-1 Set ID – PID (SI)

This field contains the number that identifies this transaction. WIR requires that this field be populated with the literal value "1" in VXU messages.

PID-3 Patient Identifier List (CX)

Components 1 (ID Number), 4 (Assigning Authority) and 5 (Identifier Type Code) are required in the PID-3 field.

When a Provider Organization is sending to WIR, use the sending system's Chart Number or other identifier if available. If a Provider Organization sends the client's WIR ID (use "SR" as the identifier type code) in addition to a chart number, the WIR ID will be used to locate the client.

PID-5 Patient Name (XPN)

Last name and first name are required in the first two components. The name type code is required in the seventh component. WIR expects the literal value L in the seventh component, for client legal name.

WIR does not support repetition of this field.

PID-6 Mother's Maiden Name (XPN_M)

In this context, where the mother's name is used for client identification, WIR uses only last name and first name. A mother's full legal name might also appear in the context of an NK1 segment. If the last name and first name components are populated, WIR requires the seventh component of Mother's Maiden Name, and that the seventh component be populated with 'M'

PID-7 Date/Time of Birth (TS_NZ)

Give the year, month, and day of birth (YYYYMMDD). WIR ignores any time component.

PID-8 Administrative Sex (IS)

See Table 0001 for a list of values

PID-10 Race (CE)

WIR does not support repetition of this field.

See Table CDCREC for a list of values. WIR stores and writes "Unknown" values as *<null>*. WIR does not accept Hispanic or Latino as a race option, those should be submitted in the Ethnic Group (PID-22).

PID-11 Address (XAD)

WIR does not support repetition of this field.

This field contains the mailing address of the patient. Address type codes are defined by HL7 Table 0190 - Address Type.

PID-13 Phone Number – Home (XTN)

WIR supports repetition of this field. However, WIR only supports and stores a single phone number and email address.

If sending phone number be sure to specify PRN in component 2 (telecommunication use code (ID) from table 0201). WIR will use components 6 – 8 for specification of area code, phone number, and extension.

If sending email address be sure to specify NET in component 2 (telecommunication use code (ID) from table 0201). WIR will use component 4 for specification of email address.

```
|^PRN^^^^608^5551212|
|^NET^^myemail@host.com^^^|
|^PRN^^^^608^5551212~^NET^^myemail@host.com^^^|
```

PID-22 Ethnic Group (CE)

This field further defines the patient's ancestry. Refer to the Value Set CDCREC - Ethnic Group.

WIR stores and writes "Unknown" values as <*null*>.

PID-24 Multiple Birth Indicator (ID)

This field indicates whether the patient was part of a multiple birth. Refer to HL7 Table 0136 - Yes/No Indicator for valid values.

Y the patient was part of a multiple birth

N the patient was a single birth

Empty multiple birth status is undetermined.

PID-25 Birth Order (NM)

Relevant when client was born in a multiple birth. Use 1 for the first born, 2 for the second, etc. This field is useful in matching client data to existing records.

PID-29 Patient Death Date and Time (TS)

The date of death, if client is deceased. Give the year, month, and day (YYYYMMDD).

The date of death will be validated for accuracy, but the datum value will not be retained. .

PID-30 Patient Death Indicator (ID)

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

Y the patient is deceased

N the patient is not deceased

Empty status is undetermined

PD1 Segment

The Patient Demographic Segment contains patient demographic information that may change from time to time. There are three uses WIR leverages in this segment for 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 with the organization which owns the message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
11	Publicity Code	CE	0215		[0..1]	RE	
12	Protection Indicator	ID	0136		[0..1]	RE	
13	Protection Indicator Effective Date	DT_D			[0..1]	C(RE/X)	If PD1-12 is valued

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
16	Immunization Registry Status	IS	0441		[0..1]	RE	
17	Registry Status Effective Date	DT_D			[0..1]	C(RE/X)	If the PD1-16 field is valued
18	Publicity Code Effective Date	DT_D			[0..1]	C(RE/X)	If the PD1-11 field is valued

Field Notes:

PD1-11 Publicity Code (CE)

Controls whether recall/reminder notices are sent.

- "01" No - recall/reminder notices
- "02" Yes - recall/reminder notices

PD1-12 Protection Indicator (ID)

The protection state must be actively determined by the clinician and indicates whether or not consent has been given for record sharing. This controls the visibility of client records to organizations as well as the client. If no value is provided, sharing of data is implied ("N").

Protection State		Code	Comments
Yes, protect the data. Client (or guardian) has indicated that the information shall be protected.	Do not share data	Y	
No, it is not necessary to protect data from other clinicians. Client (or guardian) has indicated that the information does not need to be protected.	Sharing is OK	N	
No, it is not necessary to protect data from other clinicians. Client (or guardian) has indicated that the information does not need to be protected.	Sharing is OK	PD1-12 is empty	Provider has determined consent, or the client did not refuse to share data. AND/OR Sending system is not capable of reporting this information. To ensure the client and their immunization providers have access to the record, consent is implied.

PD1-13 Protection Indicator Effective Date (DT_D)

Effective date for protection indicator reported in PD1-12. Format is YYYYMMDD.

PD1-16 Immunization Registry Status (IS)

Identifies the registry status of the patient. See table 0441.

PD1-17 Immunization Registry Status Effective Date (DT_D)

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

PD1-18 Publicity Code Effective Date (DT_D)

Effective date for publicity code reported in PD1-11. Format is YYYYMMDD.

NK1 Segment

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

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - NK1	SI			[1..1]	R	
2	Name	XPN			[1..1]	R	
3	Relationship	CE	0063		[1..1]	R	

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
			[constrained]				
4	Address	XAD			[0..1]	RE	
5	Phone Number	XTN			[0..*]	RE	
22	Publicity Code	CE	0215		[0..1]	RE	

Field Notes:

NK1-1 Set Id – NK1 (SI)

Sequential numbers. Use "1" for the first NK1 within the message, "2" for the second, and so forth. Although this field is required by HL7, WIR 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.

NK1-2 Name (XPN)

Name of the responsible person who cares for the client. See the XPN data type.

WIR does not support repetition of this field.

NK1-3 Relationship (CE)

Relationship of the responsible person to the client. See data type CE and Table 0063. Use the first three components of the CE data type, for example `|MTH^Mother^HL70063|`.

NK1-4 Address (XAD)

Responsible person's mailing address. See the XAD data type.

WIR does not support repetition of this field.

NK1-5 Phone Number (XTN)

WIR supports repetition of this field. However, WIR only supports and stores a single phone number and email address.

If sending phone number be sure to specify PRN in component 2 (telecommunication use code (ID) from table 0201). WIR will use components 6 – 8 for specification of area code, phone number, and extension.

If sending email address be sure to specify NET in component 2 (telecommunication use code (ID) from table 0201). WIR will use component 4 for specification of email address.

```
|^PRN^^^^608^5551212|
|^NET^^myemail@host.com^^^|
|^PRN^^^^608^5551212~^NET^^myemail@host.com^^^|
```

NK1-22 Publicity Code (CE)

Controls whether recall/reminder notices are sent for the responsible person.

- "01" No - recall/reminder notices
- "02" Yes - recall/reminder notices

ORC Segment

The ORC is used to transmit information specific to orders. It is a repeating segment and must be specified with every RXA segment.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Order Control	ID	0119	2	[1..1]	R	
2	Placer Order Number	EI			[0..1]	RE	
3	Filler Order Number	EI			[1..1]	R	
10	Entered By	XCN			[0..1]	RE	

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
12	Ordering Provider	XCN			[0..1]	C(RE/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA"
17	Entering Organization	CE	0362			RE	

HL7 New Structure:

The ORC segment shall follow the specifications noted in the section above, with the following exceptions:

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
17	Entering Organization	CE	0362			R	

Field Notes:

ORC-1 Order Control (ID)

SHALL contain the value “RE “(Conformance Statement: IZ-25)

ORC-2 Placer Order Number (EI)

The placer order number is used to uniquely identify this order among all orders sent by a provider organization.

ORC-3 Filler Order Number (EI)

Provider Organization will use a unique entity identifier and namespace ID, identifying this order among all orders sent by the provider organization in this field. WIR will NOT retain this datum value – it will be parsed solely for compliance.

ORC-10 Entered By (XCN)

This identifies the individual that entered this particular order. It may be used in conjunction with an RXA to indicate who recorded a particular immunization.

ORC-12 Ordering Provider (XCN)

This field contains the identity of the person who is responsible for creating the request (i.e., ordering physician). In the case where this segment is associated with a historic immunization record and the ordering provider is not known, then this field should not be populated.

ORC-17 Entering Organization (CE)

This field contains the organization that the enterer belonged to at the time the order was entered, such as medical group or department. WIR validates this field’s contents conform to CDC specifications, but does not retain the datum value. WIR relies on the value in RXA-11 to determine the site where an immunization was administered.

HL7 New Structure Field Notes:

The population of the ORC for VXU messages shall follow the specifications noted in the section above, with the following exceptions:

ORC-17 Entering Organization (CE)

When the message is being sent to WIR use the WIR Provider ID of the Provider Organization that owns the information (e.g., |99999^^HL70362|). WIR uses this value to associate the client immunization data with the correct Entering Organization.

RXA Segment

The RXA carries pharmacy administration data. Only one RXA segment can be specified per ORC segment.

Reference: Under “Appendix D – Example Segments” you will find examples RXA segments constructed as they pertain to certain scenarios (i.e. client demographic update, parent refusal, etc.):

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Give Sub-ID Counter	NM		1	[1..1]	R	
2	Administration Sub-ID Counter	NM		1	[1..1]	R	
3	Date/Time Start of Administration	TS_NZ			[1..1]	R	
5	Administered Code	CE	CVX		[1..1]	R	
6	Administered Amount	NM		20	[1..1]	R	
7	Administered Units	CE	UCUM		[0..1]	C(R/X)	If Administered Amount is not valued "999"
9	Administration Notes	CE, CE_TX	NIP001		[0..*]	C(R/O)	If RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
10	Administering Provider	XCN			[0..1]	RE	
11	Administered-at Location	LA2			[0..1]	C(R/RE)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
15	Substance Lot Number	ST		30	[0..1]	C(R/RE)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
16	Substance Expiration Date	TS_M			[0..1]	C(RE/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA"
17	Substance Manufacturer Name	CE	MVX		[0..1]	C(R/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
18	Substance/Treatment Refusal Reason	CE	NIP002		[0..1]	C(R/X)	If the RXA-20 is valued "RE"
20	Completion Status	ID	0322		[0..1]	RE	
21	Action Code - RXA	ID	0323		[0..1]	C(R/O)	If RXA-5.1 is not valued "998"

Field Notes:

RXA-1 Give Sub-ID Counter (NM)

SHALL be valued “0” (zero). Conformance Statement: IZ-28

RXA-2 Administration Sub-ID Counter (NM)

SHALL be valued “1”. Conformance Statement: IZ-29

RXA-3 Date/Time Start of Administration (TS_NZ)

The date this vaccination occurred. In the case of refusal or deferral, this is the date that the refusal or deferral was recorded. In the case of a forecast dose, this is the date the forecast was made. In the case of a refusal, it is the date the refusal was noted.

WIR ignores any time component.

RXA-5 Administered Code (CE)

This field identifies the vaccine administered. CVX codes are required for Meaningful Use (CVX Table - Codes for vaccines administered).

WIR encourages (**highly recommends**) the second set of three components contain the National Drug Code (NDC). The absence of NDC will result in WIR returning a "Warning" message.

Additionally, the second set of three components could be used to represent the same vaccine using a different coding system, such as Current Procedural Terminology (CPT), Vaccine Group or Trade Name, but to reiterate, WIR encourages the use of NDC.

```
|120^DtaP-Hib-IPV^CVX^49281-0510-05^DTAP-IPV-HIB, PKG 5 X 1 DOSE VIALS^NDC|
|120^DtaP-Hib-IPV^CVX^Pentacel^DtaP-Hib-IPV combination^WVTN|
|120^DtaP-Hib-IPV^CVX^90698^DtaP-Hib-IPV^C4
```

RXA-6 Administered Amount (NM)

This field records the amount of pharmaceutical administered. The units are expressed in the next field, RXA-7. If the amount is unknown, use "999".

RXA-7 Administered Units (CE)

WIR will store and display/report the administered unit that is provided.

Note: The UCUM value set has been constrained to those that are most commonly used.

RXA-9 Administration Notes (CE)

WIR will recognize 00 to indicate Administered Vaccine, 01 to indicate Historical Record or 07 to indicate School Record.

```
|00^New Administered^|
```

The 07 value can only be used by organizations that are set up to send school information, otherwise the incoming immunization will be rejected.

RXA-10 Administering Provider (XCN)

Identifies the name of the administering clinician of the immunization.

```
|^SMITH^SALLY^S^^ ^^^^^^^^^^^^^^^RN^^|
```

RXA-11 Administered-at Location (LA2)

WIR will use this field to identify the inventory site. If your organization is flagged to do inventory deduction via HL7, WIR will require the fourth component subcomponent field for site identification (e.g. `|^^^7777|`) where 7777 is the site id. Site Id's can be obtained by contacting the WIR Help Desk

RXA-15 Substance Lot Number (ST)

Manufacturer's lot number for the vaccine. The lot number is required for inventory deduction.

WIR does not support repetition of this field.

RXA-16 Substance Expiration Date (TS)

Identifies the date the lot expires in the YYYYMMDD format.

WIR does not support repetition of this field.

RXA-17 Substance Manufacturer Name (CE)

Vaccine manufacturer from Table 0227, for example |AB^Abbott^ MVX|. The HL7 2.5.1 specification recommends use of the external code set MVX. When using this code system to identify vaccines, the coding system component should be valued as "MVX" not "HL70227".

WIR does not support repetition of this field.

RXA-18 Substance/Treatment Refusal Reason (CE)

When applicable, this field records the reason the patient refused the vaccine.

An entry in this field indicates that the patient did not take the substance. The vaccine that was offered should be recorded in RXA-5. Do not record contraindications, immunities or reactions in this field.

WIR does not support repetition of this field.

Notes on Refusals:

a) WIR only stores the fact that a refusal of a vaccine occurred, not a specific type of refusal, so all outgoing refusals will be designated as "Parental decision". Please see the example below.
b) WIR will not write out refusals which do not have an applies-to date. It will write out multiple refusals for the same vaccine on different dates for those clients who have them.
c) WIR will accept incoming refusals of the same vaccine on different dates and file them both. However, if they both have the same applies-to date, then only one will be stored.
d) The sending organization will become the refusal owner. In general, only the organization who owns the refusal is permitted to edit it. However, in the case of parent and child organizations, the parent may edit the child's refusals and vice versa.

Example:

```
RXA|0|1|20060501|20060501|133^Pneumo-Conjugate 13^CVX^90670^Prevnar
13^C4|999||||||||||||00^Parental decision^NIP002||RE
```

RXA-20 Completion Status (ID)

For Batch HL7 WIR-PO, and Batch HL7 Bi-directional this field records the value PA for doses which are partially administered. A partially administered dose refers to the scenario where the patient jumps and the needle breaks, resulting in an unknown quantity of vaccine entering the patient's system. If value NA is present and RXA-5 is anything other than 998, no information will be stored.

RXA-21 Action Code – RXA (ID)

To add a new immunization in WIR specify a code of "A". To delete an existing immunization in WIR specify a value of "D". In addition, WIR requires that the existing immunization is owned by the same provider who is requesting the delete, and the immunization is not tied to WIR inventory. Immunizations tied to WIR inventory must be deleted manually in WIR. Update messages (with a 'U' in RXA-21) are treated as a newly administered immunizations and are subject to the immunization deduplication process. If the immunization to be updated is tied to inventory, the immunization must be deleted manually in WIR before sending in the updated immunization message. Below is an example of a RXA deletion segment:

```
RXA|0|1|20160301||141^Influenza^CVX^19515-0885-07^Influenza^NDC|0.5|mL^milliliter^UCUM||00^New
immunization
record^NIP001|^NEEDLE^BIG^O^^DR^^^^^^^VEI^^^^^^^^MD|^^^99999||||XYZ98|20251231|SKB^GlaxoSmithKline
(SmithKline Beecham and Glaxo Wellcome) ^MVX|||D|
```

NOTES:

- Immunizations tied to WIR inventory include organizations using auto-inventory decrement via HL7 and manually entered immunizations from organizations that use WIR inventory.
- For batch processing, WIR limits that no more than 5% of all incoming immunizations can be flagged as delete and no more than 50 total, in the incoming file.
    - If a file contains deletions in excess of the threshold, the file will be rejected.

RXR Segment

The Pharmacy/Treatment Route Segment contains the alternative combination of route and site.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Route	CE	NCIT		[1..1]	R	
2	Administration Site	CWE	0163		[0..1]	RE	

Field Notes:

RXR-1 Route (CE)

This is the route of administration from the NCIT table.

RXR-2 Administration Site (CWE)

This is the site of the route of administration from table 0163.

OBX Segment

The Observation/Result Segment is used to transmit an observation.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - OBX	SI		1..4	[1..1]	R	
2	Value Type	ID	0125	2..3	[1..1]	R	
3	Observation Identifier	CE	NIP003		[1..1]	R	
4	Observation Sub_ID	ST		1..20	[1..1]	R	
5	Observation Value	Varies*	Varies*		[1..1]	R	
6	Units	CE	UCUM		[0..1]	C(R/RE)	If OBX-2 is valued "NM"
11	Observation Result Status	ID	0085		[1..1]	R	
14	Date/Time of Observation	TS_NZ			[1..1]	R	
17	Observation Method	CE	CDCPHINVS		[0..1]	C(R/O)	If OBX-3.1 is "64994-7"

Field Notes:

OBX-1 Set ID – OBX (SI)

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

OBX-2 Value Type (ID)

This field contains the data type which defines the format of the observation value (OBX-5).

The value to populate this field is determined by the code specified in OBX-3.

OBX-3 Observation Identifier (CE)

This field is populated with a LOINC (Logical Observation Identifiers Names and Codes) number used to identify the observation that follows. The values expected in VXU messages are listed below, with examples:

Vaccine Funding Program Eligibility (64994-7)

Enter appropriate value from Table - 0064 (Financial Class) in OBX-5.

Example:

```
OBX|1|CE|64994-7^Vaccine funding program eligibility
category^LN|1|V01^^HL70064||||||F|||20131210180231|||VXC40^Eligibility captured at the
Immunization level^CDCPHINVS
```

Notes on Vaccine Funding Program Eligibility:

- WIR will accept Vaccine Funding Program Eligibility only for administered immunizations (RXA-9 = 00). If sending a historical immunization with Vaccine Funding Program Eligibility, WIR will ignore the OBX segment and not store the Vaccine Funding Program Eligibility. The immunization will still be retained.
- If more than a single Vaccine Funding Program Eligibility is provided for a single immunization, only the first Vaccine Funding Program Eligibility will be retained, any other Vaccine Funding Program Eligibilities will be ignored (not stored).

Vaccine Purchased With (30963-3)

Enter either the PHC70 (private funds) or VXC50, VXC51 or VXC52 (Public funds) from Table - 0396 Funds in OBX-5

Vaccination Contraindication/Precaution (30945-0)

Enter a Contraindication, Precaution, or Immunity code from Table - 0396 VacCP in OBX-5.

Example:

```
OBX|1|CE|30945-0^Vaccination contraindication^LN|1|300916003^Latex allergy
(disorder)^SCT||||||F|||20090415
```

Vaccination Contraindication Effective Date (30946-8)

Must be sent alongside a 30945-0 OBX or will result in error. Format is YYYYMMDD.

Vaccination Contraindication Expiration Date (30944-3)

Must be sent alongside a 30945-0 OBX or will result in error. Format is YYYYMMDD.

Reaction to Immunization, use 31044-1 in this field and enter a Reaction code from table 0396 Reaction in OBX-5.

Example:

```
OBX|1|CE|31044-1^Reaction^LN|1|39579001^Anaphylaxis^SCT^^^|||||F|||20100101|
```

Vaccination Special Indication, use 59785-6 in this field and enter a Special Code from table 0396 Special in OBX-5.

Example:

```
OBX|1|CE|59785-6^Special^LN|1|VXC7^Rabies Exposure^CDCPHINVS^^^||||||F|||20100101|
```

Vaccination Adverse Event Outcome, use 30948-4 in this field and enter an Event Consequence code (NIP005) in OBX-5.

Example:

```
OBX|1|CE|30948-4^Adverse Event Outcome^LN|1|E^Required Emergency Room/Doctor
Visit^NIP005||||||F|||20100101|
```

History of disease as evidence of immunity, use 59784-9 in this field and enter a History of Disease code from table 0396 immune in OBX-5.

Example

```
OBX|1|CE|59784-9^History of disease as evidence of immunity^LN|1|38907003^Varicella
(disorder)^SCT||||||F|||20100101|
```

Diseases with serological evidence of immunity, use 75505-8 in this field and enter an Immunity code from table 0396 immune in OBX-5.

Example

```
OBX|1|CE|75505-8^Diseases with serological evidence of immunity^LN|1|371113008^Varicella
(finding)^SCT||||||F|||20100101|
```

FERPA Release Status, use FERPA in this field and enter a Yes/No or blank Indicator code (HL70136) in OBX-5. Used to indicate whether or not the student has a FERPA release on file. Use 'Y', 'N' or leave blank. If this value is not sent, the system will interpret it as a 'Y'. Note: if there is already a FERPA release on the clients' WIR record, sending an 'N' will not undo the FERPA release. Sending a value of 'N' will result in rejection of the message.

Example:

```
OBX|1|ID|FERPA^FERPA Release^99W01|1|Y||||||F|||20100101|
```

Graduation Year, use GRADYEAR in this field and enter a four digit year (YYYY) in OBX-5.

Example:

```
OBX|1|TS|GRADYEAR^Graduation Year^99W01|1|2023||||||F|||20100101|
```

Date Enrolled in WI School, use ENROLLDATE in this field and give the year, month, and day that the student was first enrolled in Wisconsin Schools (YYYYMMDD) in OBX-5.

Example:

```
OBX|1|TS|ENROLLDATE^Date Enrolled in WI School^99W01|1|20010825||||||F|||20100101|
```

.

OBX-4 Observation Sub-ID (ST)

The number in this field is used to group together related observations; e.g. grouping together segments related to the presentation of the VIS for the associated vaccination.

Example:

```
OBX|1|CE|38890-0^Component Vaccine Type^LN|1|20^DTaP^CVX||||||F|||20100115
OBX|2|TS|29768-9^VIS Publication Date^LN|1|20121116||||||F|||20100115
OBX|3|TS|29769-7^VIS Presented Date^LN|1|20020829||||||F|||20100115
```

OBX-5 Observation Value (varies)

The Data Type associated with this field is dependent on the LOINC specified in OBX-3. The Data Type expected in this field is populated in OBX-2.

Text reporting Vaccine Purchased With (Table 0396 Funds), Contraindication, Precaution, Immunity (Table 0396 VacCP), Reaction (Table 0396 React), Event Consequence (NIP005), or WIR Student Information (99W01). WIR has imposed a CE data type upon this field. The first component of which is required.

(e.g., `|PERTCONT^Pertussis contra^WIR^^^|`)

Vaccine Purchased With example:

```
OBX|1|CE|30963-3^Vaccine purchased with^LN|1|PHC70^Private Funds^CDCPHINVS||||||F|||20100101|
```

OBX-6 Units (CE)

This shall be the units for the value in OBX-5. The value shall be from the ISO+ list of units.

OBX-11 Observation Result Status (ID)

The value SHALL be "F" (Conformance Statement: IZ-22)

OBX-14 Date/Time of the Observation (TS)

WIR stores the date of the observation, but ignores any time component.

It is the physiologically relevant date-time or the closest approximation to that date-time of the observation.

OBX-17 Observation Method (CE)

Used to transmit the method or procedure by which an observation was obtained.

In this Guide, it shall be used to differentiate the way that Eligibility Status was collected. The two choices are:

- VXC40 - Recorded in the sending system at the immunization level
- VXC41 - Recorded in the sending system at the visit level

Example:

```
OBX|1|CE|64994-7^Vaccine funding program eligibility
category^LN|1|V01^^HL70064||||||F|||20131210180231|||VXC40^Eligibility captured at the
Immunization level^CDCPHINVS
```

Example: Vaccination Update Message

```
MSH|^~\&|EHR Application|9999|WIR|9999|20160301083000-
0600||VXU^V04^VXU_V04|6254|P|2.5.1|||ER|AL|||||Z22^CDCPHINVS
PID|1||123456^^^WIR^PI||SMITH^JOAN^^^^^L|DOE^JANE^^^^^M|19920214|F|||NOK^^^^^^P||^PRN^^^^608^5555555^
NK1|1|DOE^JOHN^^^^^L|FTH^Father^HL70063|||||||||||||||||||||
ORC|RE||0^DNM|||||||^ORDER^SHOT^THE^^MS^^^^^^^OEI^^^^^^^^^^^^^RN||^ORDER^SHOT^THE^^MS^^^^^^^OEI^^^^^^^^^^
^^RN|||||||||
RXA|0|1|20160301||141^Influenza^CVX^19515-0885-07^Influenza^NDC|0.5|mL^milliliter^UCUM||00^New
immunization
record^NIP001|^NEEDLE^BIG^O^^DR^^^^^^^VEI^^^^^^^^MD^^|^^^99999||||XYZ98|20251231|SKB^GlaxoSmithKline
(SmithKline Beecham and Glaxo Wellcome)^MVX
RXR|C38238^Intradermal^NCIT|RD^Right Deltoid^HL70163
```

ACK (General Acknowledgment)

The following table describes the segments that are used to construct the ACK message type. The full HL7 standard allows additional segments to be used within the ACK message type, but these are not leveraged by WIR in generating an ACK message. Square brackets [ ] enclose optional segments, which are sent only if there is information to populate the segment.

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	Every message begins with an MSH.
MSA	[1..1]	R	Every ACK will have one MSA segment
[ERR]	[0..*]	RE	The ACK may have zero or more ERR segments

The following sections describe how WIR will construct the segments utilized in ACK messages. Fields not specified are not utilized by WIR and are left blank when constructing the segment.

MSH Segment

The MSH segment defines the intent, source, destination and some specifics of the syntax of a message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Field Separator	ST		1..1	[1..1]	R	
2	Encoding Characters	ST		4..4	[1..1]	R	
3	Sending Application	HD	0361		[0..1]	RE	
4	Sending Facility	HD	0362		[1..1]	R	
5	Receiving Application	HD	0361		[0..1]	RE	
6	Receiving Facility	HD	0362		[0..1]	RE	
7	Date/Time of Message	TS_Z			[1..1]	R	
9	Message Type	MSG			[1..1]	R	
10	Message Control ID	ST		1..199	[1..1]	R	
11	Processing ID	PT			[1..1]	R	
12	Version ID	VID			[1..1]	R	
15	Accept Acknowledgement Type	ID	0155		[1..1]	R	
16	Application Acknowledgment Type	ID	0155		[1..1]	R	
21	Message Profile Identifier	EI			[1..*]	R	
22	Sending Responsible Organization	XON			[0..1]	RE	
23	Receiving Responsible Organization	XON			[0..1]	RE	

Field Notes:

The population of the MSH for ACK messages shall follow the specifications noted in the section for VXU messages in this document, with the following exceptions.

MSH-3 Sending Application (HD)

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

MSH-9 Message Type (MSG)

For General Acknowledgement messages, WIR populates this field with the value “ACK^V04^ACK”.

MSH-10 Message Control ID (ST)

WIR will populate the MSH-10 value with the Job ID assigned to the job which processed the corresponding VXU message the ACK is acknowledging.

MSH-15 Accept Acknowledgement Type (ID)

WIR populates this field with NE.

MSH-16 Application Acknowledgement Type (ID)

WIR populates this field with NE

MSH-21 Message Profile Identifier (EI)

For ACK messages, WIR populates MSH-21 with the value “Z23^CDCPHINVS”

MSH-22 Sending Responsible Organization (XON)

WIR does not populate this field on outbound messages.

MSH-23 Receiving Responsible Organization (XON)

WIR does not populate this field on outbound messages

MSA Segment

The MSA segment contains information sent while acknowledging another message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Acknowledgment Code	ID	0008	2..2	[1..1]	R	
2	Message Control ID	ST		1.199	[1..1]	R	

Field Notes:

MSA-1 Acknowledgment Code (ID)

Acknowledgement code giving receiver's response to a message. AA (Application Accept) means the message was processed normally. AE (Application Error) means that the message was processed, but there were errors in the message. This includes messages that reject due to errors on datum items required for immunization or client processing. AR (Application Reject) means an error prevented normal processing, or the message rejected due to invalid message type, invalid version, or invalid processing ID. An error message will be sent in the optional ERR segment.

MSA-2 Message Control ID (ST)

The message control ID from MSH-10 in the message being acknowledged. This allows the sending system to associate this response with the message being responded to.

ERR Segment

The ERR segment contains information regarding errors detected in the corresponding VXU message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
2	Error Location	ERL		18	[0..1]	RE	
3	HL7 Error Code	CWE	0357		[1..1]	R	
4	Severity	ID	0516	1..1	[1..1]	R	
5	Application Error Code	CWE	0533		[0..1]	RE	
8	User Message	TX			[0..1]	RE	

Field Notes:

ERR-2 Error Location (ERL)

Identifies the location in a message related to the identified error, warning or informational message. Each error will have an ERR segment. This field may be left empty if location is not meaningful. For example, if the message is unable to be parsed, an ERR to that effect may be returned.

ERR-3 HL7 Error Code (CWE)

Identifies the HL7 (communications) error code. Refer to HL7 Table 0357 – Message Error Condition Codes for valid values

ERR-4 Severity (ID)

Identifies the severity of an application error. Knowing if something is Error, Warning or Information is intrinsic to how an application handles the content. Refer to HL7 Table 0516 - Error severity for valid values. If ERR-3 has a value of "0", ERR-4 will have a value of "I"

ERR-5 Application Error Code (CWE)

Application specific code identifying the type of error that occurred. Refer to HL7 Table 0533 – Application Error Code for valid values

ERR-8 User Message (TX)

WIR defined message describing the error (Always provided by WIR when more detailed information is available)

Example: Error in PID

```
ERR|||207^Application internal error^HL70357^^^|E||||Message Rejected. Please review errors
ERR||PID^1^5^^^|101^Required field missing^HL70357|E||||Patient Name is required
```

Example: General Acknowledgement Message

```
MSH|^~\&|WIR|||99999|20160405112223-0500||ACK^V04^ACK|29385794|P|2.5.1|||NE|NE|||||Z23^CDCPHINVS
MSA|AE|6254
ERR||RXA^1^5^1^4|102^Data type error^HL70357|E|||WIR recommends specification of NDC in second triplet.
ERR||RXA^1^11^1^4^1|102^Data type error^HL70357|W|4^Invalid value^HL70533|||Incoming administering site
       (clinic) is not associated with owning provider.
```

Query and Response Profile (QBP/RSP)

A provider organization will query the WIR registry to obtain information for the query client (i.e. send an HL7 2.5.1 QBP message) and will receive an HL7 2.5.1 Query Message Response (i.e. RSP with one of response profiles specified in MSH-21) to that query. The provider organization may control whether the immunization forecast is included in the response by including in MSH-21 of the QBP message the appropriate profile.

The Submission Profiles (specified in MSH-21):

1. **Z34^CDCPHINVS – Request a Complete Immunization History**
2. **Z44^CDCPHINVS – Request Evaluated Immunization History and Forecast**

The Z34 Profile is specified for the case where a provider organization is interested in only a client's immunization history, and not the client's recommendations. The Z44 Profile is specified for the case where a provider organization desires information on both the client's immunization history and the recommendations. At this time, there is not an option to query only for recommendations.

The RSP Response Message will contain the response profile identifier in MSH-21, which will identify the response profile information that will follow in the message.

The Response Profiles (specified in MSH-21):

1. **Z31^CDCPHINVS – Return a List of Candidates**
2. **Z32^CDCPHINVS – Return Complete Immunization History**
3. **Z33^CDCPHINVS – Return an Acknowledgement With No Person Records**
4. **Z42^CDCPHINVS – Return Evaluated History And Forecast**

There exist various rules that determine when each response profile will be generated in response to a provider organization query, as detailed below.

When a patient has been uniquely identified (there is only one client "match" to the query), and the incoming Query specified a profile of Z34^CDCPHINVS, the response to the query is a Z32^CDCPHINVS profile that is generated and sent back to the querying organization. WIR has imposed rules for when a Z32^CDCPHINVS profile will be sent to the querying organization. Please see the following rules:

1. If an exact match is found in WIR AND the client's "Allow Sharing of Immunization Data" indicator is set to "NO", then that client will **NOT** be returned to the requestor unless one of the statements below pertains:
   - The organization requesting the query is the Master organization of a Parent organization owning the data **OR**
   - The organization requesting the query had originally set the "Allow Sharing of Immunization Data" indicator to NO.
2. If an exact match is found in WIR AND the client's "Allow Sharing of Immunization Data" indicator is set to "NO", and the above rule does not apply, then a Z34^CDCPHINVS profile response is sent instead of the Z32^CDCPHINVS profile.

When a patient has been uniquely identified (there is only one client "match" to the query), and the incoming Query specified a profile of Z44^CDCPHINVS, the response to the query is a Z42^CDCPHINVS profile that is generated and sent back to the querying organization. The Z42^CDCPHINVS profile is subject to rules 1-2 above, as well as the following additional rule:

3. WIR will only return eligible vaccines when reporting recommendations. WIR will not supply vaccines that are ineligible due to age restrictions, contraindications or other such rules. WIR will supply vaccines according to CDC/ACIP schedule.

Regardless of which profile was specified in the QBP, a Z33 response profile will be generated when WIR has processed the query message, and one of the following applies:

1. No match was found to the query parameters in the database.
2. The number of matches found exceeds the lower of the system limit of ten clients and the value specified in RCP-2 of the QBP message.

If multiple potential matches are found, WIR will generate a Z31 response profile, regardless of which profile was specified in the QBP message. The Z31 profile is subject to the following rules:

1. If the "Allow Sharing of Immunization Data" indicator is set to No (in WIR) for a client found matching the query, then that client will **NOT** be returned to the requestor unless one of the statements below pertains:
   - The requestor is the Master organization of the Parent organization owning the data OR
   - The requestor originally set the "Allow Sharing of Immunization Data" to No.

   If all potential clients have "Allow Sharing of Immunization Data" set to No, and the above does not apply for any client in the candidate list, a Z33 response is generated instead with a Query Status of Not Found.

2. WIR will return a maximum of ten matching clients, unless a lower threshold has been specified in the RCP-2 of the QBP message.

QBP (Query By Parameter)

The following table describes the segments that are used to construct the QBP message type. Each segment is one line of text ending with a line termination character (a carriage return). The line termination character is required so that the HL7 messages are readable and printable. The messages may appear somewhat cryptic due to the scarcity of white space. (The standard has provisions for inclusion of binary data, but WIR will not use these features.)

The full HL7 standard allows additional segments within these message types, but they are ignored by WIR. In order to remain compliant with HL7, their use will not result in an error, but the recipient can ignore the content of the segments. The segments that are documented here are sufficient to support the WIR function of returning data for clients and their immunizations.

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	The MSH must include an identifier which indicates the Query Profile used.
QPD	[1..1]	R	The Query Profile will specify the list of fields and their components in the order that they will be expected for this query.
RCP	[1..1]	R	Every QBP will have one RCP segment.

The message segments below are needed to construct the QBP message type. Each segment is given a brief description excerpted from the HL7 standard. The tables define what fields make up each segment. Since WIR does not use all the fields that HL7 defines, there are sometimes gaps in the ordinal sequence of fields; fields which are not defined in the tables below are not supported by WIR and shall not be populated. Following HL7 rules, the gaps do not diminish the number of field separators within the segment. For example, if the second and third fields in a segment are not present, their field separators remain in order to indicate that the next field present is the fourth: field1|||field4.

MSH Segment

The MSH segment defines the intent, source, destination and some specifics of the syntax of a message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Field Separator	ST		1..1	[1..1]	R	
2	Encoding Characters	ST		4..4	[1..1]	R	
3	Sending Application	HD	0361		[0..1]	RE	
4	Sending Facility	HD	0362		[1..1]	R	
5	Receiving Application	HD	0361		[0..1]	RE	
6	Receiving Facility	HD	0362		[0..1]	RE	
7	Date/Time of Message	TS_Z			[1..1]	R	
9	Message Type	MSG			[1..1]	R	
10	Message Control ID	ST		1..199	[1..1]	R	
11	Processing ID	PT			[1..1]	R	
12	Version ID	VID			[1..1]	R	
15	Accept Acknowledgement Type	ID	0155		[1..1]	R	
16	Application Acknowledgment Type	ID	0155		[1..1]	R	
21	Message Profile Identifier	EI			[1..*]	R	
22	Sending Responsible Organization	XON			[0..1]	RE	
23	Receiving Responsible Organization	XON			[0..1]	RE	

HL7 New Structure:

The MSH segment shall follow the specifications noted in the section above, with the following exceptions:

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
22	Sending Responsible Organization	XON			[0..1]	R	

Field Notes:

The population of the MSH for QBP messages shall follow the specifications noted in the section for VXU messages in this document, with the following exceptions.

MSH-9 Message Type (MSG)

Three components of this field give the HL7 message type. Table 0076 (Message Code), Table 0003 (Trigger Event) and Table 0354 (Message Structure). Within HL7, the triggering event is considered to be the real-world circumstance causing the message to be sent. For Query By Parameter messages, WIR requires that this field be populated with the value "QBP^Q11^QBP_Q11".

MSH-21 Message Profile Identifier (EI)

Required for all messages as of HL7 2.5.1 r1.5. The message profile contains information about the grammar, syntax and the expected usage for a particular message. For QBP messages, WIR requires exactly one of the following values be present:

- Z34^CDCPHINVS, if the user wants to query only on the client's immunization history.
- Z44^CDCPHINVS, if the user wants to query on both the client's immunization history, and the client's immunization recommendations.

Specifying both profiles in the same QBP message will trigger an error due to conflicting profiles.

HL7 New Structure:

The population of the MSH for QBP messages shall follow the specifications noted in the HL7 New Structure section for VXU messages in this document, with the following exceptions:

MSH-4: Message Profile Identifier (EI)

Identifies for whom the message is being sent (the owner of the message information).

When the message is being sent to WIR use the WIR Provider ID of the Provider Organization that owns the information (e.g., |99999|). Contact the WIR Help Desk for the appropriate organization ID.

QPD Segment

The QPD segment contains the parameters being leveraged to locate the client within WIR.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Message Query Name	CE	CDCPHINVS		[1..1]	R	
2	Query Tag	ST		32	[1..1]	R	
3	Patient List	CX			[0..*]	RE	
4	Patient Name	XPN			[1..1]	R	
5	Patient Mother Maiden Name	XPN_M			[0..1]	RE	
6	Patient Date of Birth	TS_NZ		26	[1..1]	R	
7	Patient Sex	IS	0001	1	[0..1]	RE	
8	Patient Address	XAD			[0..1]	RE	
9	Patient Home Phone	XTN			[0..1]	RE	
10	Patient Multiple Birth Indicator	ID	0136	1	[0..1]	RE	
11	Patient Birth Order	NM		2	[0..1]	RE	

Field Notes:

QPD-1 Message Query Name (CE)

This field contains the name of the query. The value required in this field is dependent on the value specified in MSH-21:

- If the Z34 profile was specified in MSH-21, QPD-1 shall be valued with "Z34^Request Immunization History^CDCPHINVS"
- If the Z44 profile was specified in MSH-21, QPD-1 shall be valued with "Z44^Request Evaluated History and Forecast^CDCPHINVS"

QPD-2 Query Tag (ST)

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.

The responding system is required to echo it back as the first field in the query acknowledgement segment (QAK).

This field differs from *MSA-2-Message control ID* in that its value remains constant for each message (i.e. all continuation messages) associated with the query, whereas *MSA-2-Message control ID* may vary with each continuation message, since it is associated with each individual message, not the query as a whole.

QPD-3 Patient List (CX)

Components 1 (ID Number), 4 (Assigning Authority) and 5 (Identifier Type Code) are required in the QPD-3 field.

When a Provider Organization is sending to WIR, to best match to a single client it is recommended to use the client's WIR ID (use "SR" as the identifier type code). Sender's Chart Number may be used in this field but may not be utilized in client matching. When sending to an outside system WIR will provide the client's WIR ID and chart number when it is available.

QPD-4 Patient Name (XPN)

This is a required field. Last name and first name are required in the first two components.

QPD-5 Patient Mother's Maiden Name (XPN_M)

In this context, where the mother's name is used for client identification, WIR uses only last name and first name. If last name and first name are populated, the seventh component must be valued 'M' to conform to the data type specifications. If not valued, Mother's maiden name is not considered when seeking matching clients.

QPD-6 Patient Date of Birth (TS_NZ)

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

QPD-7 Patient Sex (IS)

See Table 0001 for a list of valid values.

QPD-8 Patient Address (XAD)

See XAD data type.

QPD-9 Patient Home Phone (XTN)

Ignored by WIR

QPD-10 Patient Multiple Birth Indicator (ID)

Use **Y** to indicate that the client was born in a multiple birth.

QPD-11 Patient Birth Order (NM)

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

RCP Segment

The RCP segment is used to restrict the number of potential candidate matches which are sent back by WIR in the query response.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Query Priority	ID	0091		[0..1]	RE	
2	Quantity Limited Request	CQ	0126		[0..1]	RE	

Field Notes:

RCP-1 Query Priority (ID)

WIR requires that, if populated, RCP-1 be populated with "I" for immediate processing.

RCP-2 Quantity Limited Request (CQ)

This field is used to limit the number of records returned in the RSP message; the maximum number of clients WIR will return in a response message will be the lower of the number specified in the first component of this field, or the

system limit of 10 clients. If RCP-2 is populated, WIR requires that the second component be populated with "RD&&HL70126"

Example: Z34^CDCPHINVS Query profile (Return Complete Immunization History)

```
MSH|^~\&||9999|||201401101330-0600||QBP^Q11^QBP_Q11|HL7251_QUERY_01|P^|2.5.1^^|||ER|AL|||||Z34^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|HL7251_QUERY_01||FOUND^NOT^W^^^^^||20120604|M||
RCP|I|10^RD&&HL70126^|
```

Example: Z44^CDCPHINVS Query profile (Return Immunization History and Forecast)

```
MSH|^~\&||9999|||201401101330-0600||QBP^Q11^QBP_Q11|HL7251_QUERY_01|P^|2.5.1^^|||ER|AL|||||Z44^CDCPHINVS
QPD|Z44^Request Evaluated History and Forecast^CDCPHINVS|HL7251_QUERY_01||FOUND^NOT^W^^^^^||20120604|M||
RCP|I|10^RD&&HL70126^|
```

RSP (Query Response)

The following tables describe the segments that are used to construct the RSP message type for each response profile. The full HL7 standard allows additional segments to be used within the RSP message type, but these are not leveraged by WIR in generating an RSP message. Square brackets [ ] enclose optional segments, which are sent only if there is information available to populate the segment with, and curly braces {} enclose segments that can be repeated. For example, the ERR segment is only sent if there are any errors in the query message to report, and the NK1 segment may be repeated if more than one responsible person record is associated to the same client.

Z31^CDCPHINVS – Return a List of Candidates

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	The MSH will include the identifier Z31^CDCPHINVS to denote the response profile
MSA	[1..1]	R	Every RSP will have one MSA segment.
[ERR]	[0..1]	RE	Every RSP will have at most one ERR segment. If a message generated multiple errors, the error displayed will be prioritized based upon severity and location.
QAK	[1..1]	R	Every RSP will have one QAK segment.
QPD	[1..1]	R	Every RSP will echo back the QPD specified on the corresponding QBP message.
{Begin Patient Identifier List	[1..*]	R	Every RSP with a Z31 profile will return at least one candidate client. The maximum number returned is the lower of the number of records specified in RCP-2 of the corresponding QBP message, or the system limit of 10.
PID	[1..1]	R	Every client returned in the Patient Identifier List will have a PID segment
[PD1]	[0..1]	RE	Every client returned in the Patient Identifier List will have at most one PD1 segment.
{[NK1]}	[0..*]	RE	Every client returned in the Patient Identifier List will have between zero and four NK1 segments, where four is the maximum number of Responsible Persons stored within the WIR database for each client.
End Patient Identifier List}			

Z32^CDCPHINVS – Return Complete Immunization History

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	The MSH will include the identifier Z32^CDCPHINVS to denote the response profile

Segment	WIR Cardinality	WIR Usage	Comment
MSA	[1..1]	R	Every RSP will have one MSA segment.
[ERR]	[0..1]	RE	Every RSP will have at most one ERR segment. If a message generated multiple errors, the error displayed will be prioritized based upon severity and location.
QAK	[1..1]	R	Every RSP will have one QAK segment.
QPD	[1..1]	R	Every RSP will echo back the QPD specified on the corresponding QBP message.
PID	[1..1]	R	Every RSP sent using the Z32 profile will contain one PID segment.
[PD1]	[0..1]	RE	Every RSP sent using the Z32 profile will contain at most one PD1 segment.
[{NK1}]	[0..*]	RE	Every RSP sent using the Z32 profile will contain between zero and four NK1 segments, where four is the maximum number of Responsible Persons stored within the WIR database for each client.
[{Begin Order Group	[0..*]	RE	Every RSP sent using the Z32 profile may contain Order Groups.
ORC	[1..1]	R	Every Order Group will contain one ORC
RXA	[1..1]	R	Every Order Group will contain one RXA
[RXR]	[0..1]	RE	Every Order Group will contain at most one RXR
[{Begin Observation Group	[0..*]	RE	Every Order Group may contain Observation Groups
OBX	[1..1]	R	Every Observation Group will contain one OBX
End Observation Group}]			
End Order Group}]			

Z33^CDCPHINVS – Return an Acknowledgement with No Person Records

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	The MSH will include the identifier Z33^CDCPHINVS to denote the response profile
MSA	[1..1]	R	Every RSP will have one MSA segment.
[ERR]	[0..1]	RE	Every RSP will have at most one ERR segment. If a message generated multiple errors, the error displayed will be prioritized based upon severity and location.
QAK	[1..1]	R	Every RSP will have one QAK segment.
QPD	[1..1]	R	Every RSP will echo back the QPD specified on the corresponding QBP message.

Z42^CDCPHINVS – Return Evaluated History and Forecast

Segment	WIR Cardinality	WIR Usage	Comment
MSH	[1..1]	R	The MSH will include the identifier Z42^CDCPHINVS to denote the response profile
MSA	[1..1]	R	Every RSP will have one MSA segment.
[ERR]	[0..1]	RE	Every RSP will have at most one ERR segment. If a message generated multiple errors, the error displayed will be prioritized based upon severity and location.
QAK	[1..1]	R	Every RSP will have one QAK segment.
QPD	[1..1]	R	Every RSP will echo back the QPD specified on the corresponding QBP message.
PID	[1..1]	R	Every RSP sent using the Z42 profile will contain one PID segment.

Segment	WIR Cardinality	WIR Usage	Comment
[{Begin Order Group	[1..*]	R	Every RSP sent using the Z42 profile will contain at least one Order Group. Each Order Group may pertain to immunization history or immunization forecasting information.
ORC	[1..1]	R	Every Order Group will contain one ORC
RXA	[1..1]	R	Every Order Group will contain one RXA
[RXR]	[0..1]	RE	Every Order Group will contain at most one RXR
[{Begin Observation Group	[1..*]	RE	Every Order Group will contain at least one Observation Group
OBX	[1..1]	R	Every Observation Group will contain one OBX
End Observation Group}]			
End Order Group}]			

The message segments below are needed to construct message types that are used by WIR. Each segment is given a brief description excerpted from the HL7 standard. The tables define what fields make up each segment. Since WIR does not use all the fields that HL7 defines, there are sometimes gaps in the ordinal sequence of fields. Following HL7 rules, the gaps do not diminish the number of field separators within the segment. For example, if the second and third fields in a segment are not present, their field separators remain in order to indicate that the next field present is the fourth: field1|||field4.

MSH Segment

The MSH segment defines the intent, source, destination and some specifics of the syntax of a message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Field Separator	ST		1..1	[1..1]	R	
2	Encoding Characters	ST		4..4	[1..1]	R	
3	Sending Application	HD	0361		[0..1]	RE	
4	Sending Facility	HD	0362		[1..1]	R	
5	Receiving Application	HD	0361		[0..1]	RE	
6	Receiving Facility	HD	0362		[0..1]	RE	
7	Date/Time of Message	TS_Z			[1..1]	R	
9	Message Type	MSG			[1..1]	R	
10	Message Control ID	ST		1..199	[1..1]	R	
11	Processing ID	PT			[1..1]	R	
12	Version ID	VID			[1..1]	R	
15	Accept Acknowledgement Type	ID	0155		[1..1]	R	
16	Application Acknowledgment Type	ID	0155		[1..1]	R	
21	Message Profile Identifier	EI			[1..*]	R	

Field Notes:

The population of the MSH for RSP messages shall follow the specifications noted in the section for VXU messages in this document, with the following exceptions.

MSH-3 Sending Application (HD)

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

MSH-9 Message Type (MSG)

For Query Response messages, WIR populates this field with the value “RSP^K11^RSP_K11”.

MSH-10 Message Control ID (ST)

WIR will populate the MSH-10 value with the Job ID assigned to the job which processed the corresponding QBP message the RSP is responding to.

MSH-15 Accept Acknowledgement Type (ID)

WIR populates this field with NE.

MSH-16 Application Acknowledgement Type (ID)

WIR populates this field with NE

MSH-21 Message Profile Identifier (EI)

For RSP messages, WIR populates MSH-21 with the value corresponding to the appropriate response:

- If the corresponding QBP specified a profile of Z34^CDCPHINVS, and an exact client match is found, WIR populates MSH-21with Z32^CDCPHINVS.
- If the corresponding QBP specified a profile of Z44^CDCPHINVS, and an exact client match is found, WIR populates MSH-21with Z42^CDCPHINVS.
- If no matches are found, or if the number of matches found exceeds the limit specified in RCP-2 of the corresponding QBP, WIR populates MSH-21 with Z33^CDCPHINVS
- If multiple matches are found, and the number found is less than the limit specified in RCP-2 of the corresponding QBP, WIR populates MSH-21 with Z31^CDCPHINVS

MSH-22 Sending Responsible Organization (XON)

WIR does not populate this field on outbound messages.

MSH-23 Receiving Responsible Organization (XON)

WIR does not populate this field on outbound messages

MSA Segment

The MSA segment contains information sent while acknowledging another message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Acknowledgment Code	ID	0008	2..2	[1..1]	R	
2	Message Control ID	ST		1.199	[1..1]	R	

Field Notes:

The population of the MSA for RSP messages shall follow the specifications noted in the section for ACK messages in this document.

ERR Segment

The ERR segment contains information regarding errors detected in the corresponding QBP message.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
2	Error Location	ERL		18	[0..1]	RE	
3	HL7 Error Code	CWE	0357		[1..1]	R	
4	Severity	ID	0516	1..1	[1..1]	R	
5	Application Error Code	CWE	0533		[0..1]	RE	
8	User Message	TX			[0..1]	RE	

Field Notes:

The population of the ERR segment for RSP messages shall follow the specifications noted in the section for ACK messages in this document.

QAK Segment

The QAK segment details the status of the corresponding query response.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Query Tag	ST		32	[1..1]	R	
2	Query Response Status	ID	HL70208		[1..1]	R	
3	Message Query Name	CE	HL70471		[1..1]	R	

Field Notes:

QAK-1 Query Tag (ST)

This field will echo back the value contained in QPD-2 in the corresponding QBP message.

QAK-2 Query Response Status (ID)

This field will populate with a value from HL7 table 0208 based upon the status of the query results:

- The field will populate with AR if the message itself contains an AR status in MSA-1; else
- The field will populate with TM if too many candidates are found; else
- The field will populate with NF if no candidates are found; else
- The field will populate with AE if the message itself contains an AE status in MSA-1; else
- The field will populate with OK

QAK-3 Message Query Name (CE)

This field will echo back the value contained in QPD-1 in the corresponding QBP message.

QPD Segment

The QPD segment contains the parameters being leveraged to locate the client within WIR.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Message Query Name	CE	CDCPHINVS		[1..1]	R	
2	Query Tag	ST		32	[1..1]	R	
3	Patient List	CX			[0..*]	RE	
4	Patient Name	XPN			[1..1]	R	
5	Patient Mother Maiden Name	XPN_M			[0..1]	RE	
6	Patient Date of Birth	TS_NZ		26	[1..1]	R	
7	Patient Sex	IS	0001	1	[0..1]	RE	
8	Patient Address	XAD			[0..1]	RE	
9	Patient Home Phone	XTN			[0..1]	RE	
10	Patient Multiple Birth Indicator	ID	0136	1	[0..1]	RE	
11	Patient Birth Order	NM		2	[0..1]	RE	

Field Notes:

The QPD segment included in RSP messages will echo back the values populated in the QPD segment of the corresponding QBP message.

PID Segment

The PID segment 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. The PID segment is not included in the Z33 response profile.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - PID	SI			[1..1]	R	
3	Patient Identifier List	CX			[1..*]	R	
5	Patient Name	XPN			[1..1]	R	
6	Mother's Maiden Name	XPN_M			[0..1]	RE	
7	Date/Time of Birth	TS_NZ			[1..1]	R	
8	Administrative Sex	IS	0001		[1..1]	RE	
10	Race	CE	CDCREC		[0..1]	RE	
11	Patient Address	XAD			[0..1]	RE	
13	Phone Number - Home	XTN			[0..*]	RE	
22	Ethnic Group	CE	CDCREC		[0..1]	RE	
24	Multiple Birth Indicator	ID	0136		[0..1]	RE	

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
25	Birth Order	NM		1..2	[0..1]	C(RE/O)	If PID-24 is valued "Y"
26	Citizenship	CE	0171			RE	
29	Patient Death Date and Time	TS			[0..1]	C(RE/X)	If PID-30 is valued "Y"
30	Patient Death Indicator	ID	0136		[0..1]	RE	

Field Notes:

The population of the PID segment in an RSP message will follow the specifications noted in the VXU section of this document, with the following exceptions:

PID-1 Set ID – PID (SI)

For the Z32 and Z42 response profiles, WIR will populate PID-1 with the value '1'. For the Z31 response profile, WIR will populate P1D-1 sequentially, such that the first client returned will have PID-1 populated with '1', the second client returned will have PID-1 populated with '2', and so on.

PID-3 Patient Identifier List (CX)

When WIR is sending to an outside system it will use the client's WIR ID (denoted by the identifier code "SR") and chart number when it is available.

The WIR ID can be used to uniquely identify the desired client in the event multiple client candidate matches are returned.

PID-29 Patient Death Date and Time (TS)

WIR will populate this field in RSP messages if a Death Certificate from Vital Records is on file.

PD1 Segment

The Patient Demographic Segment contains patient demographic information that may change from time to time. There are two uses for this segment in query responses: reporting whether the client wants his/her data protected, and indicating whether the person wants to receive reminder/recall notices. The PD1 segment is only included in the Z31 and Z32 response profiles.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
11	Publicity Code	CE	0215		[0..1]	RE	
12	Protection Indicator	ID	0136		[0..1]	RE	

Field Notes:

The population of the PD1 segment in an RSP message will follow the specifications noted in the VXU section of this document, with the following exceptions:

PD1-13 Protection Indicator Effective Date (DT_D)

At present, WIR does not populate this field in RSP messages.

PD1-16 Immunization Registry Status (IS)

At present, WIR does not send back the Immunization Registry Status for clients in HL7 2.5.1

PD1-17 Immunization Registry Status Effective Date (DT_D)

At present, WIR does not populate this field in RSP messages, due to not populating PD1-16.

PD1-18 Publicity Code Effective Date (DT_D)

At present, WIR does not populate this field in RSP messages.

NK1 Segment

The NK1 segment contains information about the patient's other related parties. Any associated parties may be identified. Utilizing *NK1-1-set ID*, multiple NK1 segments can be sent to patient accounts. The NK1 segment is only included in the Z31 and Z32 response profiles.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - NK1	SI			[1..1]	R	
2	Name	XPN			[1..1]	R	
3	Relationship	CE	0063		[1..1]	R	
4	Address	XAD			[0..1]	RE	
5	Phone Number	XTN			[0..*]	RE	
22	Publicity Code	CE	0215		[0..1]	RE	

Field Notes:

The population of the NK1 segment in an RSP message will follow the specifications noted in the VXU section of this document.

ORC Segment

The ORC is used to transmit information specific to orders. It is a repeating segment and must be specified with every RXA segment. The ORC segment is only included in the Z32 and Z42 message profiles.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Order Control	ID	0119	2	[1..1]	R	
2	Placer Order Number	EI			[0..1]	RE	
3	Filler Order Number	EI			[1..1]	R	
10	Entered By	XCN			[0..1]	RE	
12	Ordering Provider	XCN			[0..1]	C(RE/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA"
17	Entering Organization	CE	0362			RE	

Field Notes:

The population of the ORC segment in an RSP message will follow the specifications noted in the VXU section of this document.

RXA Segment

The RXA carries pharmacy administration data. Only one RXA segment can be specified per ORC segment. The RXA segment is only included in the Z32 and Z42 message profiles.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Give Sub-ID Counter	NM		1	[1..1]	R	
2	Administration Sub-ID Counter	NM		1	[1..1]	R	
3	Date/Time Start of Administration	TS_NZ			[1..1]	R	
5	Administered Code	CE	CVX		[1..1]	R	
6	Administered Amount	NM		20	[1..1]	R	
7	Administered Units	CE	UCUM		[0..1]	C(R/X)	If Administered Amount is not valued "999"

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
9	Administration Notes	CE, CE_TX	NIP001		[0..*]	C(R/O)	If RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
10	Administering Provider	XCN			[0..1]	RE	
11	Administered-at Location	LA2			[0..1]	C(R/RE)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
15	Substance Lot Number	ST		30	[0..1]	C(R/RE)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
16	Substance Expiration Date	TS_M			[0..1]	C(RE/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA"
17	Substance Manufacturer Name	CE	MVX		[0..1]	C(R/O)	If the first occurrence of RXA-9.1 is valued "00" and RXA-20 is valued "CP" or "PA" **OR** Provider manages inventory in WIR and deducts via HL7 messaging
18	Substance/Treatment Refusal Reason	CE	NIP002		[0..1]	C(R/X)	If the RXA-20 is valued "RE"
20	Completion Status	ID	0322		[0..1]	RE	
21	Action Code - RXA	ID	0323		[0..1]	C(R/O)	If RXA-5.1 is not valued "998"

Field Notes

The population of the RXA segment in an RSP message will follow the specifications noted in the VXU section of this document, with the following exception.

RXA-9 Administration Notes (CE)

In outgoing messages, WIR will use the note code 01 (historical immunization) for all immunizations that had been sent as 00 (new immunization) or 01 (historical immunization) on the client record. All other immunizations will be sent with the note code they were recorded with. A table of note codes can be found on page 50 of this guide.

RXR Segment

The Pharmacy/Treatment Route Segment contains the alternative combination of route and site.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Route	CE	NCIT		[1..1]	R	
2	Administration Site	CWE	0163		[0..1]	RE	

Field Notes:

The population of the RXR segment in a RSP message will follow the specifications noted in the VXU section of this document.

OBX Segment

The Observation/Result Segment is used to transmit an observation.

SEQ	Element Name	Data Type	Value Set	Length	WIR Cardinality	WIR Usage	Conditional Predicate
1	Set ID - OBX	SI		1..4	[1..1]	R	
2	Value Type	ID	0125	2..3	[1..1]	R	
3	Observation Identifier	CE	NIP003		[1..1]	R	
4	Observation Sub_ID	ST		1..20	[1..1]	R	
5	Observation Value	Varies*	Varies*		[1..1]	R	
6	Units	CE	UCUM		[0..1]	C(R/RE)	If OBX-2 is valued "NM"
11	Observation Result Status	ID	0085		[1..1]	R	
14	Date/Time of Observation	TS_NZ			[1..1]	R	
17	Observation Method	CE	CDCPHINVS		[0..1]	C(RE/O)	If OBX-3.1 is "64994-7"

Field Notes:

The population of the OBX segment in a RSP message will follow the specifications noted in the VXU section of this document, with the following additions:

OBX-3 Observation Identifier (CE)

For query responses, the system uses this field to send the LOINC Codes for **Series information** for combination vaccines. For each component of a combination vaccine, the system sends out a grouped set of two OBX segments. The first segment identifies the component antigen, and the second segment identifies the Series count. OBX-3 is used to identify whether the component antigen or the valid series count is noted in OBX-5 respectively.

Here are the LOINC Codes that the system sends in OBX-3 for Series information for combination vaccines.

LOINC Code	Description
38890-0	Component Vaccine Type. This term is used to distinguish separate vaccine components of a multiple antigen vaccine. Included in LOINC 1/2005.

In the following example, the LOINC Codes are highlighted in OBX-3. These two OBX segments together express that a dose of combination vaccine counts for the 1st dose of DTaP in the DTaP series.

```
OBX|1|CE|38890-0^Component Vaccine Type^LN|1|45^HepB^CVX^90731^Hep B, unspecified
formulation^C4||||||F|||20100115
```

For query responses the system uses this field to send the LOINC Codes for **Recommendations**. For each recommendation, the system sends a grouped set of OBX segments. Here are the LOINC Codes that the system sends out in OBX-3 for Recommendations.

LOINC Code	Description
59779-9	Immunization Schedule used
59780-7	Immunization Series name
30973-2	Dose number in series
59782-3	Number of doses in primary series
30981-5	Earliest date to give
30980-7	Date vaccine due
59778-1	Vaccine overdue date
59783-1	Status in immunization series
30982-3	Reason applied by forecast logic to project this vaccine

In the following example, the LOINC Codes are highlighted in OBX-3 for a single recommendation of HepB.

```
OBX|17|CE|59779-9^Immunization Schedule used^LN|3|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|18|CE|59780-7^Immunization Series name^LN|3|2482^Influenza^L||||||F|||20100115
OBX|19|NM|30973-2^Dose number in series^LN|3|3|NA^DOSE^HL70353|||||F|||20100115
OBX|20|NM|59782-3^Number of doses in primary series^LN|3|2|NA^DOSE^HL70353|||||F|||20100115
OBX|21|TS|30981-5^Earliest date to give^LN|3|20120801||||||F|||20100115
OBX|22|TS|30980-7^Date vaccine due^LN|3|20120801||||||F|||20100115
OBX|23|TS|59778-1^Vaccine overdue date^LN|3|20130618||||||F|||20100115
OBX|24|CE|59783-1^Status in immunization series^LN|3|3 of 2^In progress^L||||||F|||20100115
OBX|25|ST|30982-3^Reason applied by forecast logic to project this vaccine|3| The earliest and
recommended dates were adjusted seasonally.||||||F|||20100115
```

Please see the end of the OBX field notes for a complete example of how WIR sends Recommendations

OBX-4 Observation Sub-ID (ST)

For sending out Series Information and Recommendations, 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 OBX segments, all with the same sub-identifier in OBX-4. The sub-identifier increments sequentially.

For example, WIR sends out grouped OBX segments for each recommendation. The following is a single recommendation for DTAP, all sharing the same Observation sub-ID of 1 in OBX-4.

```
OBX|1|CE|59779-9^Immunization Schedule used^LN|1|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|2|CE|59780-7^Immunization Series name^LN|1|3^DTAP^L||||||F|||20100115
OBX|3|NM|30973-2^Dose number in series^LN|1|2|NA^DOSE^HL70353|||||F|||20100115
OBX|4|NM|59782-3^Number of doses in primary series^LN|1|5|NA^DOSE^HL70353|||||F|||20100115
OBX|5|TS|30981-5^Earliest date to give^LN|1|20120912||||||F|||20100115
OBX|6|TS|30980-7^Date vaccine due^LN|1|20121015||||||F|||20100115
OBX|7|TS|59778-1^Vaccine overdue date^LN|1|20121115||||||F|||20100115
OBX|8|CE|59783-1^Status in immunization series^LN|1|2 of 5^In progress^L||||||F|||20100115
```

OBX-5 Observation Value (Varies)

For series recommendations included in a query response, this field holds the value observed for series information and recommendations. The value corresponds to the LOINC in OBX-3, or for schools, the value corresponds to the Student Information Code in OBX-3. For example, for recommendations, the fifth OBX segment is for the earliest date. OBX-3 contains the code 30979-9&30981-5 and OBX-5 contains the actual earliest date as follows:

```
OBX|4|TS|30981-5^Earliest date to give^LN^^^|1|20010519||||||F|||20100101|
```

Please see the end of the OBX field notes for complete examples of how WIR sends Series for combination vaccines and Recommendations.

NOTE 1: Complete Example of WIR's use of OBX to send Series Information for Combination Vaccines

A single dose of combination vaccine may have a different series dose count for each component. Within a query response message, the system sends a grouped set of three OBX segments for each component in a combination vaccine. For example, a single dose of Dtap-Hib is sent as below. The first three OBX segments express the dose count of 1 for DTaP. The last three OBX segments express the dose count of 3 for Hib.

```
RXA|0|999|19810807|19810807|50^DtaP-Hib^TriHIBit^WVTN|1.0|mL^MilliLiter^UCUM||01^^^||||||||||
OBX|1|CE|38890-0^COMPONENT VACCINE TYPE^LN|1|20^DTaP^CVX^90700^DTaP^C4||||||F|||
20100101|<CR>
OBX|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20010730||||||F|||20100101|
OBX|3|NM|30973-2^Dose number in series^LN|1|1|NA^DOSE^HL70353|||||F|||20100101|
OBX|4|CE|38890-0^COMPONENT VACCINE TYPE^LN|2|17^Hib^CVX^90737^Hib^C4||||||F|||20100101|
OBX|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|19981216||||||F|||20100101|
OBX|6|NM|30973-2^Dose number in series^LN|2|3|NA^DOSE^HL70353|||||F|||20100101|
```

NOTE 2: Complete Example of WIR's use of OBX to send Recommendation Information

A single recommendation is sent in a grouped set of OBX-segments, which follow a place-holder RXA segment defining 998^No Vaccine Administered^CVX, which delineates the beginning of the Vaccine Recommendations for the client.

The OBX segments in order express:

Immunization Schedule used
Immunization Series name
Dose number in series
Number of doses in primary series
Earliest date to give

Date vaccine due
Vaccine overdue date
Status in immunization series
Reason applied in forecasting vaccine

Example: (white space/extra blank lines added for readability)

```
RXA|0|1|20140110|20140110|998^No vaccination administered^CVX|999|||||||||||||NA


OBX|1|CE|59779-9^Immunization Schedule used^LN|1|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|2|CE|59780-7^Immunization Series name^LN|1|3^DTAP^L||||||F|||20100115
OBX|3|NM|30973-2^Dose number in series^LN|1|2|NA^DOSE^HL70353|||||F|||20100115
OBX|4|NM|59782-3^Number of doses in primary series^LN|1|5|NA^DOSE^HL70353|||||F|||20100115
OBX|5|TS|30981-5^Earliest date to give^LN|1|20120912||||||F|||20100115
OBX|6|TS|30980-7^Date vaccine due^LN|1|20121015||||||F|||20100115
OBX|7|TS|59778-1^Vaccine overdue date^LN|1|20121115||||||F|||20100115
OBX|8|CE|59783-1^Status in immunization series^LN|1|2 of 5^In progress^L||||||F|||20100115


OBX|9|CE|59779-9^Immunization Schedule used^LN|2|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|10|CE|59780-7^Immunization Series name^LN|2|2443^Hep A^L||||||F|||20100115
OBX|11|NM|30973-2^Dose number in series^LN|2|1|NA^DOSE^HL70353|||||F|||20100115
OBX|12|NM|59782-3^Number of doses in primary series^LN|2|2|NA^DOSE^HL70353|||||F|||20100115
OBX|13|TS|30981-5^Earliest date to give^LN|2|20130604||||||F|||20100115
OBX|14|TS|30980-7^Date vaccine due^LN|2|20130604||||||F|||20100115
OBX|15|TS|59778-1^Vaccine overdue date^LN|2|20140604||||||F|||20100115
OBX|16|CE|59783-1^Status in immunization series^LN|2|1 of 2^In progress^L||||||F|||20100115
OBX|17|CE|59779-9^Immunization Schedule used^LN|3|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|18|CE|59780-7^Immunization Series name^LN|3|93^Hep B^L||||||F|||20100115
OBX|19|NM|30973-2^Dose number in series^LN|3|1|NA^DOSE^HL70353|||||F|||20100115
OBX|20|NM|59782-3^Number of doses in primary series^LN|3|3|NA^DOSE^HL70353|||||F|||20100115
OBX|21|TS|30981-5^Earliest date to give^LN|3|20120604||||||F|||20100115
OBX|22|TS|30980-7^Date vaccine due^LN|3|20120604||||||F|||20100115
OBX|23|TS|59778-1^Vaccine overdue date^LN|3|20120904||||||F|||20100115
OBX|24|CE|59783-1^Status in immunization series^LN|3|1 of 3^In progress^L||||||F|||20100115

OBX|25|CE|59779-9^Immunization Schedule used^LN|4|VXC16^ACIP Schedule^CDCPHINVS||||||F|||20100115
OBX|26|CE|59780-7^Immunization Series name^LN|4|2442^HPV^L||||||F|||20100115
OBX|27|NM|30973-2^Dose number in series^LN|4|1|NA^DOSE^HL70353|||||F|||20100115
OBX|28|NM|59782-3^Number of doses in primary series^LN|4|3|NA^DOSE^HL70353|||||F|||20100115
OBX|29|TS|30981-5^Earliest date to give^LN|4|20120214||||||F|||20100115
OBX|30|TS|30980-7^Date vaccine due^LN|4|200140214||||||F|||20100115
OBX|31|TS|59778-1^Vaccine overdue date^LN|4|20290214||||||F|||20100115
OBX|32|CE|59783-1^Status in immunization series^LN|4|1 of 3^In progress^L||||||F|||20100115
OBX|33|ST|30982-3^Reason applied by forecast logic to project this vaccine|4|Client meets gender specific
requirements for this series||||||F|||20100115
```

Example: Z32^CDCPHINVS Response profile (exactly one candidate match – history only)

```
MSH|^~\&|WIR|WIR||9999|20140130105047-0600||RSP^K11^RSP_K11|1|P|2.5.1|||NE|NE|||||Z32^CDCPHINVS
MSA|AA|1
QAK|1|OK|Z34^Request Immunization History^HL70471|1
QPD|Z34^Request Immunization
History^CDCPHINVS|Qry_01|69^^^MYEHR^PI|WHITE^BLACK^AND^^^^L|KNIGHT^JOANN^^^^^M|20131216|M
PID|1||2837463^^^WIR^SR~69^^^WIR^PI||WHITE^BLACK^AND^^^^L|KNIGHT^JOANN^^^^^M|20131216|M||2106-
3^White^CDCREC|92A HAWK RD^^FORT
ATKINSON^WI^53538^^H||^PRN^^^^920^5551212^^^^^9205551212~^NET^^WHITE.FAMILY@HOST.COM|||||||||2186-5^not
Hispanic or Latino^CDCREC|||||||N
PD1||||||||||||02^Reminder/recall - any method^HL70215|N
NK1|1|KNIGHT^JOANN^^^^^L|MTH^Mother^HL70063|92A HAWK RD^^FORT ATKINSON^WI^53538^^H
NK1|2|WHITE^BLACK^AND^^^^L|SEL^Self^HL70063|92A HAWK RD^^FORT
ATKINSON^WI^53538^^H|^PRN^^^^920^5551212^^^^^9205551212~^NET^^WHITE.FAMILY@HOST.COM
PV1||R
ORC|RE||37768095^WIA|||||||||26342^Sinha^Prerna^^^^^^WIA^^^^LR^^^^^^^^MD
RXA|0|1|20131217|20131217|08^HepB-Peds^CVX|0.5|mL^milliliter^UCUM||01^Historical information - source
unspecified^NIP001|26341^Hommen^Linda^M^^^^^WIA^^^^LR^^^^^^^^RN|||||||||||CP||20140117
RXR|C28161^Intramuscular^NCIT|LVL^Left Vastus Lateralis^HL70163
```

Example: **Z42^CDCPHINVS Response profile (exactly one candidate match – history and recommendations)**

```
MSH|^~\&|WIR|WIR||9999|201401101330-0600||RSP^K11^RSP_K11|1|P|2.5.1|||NE|NE|||||Z42^CDCPHINVS
MSA|AA|1
QAK|1|OK|Z34^Request Immunization History^HL70471|1
QPD|Z34^Request Immunization
History^CDCPHINVS|Qry_01|69^^^MYEHR^PI|WHITE^BLACK^AND^^^^L|KNIGHT^JOANN^^^^^M|20131216|M
PID|1||2837463^^^WIR^SR~69^^^WIR^PI||WHITE^BLACK^AND^^^^L|KNIGHT^JOANN^^^^^M|20131216|M||2106-
3^White^CDCREC|92A HAWK RD^^FORT
ATKINSON^WI^53538^^H||^PRN^^^^920^5551212^^^^^9205551212~^NET^^WHITE.FAMILY@HOST.COM|||||||||2186-5^not
Hispanic or Latino^CDCREC|||||||N
PD1||||||||||||02^Reminder/recall - any method^HL70215|N
NK1|1|KNIGHT^JOANN^^^^^^L|MTH^Mother^HL70063|92A HAWK RD^^FORT ATKINSON^WI^53538^^H
NK1|2|WHITE^BLACK^AND^^^^^L|SEL^Self^HL70063|92A HAWK RD^^FORT
ATKINSON^WI^53538^^H|^PRN^^^^920^5551212^^^^^9205551212~^NET^^WHITE.FAMILY@HOST.COM
PV1||R
ORC|RE||37768095^WIA|||||||||26342^Sinha^Prerna^^^^^^WIA^^^^LR^^^^^^^^MD
RXA|0|1|20131217|20131217|08^HepB-Peds^CVX|0.5|mL^milliliter^UCUM||01^Historical information - source
unspecified^NIP001|26341^Hommen^Linda^M^^^^^WIA^^^^LR^^^^^^^^RN||||||||||||20140117
RXR|C28161^Intramuscular^NCIT|LVL^Left Vastus Lateralis^HL70163
ORC|RE||9999^NA RXA|0|1|20140117|20140117|998^No vaccination administered^CVX|999||||||||||||||NA
OBX|1|CE|59779-9^Immunization Schedule used^LN|1|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
OBX|2|CE|59780-7^Immunization Series name^LN|1|3^DTAP^L||||||F|||20100115
OBX|3|NM|30973-2^Dose number in series^LN|1|1|NA^DOSE^HL70353|||||F|||20100115
OBX|4|NM|59782-3^Number of doses in primary series^LN|1|5|NA^DOSE^HL70353|||||F|||20100115
OBX|5|TS|30981-5^Earliest date to give^LN|1|20140127||||||F|||20100115
OBX|6|TS|30980-7^Date vaccine due^LN|1|20140216||||||F|||20100115
OBX|7|TS|59778-1^Vaccine overdue date^LN|1|20140316||||||F|||20100115
OBX|8|CE|59783-1^Status in immunization series^LN|1|1 of 5^In progress^L||||||F|||20100115
OBX|9|CE|59779-9^Immunization Schedule used^LN|2|VXC16^ACIP
Schedule^PHVS_ImmunizationScheduleIdentifier_IIS||||||F|||20100115
```

Example: **Z31^CDCPHINVS Response profile (multiple candidate matches)**

```
MSH|^~\&|WIR|WIR||9999|201401101330-0600||RSP^K11^RSP_K11|1|P|2.5.1|||NE|NE|||||Z31^CDCPHINVS
MSA|AA|1
QAK|1|OK|Z34^Request Immunization History^HL70471|2
QPD|Z34^Request Immunization History^CDCPHINVS|Qry_01||LASTNAME^FIRSTNAME||20090202|M
PID|1||9876543^^^WIR^SR||LASTNAME^FIRSTNAME^^^^^^L|MTHMAIDEN^MTHFIRST^^^^^^M|20090202|M|||284 Franklin
ST^^TOWNVILLE^WI^99999^^H|WI105|||||||||||||||||N
PD1||||||||||||02^Reminder/recall - any method^HL70215|N
NK1|1|NK1LASTNAME^NK1FIRSTNAME^^^^^^L|MTH^Mother^HL70063|284 Franklin ST^^TOWNVILLE^WI^99999^^H
PV1||R|||||||||||||||||V00
PID|2||876542^^^WIR^SR||LASTNAME^FIRSTNAME^^^^^^L|MTHMAIDEN^MTHFIRST^^^^^^M|20090202|M|||157 E Main
St^^TOWNVILLE^WI^99999^^H|WI105|||||||||||||||||N
PD1||||||||||||02^Reminder/recall - any method^HL70215|N
NK1|1|NK1LASTNAME^NK1FIRSTNAME^^^^^^L|PAR^Parent^HL70063|157 E Main St^^TOWNVILLE^WI^99999^^H
PV1||R|||||||||||||||||V00
```

Example: **Z33^CDCPHINVS Response profile (No client match found)**

```
MSH|^~\&|WIR|WIR||9999|20140121105304-0600||RSP^K11^RSP_K11|37374859|P|2.5.1|||NE|NE|||||Z33^CDCPHINVS
MSA|AA|37374859
QAK|37374859|NF|Z34^Request Immunization History^HL70471
QPD|Z34^Request Immunization History^CDCPHINVS|37374859|123456^^^MYEHR^MR|FOUND^NOT^^^^^L||20050512|M|10
       East Main St^^Myfaircity^WI^^^L
```

Example: **Z33^CDCPHINVS Response profile (Too many clients found)**

```
MSH|^~\&|WIR|WIR||9999|20140121105304-0600||RSP^K11^RSP_K11|37374859|P|2.5.1|||NE|NE|||||Z33^CDCPHINVS
MSA|AA|37374859
QAK|37374859|TM|Z34^Request Immunization History^HL70471
QPD|Z34^Request Immunization History^CDCPHINVS|37374859|123456^^^MYEHR^MR|FOUND^NOT^^^^^L||20050512|M|10
       East Main St^^Myfaircity^WI^^^L
```

Appendix A -- HL7 Data Types

The Center for Disease Control Implementation Guide (CDC IG) contains clearly defined HL7 data types that are the building blocks of an HL7 message. This guide will avoid potentially ambiguous situations and will *NOT* redefine an already clearly defined section.

For the Data Types defined below, any component not present is not supported within WIR. Data Types not otherwise noted herein, will adhere to corresponding definition in **Chapter 4: HL7 Data Types** of the CDC IG, which can be found at the following link → http://www.cdc.gov/vaccines/programs/iis/technical-guidance/downloads/hl7guide-1-4-2012-08.pdf

CE (Coded Element)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Identifier	ST		1..50	R	
2	Text	ST		1..999	RE	
3	Name of Coding System	ID		1..20	R	
4	Alternate Identifier	ST		1..50	RE	
5	Alternate Text	ST		1.999	C(RE/X)	If CE-4 is valued
6	Name of Alternate Coding System	ID		1..20	C(R/X)	IF CE-4 is valued

CWE (Coded With Exceptions)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Identifier	ST		1..999	R	
2	Text	ST		1..999	RE	
3	Name of Coding	ID	HL70396	1..20	C(R/X)	If CWE.1 is valued
4	Alternate Identifier	ST		1..999	RE	
5	Alternate Text	ST		1..999	C(RE/X)	If CWE.4 is valued
6	Name of Alternate System	SID	HL70396	1..20	C(R/X)	If CWE.4 is valued

CX (Extended Composite ID with Check Digit)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	ID Number	ST		15	R	
4	Assigning Authority	HD	HL70363		R	
5	Identifier Type	ID	HL70203	2..5	R	

FN (Family Name)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Surname	ST		1..35	R	

LA2 (Location with Address Variation 2)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
4	Facility	HD	HL70362		R	

PT (Processing Type)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Processing ID	ID	HL70103	1..1	R	

SAD (Street Address)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Street or Mailing Address	ST		1..55	R	

VIS (Version ID)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Version ID	ID	HL70104	5..5	R	

XAD (Extended Address)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Street Address	SAD			RE	
2	Other Designation	ST		1..55	RE	
3	City	ST		1..50	RE	
4	State or Province	ST		1..50	RE	
5	ZIP or Postal Code	ST		1..9	RE	
6	Country	ID	HL70399	3..3	RE	
7	Address Type	ID	HL70190	1..3	R	

XCN (Extended Composite ID Number and Name for Person)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	ID Number	ST		1..15	C(R/RE)	If XCN.2.1 and XCN.3 are not valued
2	Family Name	FN			R	
3	Given Name	ST		25	RE	
4	Second and Further Given Names or Initials Thereof	ST		25	RE	
5	Suffix	ST		10	RE	
6	Prefix	ST		10	RE	
9	Assigning Authority	HD	HL70363		C(R/X)	If XCN-1 is valued
10	Name Type Code	ID	HL70200	1	RE	
12	Check Digit Scheme	ID			C(O/X)	If XCN-11 is valued
13	Identifier Type Code	ID	HL70203		C(R/X)	If XCN-1 is valued

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
21	Professional Suffix	ST		10	RE	

XPN (Extended Person Name)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Family Name	FN			R	
2	Given Name	ST		25	R	
3	Second and Further Given Names	ST		25	RE	
4	Suffix	ST		10	RE	
5	Prefix	ST		10	RE	
7	Name Type Code	ID	HL70200	1	R	
14	Professional Suffix	ST		10	RE	

XPN_M (Extended Person Name – Maiden Name)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Family Name	FN			R	
2	Given Name	ST		25	R	
7	Name Type Code	ID	HL70200	1	R	

XTN (Extended Telephone Number)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
2	Telecommunication Use Code	ID	HL70201		R	
3	Telecommunication Equipment Type	ID	HL70202		RE	
4	Email Address	ST		1..80	C(R/X)	If XTN-2 is valued NET
6	Area/City Code	NM		3	C(RE/X)	If the XTN-2 is valued not "NET"
7	Local Number	NM		7	C(R/X)	If the XTN-2 is valued not "NET"
8	Extension	NM		10	RE	

Appendix B -- HL7 Data Types – HL7 New Structure

The Center for Disease Control Implementation Guide (CDC IG) contains clearly defined HL7 data types that are the building blocks of an HL7 message. This guide will avoid potentially ambiguous situations and will *NOT* redefine an already clearly defined section.

The HL7 Data Types shall follow the specifications noted in Appendix A, with the following exceptions:

*The following only applies to field MSH-22 for QBPs and VXUs.

XON (Extended Composite ID Number and Name for Organizations)

SEQ	Component	Data	Value Set	Length	WIR Usage	Conditional Predicate
1	Organization Name	ST		1..50	RE	
6	Assigning Authority	HD	HL70363		R	
7	Identifier Type Code	ID	HL70203	2..5	R	
10	Organization Identifier	ST		1..20	R	

Appendix C -- HL7 Tables

The following tables give valid values for fields in the segments defined above, in the cases where the field definitions reference an HL7 table number. The tables are considered to be part of the HL7 standard, but those tables designated as type User have values defined by WIR.

Type	Table	Name	Value	Description
HL7	0001	Sex		
	0001		F	Female
	0001		M	Male
	0001		U	Unknown
HL7	0003	Event Type		
	0003		Q11	QBP – Query by parameter
	0003		V04	VXU - Unsolicited vaccination record update
	0003		K11	RSP – Response to query message
HL7	CDCREC	Race		
	CDCREC		1002-5	American Indian or Alaska Native
	CDCREC		2028-9	Asian
	CDCREC		2076-8	Native Hawaiian or Other Pacific Islander
	CDCREC		2054-5	Black or African-American
	CDCREC		2106-3	White
	CDCREC		2131-1	Other Race
HL7	0008	Acknowledgment Code		
	0008		AA	Application Accept
	0008		AE	Application Error
	0008		AR	Application Reject
User	0063	Relationship		
	0063		BRO	Brother
	0063		CGV	Care giver
	0063		CHD	Child
	0063		FCH	Foster Child
	0063		FTH	Father
	0063		GRD	Guardian
	0063		GRP	Grandparent
	0063		MTH	Mother
	0063		OTH	Other
	0063		PAR	Parent
	0063		SCH	Stepchild
	0063		SEL	Self
	0063		SIB	Sibling
	0063		SIS	Sister
	0063		SPO	Spouse
HL7	0064	Financial class		
	0064		V00 – Do Not Use	Deprecated [VFC eligibility not determined/unknown]
	0064		V01	Not VFC eligible
	0064		V02	VFC eligible – Medicaid/Medicaid Managed Care
	0064		V03	VFC eligible – Uninsured
	0064		V04	VFC eligible – American Indian/Alaskan Native
	0064		V05	VFC eligible – Federally Qualified Health Center Patient (under-insured)
	0064		V07 – Do Not Use	Deprecated [VFC eligible – Local-specific eligibility] (use V24)
	0064		WIA01	BadgerCare
	0064		WIA02 – Do Not Use	Deprecated [S-Chip] (use V22)
	0064		V22	S-Chip
	0064		V24	Medicare
	0064		V25 – Do Not Use	Deprecated [State Program Eligibility]
HL7	0076	Message Type		
	0076		ACK	General acknowledgment message
	0076		QBP	Query by parameter message
	0076		RSP	Response to Query by parameter
	0076		VXU	Unsolicited vaccination record update
HL7	0085	Observation result status codes		
	0085		F	Final
HL7	0103	Processing ID		
	0103		P	Production
HL7	0104	Version ID		
	0104		2.5.1	Version 2.5.1 release 1.5 (XXXXXX 2016)
HL7	0119	Order Control Codes		
	0119		RE	Observations to follow
HL7	0125	Value Types		
	0125		CE	Coded Element
	0125		DT	Date
	0125		ID	Coded Values for HL7 Tables
	0125		NM	Numeric
	0125		ST	String
	0125		TS	Time Stamp
HL7	0136	Yes/No Indicator		
	0136		Y	Yes

Type	Table	Name	Value	Description
	0136		N	No
HL7	0155	Accept/Application Acknowledgment Conditions		
	0155		AL	Always send acknowledgement
	0155		ER	Error/reject conditions only
	0155		NE	Never send acknowledgement
HL7	NCIT	Route of Administration		
	NCIT		C38238	Intradermal
	NCIT		C28161	Intramuscular
	NCIT		C38284	Nasal
	NCIT		C38276	Intravenous
	NCIT		C38288	Oral
	NCIT		C38676	Percutaneous
	NCIT		C38299	Subcutaneous
	NCIT		C38305	Transdermal
HL7	0163	Administrative Site		
	0163		BN	Bilateral Nares
	0163		LA	Left Arm
	0163		LD	Left Deltoid
	0163		LG	Left Gluteus Medius
	0163		LLFA	Left Lower Forearm
	0163		LPC	Left Posterior Chest
	0163		LT	Left Thigh
	0163		LVL	Left Vastus Lateralis
	0163		RA	Right Arm
	0163		RD	Right Deltoid
	0163		RG	Right Gluteus Medius
	0163		RLFA	Right Lower Forearm
	0163		RPC	Right Posterior Chest
	0163		RT	Right Thigh
	0163		RVL	Right Vastus Lateralis
HL7	CDCREC	Ethnic Group		
	CDCREC		2135-2	Hispanic
	CDCREC		2186-5	Non-Hispanic
HL7	0200	Name Type		
	0200		A	Alias Name
	0200		L	Legal Name
	0200		D	Display Name
	0200		M	Maiden Name
	0200		C	Adopted Name
	0200		B	Name at birth
	0200		P	Name of partner/spouse
	0200		U	Unspecified
HL7	0201	Telecommunication use code		
	0201		PRN	Primary Residence Number
	0201		ORN	Other Residence Number
	0201		WPN	Work Number
	0201		VHN	Vacation Home Number
	0201		ASN	Answering Service Number
	0201		EMR	Emergency Number
	0201		NET	Network (email) Address
	0201		BPN	Beeper Number
HL7	0202	Telecommunication Equipment Type		
	0202		PH	Telephone
	0202		FX	Fax
	0202		MD	Modem
	0202		CP	Cellular Phone
	0202		BP	Beeper
	0202		Internet	Internet Address:Use Only if Telecommunication Use Code is NET
	0202		X.400	X.400 email address: Use Only If Telecommunication Use Code Is NET
	0202		TDD	Telecommunications Device for the Deaf
	0202		TTY	Teletypewriter
HL7	0203	Identifier Type		
	0203		MA	Medicaid Number
	0203		MC	Medicare Number
	0203		MR	Medical Record Number
	0203		PI	Patient Internal Identifier
	0203		PN	Person Number
	0203		PRN	Provider Number
	0203		PT	Patient External Identifier

Type	Table	Name	Value	Description
	0203		RRI	Regional Registry ID
	0203		SR	State Registry Identifier
	0203		SS	Social Security Number
HL7	0208	Query Response Status		
	0208		OK	Data found, no errors
	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 (**Inactive**)
	0227		ACA	ACAMBIS
	0227		AD	Adams
	0227		ALP	Alpha (**Inactive**)
	0227		AR	Armour (**Inactive** – use CSL)
	0227		AVB	Aventis Behring (**Inactive** – use CSL)
	0227		AVI	Aviron
	0227		BA	Baxter (**Inactive** - use BAH)
	0227		BAH	Baxter Health Care
	0227		BAY	Bayer
	0227		BN	Bavarian Nordic A/S
	0227		BP	Berna **(Inactive** – use BPC)
	0227		BPC	Berna Products Corporation
	0227		BRR	Barr Laboratories (**Inactive**)
	0227		CEN	Centeon L.L.C. (**Inactive** – use CSL)
	0227		CHI	Chiron Corporation (**Inactive** – use NOV)
	0227		CMP	Celltech Medeva Pharmaceuticals (**Inactive** – use NOV)
	0227		CNJ	Cangene Corporation
	0227		CON	Connaught **(Inactive** – use PMC)
	0227		CRU	Crucell (**Inactive**)
	0227		CSL	CSL Behring, Inc.
	0227		DVX	Dynavax Inc.
	0227		DYN	DynPort Vaccine Company, LLC
	0227		EVN	Evans (**Inactive** – use NOV)
	0227		GRE	Greer (**Inactive**)
	0227		GRF	Grifols
	0227		IAG	Immuno International AG (**Inactive** – use BAH)
	0227		IDB	ID Biomedical
	0227		IM	Merieux (**Inactive** – Use PMC)
	0227		INT	Intercell Biomedical (**Inactive**)
	0227		IUS	Immuno-US
	0227		JPN	The Research foundation for Microbial Diseases of Osaka U. (**Inactive**)
	0227		JSN	Janssen
	0227		KGC	Korea Green Cross
	0227		LED	Lederle (**Inactive** – use WAL)
	0227		MA	Massachusetts Public Health (**Inactive**-Use MBL)
	0227		MBL	Massachusetts Biologic Laboratories
	0227		MED	MedImmune, Inc.
	0227		MIL	Miles (**Inactive** – use BAY)
	0227		MIP	Emergent BioSolutions
	0227		MOD	Moderna US, Inc.
	0227		MSD	Merck
	0227		MSP	MSP Vaccine Company – (partnership Merck and Sanofi Pasteur)
	0227		NAB	North American Biologicals, Inc.
	0027		NAV	North American Vaccine (**Inactive** – use BAH)
	0227		NYB	New York Blood Center (**Inactive**)
	0227		NOV	Novartis
	0227		NVX	Novavax, Inc
	0227		OTC	Organon Teknika (**Inactive**)
	0227		ORT	Ortho
	0227		PAX	Emergent Travel Health, Inc (Formerly PaxVax)
	0227		PD	Parkdale Pharmaceuticals (formerly Parke Davis)
	0227		PFR	Pfizer
	0227		PMC	Sanofi Pasteur Inc. (Connaught and Pasteur Merieux)
	0227		PRX	Praxis Biologics (**Inactive** – use WAL)
	0227		PSC	Protein Sciences

Type	Table	Name	Value	Description
	0227		PWJ	PowderJect Pharmaceutical
	0227		SCL	Sclavo (**Inactive**)
	0227		SEQ	Seqirus
	0227		SOL	Solvay Pharmaceuticals
	0227		SKB	GlaxoSmithKline
	0227		SI	Swiss Serum and Vaccine Inst. (**Inactive** – use BPC)
	0227		TAL	Talecris Biotherapeutics (includes Bayer Biologicals) (**Inactive**)
	0227		USA	United States Army Medical Research
	0227		VAL	Valneva
	0227		VBI	VBI Vaccines, Inc
	0227		VXG	VaxGen
	0227		WA	Wyeth-Ayerst (**Inactive** – use WAL)
	0227		WAL	Wyeth
	0227		ZLB	ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Co) (**Inactive** – use CSL)
	0227		OTH	Other
	0227		UNK	Unknown manufacturer
User	0289	County/parish (Wisconsin only)		
	0289		WI001	Adams
	0289		WI003	Ashland
	0289		WI005	Barron
	0289		WI007	Bayfield
	0289		WI009	Brown
	0289		WI011	Buffalo
	0289		WI013	Burnett
	0289		WI015	Calumet
	0289		WI017	Chippewa
	0289		WI019	Clark
	0289		WI021	Columbia
	0289		WI023	Crawford
	0289		WI025	Dane
	0289		WI027	Dodge
	0289		WI029	Door
	0289		WI031	Douglas
	0289		WI033	Dunn
	0289		WI035	Eau Claire
	0289		WI037	Florence
	0289		WI039	Fond du Lac
	0289		WI041	Forest
	0289		WI043	Grant
	0289		WI045	Green
	0289		WI047	Green Lake
	0289		WI049	Iowa
	0289		WI051	Iron
	0289		WI053	Jackson
	0289		WI055	Jefferson
	0289		WI057	Juneau
	0289		WI059	Kenosha
	0289		WI061	Kewaunee
	0289		WI063	La Crosse
	0289		WI065	Lafayette
	0289		WI067	Langlade
	0289		WI069	Lincoln
	0289		WI071	Manitowoc
	0289		WI073	Marathon
	0289		WI075	Marinette
	0289		WI077	Marquette
	0289		WI078	Menominee
	0289		WI079	Milwaukee
	0289		WI081	Monroe
	0289		WI083	Oconto
	0289		WI085	Oneida
	0289		WI087	Outagamie
	0289		WI089	Ozaukee
	0289		WI091	Pepin
	0289		WI093	Pierce
	0289		WI095	Polk
	0289		WI097	Portage
	0289		WI099	Price
	0289		WI101	Racine
	0289		WI103	Richland

Type	Table	Name	Value	Description
	0289		WI105	Rock
	0289		WI107	Rusk
	0289		WI109	St. Croix
	0289		WI111	Sauk
	0289		WI113	Sawyer
	0289		WI115	Shawano
	0289		WI117	Sheboygan
	0289		WI119	Taylor
	0289		WI121	Trempealeau
	0289		WI123	Vernon
	0289		WI125	Vilas
	0289		WI127	Walworth
	0289		WI129	Washburn
	0289		WI131	Washington
	0289		WI133	Waukesha
	0289		WI135	Waupaca
	0289		WI137	Waushara
	0289		WI139	Winnebago
	0289		WI141	Wood
HL7	0292	Administered Code	Refer to the CPT Codes (CPT) and CVX Codes (0292) table below.	
HL7	0323	Action Code		
	0323		A	Add
	0323		D	Delete
	0323		U	Update
HL7	0354	Message Structure		
	0354		ACK	ACK
	0354		VXU_V04	VXU
	0354		QBP_Q11	QBP
	0354		RSP_K11	RSP
HL7	0357	HL7 Error Code		
	0357		0	Success
	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		207	Application internal error
HL7	0396	OBX-5 Value Sets		
		Coding System	**Code**	**Description**
	Funds	CDCPHINVS	PHC70	Private Funds
	Funds	CDCPHINVS	VXC50	Public Funds
	Funds	CDCPHINVS	VXC51	Public VFC Funds
	Funds	CDCPHINVS	VXC52	Public Non-VFC Funds
	Reaction	SCT	39579001	Anaphylaxis
	Reaction	SCT	81308009	Disorder of brain (disorder)
	Reaction	CDCPHINVS	VXC9	Persistent, inconsolable crying lasting > 3 hours within 48 hours of dose
	Reaction	CDCPHINVS	VXC10	Collapse or shock-like state within 48 hours of dose
	Reaction	CDCPHINVS	VXC11	Convulsions (fits, seizures) within 72 hours of dose
	Reaction	CDCPHINVS	VXC12	Fever of >40.5C (105F) within 48 hours of dose
	Reaction	CDCPHINVS	VXC13	Guillain-Barre syndrome (GBS) within 6 weeks of dose
	Reaction	CDCPHINVS	VXC14	Rash within 14 days of dose
	Reaction	CDCPHINVS	VXC15	Intussusception within 30 days of dose
	VacCP	SCT	27624003	Chronic disease (disorder)
	VacCP	SCT	91930004	Allergy to eggs (disorder)
	VacCP	SCT	294530006	Polymyxin B allergy (disorder)
	VacCP	SCT	294847001	Gelatin allergy (disorder)
	VacCP	SCT	294468006	Neomycin allergy (disorder)
	VacCP	SCT	294466005	Streptomycin allergy (disorder)
	VacCP	SCT	402306009	Allergy to aluminum (disorder)
	VacCP	SCT	77386006	Patient currently pregnant (finding)
	VacCP	SCT	302215000	Thrombocytopenic disorder (disorder)
	VacCP	SCT	300916003	Latex allergy (disorder)
	VacCP	SCT	161461006	History of- purpura (situation)
	VacCP	CDCPHINVS	VXC17	allergy (anaphylactic) to 2-phenoxyethanol
	VacCP	CDCPHINVS	VXC18	Allergy to baker’s yeast (anaphylactic)
	VacCP	CDCPHINVS	VXC19	Allergy to thimerosal (anaphylactic)

Type	Table	Name	Value	Description
	VacCP	CDCPHINVS	VXC20	Allergy to previous dose of this vaccine or any of its unlisted vaccine components (anaphylactic)
	VacCP	CDCPHINVS	VXC21	Previous history of intussusception
	VacCP	CDCPHINVS	VXC22	Encephalopathy within 7 days of previous dose of DTP or DTaP
	VacCP	CDCPHINVS	VXC23	Current fever with moderate-to-severe illness
	VacCP	CDCPHINVS	VXC24	Current acute illness, moderate to severe (with or without fever) (e.g., diarrhea, otitis media, vomiting)
	VacCP	CDCPHINVS	VXC25	History of Arthus hypersensitivity reaction to a tetanus-containing vaccine administered < 10 yrs previously
	VacCP	CDCPHINVS	VXC26	underlying unstable, evolving neurologic disorders, (including seizure disorders, cerebral palsy, and developmental delay)
	VacCP	CDCPHINVS	VXC27	immunodeficiency due to any cause, including HIV (hematologic and solid tumors, congenital immunodeficiency, long-term immunosuppressive therapy, including steroids)
	VacCP	CDCPHINVS	VXC30	allergy (anaphylactic) to proteins of rodent or neural origin
	Immune	SCT	278971009	Hepatitis A (finding)
	Immune	SCT	271511000	Hepatitis B (finding)
	Immune	SCT	371111005	Measles (finding)
	Immune	SCT	341112003	Mumps (finding)
	Immune	SCT	278968001	Rubella (finding)
	Immune	SCT	371113008	Varicella (finding)
	Immune	L	24	Immunity: diptheria
	Immune	L	25	Immunity: haemophilus influenzae type B (Hib)
	Immune	L	29	Immunity: pertussis
	Immune	L	30	Immunity: poliovirus
	Immune	L	32	Immunity: tetanus
	Immune	L	42	Immunity: rabies
	Immune	L	45	Immunity: Rabies
	History of Disease	SCT	409498004	Anthrax (disorder)
	History of Disease	SCT	397428000	Diphtheria (disorder)
	History of Disease	SCT	76902006	Tetanus (disorder)
	History of Disease	SCT	27836007	Pertussis (disorder)
	History of Disease	SCT	40468003	Viral hepatitis, type A (disorder)
	History of Disease	SCT	66071002	Type B viral hepatitis (disorder)
	History of Disease	SCT	91428005	Haemophilus influenzae infection (disorder)
	History of Disease	SCT	240532009	Human papilloma virus infection (disorder)
	History of Disease	SCT	6142004	Influenza (disorder)
	History of Disease	SCT	52947006	Japanese encephalitis virus disease (disorder)
	History of Disease	SCT	14189004	Measles (disorder)
	History of Disease	SCT	36989005	Mumps (disorder)
	History of Disease	SCT	36653000	Rubella (disorder)
	History of Disease	SCT	23511006	Meningococcal infectious disease (disorder)
	History of Disease	SCT	16814004	Pneumococcal infectious disease (disorder)
	History of Disease	SCT	398102009	Acute poliomyelitis (disorder)
	History of Disease	SCT	14168008	Rabies (disorder)
	History of Disease	SCT	18624000	Disease due to Rotavirus (disorder)
	History of Disease	SCT	4834000	Typhoid fever (disorder)
	History of Disease	SCT	111852003	Vaccinia (disorder)
	History of Disease	SCT	38907003	Varicella (disorder)

Type	Table	Name	Value	Description
	History of Disease	SCT	16541001	Yellow Fever (disorder)
	Special	CDCPHINVS	VXC7	Rabies exposure within previous 10 days.
	Special	CDCPHINVS	VXC8	Member of special group
	UCUM	UCUM	CAP	Capsules
	UCUM	UCUM	g	Gram
	UCUM	UCUM	[iU]	InternationalUnits
	UCUM	UCUM	[iU]/L	InternationalUnitsPerLiter
	UCUM	UCUM	L	Liter
	UCUM	UCUM	mg	MilliGram
	UCUM	UCUM	mg/kg	MilliGramPerKiloGram
	UCUM	UCUM	mg/mL	MilliGramPerMilliLiter
	UCUM	UCUM	mL	MilliLiter
	UCUM	UCUM	mL/kg	MilliLiterPerKiloGram
	UCUM	UCUM	ug	MicroGram
	UCUM	UCUM	ug/mL	MicroGramsPerMilliLiter
	UCUM	UCUM	U	Unit
HL7	0441	Immunization Registry Status		
	0441		A	Active
	0441		I	Inactive--Unspecified
	0441		P	Permanently inactive (dead)
HL7	0516	Severity		
	0516		W	Warning - Transaction successful, but there may be issues. These may include non-fatal errors with potential for loss of data.
	0516		I	Information - Transaction successful, but includes returned information.
	0516		E	Error - Transaction was not successful.
NIP	NIP001	Immunization Information Source		
	NIP001		00	New Immunization Record
	NIP001		01	Historical Information – Source Unspecified
	NIP001		02	Historical Information – from Other Provider
	NIP001		03	Historical Information – from Patient's Written Record
	NIP001		04	Historical Information – from Parent's Recall
	NIP001		05	Historical Information – from Other Registry
	NIP001		06	Historical Information – from Birth Certificate
	NIP001		07	Historical Information – from School Record
	NIP001		08	Historical Information – from Public Agency
NIP	NIP002	Substance Refusal Reason		
	NIP002		00	Parental decision
	NIP002		01	Religious Exemption
NIP	NIP005	Event Consequence		
	NIP005		E	Required emergency room/doctor visit
WIR	L	ACIP Schedule - WIR Series Name		
	L		1	MMR
	L		3	DTAP
	L		4	HIB
	L		5	HIB 1 DOSE
	L		8	Td
	L		11	Smallpox (Dryvax)
	L		13	Pedvax
	L		64	Polio
	L		67	Pneumococcal
	L		69	Varicella
	L		70	VARICELLA start age 13
	L		71	Adeno
	L		72	Anthrax
	L		73	Cholera
	L		74	Encephalitis
	L		76	Pediarix-Hep B
	L		77	Comvax
	L		78	Recombivax Adolescent
	L		82	Measles
	L		87	Rabies PRE-EXPOSURE
	L		88	Rabies POSTEXPOSURE w/HISTORY
	L		89	Rabies POSTEXPOSURE no HISTORY
	L		91	Yellow Fever
	L		93	Hep B
	L		96	Plague
	L		97	Rubella
	L		98	Mumps
	L		1036	Lyme

Type	Table	Name	Value	Description
	L		2079	Pertussis / TdaP
	L		2442	HPV
	L		2443	Hep A
	L		2462	Rotavirus
	L		2463	Rotavirus--Late Start
	L		2482	Influenza
	L		3122	Zoster: 3 doses
	L		3362	Meningococcal
	L		3525	Twinrix Accelerated
	L		3526	Hep A 3 dose
	L		3722	Rotarix
	L		4522	Ixiaro
	L		4942	HPV Males
	L		7442	Twinrix 3 dose
	L		11882	Meningococcal B, Trumenba 3 Dose
	L		11883	Meningococcal B, Bexsero
	L		14062	HPV 2 Dose
	L		14063	HPV 2 Dose Males
	L		14454	Meningococcal B, Trumenba
	L		14522	Zoster: 2 doses
	L		14722	Hep B 2 dose (Heplisav-B)
	L		15242	MMR-Adult
	L		15662	COVID-19, Age 12+, jump to 23-24 formula schedule
	L		15663	COVID '23 Moderna, 6M-4Y, 2 plus previous Moderna
	L		15762	COVID-19, 5Y-11Y, jump to 23-24 formula schedule
	L		15783	Pneumo-Poly: PPSV23/ PCV
	L		15784	Pneumo-Poly: PCV/ PPSV23
	L		15785	Pneumo-Poly: PCV20
	L		15804	Smallpox / Mpox
	L		15822	COVID 23-24 Novavax, 1+ previous dose, age 12+
	L		15823	COVID '23 Pfizer 6M-4Y, 3+ previous Pfizer doses
	L		15902	Hep B, Age 19+ 3-dose
	L		15922	COVID-19, BIvalent Only12+, jump to 23-24 schedule
	L		15923	COVID '23 Pfizer 6M-4Y, Unvaccinated
	L		15924	COVID '23 Pfizer 6M-4Y, 1 previous Pfizer dose
	L		15925	COVID '23 Pfizer 6M-4Y, 2 previous Pfizer doses
	L		15942	COVID '23 Moderna, 6M-4Y, Unvaccinated
	L		15943	COVID '23 Moderna, 6M-4Y, 1 previous Moderna dose
	L		15947	RSV - Adult
	L		15967	COVID 23-24 Formula 12+
	L		15968	COVID 23-24 Formula 5Y-11Y
	L		15969	COVID 23-24 Novavax, Unvaccinated 12+
WIR	99W01	WIR Student Information Codes		
	99W01		FERPA	FERPA Release
	99W01		GRADYEAR	Graduation Year
	99W01		ENROLLDATE	Date Enrolled in WI School
WIR	WVGC	Vaccine Group Code (WVGC)		
	WVGC		Adeno	Adeno
	WVGC		Anthrax	Anthrax
	WVGC		BCG	BCG
	WVGC		Cholera	Cholera
	WVGC		COVID-19	COVID-19
	WVGC		Diphtheria	Diphtheria Antitoxin
	WVGC		DTP/aP	Diphtheria, Tetanus, Acellular Pertussis
	WVGC		Ebola	Ebola, unspecified
	WVGC		Encephalitis	Encephalitis
	WVGC		HepA	Hepatitis A
	WVGC		HepB	Hepatitis B
	WVGC		Hib	Hib
	WVGC		HPV	Human Papilloma Virus
	WVGC		Ig	Ig
	WVGC		IG-RSV	Respiratory Syncytial virus Ig
	WVGC		Influenza	Influenza
	WVGC		Influenza A H1N1	Novel Influenza A H1N1
	WVGC		Lyme	Lyme
	WVGC		Measles	Measles Virus Vaccine
	WVGC		MMR	Measles, Mumps, Rubella
	WVGC		Meningo	Meningitis
	WVGC		Meningo B	Meningitis B
	WVGC		Mumps	Mumps Virus Vaccine
	WVGC		Pertussis	Pertussis
	WVGC		Plague	Plague

Type	Table	Name	Value	Description
	WVGC		Pneumococcal	Pneumonia Conjugate
	WVGC		Pneumo-Poly	Pneumonia Polysaccharide
	WVGC		Polio	Poliomyelitis
	WVGC		Rabies	Rabies
	WVGC		Rotavirus	Rotavirus
	WVGC		RSV	Respiratory syncytial virus (RSV)
	WVGC		Rubella	Rubella Virus Vaccine
	WVGC		Tetanus	Tetanus Diphtheria
	WVGC		Td	Tetanus Diphtheria
	WVGC		TickBorne Enceph	Tick-borne encephalitis
	WVGC		Typhoid	Typhoid
	WVGC		Smallpox	Orthopoxvirus
	WVGC		Varicella	Varicella
	WVGC		Yellow Fever	Yellow Fever
	WVGC		Zoster	Zoster
WIR	WVTN	Vaccine Trade Name (WVTN)		
	WVTN		Abrysvo	Respiratory syncytial virus (RSV), vaccine, bivalent, protein subunit RSV prefusion F, diluent reconstituted, 0.5 mL, preservative free
	WVTN		ACAM2000	Smallpox
	WVTN		Acel-Imune	Diphtheria, tetanus, acellular pertussis
	WVTN		ActHib	Hemophilus influenza b PRP-T 4 dose
	WVTN		Adacel	TdaP > 7 years
	WVTN		Adeno T4	Adenovirus type 4, live oral
	WVTN		Adeno T7	Adenovirus type 7, live oral
	WVTN		AFLURIA	Influenza split virus
	WVTN		AFLURIA, P-free	Influenza preservative free
	WVTN		AFLURIA Quadrivalent	Influenza quadrivalent
	WVTN		AFLURIA Quad, P-Free	Influenza quadrivalent preservative free
	WVTN		AFLURIA Quad PF 6-35M	Influenza quadrivalent, preservative free 6 month to 3 year dosage
	WVTN		Agriflu, P-free	Influenza preservative free
	WVTN		Anthrax	Anthrax
	WVTN		Arexvy	Respiratory syncytial virus (RSV), vaccine, recombinant, protein subunit RSV prefusion F, adjuvant reconstituted, 0.5 mL, preservative free
	WVTN		Attenuvax	Measles live
	WVTN		BabyBIG	Botulism Immune Globulin
	WVTN		BayTet	Tetanus Ig human
	WVTN		BCG-Cancer	Bacillus Calmette-Guerin bladder cancer
	WVTN		BCG-TB	Bacillus Calmette-Guerin TB
	WVTN		Bexsero	Meningococcal B, recombinant, OMV, adjuvanted
	WVTN		BEYFORTUS, 50 mg/0.5mL	Respiratory syncytial virus (RSV) monoclonal antibody, IgG1κ, (nirsevimab-alip), 0.5 mL, neonates and children to 24 months
	WVTN		BEYFORTUS, 100 mg/1mL	Respiratory syncytial virus (RSV) monoclonal antibody, IgG1κ, (nirsevimab-alip), 1 mL, neonates and children to 24 months
	WVTN		Biavax II	Rubella and mumps live
	WVTN		BIG	Botulism Immune Globulin
	WVTN		BioThrax	Anthrax
	WVTN		Boostrix	TdaP > 7 years
	WVTN		Botulinum-antitoxin	Botulinum antitoxin equine
	WVTN		Botulism	Botulism Immune Globulin
	WVTN		Certiva	Diphtheria, tetanus, acellular pertussis
	WVTN		Cervarix	Human Papilloma Virus, Bivalent
	WVTN		CMV-IgIV	Cytomegalovirus Ig IV human
	WVTN		Comirnaty	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3 mL dose, tris-sucrose formulation
	WVTN		Comirnaty (2023-24) 12+	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 30 mcg/0.3 mL
	WVTN		Comvax	HepB-Hib Combination
	WVTN		DAPTACEL	Diphtheria, tetanus, acellular pertussis, 5 antigens
	WVTN		DECAVAC	Td, preservative free
	WVTN		Diphtheria	Diphtheria
	WVTN		Diphtheria-antitoxin	Diphtheria antitoxin, equine
	WVTN		Dryvax	Vaccinia(Smallpox) dry
	WVTN		DT	Diphtheria tetanus pediatric

Type	Table	Name	Value	Description
	WVTN		DTP	Diphtheria, tetanus, whole cell pertussis
	WVTN		Engerix-B Adult	Hepatitis B adult dose 1ml
	WVTN		Engerix-B dialysis	HepB-Dialysis 4 dose
	WVTN		Engerix-B Peds	Hepatitis B pediatric/adolescent .5ml
	WVTN		ERVEBO	Ebola Zaire vaccine, live, recombinant, 1mL dose
	WVTN		Flebogamma	Ig IV human
	WVTN		Flu-Imune	Influenza split virus
	WVTN		Flu-Shield	Influenza split virus
	WVTN		FLUAD	Influenza Trivalent Adjuvanted
	WVTN		FLUAD Quadrivalent	Influenza vaccine, quadrivalent, adjuvanted
	WVTN		Fluarix, P-free	Influenza preservative free
	WVTN		Fluarix Quadrivalent, P-Free	Influenza quadrivalent preservative free
	WVTN		Flublok	Influenza recombinant preservative free
	WVTN		Flublok Quadrivalent	Influenza Quadrivalent Recombinant P-Free
	WVTN		Flucelvax	Influenza MDCK preservative free
	WVTN		Flucelvax Quadrivalent	Influenza MDCK Quadrivalent P-Free
	WVTN		Flucelvax Quadrivalent, P-Free	Influenza MDCK Quadrivalent Preservative Free
	WVTN		FluLaval	Influenza split virus
	WVTN		FluLaval, P-free	Influenza preservative free
	WVTN		FluLaval Quad, P-Free	Influenza quadrivalent preservative free
	WVTN		FluLaval Quadrivalent	Influenza, injectable, quadrivalent
	WVTN		FluMist	Influenza live, for intranasal use
	WVTN		FluMist Quadrivalent	Flu-nasal quadrivalent
	WVTN		Fluogen	Influenza split virus
	WVTN		Fluvirin	Influenza split virus
	WVTN		Fluvirin, P-free	Influenza preservative free
	WVTN		Fluzone	Influenza split virus
	WVTN		Fluzone High-Dose	Influenza split virus increased antigen content
	WVTN		Fluzone Intradermal	Influenza, seasonal, intradermal, p-free
	WVTN		Fluzone Intradermal Quad	influenza, intradermal, quadrivalent, preservative free
	WVTN		Fluzone, P-free	Influenza preservative free
	WVTN		Fluzone Quad	Influenza Quadrivalent
	WVTN		FLUZONE Quad HighDose PF	Influenza, injectable, quadrivalent, .7mL dose, high dose, preservative free
	WVTN		Fluzone Quad PF 6-35M	Influenza quadrivalent, preservative free 6 month to 3 year dosage
	WVTN		Fluzone Quadrivalent, P-Free	Influenza quadrivalent preservative free
	WVTN		Gardasil	Human Papilloma Virus, Quadrivalent
	WVTN		Gardasil 9	Human Papilloma Virus, 9-valent
	WVTN		Havrix-Adult	Hepatitis A adult
	WVTN		Havrix-Peds 2 Dose	Hepatitis A pediatric/adolescent 2 dose
	WVTN		Havrix-Peds 3 Dose	Hepatitis A pediatric/adolescent 3 dose
	WVTN		HBIg	Hepatitis B Ig human
	WVTN		Heplisav-B	HepB-CpG
	WVTN		Hib-TITER	Hemophilus influenza b HbOC 4 dose
	WVTN		Hiberix	Hemophilus influenza b PRP-T 4 dose
	WVTN		HyperTET	Tetanus immune globulin human
	WVTN		H1N1 MED Nasal	H1N1 live, for intranasal use
	WVTN		H1N1 P-free CSL	H1N1 monovalent inactivated preservative free
	WVTN		H1N1 P-free NOV	H1N1 monovalent inactivated preservative free
	WVTN		H1N1 P-free SAN	H1N1 monovalent inactivated preservative free
	WVTN		H1N1 CSL	H1N1 monovalent inactivated
	WVTN		H1N1 NOV	H1N1 monovalent inactivated
	WVTN		H1N1 SAN	H1N1 monovalent inactivated
	WVTN		Ig	Ig human
	WVTN		IgIV	Ig IV human
	WVTN		Imovax Rabies ID	Rabies intradermal
	WVTN		Imovax Rabies IM	Rabies intramuscular
	WVTN		Infanrix	Diphtheria, tetanus, acellular pertussis
	WVTN		IPOL	Poliovirus inactivated IPV
	WVTN		Ixiaro	Japanese Encephalitis for Intramuscular use
	WVTN		Janssen COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, vector non-replicating, recombinant spike protein-Ad26, preservative free, 0.5 mL
	WVTN		JE-Vax	Japanese Encephalitis for Subcutaneous use
	WVTN		JYNNEOS	Vaccinia, smallpox mpox vaccine live, PF, SQ or ID injection
	WVTN		KINRIX	DTaP-IPV combination

Type	Table	Name	Value	Description
	WVTN		LYMErix	Lyme disease
	WVTN		M-R-VAX	Measles and rubella live
	WVTN		Measles	Measles live 1964-1974
	WVTN		Measles-Rubella (MERU)	Measles and rubella live
	WVTN		Menactra	Meningococcal polysaccharide [groups A, C, Y and W-135] diphtheria toxoid conjugate vaccine
	WVTN		MenHibrix	Meningococcal-Hib combination
	WVTN		MENOMUNE	Meningococcal polysaccharide
	WVTN		MenQuadfi	Meningococcal conjugate quadrivalent, MenACWY-TT (MCV4)
	WVTN		Menveo	Meningococcal oligosaccharide [groups A, C, Y and W-135] diphtheria toxoid conjugate vaccine
	WVTN		Meruvax II	Rubella live
	WVTN		MMR II	Measles, mumps and rubella live
	WVTN		Moderna (2023-24) 6M-11Y	COVID-19, mRNA, LNP-S, PF, 25 mcg/0.25 mL
	WVTN		Moderna6-11Y/ 18+BOOSTER	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 50 mcg/0.5 mL dose
	WVTN		Moderna BvlntBstr	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 50 mcg/0.5 mL or 25mcg/0.25mL dose
	WVTN		Moderna COVID-19 (6M-5Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, pediatric 25 mcg/0.25 mL dose
	WVTN		Moderna BvlntBstr 6M-5Y	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 10 mcg/0.2 mL dose
	WVTN		Moderna COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 100 mcg/0.5mL dose or 50 mcg/0.25mL dose
	WVTN		Mumps	Mumps
	WVTN		Mumps-Rubella (MURU)	Rubella and mumps live
	WVTN		Mumpsvax	Mumps live
	WVTN		Novavax COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, Subunit, recombinant spike protein-nanoparticle+Matrix-M1 Adjuvant, preservative free, 0.5mL per dose
	WVTN		Novavax (2023-24) 12+	COVID-19, subunit, rS-nanoparticle, adjuvanted, PF, 5 mcg/0.5 mL
	WVTN		OmniHib	Hemophilus influenza b PRP-T 4 dose
	WVTN		ORIMUNE	Poliovirus OPV live oral
	WVTN		Pediarix	DTAP-HepB-Polio combination
	WVTN		Penbraya	Meningococcal polysaccharide (groups A, C, W, Y) tetanus toxoid conjugate, meningococcal B recombinant vaccine, 0.5mL, preservative free
	WVTN		Pentacel	DtaP-Hib-IPV combination
	WVTN		PedvaxHIB	Hemophilus influenza b OMP 3 dose
	WVTN		Pfizer (2023-24) 5Y-11Y	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 10 mcg/0.3 mL
	WVTN		Pfizer (2023-24) 6M-4Y	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 3 mcg/0.3 mL
	WVTN		Pfizer COVID-19 (5-11Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 10 mcg/0.2 mL dose, tris-sucrose formulation
	WVTN		Pfizer COVID-19 (6M-4Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 3 mcg/0.2 mL dose, tris-sucrose formulation
	WVTN		Pfizer BvlntBstr 6M-4Y	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent, preservative free, 3 mcg/0.2mL dose, tris-sucrose formulation
	WVTN		Pfizer BvlntBstr 5-11	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 30 mcg/0.3mL dose, tris-sucrose formulation
	WVTN		Pfizer BvlntBstr 12+	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 30 mcg/0.3mL dose, tris-sucrose formulation
	WVTN		Pfizer COVID-19 tris 12+	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3 mL dose, tris-sucrose formulation
	WVTN		Pfizer COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3mL dose
	WVTN		Plague	Plague
	WVTN		Pneumovax 23	Pneumococcal polysaccharide 23 valent
	WVTN		PNU-IMUNE 23	Pneumococcal polysaccharide 23 valent
	WVTN		Prehevbrio Hep B Adult	HepB recombinant, 3-antigen, Al(OH)3

Type	Table	Name	Value	Description
	WVTN		Prevnar	Pneumococcal conjugate polyvalent
	WVTN		Prevnar 13	Pneumococcal 13-valent conjugate
	WVTN		Prevnar 20	Pneumococcal conjugate vaccine, 20-valent (PCV20), polysaccharide CRM197 conjugate, adjuvant, preservative free
	WVTN		Priorix	Measles, mumps and rubella live
	WVTN		ProHIBit	Hemophilus influenza b PRP-D booster
	WVTN		ProQuad	Measles, mumps, rubella, varicella live
	WVTN		Quadracel	DtaP-IPV combination
	WVTN		RabAvert	Rabies intramuscular
	WVTN		Recombivax Peds	Hepatitis B pediatric/adolescent .5ml
	WVTN		Recombivax-Adult	Hepatitis B adult dose 1ml
	WVTN		Recombivax-Dialysis	Hepatitis B Dialysis 4 dose
	WVTN		Respigam	Respiratory syncytial virus Ig IV
	WVTN		Rho(D)Full	Rho(D)Ig Rhlg human full-dose
	WVTN		Rho(D)IV	Rho(D)Ig Rhlg human IV
	WVTN		Rho(D)Mini	Rho(D)Ig Rhlg human mini-dose
	WVTN		RIg	Rabies Ig human
	WVTN		RIg-HT	Rabies Ig heat treated human
	WVTN		Rotarix	Rotavirus-RV1
	WVTN		RotaShield	Rotavirus tetravalent live oral
	WVTN		RotaTeq	Rotavirus pentavalent
	WVTN		RSV-IgIV	Respiratory syncytial virus Ig IV
	WVTN		Rubella	Rubella live
	WVTN		Shingrix	Zoster (shingles), recombinant
	WVTN		Spikevax	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 100 mcg/0.5mL dose or 50 mcg/0.25mL dose
	WVTN		Spikevax (2023-24) 12+	COVID-19, mRNA, LNP-S, PF, 50 mcg/0.5 mL
	WVTN		Stamaril	Alternate yellow fever vaccine
	WVTN		Synagis	Respiratory syncytial virus Ig
	WVTN		Td	Tetanus and Diphtheria Adsorbed
	WVTN		TENIVAC	Td, preservative free
	WVTN		Tetramune	DTP – Hib combination
	WVTN		TicoVac 0.25 mL	Tick-borne encephalitis vaccine, inactivated, preservative free, 0.25mL dose
	WVTN		TicoVac 0.5 mL	Tick-borne encephalitis vaccine, inactivated, preservative free, 0.5mL dose
	WVTN		TIg	Tetanus Ig human
	WVTN		TriHIBit	DtaP-Hib combination
	WVTN		Tripedia	Diphtheria, tetanus, acellular pertussis
	WVTN		Trumenba	Meningococcal B, fully recombinant
	WVTN		TT	Tetanus
	WVTN		Twinrix	Hepatitis A & Hepatitis B adult
	WVTN		Typhim Vi	Typoid VI capsular polysaccharide
	WVTN		Typhoid	Typhoid heat and phenol inactivated
	WVTN		Typhoid-AKD	Typhoid acetone-killed, dried
	WVTN		Vaccinia (smallpox), diluted	Vaccinia (smallpox), diluted
	WVTN		Vaccinia immune globulin VIG	Vaccinia immune globulin VIG
	WVTN		VAQTA-Adult	Hepatitis A adult
	WVTN		VAQTA-Peds 2 Dose	Hepatitis A pediatric/adolescent 2 dose
	WVTN		Varivax	Varicella live
	WVTN		Vaxchora	Cholera, live attenuated
	WVTN		Vaxelis	DTaP-IPV-Hib-HepB Combination
	WVTN		Vaxneuvance	Pneumococcal conjugate vaccine, 15-valent (PCV15), polysaccharide CRM197 conjugate, adjuvant, preservative free
	WVTN		Vivotif Berna/Ty21a	Typhoid oral
	WVTN		VZIg	Varicella-zoster Ig human
	WVTN		YF-VAX	Yellow Fever live
	WVTN		Zostavax	Zoster (shingles), live

CPT Codes (CPT) and CVX Codes (0292)

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
90476	54	Adeno	Adeno T4	Adeno T4	Adenovirus type 4, live oral	WAL
90477	55		Adeno T7	Adeno T7	Adenovirus type 7, live oral	WAL
	82		Adeno, unspecified formulation		Recorded as CVX 55	
90581	24	Anthrax	Anthrax	Anthrax BioThrax	Anthrax	MIP
90585	19	BCG	BCG-TB	BCG-TB	Bacillus Calmette-Guerin TB	MSD
90586			BCG-BC	BCG-Cancer	Bacillus Calmette-Guerin bladder cancer	OTC
90728			BCG		BCG	
90625	174	Cholera	Cholera, live attenuated	Vaxchora	Cholera, live attenuated	PAX
90725	26		Cholera, unspecified formulation		Cholera, unspecified formulation	
91300	208	COVID-19	Pfizer COVID-19 Vaccine	Pfizer COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3mL dose	PFR
91301	207		Moderna COVID-19 Vaccine	Moderna COVID-19 Vaccine Spikevax	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 100 mcg/0.5mL dose or 50 mcg/0.25mL dose	MOD
91303	212		Janssen COVID-19 Vaccine	Janssen COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, vector non-replicating, recombinant spike protein-Ad26, preservative free, 0.5 mL	JSN
91304	313		Novavax (2023-2024 Formula) 12+	Novavax (2023-24) 12+	COVID-19, subunit, rS-nanoparticle, adjuvanted, PF, 5 mcg/0.5 mL	NVX
91304	211		Novavax COVID-19 Vaccine	Novavax COVID-19 Vaccine	SARS-COV-2 (COVID-19) vaccine, Subunit, recombinant spike protein-nanoparticle+Matrix-M1 Adjuvant, preservative free, 0.5mL per dose	NVX
91305	217		Pfizer COVID-19 tris 12+	Pfizer COVID-19 tris 12+ Comirnaty	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 30 mcg/0.3 mL dose, tris-sucrose formulation	PFR
91307	218		Pfizer COVID-19 (5-11Y)	Pfizer COVID-19 (5-11Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 10 mcg/0.2 mL dose, tris-sucrose formulation	PFR
91308	219		Pfizer COVID-19 (6M-4Y)	Pfizer COVID-19 (6M-4Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 3 mcg/0.2 mL dose, tris-sucrose formulation	PFR
91309	221		Moderna6-11Y/ 18+BOOSTER	Moderna6-11Y/ 18+BOOSTER	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, 50 mcg/0.5 mL dose	MOD
91311	228		Moderna COVID-19 (6M-5Y)	Moderna COVID-19 (6M-5Y)	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, preservative free, pediatric 25 mcg/0.25 mL dose	MOD
91312	300		Pfizer BvlntBstr 12+	Pfizer BvlntBstr 12+	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 30 mcg/0.3mL dose, tris-sucrose formulation	PFR
91313	229		Moderna BvlntBstr	Moderna BvlntBstr	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 50 mcg/0.5 mL dose	MOD
91314	229		Moderna BvlntBstr	Moderna BvlntBstr	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 25mcg/0.25mL dose	MOD
91315	301		Pfizer BvlntBstr 5-11	Pfizer BvlntBstr 5-11	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent booster, preservative free, 30 mcg/0.3mL dose, tris-sucrose formulation	PFR
91316	230		Moderna BvlntBstr 6M-5Y	Moderna BvlntBstr 6M-5Y	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent	MOD

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
					booster, preservative free, 10 mcg/0.2 mL dose	
91317	302		Pfizer BvlntBstr 6M-4Y	Pfizer BvlntBstr 6M-4Y	SARS-COV-2 (COVID-19) vaccine, mRNA, spike protein, LNP, bivalent, preservative free, 3 mcg/0.2mL dose, tris-sucrose formulation	PFR
91318	308		Pfizer (2023-2024 Formula) 6M-4Y	Pfizer (2023-24) 6M-4Y	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 3 mcg/0.3 mL	PFR
91319	310		Pfizer (2023-2024 Formula) 5Y-11Y	Pfizer (2023-24) 5Y-11Y	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 10 mcg/0.3 mL	PFR
91320	309		Comirnaty (2023-2024 Formula) 12+	Comirnaty (2023-24) 12+	COVID-19, mRNA, LNP-S, PF, tris-sucrose, 30 mcg/0.3 mL	PFR
91321	311		Moderna (2023-2024 Formula) 6M-11Y	Moderna (2023-24) 6M-11Y	COVID-19, mRNA, LNP-S, PF, 25 mcg/0.25 mL	MOD
91322	312		Spikevax (2023-2024 Formula) 12+	Spikevax (2023-24) 12+	COVID-19, mRNA, LNP-S, PF, 50 mcg/0.5 mL	MOD
	213		COVID-19, unspecified formulation		COVID-19, unspecified formulation	
90719		Diphtheria	Diphtheria	Diphtheria	Diphtheria	PD
90700	20	DTP/aP	DTaP	Acel-Imune	Diphtheria, tetanus, acellular pertussis	WAL
				Certiva		BAH
				Infanrix		SKB
				Tripedia		PMC
90701	01		DTP	DTP	Diphtheria, tetanus, whole cell pertussis	PMC
90702	28		DT	DT	Diphtheria tetanus pediatric	PMC
90720	22		DTP-Hib	Tetramune	DTP – Hib combination	WAL
90721	50		DTaP-Hib	TriHIBit	DtaP-Hib combination	PMC
90723	110		DTAP-HepB-Polio	Pediarix	DTAP-HepB-Polio combination	SKB
90696	130		DTaP-IPV	KINRIX	DTaP-IPV combination	SKB
				Quadracel		PMC
90697	146		DTaP-IPV-Hib-HepB	Vaxelis	DTaP-IPV-Hib-HepB Combination	MSP
90698	120		DtaP-Hib-IPV	Pentacel	DtaP-Hib-IPV combination	PMC
	106		DTAP, 5 pertussis antigens	DAPTACEL	Diphtheria, tetanus, acellular pertussis, 5 antigens	PMC
	107		DTaP, unspecified formulation		Recorded as CVX 20	
90758	204	Ebola	Ebola Zaire vaccine, live, recomb, 1mL	ERVEBO	Ebola Zaire vaccine, live, recombinant, 1mL dose	MSD
	214		Ebola, unspecified		Ebola, unspecified	
90735	39	Encephalitis	Japanese Encephalitis-SC	JE-Vax	Japanese encephalitis for Subcutaneous use	JPN
90738	134		Japanese Encephalitis-IM	Ixiaro	Japanese encephalitis for Intramuscular use	VAL
	129		Japanese Enceph, unspecified formulation		Japanese Enceph, unspecified formulation	
90632	52	HepA	HepA adult	Havrix-Adult	Hepatitis A adult	SKB
				VAQTA-Adult		MSD
90633	83		HepA-Ped 2 Dose	Havrix-Peds 2 Dose	Hepatitis A pediatric/adolescent 2 dose	SKB
				VAQTA-Peds 2 Dose		MSD
90634	84		HepA -Peds	Havrix-Peds 3 Dose	Hepatitis A pediatric/adolescent 3 dose	SKB
						MSD
90636	104		HepA-HepB Adult	Twinrix	Hepatitis A & Hepatitis B adult	SKB
90730	85		Hep A, unspecified formulation		Hep A, unspecified formulation	
	31		Hep A-Peds, unspecified formulation		Recorded as CVX 85	
90636	104	HepB	HepA-HepB Adult	Twinrix	Hepatitis A & Hepatitis B adult	SKB
90723	110		DTAP-HepB-Polio	Pediarix	DTAP-HepB-Polio combination	SKB
90697	146		DTaP-IPV-Hib-HepB	Vaxelis	DTaP-IPV-Hib-HepB Combination	MSP
90731	45		Hep B, unspecified formulation		Hep B, unspecified formulation	
90739	189		HepB-CpG	Heplisav-B	Hepatitis B, adult dosage (2 dose schedule), for intramuscular use	DVX
90740	44		Hep B-Dialysis 3 dose		Hepatitis B Dialysis 3 dose	
90743	43		HepB adult	Recombivax-Adult	Hepatitis B adult dose 1ml	MSD
				Engerix-B Adult		SKB
90744	08		HepB pediatric	Recombivax Peds	Hepatitis B pediatric/adolescent .5ml	MSD
				Engerix-B Peds		SKB
90745	42		Hep B, adolescent/high risk infant		Hep B, adolescent/high risk infant	
90746	43		HepB adult	Recombivax-Adult	Hepatitis B adult dose 1ml	MSD
				Engerix-B Adult		SKB

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
90747	44		HepB-Dialysis 4 dose	Recombivax-Dialysis	Hepatitis B Dialysis 4 dose	MSD
				Engerix-B dialysis		SKB
90748	51		HepB-Hib	Comvax	HepB-Hib Combination	MSD
90759	220		HepB-Adult, recombinant, adjuvanted	Prehevbrio Hep B Adult	HepB recombinant, 3-antigen, Al(OH)3	VBI
			HepB-Unspecified			
90645	47	Hib	Hib-HbOC	Hib-TITER	Hemophilus influenza b HbOC 4 dose	WAL
90697	146		DTaP-IPV-Hib-HepB	Vaxelis	DTaP-IPV-Hib-HepB Combination	MSP
90646	46		Hib-PRP-D	ProHIBit	Hemophilus influenza b PRP-D booster	PMC
90647	49		Hib-OMP	PedvaxHIB	Hemophilus influenza b OMP 3 dose	MSD
90648	48		Hib-PRP-T	OmniHib	Hemophilus influenza b PRP-T 4 dose	PMC
				ActHib		PMC
				Hiberix		SKB
90720	22		DTP-Hib	Tetramune	DTP – Hib combination	WAL
90721	50		DTaP-Hib	TriHIBit	DtaP-Hib combination	PMC
90737	17		Hib, unspecified formulation		Hib,unspecified formulation	
90748	51		HepB-Hib	Comvax	HepB-Hib combination	MSD
90698	120		DtaP-Hib-IPV	Pentacel	DtaP-Hib-IPV combination	PMC
90644	148		Meningococcal C/Y-HIB PRP	MenHibrix	Meningococcal-Hib combination	SKB
90650	118	HPV	HPV, Bivalent	Cervarix	Human Papilloma Virus	SKB
90649	62		HPV, Quadrivalent	Gardasil	Human Papilloma Virus	MSD
90651	165		HPV, 9-valent	Gardasil 9	Human Papilloma Virus, 9-valent	MSD
	137		HPV, unspecified formulation		HPV, unspecified formulation	
90281	86	Ig	Ig	Ig	Ig human	
90283	87		IgIV	IgIV	Ig IV human	
				Flebogamma		
90287	27		Botulinum-antitoxin	Botulinum-antitoxin	Botulinum antitoxin equine	
90288			Botulism	BabyBIG	Botulism Immune Globulin	
				Botulism		
				BIG		
90291	29		CMV-IgIV	CMV-IgIV	Cytomegalovirus Ig IV human	
90399	14		IG, unspecified formulation		IG, unspecified formulation	
90296	12		Diphteria-antitoxin	Diphteria-antitoxin	Diphtheria antitoxin, equine	
90371	30		HBIg	HBIg	Hepatitis B Ig human	
90375	34		RIg	Rig	Rabies Ig human	
90376	34		RIg-HT	RIg-HT	Rabies Ig heat treated human	
90384	157		Rho(D)Full	Rho(D)Full	Rho(D)Ig Rhlg human full-dose	
90385	157		Rho(D)Mini	Rho(D)Mini	Rho(D)Ig Rhlg human mini-dose	
90386			Rho(D)IV	Rho(D)IV	Rho(D)Ig Rhlg human IV	
	156		Rho(D) IM or IV		Rho(D), unspecified formulation	
	159		Rho(D), unspecified formulation		Rho(D), unspecified formulation	
90389	13		TiG	BayTet	Tetanus Ig human	
				TiG		
				HyperTET		GRF
90393	79		Vaccinia immune globulin VIG	Vaccinia-Ig	VacciniaIg human	
90396	36		VZIg	VZIg	Varicella-zoster Ig human	
	117		VZIG (IND)	VariZIG		CNJ
			Varicella IG			
90378	93	IG-RSV	RSV-IgIM	Synagis	Respiratory syncytial virus Ig	
90379	71		RSV-IgIV	RSV-IgIV	Respiratory syncytial virus Ig IV	
				Respigam		
90630	166	Influenza	Influenza Intradermal Quadrivalent P-Free	Fluzone Intradermal Quad	influenza, intradermal, quadrivalent, preservative free	PMC
90653	168		Influenza Trivalent Adjuvanted	FLUAD	Influenza Trivalent Adjuvanted	SEQ
90654	144		Influenza Intradermal	Fluzone Intradermal	Influenza, seasonal, intradermal, p-free	PMC
90655	140		Influenza Preservative-Free	AFLURIA, P-free	Influenza preservative free 6 month to 3 year dosage	SEQ
				Agriflu, P-free		NOV
				Fluarix, P-free		SKB
				Fluvirin, P-free		SEQ
				Fluzone, P-free		PMC
90656				AFLURIA, P-free	Influenza preservative free 3 years and up dosage	SEQ
				Agriflu, P-free		NOV
				Fluarix, P-free		SKB
				FluLaval, P-free		SKB
				Fluvirin, P-free		SEQ
				Fluzone, P-free		PMC
90657	141		Influenza	Flu-Imune	Influenza split virus	WAL

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
				Flu-Shield	6 month to 3 year dosage	WAL
				Fluzone		PMC
				AFLURIA		SEQ
				Fluvirin		SEQ
				Fluogen		PD
				FluLaval		SEQ
90658				Flu-Imune	Influenza split virus 3 years and up dosage	WAL
				Flu-Shield		WAL
				Fluzone		PMC
				AFLURIA		SEQ
				Fluvirin		SEQ
				Fluogen		PD
				FluLaval		SEQ
90659	16		Influenza-Whole Virus		Influenza whole virus	
90660	111		Flu-Nasal	FluMist	Influenza live, for intranasal use	MED
90661	153		Influenza MDCK Preservative-Free	Flucelvax	Influenza, injectable, MDCK, preservative free	NOV
90662	135		Influenza High Dose	Fluzone High-Dose	Influenza split virus increased antigen content	PMC
90672	149		Flu-Nasal Quadrivalent	FluMist Quadrivalent	Influenza quadrivalent live, for intranasal use	MED
90673	155		Influenza Recombinant P-Free	Flublok	Influenza, recombinant, injectable, preservative free	PSC
90674	171		Influenza MDCK Quadrivalent P-Free	Flucelvax Quadrivalent, P-Free	Influenza MDCK Quadrivalent P-Free	SEQ
90694	205		Influenza Quadrivalent Adjuvanted	FLUAD Quadrivalent	Influenza, seasonal vaccine, quadrivalent, adjuvanted, 0.5mL dose, preservative free	SEQ
90662	197		Influenza Quadrivalent High Dose, P-free	FLUZONE Quad HighDose PF	Influenza, high-dose seasonal, quadrivalent, 0.7mL dose, preservative free	PMC
90685	161		Influenza Quadrivalent P-Free 6-35M	AFLURIA Quad PF 6-35M	Influenza, injectable, quadrivalent, preservative free 6 month to 3 year dosage	SEQ
				Fluzone Quad PF 6-35M		PMC
90686	150		Influenza Quadrivalent P-Free	AFLURIA Quad, P-Free	Influenza, injectable, quadrivalent, preservative free 3 years and up dosage	SEQ
				Fluarix Quadrivalent, P-Free		SKB
				FluLaval Quad, P-Free		IDB
				Fluzone Quadrivalent, P-Free		PMC
90682	185		Influenza Quad Recombinant P-Free	Flublok Quadrivalent	Influenza Quadrivalent Recombinant P-Free	PMC
90687	158		Influenza Quadrivalent	AFLURIA Quadrivalent	Influenza virus vaccine, quadrivalent, split virus, when administered to individuals 6-35 months of age, for intramuscular use	SEQ
				FluLaval Quadrivalent		IDB
				Fluzone Quad		PMC
90688				AFLURIA Quadrivalent	Influenza virus vaccine, quadrivalent, split virus, when administered to individuals 3+ years of age, for intramuscular use	SEQ
				FluLaval Quadrivalent		IDB
				Fluzone Quad		PMC
90724	88		Influenza, unspecified formulation		Influenza, unspecified formulation	
	151		Influenza Nasal, unspecified formulation		Influenza Nasal, unspecified formulation	
90756	186		Influenza MDCK Quadrivalent	Flucelvax Quadrivalent	Influenza, MDCK, Quadrivalent	SEQ
90664	125	Influenza A H1N1	Novel Influenza A H1N1-Nasal	H1N1 MED Nasal	H1N1 live, for intranasal use	MED
90666	126		Novel Influenza A H1N1, P-free	H1N1 P-free CSL	H1N1 monovalent inactivated preservative free	CSL
				H1N1 P-free NOV		NOV
				H1N1 P-free SAN		PMC
90668	127		Novel Influenza A H1N1	H1N1 CSL	H1N1 monovalent inactivated	CSL
				H1N1 NOV		NOV
				H1N1 SAN		PMC
90663	128		Novel Influenza A H1N1 all formulations		H1N1 all formulations	

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
90665	66	Lyme	Lyme	LYMErix	Lyme disease	SKB
90705	05	Measles	Measles	Measles	Measles live 1964-1974 (Eli Lilly)	MSD
				Attenuvax	Measles live	MSD
90708	04		Measles-Rubella	M-R-VAX	Measles and rubella live	MSD
				Measles-Rubella (MERU)		MSD
90704	07	Mumps	Mumps	Mumps	Mumps 1950-1978	MSD
				Mumpsvax	Mumps live	MSD
90709			Rubella-Mumps, NOS			
	38		Rubella-Mumps	Biavax II	Rubella and mumps live	MSD
				Mumps-Rubella (MURU)		MSD
90707	03	MMR	MMR	MMR II	Measles, mumps and rubella live	MSD
				Priorix		SKB
90710	94		MMRV	ProQuad	Measles, mumps, rubella, varicella live	MSD
90619	203	Meningo	Mening ACWY polysaccharide/TT conj	MenQuadfi	Meningococcal conjugate quadrivalent, MenACWY-TT (MCV4)	PMC
90623	316		Mening polysacchar(MenACWY-TT),(MenB)PF	Penbraya	Meningococcal polysaccharide (groups A, C, W, Y) tetanus toxoid conjugate, meningococcal B recombinant vaccine, 0.5mL, preservative free	PFR
90644	148		Meningococcal C/Y-HIB PRP	MenHibrix	Meningococcal-Hib combination	SKB
90733	32		Meningococcal-MPSV4	MENOMUNE	Meningococcal polysaccharide	PMC
90734	114		Meningococcal-MCV4P	Menactra	Meningococcal polysaccharide [groups A, C, Y and W-135] diphtheria toxoid conjugate vaccine	PMC
	136		Meningococcal-MCV4O	Menveo	Meningococcal oligosaccharide [groups A, C, Y and W-135] diphtheria toxoid conjugate vaccine	NOV
	147		Meningococcal-MCV4		MCV4, unspecified formulation [groups A, C, Y and W-135]	
	108		Meningococcal, unspecified formulation		Meningococcal, unspecified formulation	
90620	163	Meningo B	Meningococcal B, OMV	Bexsero	Meningococcal B, recombinant, OMV, adjuvanted	SKB
90621	162		Meningococcal B, recombinant	Trumenba	Meningococcal B, fully recombinant	PFR
90623	316		Mening polysacchar(MenACWY-TT),(MenB)PF	Penbraya	Meningococcal polysaccharide (groups A, C, W, Y) tetanus toxoid conjugate, meningococcal B recombinant vaccine, 0.5mL, preservative free	PFR
	164		Meningococcal B, unspecified formulation		Meningococcal B, unspecified formulation	
90715	115	Pertussis	TdaP > 7 Years	Adacel	TdaP > 7 years	PMC
				Boostrix		SKB
	11		Pertussis		Pertussis vaccine	
90712	02	Polio	Polio oral	ORIMUNE	Poliovirus OPV live oral	WAL
90713	10		Polio injectable	IPOL	Poliovirus inactivated IPV	PMC
90723	110		DTAP-HepB-Polio	Pediarix	DTAP-HepB-Polio combination	SKB
90696	130		DTaP-IPV	KINRIX	DTaP-IPV	SKB
				Quadracel		PMC
90697	146		DTaP-IPV-Hib-HepB	Vaxelis	DTaP-IPV-Hib-HepB Combination	MSP
90698	120		DtaP-Hib-IPV	Pentacel	DtaP-Hib-IPV combination	PMC
	89		Polio, unspecified formulation		Polio, unspecified formulation	
90727	23	Plague	Plague	Plague	Plague	GRE
90732	33	Pneumo-Poly	Pneumococcal 23	PNU-IMUNE 23	Pneumococcal polysaccharide 23 valent	WAL
				Pneumovax 23		MSD
90669	100	Pneumococcal	Pneumo-Conjugate 7	Prevnar	Pneumococcal conjugate polyvalent	WAL
90670	133		Pneumo-Conjugate 13	Prevnar 13	Pneumococcal 13-valent conjugate	PFR
90671	215		Pneumo-Conjugate 15	Vaxneuvance	Pneumococcal conjugate vaccine, 15-valent (PCV15), polysaccharide CRM197 conjugate, adjuvant, preservative free	MSD
90677	216		Pneumo-Conjugate 20	Prevnar 20	Pneumococcal conjugate vaccine, 20-valent (PCV20), polysaccharide CRM197 conjugate, adjuvant, preservative free	PFR
	109		Pneumococcal, unspecified formulation		Pneumococcal, unspecified formulation	

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
	152		Pneumococcal Conjugate, unspecified		Pneumococcal Conjugate, unspecified formulation	
90675	18	Rabies	Rabies-intramuscular		Rabies intramuscular	
90675	175		Rabies-intramuscular, Diploid cell culture	Imovax Rabies IM	Rabies intramuscular, Diploid cell culture	PMC
90675	176		Rabies-intramuscular, Fibroblast culture	RabAvert	Rabies intramuscular, Fibroblast culture	SKB
90676	40		Rabies-intradermal	Imovax Rabies ID	Rabies intradermal	PMC
90726	90		Rabies, unspecified formulation		Rabies, unspecified formulation	
90680	74	Rotavirus	Rotavirus, Tet	RotaShield	Rotavirus tetravalent live oral (removed on 10/16/1999)	WAL
	116		Rotavirus, Pent	RotaTeq	Rotavirus pentavalent (after 02/02/2006)	MSD
	122		Rotavirus, unspecified formulation		(between 10/16/1999 and 02/01/2006)	
90681	119		Rotavirus, monovalent	ROTARIX		SKB
90678	305	RSV	RSV, bivalent, 0.5 mL, PF	Abrysvo	Respiratory syncytial virus (RSV), vaccine, bivalent, protein subunit RSV prefusion F, diluent reconstituted, 0.5 mL, preservative free	PFR
90679	303		RSV, recombinant, 0.5 mL, PF	Arexvy	Respiratory syncytial virus (RSV), vaccine, recombinant, protein subunit RSV prefusion F, adjuvant reconstituted, 0.5 mL, preservative free	SKB
90380	306		RSV, mAb, nirsevimab, 50 mg/0.5mL	BEYFORTUS, 50 mg/0.5mL	Respiratory syncytial virus (RSV) monoclonal antibody, IgG1κ, (nirsevimab-alip), 0.5 mL, neonates and children to 24 months	PMC
90381	307		RSV, mAb, nirsevimab, 100 mg/1mL	BEYFORTUS, 100 mg/1mL	Respiratory syncytial virus (RSV) monoclonal antibody, IgG1κ, (nirsevimab-alip), 1 mL, neonates and children to 24 months	PMC
	304		Respiratory syncytial virus, unspecified		Respiratory syncytial virus (RSV), unspecified	
	314		RSV vaccine, unspecified		Respiratory syncytial virus (RSV) vaccine, unspecified	
	315		RSV mAb, unspecified		Respiratory syncytial virus (RSV) monoclonal antibody (MAB), unspecified	
90706	06	Rubella	Rubella	Rubella	Rubella live	MSD
				Meruvax II		MSD
90708	04		Measles-Rubella	Measles-Rubella (MERU)	Measles and rubella live	MSD
				M-R-VAX		MSD
90709			Rubella-Mumps NOS		Rubella-Mumps, NOS	
	38		Rubella-Mumps	Mumps-Rubella (MURU)	Rubella and mumps live	MSD
				Biavax II		MSD
90622	75	Smallpox	Smallpox	ACAM2000	Smallpox	MIP
			Smallpox	Dryvax	Vaccinia(Smallpox) dry	WAL
90611	206		Smallpox mpox vaccine	JYNNEOS	Vaccinia, smallpox mpox vaccine live, PF, SQ or ID injection	BN
	105		Vaccinia (Smallpox), diluted	Vaccinia (smallpox), diluted	Vaccinia (smallpox), diluted	
90718	09	Td	Td	Td	Tetanus and Diphtheria Adsorbed	MBL
90714	113		Td Preservative-Free	DECAVAC	Td preservative free – CPT code is effective for immunizations given on or after 7/1/2005	PMC
				TENIVAC		
				Td P-free		
90715	115		TdaP > 7 Years	Adacel	TdaP > 7 years	PMC
				Boostrix		SKB
	138		Td (adult) not adsorbed		Td (adult) not adsorbed	
	139		Td (adult) unspecified formulation		Td (adult) unspecified formulation	
90703	35	Tetanus	Tetanus	TT	Tetanus	PMC
	142		Tetanus toxoid, not adsorbed		Tetanus toxoid, not adsorbed	
	112		Tetanus toxoid, unspecified formulation			

CPT	CVX	Group	Vaccine	Trade Name	Description	MFG
90627	224	TickBorne Enceph	Tick-borne encephalitis, PF, 0.5mL	TicoVac 0.5 mL	Tick-borne encephalitis vaccine, inactivated, preservative free, 0.5mL dose	PFR
90626	223		Tick-borne encephalitis, PF, 0.25mL	TicoVac 0.25 mL	Tick-borne encephalitis vaccine, inactivated, preservative free, 0.25mL dose	PFR
	222		Tick-borne encephalitis, unspecified		Tick-borne encephalitis vaccine, unspecified	
90690	25	Typhoid	Typhoid-oral	Vivotif Berna/Ty21a	Typhoid oral	
90691	101		Typhoid-ViCPs	Typhim Vi	Typoid VI capsular polysaccharide	PMC
90692	41		Typhoid-HP	Typhoid	Typhoid heat and phenol inactivated	
90693	53		Typhoid-AKD	Typhoid-AKD	Typhoid acetone-killed, dried (military)	
90714	91		Typhoid, unspecified formulation		Typhoid, unspecified formulation (after 7/1/2005, no CPT code is associated with this vaccine group)	
90710	94	Varicella	MMRV	ProQuad		MSD
90716	21		Varicella	Varivax	Varicella live	MSD
90717	37	Yellow Fever	Yellow Fever US	YF-VAX	Yellow Fever live	PMC
	183		Yellow fever - alt	Stamaril	Alternate yellow fever vaccine	PMC
			Yellow fever		Yellow fever US or yellow fever alternate	
	184		Yellow fever, unspecified formulation		Yellow fever, unspecified formulation	
90736	121	Zoster	Zoster (shingles), live	Zostavax	Zoster (shingles), live	MSD
90750	187		Zoster (shingles), recombinant	Shingrix	Zoster (shingles), recombinant	SKB
	188		Zoster, unspecified formulation		Zoster, unspecified formulation	

WIR Default Vaccine Groups

Vaccine Group Name	WIR NOS CVX Code for identifying OBX Vaccine Type {30956-7}	Related CVX Codes
Adeno	54	54, 55, 82
Anthrax	24	24
BCG	19	19
Cholera	N/A use CPT: 90592	26, 174
COVID-19	213	207, 208, 211, 212, 217, 218, 219, 221, 228, 229, 230, 300, 301, 302, 308, 309, 310, 311, 312, 313
Diphtheria	N/A use CPT: 90719	N/A
DTP/aP	20	20, 01, 28, 22, 50, 110, 130, 120, 106, 107, 146
Ebola	214	204, 214
Encephalitis	129	39, 134, 129
HepA	85	52, 83, 84, 104, 85, 31
HepB	45	104, 110, 45, 44, 43, 08, 42, 51, 189, 146, 220
Hib	17	47, 46, 49, 48, 22, 50, 17, 51, 120, 148, 146
HPV	137	118, 62, 165, 137
Ig	86	86, 87, 27, 29, 12, 30, 34, 13, 79, 36, 117, 14, 156, 157, 159
IG-RSV	93	93, 71
Influenza	88	144, 140, 141, 16, 111, 153, 135, 149, 155, 161, 150, 158, 88, 151, 171, 168, 185, 186, 197, 205, 166
Influenza A H1N1	128	128, 125, 126, 127
Lyme	66	66
Measles	05	05, 04
Meningo	108	32, 114, 136, 147, 108, 148, 203, 316
Meningo B	164	163, 162, 164, 316
MMR	03	03, 94
Mumps	07	07, 38
Pertussis/Tdap	115	115,11
Plague	23	23
Pneumo-Poly	33	33
Pneumococcal	152	100, 133, 152, 109, 215, 216
Polio	89	130, 120, 02, 10, 110, 89, 146
Rabies	18	18, 40, 90, 175, 176
Rotavirus	122	74, 116, 122, 119
RSV	304	303, 304, 305, 306, 307, 314, 315
Rubella	06	06, 04, 38
Smallpox	75	75, 105, 206
Td	139	09, 113, 115, 138, 139
Tetanus	112	35, 142, 112
TickBorne Enceph	222	223, 224
Typhoid	91	25, 101, 41, 53, 91
Varicella	21	94, 21
Yellow Fever	184	37, 183, 184
Zoster	188	121, 187, 188

Appendix D – Example Segments

MSH SEGMENT for VXU (Vaccination Update) Message Type

When interfacing in real-time (Web Services or PHINMS), MSH-4 is required

MSH|^~\&|| **MyOrgId**^^|||20090531145259-0600||VXU^V04^VXU_V04|**MyMessageId**|P|2.5.1||||ER|AL|||||**Z22^CDCPHINVS**

Where:

MyOrgId is the provider organization id registered in WIR
MyMessageId is an alphanumeric message ID generated by the provider that uniquely identifies this message

When: No organization information is specified in MSH-4 the immunization is "owned" by the provider organization loading the file. When MSH-4 is specified, the immunization is "owned" by that provider organization, provided there exists an organizational relationship between it and the provider organization loading the file.

HL7 New Structure:

MSH SEGMENT for VXU (Vaccination Update) Message Type

MSH|^~\&|| **MyOrgId**^^|||20090531145259-0600||VXU^V04^VXU_V04|**MyMessageId**|P|2.5.1||||ER|AL|||||**Z22^CDCPHINVS**|^^^^^WIA^PRN^^^**MyResponsibleId**|

Where:

MyOrgId is the provider organization id registered in WIR that sent the message.
MyMessageId is an alphanumeric message ID generated by the provider that uniquely identifies this message
MyResponsibleId is the provider organization ID registered in WIR responsible for initiating the message data to WIR.

When: When MSH-4 is specified, the immunization is "sent" by that provider organization, provided there exists an organizational relationship between it and the provider organization loading the file.

The Sending Responsible Organization is specified in MSH-22 and identifies the organization responsible for initiating the message data to WIR. This ID must have a valid relationship to the Provider ID specified in MSH-4.

MSH SEGMENT for QBP (Query) Message Type

MSH|^~\&||**MyOrgId^^**|||20090531145259-0600||QBP^Q11^QBP_Q11|**MyMessageId**|P^|2.5.1^^|||ER|AL|||||**Z34^CDCPHINVS**

MSH|^~\&||**MyOrgId^^**|||20090531145259-0600||QBP^Q11^QBP_Q11|**MyMessageId**|P^|2.5.1^^|||ER|AL|||||**Z44^CDCPHINVS**

Where:

MyOrgId is the provider organization id registered in WIR
MyMessageId is an alphanumeric message ID generated by the provider that uniquely identifies this message

HL7 New Structure:

MSH SEGMENT for QBP (Query) Message Type

MSH|^~\&||**MyOrgId^^**|||20090531145259-0600||QBP^Q11^QBP_Q11|**MyMessageId**|P^|2.5.1^^|||ER|AL|||||**Z34^CDCPHINVS**|^^^^^WIA^PRN^^^**MyResponsibleId**|

MSH|^~\&||**MyOrgId^^**|||20090531145259-0600||QBP^Q11^QBP_Q11|**MyMessageId**|P^|2.5.1^^|||ER|AL|||||**Z44^CDCPHINVS**|^^^^^WIA^PRN^^^**MyResponsibleId**|

Where:

MyOrgId is the provider organization id registered in WIR that owns the message.
MyMessageId is an alphanumeric message ID generated by the provider that uniquely identifies this message
MyResponsibleId is the provider organization ID registered in WIR responsible for initiating the message data to WIR.

PID SEGMENT

PID Segment with one patient identifier in PID-3 and address specified

PID|||45LR999^^^^PI||MILLER^GEORGE^M^JR|OLSON^MARTHA|19950227|M|||123 MAIN ST^^MADISON^WI^53000^US^^^DANE||||||||000111222|||||Y|2

PID Segment with two patient identifiers in PID-3 and no address specified

PID|||66782^^^SR^~23LK729^^^^PI|CALIFANO^MARIA|DISTEFANO^ANGELICA|19980413|F

PID-3 Patient Identifiers (HL7 Table 0203) – Identifier Type specifies 41 possible identifier type codes. WIR requires one of the following six codes:

- PI – Patient internal identifier
- PN – Person Number
- PRN – Provider Number
- PT – Patient External Identifier
- MR – Medical Record Number
- RRI – Regional Registry ID

WIR validates all 41 codes but only retains the datum values for the following codes:

- MA – Medicaid Number
- MC – Medicare Number
- PI – Patient Internal Identifier
- PN – Person Number
- PRN – Provider Number
- PT – Patient External Identifier
- MR – Medical Record Number
- RRI – Regional Registry ID
- SS – Social Security Number
- SR – State Registry ID (WIR Internal Client ID)

WIR will never generate the patient social security number in outbound files.

QPD SEGMENT

QPD Segment with one patient identifier in QPD-3 and address specified

```
QPD|Z34^Request Immunization
History^CDCPHINVS|Qry_01|1^^^^PI^|LAST^FIRST^MIDDLE|MAIDEN^MOTHER|19620119|F|||
539 OBSERVATORY^^Rice Lake^WI^53811^USA
```

QPD Segment with two patient identifiers in QPD-3 and no address specified

```
QPD|Z34^Request Immunization
History^CDCPHINVS|Qry_01|66782^^^SR^~1^^^^PI^|LAST^FIRST^MIDDLE|MAIDEN^MOTHER|1
9620119|F|||
```

See above PID Segment example above for expected Identifier types.

PD1 SEGMENT

```
PD1||||||||||||Y|20090531
PD1||||||||||||N|20090531
```

NK1 SEGMENT

```
NK1|1|MILLER^MARTHA|MTH^Mother^HL70063|123 MAIN ST^^MADISON^WI^53000^US^^^W1025
|^PRN^PH^^^608^1234567
NK1|2|MILLER^GEORGE|FTH^Father^HL70063|123 MAIN ST^^MADISON^WI^53000^US^^^W1025
|^PRN^PH^^^608^1234567
```

HL7 New Structure:

ORC SEGMENT

```
ORC|RE||0^DNM|||||||^ORDER^SHOT^THE^^MS^^^^^^^MR^^^^^^^^^^^^^RN^^||^ORDER^SHOT^
THE^^MS^^^^^^^OEI^^^^^^^^^^^^^RN^^|||||MyEnterID^^HL70362^^^||||
```

Where:

MyEnterID is the provider organization ID registered in WIR that owns the message.

RXA SEGMENT

WIR highly recommends NDC specification in the second triplet of RXA-5, CVX must be specified in the first triplet.

RXA Segment (not enough information for deduction from inventory)

```
RXA|0|1|20010207||39^Japanese encephalitis^CVX^49281-0680-20^JE-VAX FOR
INJECTION 10 DOSES W/ DILUENT VIAL^NDC|1.0|mL^MilliLiter^UCUM||00^New
immunization record^NIP001||||||||||
```

RXA Segment (sufficient information for deduction from inventory)

```
RXA|0|1|20030515||20^DTP/aP^CVX^00007-0840-50^INFANRIX INJECTION 25 X .5 ML
SYR^NDC|1.0|mL^MilliLiter^UCUM||00^New immunization
record^NIP001|^^^^^^^^^^^^^^|^^^330^^^^^^^^^^^^|||LOTNUMBER|20171224|SKB^Glaxo
SmithKline (SmithKline Beecham and Glaxo Wellcome)^MVX^^^|||||
```

RXA Segment specifying refusal

```
RXA|0|1|20060501||03^MMR^CVX^90707^MMR II^CPT|999||||||||||||00^Parental
decision^NIP002||RE
```

RXA Segment for client demographic update when no immunizations have been administered.

```
RXA|0|1|20110327||998^No Vaccine Administered^CVX|999||||||||||||||||
```

RXR SEGMENT

RXR Segment

```
RXR|C28161^Intramuscular^NCIT|RA^Right Arm^HL70163|
```

OBX SEGMENT EXAMPLES

OBX Segment Contraindications/Precautions

```
OBX|1|CE|30945-0^Vaccination contraindication^LN|1|VXC22^encephalopathy within 7
   days of previous dose of DTP or DTaP^CDCPHINVS||||||F|||20090415
OBX|1|CE|30945-0^Vaccination contraindication^LN|1|VXC23^current fever with
   moderate-to-severe illness^CDCPHINVS||||||F|||20090415
OBX|1|CE|30945-0^Vaccination contraindication^LN|1|27624003^Chronic disease
   (disorder)^SCT||||||F|||20090415
OBX|1|CE|30945-0^Vaccination contraindication^LN|1|161461006^History of - purpura
   (situation)^SCT||||||F|||20090415
```

OBX History of Disease

```
OBX|1|CE|59784-9^Disease with presumed immunity^LN|1|91428005^Haemophilus
   influenzae infection (disorder)^SCT||||||F|||20090415
OBX|1|CE|59784-9^Disease with presumed immunity^LN|1|66071002^Type B viral
   hepatitis (disorder)^SCT||||||F|||20090415
```

OBX Immunities

```
OBX|1|CE|75505-8^Diseases with serological evidence of immunity^LN|1|25^Immunity:
   Haemophilus influenzae infection (Hib)^L||||||F|||20090415
OBX|1|CE|75505-8^Diseases with serological evidence of
   immunity^LN|1|271511000^Hepatitis B (finding)^SCT||||||F|||20090415
```

OBX Segment Reactions

```
OBX|1|CE|31044-1^Reaction^LN|1|VXC12^fever of > 40.5C (105F) within 48 hours of
   dose^CDCPHINVS||||||F|||20090415
OBX|1|CE|31044-1^Reaction^LN|1|39579001^Anaphylaxis^SCT||||||F|||20090415
OBX|1|CE|30948-4^Adverse Event Outcome^LN|1|E^Required Emergency Room/Doctor
   Visit^NIP005||||||F|||20100101|
```

OBX Segment Vaccines Purchased With

```
OBX|1|CE|30963-3^Vaccine purchased with^LN||PHC70^Private
   Funds^CDCPHINVS||||||F|||20100101|
OBX|1|CE|30963-3^Vaccine purchased with^LN||VXC50^Public
   Funds^CDCPHINVS||||||F|||20100101|
OBX|1|CE|30963-3^Vaccine purchased with^LN||VXC51^Public VFC
   Funds^CDCPHINVS||||||F|||20100101|
OBX|1|CE|30963-3^Vaccine purchased with^LN||VXC52^Public Non-VFC
   Funds^CDCPHINVS||||||F|||20100101|
```

OBX Segment VIS Statements (Three Segment Format with Vaccine Type CVX and VIS Publication Date)

```
OBX|1|CE|30956-7^vaccine type^LN|1|03^MMR^CVX||||||F|||20100115
OBX|2|TS|29768-9^VIS Publication Date^LN|1|20080110||||||F|||20100115
OBX|3|TS|29769-7^VIS Presentation Date^LN|1|20091010||||||F|||20100115
```

OBX Segment VIS Statements (Two Segment Format with VIS Barcode)

```
   OBX|1|CE|69764-9^document type^LN|1|25308869830000421111025^Hepititis A
VIS^cdcgs1vis||||||F
   OBX|2|TS|29769-7^VIS Presentation Date^LN|1|20151010||||||F|||20100115
```

Appendix E – Error Messages

A list of error messages which may be returned by WIR in response to errors contained within messages can be found below. Messages which contain {0} or {1} are messages which are not specific to a particular field or table, and the {0} and {1} are replaced in the error response with the value of the appropriate field or table.

HL7 New Structure			
Text User Sees	**HL7 Error Code (ERR-3)**	**Application Error Code (ERR-5)**	**Error Severity**
Invalid Entering Organization. Entering Organization has no relationship to Sending Responsible Organization.			E
Sending Responsible Organization is required	101		E
Entering Organization is Required	207		E
DEDUCT ERROR - Incoming administering site (clinic) is not associated with entering organization.	102	3	E
Incoming administering site (clinic) is not associated with entering organization.	102		W
Invalid Sending Responsible Organization Identifier	207		E
Record rejected. The initiating organization has no relationship to the organization on this record.	207		E
This organization is disabled and cannot submit data exchange messages.	207		E

Text User Sees	**HL7 Error Code (ERR-3)**	**Application Error Code (ERR-5)**	**Error Severity**
Value [{0}] not found in table [{1}]	103	5	Varies
System does not have table definitions for [{0}] to validate [{1}]	103	5	Varies
IZ-1: CQ.1 (Quantity) shall be a positive integer	102	4	W
IZ-2: CQ.2 (Units) shall be the literal value RD	102	4	W
{0} contains an invalid date	102	2	E
IZ-3: If populated EI.3 (Universal Id), it shall be valued with an ISO-compliant OID	102	4	W
IZ-4: If populated EI.4 (Universal ID Type), it shall contain the value ISO	102	4	W
IZ-5: If populated HD.2 (Universal Id), it shall be valued with an ISO-compliant OID	102	4	E
IZ-6: If populated HD.3 (Universal ID Type), it shall contain the value ISO	102	4	E
{0} contains an invalid number	102	4	Varies
{0} contains an invalid number	102	4	Varies
IZ-7: VID-1 (Version Id) SHALL be valued with the literal 2.5.1	102	4	E
IZ-20: The Value of OBX-1 (Set ID-OBX) SHALL be valued sequentially starting with the value 1	102	4	W

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
{0} segment is required for {1}	100		Varies
No valid RXAs -- Message rejected	207		E
Funding Program is needed for Inventory Deduction	101		W
VIS requires a valid vaccine type	102	6	W
VIS requires a valid publication date	102	6	W
VIS requires a valid presented date	102	6	W
The VIS for the vaccine group is a duplicate	102		W
Client has an 'Allow Sharing of Immunization Data' indicator = No.	207		E
{0} is required	101		Varies
{0} length is less than the minimum [{1}]	102		Varies
{0} length is more than the maximum [{1}]	102		Varies
IZ-8: BHS.1 (Batch Field Separator) field SHALL be '\F\'	102	4	E
IZ-9: BHS.2 (Batch Encoding Characters) field SHALL be '\S\\R\\E\\T\'	102	4	E
IZ-10: FHS.1 (File Field Separator) field SHALL be '\F\'	102	4	E
IZ-11: FHS.2 (File Encoding Characters) field SHALL be '\S\\R\\E\\T\'	102	4	E
Unsupported message type	200	4	E
Failed Authentication in MSH. Blank	103	5	E
Failed Authentication in MSH. Invalid Id	103	5	E
IZ-12: MSH.1 (Field Separator) field SHALL be valued '\F\'	102	4	E
IZ-13: MSH.2 (Encoding Characters) field SHALL be valued '\S\\R\\E\\T\'	102	4	E
IZ-15: MSH.12 (Version ID) SHALL be valued 2.5.1	102	4	E
IZ-17: MSH.9 (Message Type) SHALL contain the constant value VXU\S\V04\S\VXU_V04	102	4	E
RELATIONSHIP MISSING LAST NAME. NO VALUE STORED	101		W
INVALID TELECOMUNICATIONS USE CODE, PHONE NUMBER IGNORED.	103	5	W
INVALID RELATIONSHIP CODE. DEFAULTING TO GUARDIAN.	103	5	W
NO RELATIONSHIP CODE SPECIFIED. DEFAULTING TO GUARDIAN.	102		W
NEITHER LAST NAME, ADDRESS, NOR TELEPHONE SPECIFIED. NK1 SEGMENT IGNORED.	102		W
CONTACT INFORMATION INCOMPLETE. NK1 SEGMENT IGNORED.	102		W
INVALID OBSERVATION DATE. DATE OF BIRTH AFTER OBSERVATION DATE. OBSERVATION DATE IGNORED.	102	1	W
INVALID OBSERVATION DATE. FUTURE DATE. OBSERVATION DATE IGNORED.	102	1	W
Required OBX-03 LOINC code is null, invalid or not supported by WIR - OBX Segment ignored.	103	5	W

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
LOINC code in OBX-3.1 does not match Value Type (OBX-2)	102	3	W
Vaccine Funding Program Eligibility is not supported for historical immunizations.	102	3	W
Duplicate Vaccine Funding Program Eligibility for this immunization	102	3	W
Vaccination contraindication/precaution already has an effective date	102	1	W
Comment must be given after a 998 CVX code	102		W
INVALID OBX SEGMENT - CONTRAINDICATION/PRECAUTION LOINC CODE SPECIFIED WITH IMMUNITY OBSERVATION VALUE. NO VALUE STORED.	103	5	W
INVALID OBX SEGMENT - CONTRAINDICATION/PRECAUTION LOINC CODE SPECIFIED WITH IMMUNITY OBSERVATION VALUE. NO VALUE STORED.	102	4	W
Vaccination contraindication/precaution already has a comment code	102	3	W
Invalid comment code	103	5	W
INVALID OBX SEGMENT - INVALID OBSERVATION VALUE. NO VALUE STORED.	103	5	W
Invalid reaction	103	5	W
INVALID OBX SEGMENT - A REACTION OBSERVATION IS NOT VALID FOR ADT MESSAGE TYPE.	102	4	W
INVALID OBX SEGMENT - OBSERVATION REACTION VALUE 'D' NO DATE OF DEATH SPECIFIED IN PID SEGMENT.	102	3	W
INVALID OBX SEGMENT - INVALID OBSERVATION REACTION VALUE. NO VALUE STORED.	103	5	W
INVALID OBX SEGMENT - REACTION REQUIRES VALID RXA SEGMENT. NO VALUE STORED.	102	3	W
Invalid Disease with presumed immunity	103	5	W
INVALID OBX SEGMENT - INVALID OBSERVATION VALUE (OBX-05). NO VALUE STORED.	103	5	W
INVALID FERPA CONSENT IND '{0}'	102	4	W
INVALID OBX SEGMENT - INVALID GRADUATION DATE: {0}	102	1	W
INVALID OBX SEGMENT - INVALID ENROLL DATE: {0}	102	1	W
Barcoded VIS not found in table [PHNS_VISBatcodes_IIS]	103	5	W
This vaccine group already has a date published	102	3	W
Unable to find VIS [{0}]	103	5	W
This vaccine group already has a date presented	102	3	W
VIS Presentation Date is an invalid date	102	2	W
VIS Presentation Date is a future date	102	2	W
VIS Already has a vaccine group	102	3	W
Unable to resolve NOS from CVX	103	5	W
IZ-21: The value of OBX-2 (Value Type) SHALL be one of the following: CE, NM, ST, DT, ID, TS	102	4	W
IZ-22: The value of OBX-11 (Observation Result Status) SHALL be F	102	4	W

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
INVALID OBX SEGMENT - INVALID OBSERVATION COMMENT VALUE. NO VALUE STORED. NOT A SCHOOL.	102	4	W
INVALID OBX SEGMENT - INITIATING PROVIDER NOT CONFIGURED TO SUBMIT OBSERVATION [{0}]	102	4	W
INVALID OBX SEGMENT - OWNING PROVIDER DOES NOT ADHERE TO FERPA TO SUBMIT OBSERVATION [{0}]	102	4	W
Invalid Vaccine funding source	103	5	W
INVALID OBX SEGMENT - DEDUCT ERROR - INVALID VACCINES PURCHASE WITH	103	5	W
INVALID OBX SEGMENT - LOINC CODE VACCINES PURCHASED WITH SPECIFIED WITH INVALID OR MISSING OBX-05 FUNDING CODE - VACCINES PURCHASED WITH INFORMATION IGNORED.	103	5	W
Invalid Order Control	102	4	W
Ordering provider last name is required to use ordering provider field.	102	4	W
IZ-25: ORC.1 (Order Control) SHALL contain the value RE	102	4	W
PATIENT REGISTRY STATUS OF 'P' AND NO DATE OF DEATH SPECIFIED.	102	3	W
{0} must be numeric	102	4	Varies
Invalid State Registry ID - Must be numeric. Value ignored	102	4	W
INVALID PATIENT IDENTIFIER TYPE CODE: {0}. Value ignored	103	5	W
PATIENT IDENTIFIER TYPE OF PI, PN, PRN OR PT REQUIRED	103	5	E
INVALID DATE OF BIRTH. BIRTH YEAR MUST BE AFTER 1889.	102	1	E
INVALID DATE OF BIRTH. MUST BE PRIOR TO OR EQUAL TO TODAY.	102	1	E
Invalid Social Security Number. Value ignored	102	4	W
INVALID DATE OF DEATH. PRECEDES BIRTHDATE.	102	1	E
INVALID DATE OF DEATH. MUST BE PRIOR TO OR EQUAL TO TODAY.	102	1	E
IZ-26: PID-7 (birth date) SHALL be accurate at least to the day	102	2	E
IZ-27: Constrain RCP-1 (Query Priority) to empty or I	102	4	W
INVALID VACCINE ADMINISTRATION DATE. DATE OF BIRTH > ADMINISTRATION DATE.	102	1	E
INVALID VACCINE ADMINISTRATION DATE. FUTURE DATE.	102	1	E
Invalid historical indicator	103	5	W
07 is not a valid immunization source for this provider organization.	102	4	E
Invalid administered units.	102	4	E
Invalid administered amount	102	4	E
Administering provider last name is required to use administering provider field.	102	4	W
DEDUCT ERROR - Missing substance lot number.	101		E
DEDUCT ERROR - A valid manufacturer code is required for inventory deduction.	102	4	E
DEDUCT ERROR - Incoming administering site (clinic) is not associated with owning provider.	102	3	E

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
IZ-28: RXA-1 (Give Sub-id counter) SHALL be valued 0	102	4	W
IZ-29: RXA-2 (Admin Sub-id) SHALL be valued 1	102	4	W
IZ-31: If RXA-20 is valued CP or PA then RXA-9.1 (Admin Notes) SHALL be valued one of the codes listed in NIP001 in the first repetition of this field	102	4	W
IZ-32: If the RXA-18 (Refusal Reason) is populated, this field SHALL be valued to RE	102	4	E
Naming Code System and Alternate Naming Code System are blank	101		E
Naming Code System and Alternate Naming Code System are the same	102	3	E
Identifier is blank or empty. Ignoring first triplet	101		W
RECORD REJECTED - Naming Code System and Alternate Naming Code System both CVX	102	3	E
Alternate Identifier is blank or empty. Ignoring second triplet	101		W
WIR recommends specification of NDC in second triplet.	102		W
RECORD REJECTED - Naming Code System and Alternate Naming Code System both CPT	102	3	E
RECORD REJECTED - Naming Code System and Alternate Naming Code System both WVGC	102	3	E
RECORD REJECTED - Naming Code System and Alternate Naming Code System both WVTN	102	3	E
INVALID ADMINISTERED CODES. {0} and {1} do not match.	102	4	E
CPT Code {0} is not valid for the vaccination date {1}.	102	3	E
INVALID SITE-ID	102	4	E
SITE ID IS REQUIRED FOR INVENTORY DEDUCTION.	102	4	E
Unsupported segment	100		W
Segment out of sequence	100		W
PROVIDER ORGANIZATION NOT RECOGNIZED BY WIR	103	5	E
INVALID JOB ID FOR REAL TIME INFORMATION REQUEST	103	5	E
Job received during maintenance	0		I
Number of transactions exceeds the maximum	0		I
REAL TIME Job({0}) not found in WIR	207		E
The initiating provider is not the owner of the job requested.	207		E
REAL TIME job ({0}) has failed with status: {1}	207		E
REAL TIME job ({0}) not finished in WIR status: {1}	207		E
REQUESTED FILE FOR JOB {0} IS NO LONGER AVAILABLE.	207		E
REQUESTED FILE FOR JOB [{0}] IS TOO BIG. Maximum allowed size is {1}. Requested size is {2}.	207		E
ERROR READING FILE FOR JOB {0}. TRY YOUR REQUEST LATER.			E
REQUESTED FILE FOR JOB {0} IS NO LONGER AVAILABLE.			E

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
VIS Present Date before VIS Published Date	102	1	W
VIS Dates not supported for historical Immunizations	102	3	W
IZ-51: MSH-9 (Message Type) SHALL contain the constant value 'ACK\S\VO4\S\ACK'	102	4	E
IZ-52: The value of MSH-16 (Application Acknowledgement) shall be 'NE'	102	4	W
IZ-53: The value of MSH-15(Accept Acknowledgement) shall be 'NE'	102	4	W
IZ-66: XPN_M.7 (Name Type code) SHALL be valued 'M'	102	4	W
IZ-44: The value of OBX-4 SHALL be a positive integer.	102	4	W
IZ-35: If OBX-3.1 is '64994-7' and OBX-2 is 'CE' then the value set for OBX-5 shall be HL70064.	102	4	W
IZ-36: If OBX-3.1 is '69764-9' and OBX-2 is 'CE' then the value set for OBX-5 shall be cdcgs1vis.	102	4	W
IZ-37: If OBX-3.1 is '30956-7' and OBX-2 is 'CE' then the value set for OBX-5 shall be CVX.	102	4	W
IZ-45: If RXA-20 is valued 'NA' or 'RE' then ORC-3 SHALL be valued '9999'.	102	4	W
IZ-46: PID-1 (Set ID) SHALL have the literal value '1'	102	4	W
IZ-47: If RXA-20 is NOT valued 'CP' or 'PA' then the first occurrence of RXA-9.1 (admin notes) SHALL be empty and the following repetitions should be empty or valued with text notes.	102	4	W
IZ-48: If RXA-20 is valued 'RE' then RXA-6 shall be valued '999'.	102	4	W
IZ-49: If RXA-5.3 is valued '998' then RXA-6 shall be valued '999'.	102	4	W
DT_D data type requires precision to the day	102	2	E
TS_M data type requires precision to the month	102	2	E
TS_NZ data type requires precision to the day	102	2	E
TS_NZ data type requires no Time Zone be included	102	2	W
TS_Z data type requires precision to the day	102	2	E
TS_Z data type requires Time Zone	102	2	W
IZ-41: The value of MSH-16 (Application Acknowledgement) shall be 'AL'	102	4	W
IZ-42: The value of MSH-15 (Accept Acknowledgement) shall be 'ER'	102	4	W
IZ-55: MSH-9 (Message Type) SHALL contain the constant value of 'QBP\S\Q11\S\QBP_Q11'	102	4	E
IZ-57: The value of MSH-15 (Accept Acknowledgement) shall be 'ER'	102	4	W
IZ-58: The value of MSH-16 (Application Acknowledgement) shall be 'AL'	102	4	W
IZ-59: MSH-9 (Message Type) SHALL contain the constant value 'RSP\S\K11\S\RSP_K11'	102	4	W
Only one Z-based profile can be used	207	3	E
Need a valid profile	102	4	E
INVALID TELECOMUNICATIONS USE CODE, PHONE NUMBER IGNORED.	102	4	W

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
INVALID OBX SEGMENT - CONTRAINDICATION/PRECAUTION LOINC CODE SPECIFIED WITH IMMUNITY OBSERVATION VALUE. NO VALUE STORED.	103	5	W
Record Rejected. Both owning provider organization id and initiating provider organization is are 0.	207		E
Update rejected. Client does not exist in the registry.	204		E
Duplicate SSN. No value stored.	207		W
Duplicate Medicaid. No value stored.	207		W
Record rejected. Message type not supported when client does not already exist in registry.	207		E
Financial Class {0} is duplicated. Only one record for this financial class will be stored.	102		W
Financial Classes V00 and V01 must not be accompanied by any other financial class. All Vaccine Funding Codes (Financial Classes) will not be stored.	102		W
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.	207		E
Informational message - More than one clinician found to match {0}, {1}	102		I
Informational message - Administering provider field is not formatted correctly.	102		I
This immunization has a vaccination date prior to the existing client's birth date in the registry.	102		E
Record rejected. This client has existing immunizations with vaccination date(s) prior to the client's birth date.	207		E
The incoming delete immunization does not match an existing immunization in WIR. This delete was not processed.	102		E
INFORMATIONAL MESSAGE: Immunization is being combined with another incoming inventory immunization [{0}] [{1}].	0		I
INFORMATIONAL MESSAGE: Immunization is being combined with another incoming immunization [{0}] [{1}].	0		I
Inventory immunization is a duplicate of another incoming inventory immunization.	205		W
This immunization matches another immunization in incoming file.	205		W
This comment matches another comment in incoming file.	205		W
This reaction matches another reaction for same immunization in incoming file.	205		W
Record rejected. Client may not be updated since the existing client that it matches does not consent to share immunizations with your organization.	206		E
Attempting to delete a non-existent client comment. Deletion ignored.	204		E
The incoming delete immunization does not match an existing immunization in WIR. This delete was not processed.	204		W
Record rejected. Incoming Pneumoc 23 Imm rejected due to PneumoConjugate Imm on file w/i 4d window. Client ID is {0}	205		W
Rejected Inventory. Incoming is a duplicate of an existing immunization.	205		W
Inventory Warning. Incoming is possibly a duplicate of an existing immunization.	102		I
The sending provider organization does not own the existing matched immunization in WIR. This delete was not processed.	102		E
The incoming delete immunization matches a shot given from WIR inventory. This delete was not processed, and must be deleted in the UI.	102		E
The incoming delete immunization does not match an existing immunization in WIR. This delete was not processed.	102		E
The incoming client matches an existing candidate. Existing candidate client id is {0}	0		I

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
The incoming client matches more than one existing candidate. Existing candidate client ids include {0}	0		I
The incoming client information has been saved (ID {0}) for review by a State BA, who will decide the appropriate existing client to match to.	207		I
The incoming client information has NOT been saved because of the 'Record Rejected' error(s).	207		I
Record Rejected - Invalid first name ({0}).	102		E
Invalid middle name ({0}). No value stored.	102		W
Record Rejected - Invalid Last Name ({0}).	102		E
Invalid Suffix ({0}). No value Stored.	102		W
Invalid state certificate ({0}). No value stored.	102		W
Invalid responsible party middle name ({0}). No value stored.	102		W
Invalid responsible party middle name ({0}). No value stored.	102		W
Invalid responsible party last name ({0}). No value stored.	102		W
Invalid street address ({0}). No Address values stored.	102		W
Invalid address ({0}). Responsible person rejected.	102		W
Invalid city ({0}). No value stored.	102		W
Invalid state code ({0}). No value stored.	102		W
Invalid mother's first name ({0}). No value stored.	102		W
Invalid mother's maiden name ({0}). No value stored.	102		W
Trade Name ({0}) not produced by manufacturer ({1}). Defaulting to unknown manufacturer.	102		W
Invalid administered by first name ({0}). No value stored.	102		W
Invalid administered by middle name ({0}). No value stored.	102		W
Invalid administered by last name ({0}). No value stored.	102		W
Invalid administered by name suffix ({0}). No value Stored.	102		W
{0} rejected. Client name cannot be empty.	102		E
{0} rejected. Client last name must be greater than one character in length.	102		E
{0} rejected. Client first name must be greater than one character in length.	102		E
{0} rejected. {1} is not a valid last name.	102		E
{0} rejected. {1} is not a valid first name.	102		E
The initiating and owning providers do not have a relationship in the IR	207		E
DEDUCT WARNING - No matching vaccine lot found. Lot created ({0}).	102		W
DEDUCT ERROR - No matching vaccine lot and two or more tradenames in the site inventory.	102		W
DEDUCT ERROR - Unable to deduct from inventory as at least two different trade names exist.	102		W

Text User Sees	HL7 Error Code (ERR-3)	Application Error Code (ERR-5)	Error Severity
Sending Responsible Organization Identifier not found.			W
Exception occurred validating {0} Segment			Varies
Exception occurred processing {0} Segment			Varies
Exception occurred applying special rules to {0} segment			Varies
Exception occurred applying conformance rules to {0} segment			Varies
Invalid Sending Responsible Organization Identifier			E
RECORD REJECTED - Naming Code System and Alternate Naming Code System both NDC			E
INVALID ADMINISTERED CODE.	102	4	W
Message Rejected. Please review errors.			E

The following tables contain the definitions for the error codes and severity:

HL7 Error Codes (Table 0357)	
0	Message Accepted
100	Segment Sequence Error
101	Required Field Missing
102	Data Type Error
103	Table Value Not Found
200	Unsupported Message Type
201	Unsupported Event Code
202	Unsupported Processing ID
203	Unsupported Version ID
204	Unknown Key Identifier
205	Duplicate Key Identifier
206	Application Record Locked
207	Application Internal Error

Application Error Codes (Table 0533)	
1	Illogical Date Error
2	Invalid Date

3	Illogical Value Error
4	Invalid Value
5	Table Value Not Found
6	Required Observation Missing

Error Severity Codes (Table 0516)	
I	Informational - Non-Error message
W	Warning - non-fatal issue, could include data loss
E	Error - Fatal issue, important data rejected
Varies	A severity of W or E is calculated based on the impacted field; used for errors not tied to a specific field where rejection behavior is dependent on whether the field is a critical datum item.

Document Updates

Version No.	Version Date	Revised By	Description
1.0	1-Sep-2016	Amanda Ray	Updated Vaccine and Manufacturer Tables
1.1	12-Dec-2016	Amanda Ray	Updated Vaccine and Manufacturer Tables
1.2	20-Mar-2017	Amanda Ray	Added Afluria Quad, Afluria Quad P-Free, and Quadracel vaccines
1.3	16-Jun-2017	Amanda Ray	Updated the description for QPD-3
1.4	11-Aug-2017	Jayme Judd	Added Flublok Quadrivalent and Flucelvax Quadrivalent. Updated RabAvert and Imovax Rabies IM.
1.5	13-Sept-2017	Jayme Judd	Added Yellow Fever vaccines
1.6	20-Sept-2017	Jayme Judd	Updated Vaccine and Manufacturer Tables
1.7	10-Nov-2017	Jayme Judd	Updated Vaccine and Manufacturer Tables
1.8	8-Dec-2017	Rebekah Van Dusen	Added Zoster vaccines (Shingrix and Zoster, unspecified formulation). Updated manufacturer tables.
1.9	18-Dec-2017	Mark Ehlke	Updated UCUM table and Removed references in support of NO FIRST NAME for the first_name field.
2.0	11-Jan-2018	Mark Ehlke	Updated QPD 1.3 references to "CDCPHINVS" to indicate acceptable values
2.1	20-Feb-2018	Amanda Ray	Updated QPD 1.3 references to "CDCPHINVS" to indicate acceptable values and Flulaval, P-Free typo.
2.2	27-Feb-2018	Mark Ehlke	Added Vaxchora information and updated a typo to "Reason applied by forecast logic to project this vaccine" LOINC code.
2.3	23-Mar-2018	Mark Ehlke	Updated ACIP schedule table, added information for Heplisav-B, corrected typo in OBX-17 and in WIR Default Vaccine Groups table for HepB related CVX codes, WVTN and related CVX, updated manufacturer table.
2.4	01-May-2018	Mark Ehlke	Removed notes about vaccine funding program eligibility as it is now required. Corrected LOINC Code 64994-7 to C(RE/O). Updated WIR NOS CVX code in WIR default vaccine groups table from 107 to 20. Added Rabies related vaccines codes in default vaccine group table. Updated Bexsero MFG to SKB. Removed reference to VXC40 being required in OBX-17.1.

Version No.	Version Date	Revised By	Description
2.5	15-Oct-2018	Amanda Ray	Update the Vaccine Type CVX code from 37 to 184. Added CVX codes 185 & 186 to the Related CVX column of the NOS CVX table.
2.6	18-Oct-2018	Zac Derenne	Update examples to reflect that OBX-14 is required. Update examples to reflect that RXR-1 uses the NCIT table.
2.7	03-Dec-2018	Zac Derenne	Update Ethnic Code table in examples to CDCREC.
2.8	12-Mar-2019	Zac Derenne	Update Vaccine Names (0292); Update Descriptions (WVTN); Mark MFGs as inactive (0227)
2.8.1	21-Mar-2019	Zac Derenne	Update Manufacturer code MIP with new name.
2.9	27-Jun-2019	Zac Derenne	Add MMR-Adult Series to ACIP table
3.0	12-Nov-2019	Zac Derenne	Update AFLURIA and FluLaval
3.1	20-Mar-2020	Zac Derenne	Update Document Title in Properties
3.2	31-Jul-2020	Zac Derenne	Add FLUZONE Quad High Dose PF and FLUAD Quadrivalent
3.3	03-Dec-2020	Zac Derenne	Add Moderna and Pfizer COVID-19 vaccines.
3.4	22-Feb-2021	Zac Derenne	Add Janssen COVID-19 Vaccine and Janssen MFG
3.5	04-Mar-2021	Zac Derenne	Add Janssen COVID-19 Series Name
3.6	08-Apr-2021	Zac Derenne	Add MenQuadfi
3.7	06-May-2021	Zac Derenne	Add Vaxelis
3.8	24-Jun-2021	Zac Derenne	Update 0064 table; Update Race to reference CDCREC table; Update OBX examples with 59782-3 LOINC; Update RXA-9 query response notes; Add description for LOINC codes 30946-8 and 30944-3; Clarified RXA-20 information retention standards.
3.9	25-Jun-2021	Zac Derenne	Add JYNNEOS
4.0	13-Oct-2021	Zac Derenne	Add Pneumo-Conjugate 15 and 20
4.1	20-Oct-2021	Zac Derenne	Add Pfizer COVID-19 (5-11Y)
4.2	14-Dec-2021	Zac Derenne	Add Pfizer COVID-19 tris 12+
4.3	08-Feb-2022	Zac Derenne	Add Pfizer COVID-19 (6M-4Y)
4.4	06-Jun-2022	Zac Derenne	Add Moderna COVID-19 (6M-5Y) and changed description for Moderna COVID-19 Vaccine
4.5	14-Jun-2022	Zac Derenne	Add Prehevbrio Hep B Adult and VBI Vaccinces Inc. MFG

Version No.	Version Date	Revised By	Description
4.6	27-Jun-2022	Zac Derenne	Add Comirnaty
4.7	07-Jul-2022	Zac Derenne	Add Moderna6-11Y/ 18+Booster
4.8	19-Jul-2022	Zac Derenne	Add Novavax COVID-19 Vaccine
4.9	17-Aug-2022	Zac Derenne	Add Spikevax
5.0	12-Sep-2022	Zac Derenne	Add Pfizer BvlntBstr, Pfizer BvlntBstr, and Moderna BvlntBstr
5.1	26-Sep-2022	Zac Derenne	Add HL7 New Structure sections; Remove XON data type from Appendix A; Add Appendix B HL7 New Structure; Add missing HL7 Error Codes to Appendix C
5.2	29-Sep-2022	Zac Derenne	Add Smallpox CPT; update Jynneos description; Update ACAM2000 MFG to MIP; Add 206 to Smallpox "Related CVX Codes"; Add MSP manufacturer; Change Vaxelis MFG to MSP
5.3	19-Oct-2022	Zac Derenne	Change PaxVax to Emergent Travel Health, mark Organon Teknika as inactive, change BCG-TB's MFG to MSD
5.4	29-Nov-2022	Zac Derenne	Add Priorix, Moderna BvlntBstr 6M-5Y (91316 CPT), and Pfizer BvlntBstr 6M-4Y
5.5	10-Feb-2023	Zac Derenne	Update Smallpox Vaccine Group name to "Orthopoxvirus". Add Left Posterior Chest, Right Posterior Chest, and Bilateral Nares administrative sites. Update Descriptions for FLUZONE Quad HighDose PF, MenQuadfi, and FLUAD Quadrivalent. Add COVID-19 unspecified and NOS CVX Code to relevant tables. Update NOS CVX tables with previously omitted Related CVX Codes.
5.6	12-Jul-2023	Shriya Shrestha	Add TicoVac 0.5 mL and TicoVac 0.25 mL in table WVTN, 0292 and NOS Table for dose 0.5 mL, 0.25mL and unspecified dose in WVGC. Update Smallpox monkeypox to "Smallpox mpox vaccine" and it's description in table WVTN,0292. Update Meningo (Trade name: MenQuadfi) Description in Table WVTN and 0292.
5.7	28-Aug-2023	Zac Derenne	Add RSV to WVGC, Arexvy and Abrysvo to WVTN and 0292, RSV unspecified to 0292, and RSV CVX to WIR Default Vaccine Groups.
5.8	19-Sep-2023	Zac Derenne	Add Comirnaty (2023-24) 12+, Pfizer (2023-24) 5Y-11Y, Pfizer (2023-24) 6M-4Y, Moderna (2023-24) 6M-11Y, Spikevax (2023-24) 12+ to WVTN, Table 0292, and the WIR Default Vaccine Groups table.

Version No.	Version Date	Revised By	Description
5.9	29-Sep-2023	Shriya Shrestha	Add Beyfortus 50mg and 100mg to WVTN, 0292, and Default Vaccine Groups.
6.0	09-Oct-2023	Shriya Shrestha	Add Novavax (2023-2024 Formula) 12+ to WVTN, 0292, WIR Default Vaccine Groups table and RSV vaccine, unspecified and RSV mAb, unspecified to 0292, WIR Default Vaccine Groups table.
6.1	07-Nov-2023	Zac Derenne	Updates to HL7 message conformance: • "Immunization Series name" (LOINC 59780-7) and "Status in immunization series" (LOINC 59783-1). Ensure use of proper coding system value in OBX-5.3 • OBX-6 – conform to field usage C(R/O) Add/remove/update WIR Series Name values to fit ACIP Schedule.
6.2	04-Apr-2024	Zac Derenne	Add Penbraya to WVTN table, Meningo and Meningo B Groups within 0292 table, and WIR Default Vaccine Groups table. Update ORC-3 description for clarity. Update PD1-12 description for clarity. Update RXA-21 description for clarity. Updated Z32^CDCPHINVS Response profile and Z42^CDCPHINVS Response profile examples. Add Ebola to WVGC, WVTN, Table 0292, and WIR Default Vaccine Groups.