



Arkansas WebIZ Immunization Registry HL7 Interface Specification

Arkansas Department of Health

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Change Log

The following table captures the progression of this document over time.

Version	Date	Description	Author
0.9	07/31/2012	DRAFT version of document	Ray Seggelke
0.9.1	01/30/2013	Updating ADH to the latest version of the core document (but still DRAFT pending ADH review)	Ray Seggelke

Overview

There are numerous providers across Arkansas who will use the Arkansas WebIZ Statewide Immunization Registry directly as they administer vaccinations to their patients. The Registry can be a valuable tool to these providers by offering significant functionality not available to them in their current systems.

ADH desires to offer the benefits of the Registry to all providers in Arkansas. For those providers already using a full-featured electronic management records system or a clinic management system that is adequately assisting them with the daily operations of their practice, Arkansas WebIZ can still serve as the single, consolidated repository of a patient's immunization history.

The goal of the HL7 Interface is to provide the ability for a provider's system to communicate with the Registry via a standardized set of messages. This allows the provider to retrieve the vaccination history of a patient from the Registry and to update the Registry with additional vaccination data.

Significant Design Decisions

In most cases, this interface has been defined to follow the standards and recommendations from the CDC. More specifically, the following standards have been selected as the foundation of these interfaces:

- Health Level Seven (HL7) Standard Protocol, version 2.3.1
- The CDC's Implementation Guide for Immunization Data Transactions, version 2.2, dated June, 2006
 - This guide also incorporates some minor updates to various messages and code sets that are included in version 2.4 of the HL7 protocol.

Any significant deviations from these guidelines are documented here. Where applicable, "lessons learned" from select previously implemented projects have also been addressed.

In most cases, the tables contained in the CDC's Implementation Guide will be used as the set of valid values for many of the fields in the messages. Every effort has been made to accommodate these values as much as possible in order to minimize the number modifications necessary for a system to interface with the Registry. Any deviations from these values have been documented within the relevant field(s).

All providers using the HL7 interfaces will be setup in Arkansas WebIZ with non-integrated inventory control. This will allow the Registry to track inventory information about the vaccines administered, but it will not manage the number of doses on-hand. As a result, these providers will not be able to use the inventory reconciliation features available in the Registry, and they will not be able to report their monthly inventory status electronically via the Registry.

While evaluating the interface definition, it is expected that a technical assessment will be made by representatives of other systems (in use at the various provider locations around the state) in order to identify what, if any, modifications will be necessary to their system in order to successfully communicate with the Registry. Each vendor is highly encouraged to contact the ADH Immunization Program to request and/or discuss any modifications to the interface that would assist them to minimize the modifications necessary to their system.

Business Rules

When defining these interfaces, the general approach has been to consider the Registry as a repository of information. The idea is for systems utilizing these interfaces to submit requests for information from the Registry or messages that contain updates to records within the Registry. The primary scenarios are:

- The Registry receives a query and responds with the results of the query.
- The Registry receives an update message and responds with an acknowledgement indicating success or failure of persisting the data in the Registry.
- The Registry receives a file (consisting of batch VXU messages) and processes the file during non-peak hours (e.g., overnight).
- The Registry receives a request to generate a file (consisting of batch VXU messages) and processes the request during non-peak hours (e.g., overnight)

At this time, it is not anticipated that the Registry will initiate the exchange of information with other systems. (This is something that can be revisited in the future at such time that Arkansas WebIZ begins interfacing with other Registries or systems at the national level.) The Registry will only respond to messages submitted to it.

There are several common interactions that will occur between provider systems and the Registry. The following sections describe these exchanges in terms of the messages that are transmitted between the systems involved. (Detailed information regarding these messages can be found in the “Data Definition” section later in this section of the document.)

Request for Vaccination Record

One of the key benefits of an immunization registry is the ability for a provider to gain access to the consolidated vaccination history of a patient. In today’s highly mobile society, it is common for a person to receive immunizations from multiple providers. A registry allows a provider to review vaccinations a person has received from other providers in order to more accurately identify any immunizations they may need. As a result, when a patient presents at a provider’s facility for a vaccination, a common request will be to obtain the available vaccination history for that person from the Registry.

Providers who need access to a person’s vaccination record will submit a VXQ (Query for Vaccination Record) message to Arkansas WebIZ to obtain this information. The Registry will respond in one of the following ways:

- If there is no record in the Registry that matches the information provided in the Query, the Registry will respond with a QCK (Query General Acknowledgement) message indicating no matching record was found.
- If there is a single matching record found, the Registry will respond with a VXR (Response to Vaccination Query) message containing the relevant information.

- If there are multiple matching records found, the Registry will respond with a VXX (Response to Vaccination Query Returning Multiple PID Matches) message containing the list of possible matches.
 - Typically, the provider's system will then send another VXQ message indicating the specific record from the VXX response that represents their patient.
- If there is an issue processing the message, the Registry will respond with an ACK (General Acknowledgement) message containing the applicable error message.

Update a Patient's Vaccination Record in the Registry

Obviously, the only way for a Registry to be able to make available a patient's immunization history is for providers who are physically administering the vaccinations to notify the Registry in a timely fashion of each vaccination they have administered. This immunization information is then consolidated with similar information from other providers to produce the full vaccination record for a person.

To this end, providers desiring to submit vaccination information to the Registry will use the VXU (Unsolicited Vaccination Record Update) message. The Registry will respond with an ACK (General Acknowledgement) message indicating the success or failure of the update. In the case of failure, this message will include the applicable error message.

Business Rules for Parsing Messages

The HL7 interfaces defined for Arkansas WebIZ are based on version 2.3.1 of the HL7 standards protocol (with some variances to support the related changes made in version 2.4 of the same protocol). The "Data Definition" section documents the specific messages that will be accepted. Systems submitting a properly formatted message can expect the Registry to accept the message. Any minor issues will be reported as errors via the ACK (General Acknowledgement) message. In these cases, the Registry will process as much of the message as possible.

Significant deviations from the message definitions will prevent the Registry from being able to process the message. This situation will be reported as rejections via the ACK (General Acknowledgement) message. In these cases, the Registry will not process the contents of the message.

All incoming messages and associated responses are logged by the Registry.

Security for Submitting a Message to the Registry

Refer to the Arkansas WebIZ Immunization Registry HL7 Engine Design Document for the detailed web service definition for the real-time HL7 interface.

Data Definition

All messages sent to Arkansas WebIZ should be properly formatted as described in the CDC’s Implementation Guide for Immunization Data Transactions, version 2.2, dated June, 2006 (which is based on the Health Level Seven (HL7) Standard Protocol, version 2.3.1). This document also describes the possible codes and/or values that can be included in various data fields in the document.

The following sections contain detailed information for each message, including indications when a field will always have a set value, which fields are required (highlighted in bold font), which fields in the standard message definition will be ignored, etc. Where applicable, information is also included on what makes a value valid and/or invalid.

Delimiters

Arkansas WebIZ expects and will use the CDC recommended delimiters for all messages. These include:

DELIMITER		MEANING
Character	Description	
<CR>	Carriage Return	Segment Terminator
	Pipe	Field Separator
^	Carat	Component Separator
&	Ampersand	Sub-Component Separator
~	Tilde	Repetition Separator
\	Back Slash	Escape Character

Table 1: HL7 Interface Definition

Implemented Message Types

Arkansas WebIZ will accept the message types and corresponding event types defined in Table 2. Any other message types will generate an ACK general acknowledgement response indicating a rejection.

MESSAGE TYPES ACCEPTED BY REGISTRY	SUPPORTED EVENT TYPES (BY MESSAGE TYPE)
VXQ	V01
VXU	V04

Table 2: Message Types accepted by Arkansas WebIZ

Similarly, the Registry will send the message types and corresponding event types as defined in Table 3. At the current time, the Registry will only send these messages in response to a message received from a provider’s system. It will not initiate any exchange of data.

MESSAGE TYPES SENT BY REGISTRY	SUPPORTED EVENT TYPES (BY MESSAGE TYPE)
ACK	
QCK	
VXX	V02
VXR	V03

Table 3: Message Types Sent by Arkansas WebIZ

Accessing the HL7 Interface

Refer to the Arkansas WebIZ Immunization Registry HL7 Interface Design Document for details on how to access the HL7 interface.

VXQ - Query for Vaccination Record

The VXQ message is used by a provider to submit a request for a person’s vaccination record. As mentioned previously, the message should be formatted as specified in the referenced documentation.

Table 4 contains notes for various fields as they pertain to the Registry. The following conventions have been used:

- Required fields are in **bold** type and are marked appropriately in the REQ/OPT column
- Shaded cells will not be used by the ARKANSAS WEBIZ Registry.
- The REQ/OPT column will contain one of 2 values:
 - O – Optional
 Optional fields may be left as NULL (i.e., no value supplied). These fields are not necessary for effectively searching the Registry. However, if a value is specified, it **must** be a valid value and format as specified below. Otherwise, an acknowledgement message of type ‘AE’ may be returned.
 - **R - Required**
 All required fields must contain a valid value and format as specified below. If a valid value is not submitted or if the value submitted is not in a valid format, an acknowledgement message of type ‘AR’ will typically be returned.
- An instruction to leave a field NULL means no value needs to be provided in that field. It would look like || when constructing the message.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
MSH Segment						
Field Separator	1	1	ST		R	<ul style="list-style-type: none"> Registry expects that incoming messages will use the pipe character (“ ”) as the field separator for all messages. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Encoding Characters	2	4	ST	^~\&	R	<ul style="list-style-type: none"> Registry expects that incoming messages will contain the recommended value of “^~\&” in this field. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Sending Application	3					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Sending Facility	4	180	HD	The ADH Immunization Program unique ID assigned to the provider	R	<ul style="list-style-type: none"> The ADH Immunization Program will assign a unique ID to each provider system interfacing with the Registry. This ID should be included in this field. Registry will include the ID provided here in the “Receiving Facility” field of the MSH segment of the response message. If an invalid ID is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Receiving Application	5					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Receiving Facility	6	180	HD	Leave NULL or use a value of AR0000	R	<ul style="list-style-type: none"> Registry will allow two values in this field: <ul style="list-style-type: none"> Leave NULL A value of “AR0000” Any other value will be considered invalid, and the Registry will not process the message. It will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Date/Time of Message	7	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will archive this in the message log.
Security	8					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Message Type	9	7	CM	VXQ^V01	R	<ul style="list-style-type: none"> Registry expects this to always be “VXQ^V01” for this type of message. Registry will ignore any value in the Message Structure component of this field. If an unsupported message type is indicated, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Message Control ID	10	20	ST	a unique ID generated by the system sending the message	R	<ul style="list-style-type: none"> Should be a unique ID (within each system sending messages to the Registry) and is generated by the system sending the message. Registry will archive this in its message log.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						<ul style="list-style-type: none"> Registry will include the ID provided here in the "Message Control ID" field of the MSA segment of the response message. If no value is supplied, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Processing ID	11	3	PT	One of the following: D, P, or T	R	<ul style="list-style-type: none"> Registry will use the indicated system to generate the results for the query. Valid values are represented HL7- defined Table 0103. If an invalid Processing Id is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected. Registry will ignore the contents of the second component as it does not impact how the Registry will process the request.
Version ID	12	60	VID	2.3.1	R	<ul style="list-style-type: none"> Registry expects all messages to use version 2.3.1. If an unsupported version is indicated, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected. NOTE: Additional versions may be made available as the need arises. Please contact the ADH Immunization Program to discuss any specific needs for other versions.
Sequence Number	13					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Continuation Pointer	14					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Accept Acknowledgement Type	15	2	ID	Leave NULL or use a value of NE	O	<ul style="list-style-type: none"> Registry does not support enhanced acknowledgement mode. Registry will only respond using the original acknowledgement mode (i.e., a value of NULL or "NE"). Registry will ignore any other value in this field and will process the message using the original acknowledgement mode.
Application Acknowledgement Type	16					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Country Code	17	3	ID	USA or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will originate in the USA (i.e., this field has a value of either "USA" or is NULL). Registry will ignore any other value in this field and will process the message as if it originated in the USA.
Character Set	18	10	ID	ASCII or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will use the ASCII character set (i.e., this field has a value of "ASCII" or is NULL). Registry will ignore any other value in this field and will process the message using the ASCII character set.
Principal Language of Message	19	60	CE	EN or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will use English as the principal language (i.e., this field has a value of "EN" or is NULL). Registry will ignore any other value in this field and will process the message in English.
Alternate	20					<ul style="list-style-type: none"> Registry expects all messages submitted to it will not be using

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Character Set Handling						<ul style="list-style-type: none"> character set switching (i.e., this field is empty). Registry will ignore any other value in this field and will process the message without using alternate character sets.
QRD Segment						
Query Date/Time	1					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Query Format Code	2	1	ID	R	R	<ul style="list-style-type: none"> Registry will only return result in the record-oriented-format (i.e., a value of "R" in this field). Registry will ignore any other value in this field and will return the results in the record-oriented format. Since the Registry treats all records as type "R", the Registry will accept any value in the field and the Registry will NOT return a rejected Acknowledgement code of "AR" in the ACK message
Query Priority	3	1	ID	I	R	<ul style="list-style-type: none"> Registry will only return results immediately (i.e., a value of "I" in this field). Registry will ignore any other value in this field and will process the message with a query priority of immediate. Since the Registry treats all records as type "I", the Registry will accept any value in the field and the Registry will NOT return a rejected Acknowledgement code of "AR" in the ACK message
Query ID	4	10	ST	a unique ID generated by the system sending the message	R	<ul style="list-style-type: none"> Should be a unique ID (within each system sending messages to the Registry) and is generated by the system sending the message. Registry will include the ID provided here in the "Query ID" field of the QRD segment of the corresponding VXX or VXR response message. If no value is supplied, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Deferred Response Type	5					<ul style="list-style-type: none"> Registry will ignore any value in this field and will return the results immediately.
Deferred Response Date/Time	6					<ul style="list-style-type: none"> Registry will ignore any value in this field and will return the results immediately.
Quantity Limited Request	7	10	CQ	Number of Records^Units	R	<ul style="list-style-type: none"> Registry will return up to 100 records or the Number of Records value indicated in this field, whichever is less. The Registry expects that the Units will be "RD". For example, "25^RD" will return up to 25 records. Registry will use the indicated unit values to generate the results for the query. Only the valid value, RD from the HL7- defined Table 0126. If an invalid number of records or units is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Who Subject filter	8	60	XCN	IDnumber^Lastname^Firstname^Middle^Suffix^Prefix^	R	<ul style="list-style-type: none"> Registry will ignore values in the following components of this field as they will have no impact on the search results:

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
				Degree^Source Table^Assigning Authority^Name Type^IdentifierCheckDigit^ CodeIdentifying theCheckDigitScheme Employed^IdentifierType^A ssigningFacility ID^NameRepresentationCod e		<ul style="list-style-type: none"> o Source Table o Assigning Authority o All Name Types except: <ul style="list-style-type: none"> ▪ Legal ▪ Alias NOTE: Name values will be parsed by the Registry to ensure a standardized format prior to searching for or updating a patient's record. This may result in slight variations of names submitted versus names returned. o Identifier Check Digit o Code Identifying the Check Digit Scheme Employed o All Identifier Types except: <ul style="list-style-type: none"> ▪ Medicaid number ▪ Medicare number ▪ Medical Record Number ▪ Patient Internal Identifier ▪ Social Security Number (This field must include 9 digits after the system removes all non-numeric characters such as a dash (-), forward slash (/), spaces, etc. If 9 digits are not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.) ▪ State Registry ID (This field must only contain numeric digits. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.) ▪ MCI (Master Client Index) o Assigning Facility ID o Name Representation Code • Example ^Simpson^Bart^Thomas^^^^^^L^^ ^SS123456789^^ • If no value is supplied, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
What Subject Filter	9	60	CE	VXI^VACCINE INFORMATION^HL70048	R	<ul style="list-style-type: none"> • Registry will only return vaccine information for a patient (i.e., a value of "VXI^VACCINE NFORMATION^HL70048" in this field). • Specifying any other value (including no value) will result in the Registry returning an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
What Department Data Code	10					<ul style="list-style-type: none"> • Registry will ignore any value in this field.
What Data Code Value Qualifier	11					<ul style="list-style-type: none"> • Registry will ignore any value in this field.
Query Results Level	12					<ul style="list-style-type: none"> • Registry will only return vaccine information for a patient. Therefore, the value of this field has no impact on the query results, and the Registry will ignore it.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES								
QRF Segment														
Where Subject Filter	1	20	ST	AR0000	R	<ul style="list-style-type: none"> Registry expects incoming VXQ messages are intended for the Registry in an attempt to receive vaccine information for a patient. Therefore, this field should always be valued as "AR0000". Any other value in this field will cause the Registry to ignore the request and return an ACK message is returned with an Acknowledgement Code of "AR" indicating the message has been rejected. 								
When Data Start Date/Time	2	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will only use the YYYYMMDD portion of this field (i.e., all time-related data will be ignored) Registry expects that, if populated, the field will contain a fully specified, valid date (i.e., not just a year or month/year value) Registry will ignore any value that is not valid date. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. If supplied and the: <ul style="list-style-type: none"> "When Data End Date/Time" field is empty, then all of the patient's vaccinations on or after this date will be returned. "When Data End Date/Time" field has a value equal to or greater than this field, then all of the patient's vaccinations beginning with this value and ending with the End Date value will be returned. "When Data End Date/Time" field is less than this date, then no vaccination records will be returned. 								
When Data End Date/Time	3	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will only use the YYYYMMDD portion of this field (i.e., all time-related data will be ignored) Registry expects that, if populated, the field will contain a fully specified, valid date (i.e., not just a year or month/year value). Registry will ignore any value that is not valid date. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. If supplied and the: <ul style="list-style-type: none"> "When Data Start Date/Time" field is empty, then all of the patient's vaccinations before or on this date will be returned. "When Data Start Date/Time" field has the a value equal to or less than this field, then all of the patient's vaccinations beginning with the Start Date/Time value and ending with this value will be returned. "When Data Start Date/Time" field is greater than this date, then no vaccination records will be returned. 								
What User Qualifier	4					<ul style="list-style-type: none"> Registry will not filter the results based on this field; therefore the value of this field will be ignored. 								
Other Query Subject Filter	5	60	ST	PatientSocialSecurity Number^PatientBirthdate^PatientBirthState^ Patient Medicare Number^ Patient Medicaid Number^	O	<ul style="list-style-type: none"> Registry locally defines the following search keys for use in this field: <table border="1"> <thead> <tr> <th>Position</th> <th>Component</th> <th>Data Type</th> <th>Description / Examples</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Position	Component	Data Type	Description / Examples				
Position	Component	Data Type	Description / Examples											

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES			
				Mother'sLastName^Mother's Firstname^Mother'sMiddleN ame^Mother'sSuffix^Mother' sPrefix^Mother'sDegree^Mot her'sMaidenName^ Patient State Registry ID^ Father'sLastName^Father'sF irstname^Father'sMiddleNa me^Father'sSuffix^Father'sP refix^Father'sDegree^Patient Identifier		1	Patient Social Security Number~	ST	This field must include 9 digits after the system removes all non-numeric characters such as dash (-), forward slash (/), spaces, etc. If 9 digits are not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'. Example: 123456789
						2	Patient Birth Date~	DT	YYYYMMDD If a valid date is not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'. Example: July 4, 1976 = 19760704
						3	Patient Birth State~	ID	Use 2-letter postal code. If a valid state code is not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.
						4	Patient Medicare Number~	ST	When applicable
						5	Patient Medicaid Number~	ST	When applicable
						6	Mother's Name~	PN	<family name> ^<given name>^<middle name or initial>^<suffix>^<prefix> ^<degree>
						7	Mother's Maiden Name~	ST	Family name of mother before marriage
						8	Patient State Registry ID~	ST	Example: 123456 Note that leading zeroes

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES												
						<table border="1"> <tr> <td></td> <td></td> <td></td> <td>should not be included. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.</td> </tr> <tr> <td>9</td> <td>Father's Name~</td> <td>PN</td> <td><family name> ^<given name>^<middle name or initial>^<suffix>^<prefix> ^<degree></td> </tr> <tr> <td>10</td> <td>Local Patient Identifier</td> <td>ST</td> <td>Patient's unique identifier in the provider's system</td> </tr> </table> <ul style="list-style-type: none"> Registry requires that the keys be listed in the order presented here. If a field has no value, it should be left empty with a repeat delimiter holding its place. If Registry will ignore any invalid values and will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. Example: 123456789^2012102^DE^^^Simpson^Marge^^^^^123456^Simpson^Homer^^^^^12345 				should not be included. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.	9	Father's Name~	PN	<family name> ^<given name>^<middle name or initial>^<suffix>^<prefix> ^<degree>	10	Local Patient Identifier	ST	Patient's unique identifier in the provider's system
			should not be included. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.															
9	Father's Name~	PN	<family name> ^<given name>^<middle name or initial>^<suffix>^<prefix> ^<degree>															
10	Local Patient Identifier	ST	Patient's unique identifier in the provider's system															
Which Date/Time Qualifier	6					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored. 												
Which Date/Time Status Qualifier	7					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored. 												
Date/Time Selection Qualifier	8					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored. 												
When Quantity/Timing Qualifier	9					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored. 												

Table 4: Reference Information for VXQ Message

Based on the identifying information provided, the Registry will attempt to locate any and all matching patient records using the guidelines below.

1. The Registry will look for a record where there is an exact match on MCI Number (if supplied).
 - a. If this results in a single match, then the search is completed and the result is returned via a VXR message.
 - b. If this results in no matches or in multiple matches, then continue with step 2 to further restrict the number of potential matches.
2. The Registry will look for a record where there is an exact match by applying all of the following criteria:
 - a. First and Last name supplied match the patient's name, the patient's alias name, or the patient's birth record name in the Registry.
 - b. The SSN supplied (if any) matches the patient's SSN in the Registry. (Records with no SSN in the Registry would not be returned in this step of the search.)
 - c. The Date of Birth supplied (if any) matches the patient's DOB in the Registry. (Records with no DOB in the Registry would not be return in this step of the search.)
3. If step 2 resulted in a single match, then the search is completed and the result is returned via a VXR message.
4. If step 2 resulted in multiple matches, the following filters will be applied in the order indicated until either a single record remains or until applying the filter would result in no matches remaining:
 - a. State Registry ID
 - b. Requesting Application's Medical Record Number
 - c. Gender
 - d. Mother's Maiden Name
 - e. Birth State
 - f. Mother's First/Last Name
 - g. Medicaid Number
 - h. Medicare Number
5. If one or more records remain in the result set after step 4, then the results are returned via the VXX or VXR message as appropriate.
6. If step 2 resulted in no matches found , the Registry will attempt a less restrictive search by applying all of the following criteria:
 - a. One of the following is true:
 - i. The Last name supplied matches the patient's last name or alias last name and the First name supplied is similar to the patient's first name or alias first name.
 - ii. The First name supplied matches the patient's first name or alias first name and the Last name supplied is similar to the patient's last name or alias last name.
 - iii. The Last name supplied matches the patient's birth record last name and the First name supplied is similar to the patient's birth record first name.

- iv. The First name supplied matches the patient's birth record first name and the Last name supplied is similar to the patient's birth record last name.
 - b. The Middle name supplied (if any) is similar to the patient's middle name, alias middle name, or birth record middle name or the patient's middle name field is empty in the Registry.
 - c. The DOB supplied (if any) matches the patient's DOB or the patient's DOB is empty in the Registry.
 - d. The SSN supplied (if any) matches the patient's SSN or the patient's SSN is empty in the Registry.
7. If step 6 results in no records or a single record matching, the Registry will respond with a QCK message indicating no records were found. (Because a looser matching algorithm was applied, a single record match cannot be assumed to be an exact match without human intervention. Therefore, matching records will not be returned unless at least two potential matches are found.)
8. If step 6 results in multiple matches being found, the following filters will be applied in the order indicated until either only two records remain or until applying the filter would result in less than two matches remaining:
 - a. Gender
 - b. Mother's Maiden Name
 - c. Birth State
 - d. Mother's First/Last Name
 - e. Medicaid Number
 - f. Medicare Number

For any search, if there is a matching record that is marked for deletion in the Registry or who has opted out, it will not be returned as part of the search results.

The Registry will always respond with the appropriate message type as follows:

- If no matching records are found, a QCK message will be returned.
- If a single matching record is found, a VXR message will be returned.
- If multiple matching records are found, a VXX message will be returned.
- If a significant issue is found in the incoming VXQ message that would prevent an effective search from being accomplished, an ACK message will be returned with additional details about the error encountered.

(NOTE: The above description is not intended to imply anything regarding about the technical design of the queries used to locate matching records in the Registry. The goal is only to describe the general concept of how the searches will work.)

VXX - Response to Vaccination Query Returning Multiple PID Matches (VXX)

The VXX message is used in response to a VXQ message whenever there are multiple patient records in the Registry that match the query. As mentioned previously, the message should be formatted as specified in the referenced documentation. Table 5 contains notes for various fields as they pertain to the Registry.

FIELD NAME	FIELD NUMBER	NOTES
MSH Segment		
Field Separator	1	<ul style="list-style-type: none"> Registry will always use the pipe character (“ ”) as the field separator for all HL7 messages.
Encoding Characters	2	<ul style="list-style-type: none"> Registry will always put a value of “^~\&” in this field.
Sending Application	3	<ul style="list-style-type: none"> Registry will always include the version number of the instance of the software that has generated the message.
Sending Facility	4	<ul style="list-style-type: none"> Registry will always put a value of “AR0000” in this field.
Receiving Application	5	<ul style="list-style-type: none"> Registry will always put the value of the “Sending Application” field in the corresponding VXQ message in this field.
Receiving Facility	6	<ul style="list-style-type: none"> Registry will always put the value of the “Sending Facility” field in the corresponding VXQ message in this field.
Date/Time of Message	7	<ul style="list-style-type: none"> Registry will always put the system date and time the message was created in this field.
Security	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Message Type	9	<ul style="list-style-type: none"> Registry will always put a value of “VXX^V02” in this field.
Message Control ID	10	<ul style="list-style-type: none"> Registry will always put a value of “YYYYMMDDDE999999” in this field. The value can be interpreted as: <ul style="list-style-type: none"> YYYYMMDD = current system date when query was executed DE = 2 character abbreviation for Arkansas 999999 = sequential number indicating the number of HL7 messages sent from the Registry on the indicated date
Processing ID	11	<ul style="list-style-type: none"> Registry will always put a value of “P” in the first component of this field when the message is being processed by the production system. Registry will always put a value of “T” in the first component of this field when the message is being processed by the test/training system. Registry will always leave the second component of this field empty.
Version ID	12	<ul style="list-style-type: none"> Registry will always put a value of “2.3.1” in this field.
Sequence Number	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Continuation Pointer	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Accept Acknowledgement Type	15	<ul style="list-style-type: none"> Registry will always put a value of “NE” in this field.
Application Acknowledgement Type	16	<ul style="list-style-type: none"> Registry will always put a value of “NE” in this field. (At this time, we do not intend to process responses to messages sent by the Registry, so there’s no need for them to be sent back. This can be revisited if it causes

FIELD NAME	FIELD NUMBER	NOTES
		issues for other systems using the interface.)
Country Code	17	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default country of USA).
Character Set	18	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default character set of "ASCII").
Principal Language of Message	19	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default principal language of "EN").
Alternate Character Set Handling	20	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default of not using alternate character set handling).
MSA Segment		
Acknowledgment Code	1	<ul style="list-style-type: none"> Registry will always respond using the original acknowledgement mode. Registry will only respond with a VXX message when the message was processed without error. Therefore, the only value that will be used here is "AA".
Message Control ID	2	<ul style="list-style-type: none"> Registry will always put the value of the "Message Control ID" field in the MSH segment of the corresponding VXQ message in this field.
Text Message	3	<ul style="list-style-type: none"> Registry will always leave this field empty.
Expected Sequence Number	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Delayed Acknowledgment Type	5	<ul style="list-style-type: none"> Registry will always leave this field empty.
Error Condition	6	<ul style="list-style-type: none"> Registry will always leave this field empty.
QRD Segment		
Query Date/Time	1	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Date/Time" field in the QRD segment from the corresponding VXQ message.
Query Format Code	2	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Format Code" field in the QRD segment from the corresponding VXQ message.
Query Priority	3	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Priority" field in the QRD segment from the corresponding VXQ message.
Query ID	4	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query ID" field in the QRD segment from the corresponding VXQ message.
Deferred Response Type	5	<ul style="list-style-type: none"> Registry will always set this to the value of the "Deferred Response Type" field in the QRD segment from the corresponding VXQ message.
Deferred Response Date/Time	6	<ul style="list-style-type: none"> Registry will always set this to the value of the "Deferred Response Date/Time" field in the QRD segment from the corresponding VXQ message.
Quantity Limited Request	7	<ul style="list-style-type: none"> Registry will always set this to the value of the "Quantity Limited Request" field in the QRD segment from the corresponding VXQ message or

FIELD NAME	FIELD NUMBER	NOTES
		“100”, whichever is less.
Who Subject Filter	8	<ul style="list-style-type: none"> Registry will always set this to the value of the “Who Subject Filter” field in the QRD segment from the corresponding VXQ message.
What Subject Filter	9	<ul style="list-style-type: none"> Registry will always set this to the value of the “What Subject Filter” field in the QRD segment from the corresponding VXQ message.
What Department Data Code	10	<ul style="list-style-type: none"> Registry will always set this to the value of the “What Department Data Code” field in the QRD segment from the corresponding VXQ message.
What Data Code Value Qualifier	11	<ul style="list-style-type: none"> Registry will always set this to the value of the “What Data Code Value Qualifier” field in the QRD segment from the corresponding VXQ message.
Query Results Level	12	<ul style="list-style-type: none"> Registry will always set this to the value of the “Query Results Level” field in the segment from the corresponding VXQ message.
QRF Segment		
Where Subject Filter	1	<ul style="list-style-type: none"> Registry will always set this the value of the “Where Subject Filter” field in the QRF segment from the corresponding VXQ message.
When Data Start Date/Time	2	<ul style="list-style-type: none"> Registry will always set this to the value of the “When Data Start Date/Time” field in the QRF segment from the corresponding VXQ message.
When Data End Date/Time	3	<ul style="list-style-type: none"> Registry will always set this to the value of the “When Data End Date/Time” field in the QRF segment from the corresponding VXQ message.
What User Qualifier	4	<ul style="list-style-type: none"> Registry will always set this to the value of the “What User Qualifier” field in the QRF segment from the corresponding VXQ message.
Other Query Subject Filter	5	<ul style="list-style-type: none"> Registry will always set this to the value of the “Other Query Subject Filter” field in the QRF segment from the corresponding VXQ message.
Which Date/Time Qualifier	6	<ul style="list-style-type: none"> Registry will always set this to the value of the “Which Date/Time Qualifier” field in the QRF segment from the corresponding VXQ message.
Which Date/Time Status Qualifier	7	<ul style="list-style-type: none"> Registry will always set this to the value of the “Which Date/Time Status Qualifier” field in the QRF segment from the corresponding VXQ message.
Date/Time Selection Qualifier	8	<ul style="list-style-type: none"> Registry will always set this to the value of the “Date/Time Selection Qualifier” field in the QRF segment from the corresponding VXQ message.
When Quantity/Timing Qualifier	9	<ul style="list-style-type: none"> Registry will always set this to the value of the “When Quantity/Timing Qualifier” field in the QRF segment from the corresponding VXQ message.
PID Segment		
Set ID - PID	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide.
Patient ID	2	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Patient Identifier List	3	<ul style="list-style-type: none"> • The Registry will provide the following field identifiers when their value is non-NULL in the Registry: <ul style="list-style-type: none"> ○ MA (Medicaid Number) ○ MC (Medicare Number) ○ MR (Medical Record Number) ○ SR (State Registry ID)
Alternate Patient ID - PID	4	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Name	5	<ul style="list-style-type: none"> • Registry will always include the patient's full name as it is entered in the Registry and will set the name type component of this field to "L".
Mother's Maiden Name	6	<ul style="list-style-type: none"> • Registry will always include the mother's maiden name as it is entered in the Registry and will set the name type component of this field to "M". • Registry will leave this field empty if there is no mother's maiden name for the patient.
Date of Birth	7	<ul style="list-style-type: none"> • Registry will only value the date portion of this field. • Registry will leave this field empty if there is no date of birth for the patient.
Sex	8	<ul style="list-style-type: none"> • Registry will include one of the following values: <ul style="list-style-type: none"> ○ M = Male ○ F = Female ○ U = Unknown ○ T = Transgender ○ Empty (if there is no gender for the patient in the Registry)
Patient Alias	9	<ul style="list-style-type: none"> • Registry will always include the patient's alias(es) as entered in the Registry and will set the name type component of this field to "A". • Registry will leave the field empty if there is no alias information for the patient.
Patient Race	10	<ul style="list-style-type: none"> • Registry will use the approved values in version 2.4 of the HL7 standard and will include the value of "HL70005" as the coding system. • Registry will leave this field empty if there is no race information for the patient. • Registry will include up to 5 instances of this segment with unique race values (depending on how many races are defined for the patient in the system).
Patient Address	11	<ul style="list-style-type: none"> • Registry will include the most recent mailing address it has for the patient and will put "M" in the Address Type component. • Registry will leave this field empty if there is no mailing address information for the patient.
County Code	12	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Patient Number - Home	13	<ul style="list-style-type: none"> • Registry will include the following phone numbers values: <ul style="list-style-type: none"> ○ Home Phone = PRN (Equipment Type as “PH”) ○ Cell Phone = ORN (Equipment Type of “CP”) ○ Message Phone = ASN (Equipment Type of “PH”) ○ Pager = BPN (Equipment Type of “BP”) ○ Email Address = NET (Equipment Type of “Internet”) ○ Examples: <ul style="list-style-type: none"> ○ 617-555-1212^PRN^PH ○ ^NET^X.400^georgebush@yahoo.com^NET • Registry will only include a phone number type if there is a corresponding phone number for the patient in the system.
Patient Number - Business	14	<ul style="list-style-type: none"> • Registry will include the following phone numbers: <ul style="list-style-type: none"> ○ Work Phone = WPN (Equipment Type as “PH”) ○ Example: <ul style="list-style-type: none"> ○ 617-555-1212^WPN^PH • Registry will only include a phone number type if there is a corresponding phone number for the patient in the system.
Primary Language	15	<ul style="list-style-type: none"> • Registry will use the standard language definitions and will include “HL70296” in the coding system component. • Registry will leave this field empty if there is no language information for the patient.
Marital Status	16	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Religion	17	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Account Number	18	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
SSN Number - Patient	19	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Driver’s License Number - Patient	20	<ul style="list-style-type: none"> • Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Mother’s Identifier	21	<ul style="list-style-type: none"> • Registry will always leave this field empty.
Ethnic Group	22	<ul style="list-style-type: none"> • Registry will use the standard ethnic group definitions and will include “HL70189” in the coding system component. • Registry will leave this field empty if there is no ethnicity information for the patient.

FIELD NAME	FIELD NUMBER	NOTES
Birth Place	23	<ul style="list-style-type: none"> Registry will always leave this field empty.
Multiple Birth Indicator	24	<ul style="list-style-type: none"> Registry will put a value of "Y" in this field whenever a patient is part of a multiple birth. Registry will leave this field empty in all other cases.
Birth Order	25	<ul style="list-style-type: none"> Registry will always leave this field empty.
Citizenship	26	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Veterans Military Status	27	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Nationality	28	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Death Date and Time	29	<ul style="list-style-type: none"> Registry will always leave this field empty.
Patient Death Indicator	30	<ul style="list-style-type: none"> Registry will put a value of "Y" in this field only when the patient is marked as deceased. Registry will leave this field empty in all other cases.
<i>NK1 Segment</i>		
Set ID - NK1	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide.
Name	2	<ul style="list-style-type: none"> Registry will always provide only legal names (i.e., the name type code component will have a value of "L").
Relationship	3	<ul style="list-style-type: none"> Registry will use the standard relationship definitions and will include "HL70063" as the coding system.
Address	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Phone Number	5	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Home Phone = PRN (Equipment Type as "PH") Cell Phone = ORN (Equipment Type of "CP") Registry will only include a phone number type if there is a corresponding phone number for the next of kin in the system.
Business Phone Number	6	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Work Phone = WPN (Equipment Type as "PH") Registry will only include a phone number type if there is a corresponding phone number for the next of kin in the system.
Contact Role	7	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Start Date	8	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
End Date	9	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation

FIELD NAME	FIELD NUMBER	NOTES
		Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Job Title	10	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Job Code/Class	11	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Employee Number	12	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Organization Name - NK1	13	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Marital Status	14	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Sex	15	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Date/Time of Birth	16	<ul style="list-style-type: none"> Registry will always leave this field empty.
Living Dependency	17	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Ambulatory Status	18	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Citizenship	19	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Primary Language	20	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Living Arrangement	21	<ul style="list-style-type: none"> Registry will always leave this field empty.
Publicity Code	22	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Protection Indicator	23	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Student Indicator	24	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Religion	25	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Mother's Maiden Name	26	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Nationality	27	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Ethnic Group	28	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Reason	29	<ul style="list-style-type: none"> Registry will always leave this field empty.
Contact Person's Name	30	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Person's Telephone Number	31	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Person's Address	32	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, Registry will always leave this field empty.
Next of Kin/Associated Party's Identifiers	33	<ul style="list-style-type: none"> Registry will always leave this field empty.
Job Status	34	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, Registry will always leave this field empty.
Race	35	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Handicap	36	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the

FIELD NAME	FIELD NUMBER	NOTES
		Registry will always leave this field empty.
Contact Person Social Security Number	37	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

Table 5: Reference Information for VXX Message

VXR - Response to Vaccination Query Returning the Vaccination Record (VXR)

The VXR message is used in response to a VXQ message whenever the Registry has uniquely identified a single patient matching the criteria contained in the associated query. As mentioned previously, the message should be formatted as specified in the referenced documentation. Table 6 contains notes for various fields as they pertain to the Registry.

FIELD NAME	FIELD NUMBER	NOTES
<i>MSH Segment</i>		
Field Separator	1	<ul style="list-style-type: none"> Registry will always use the pipe character (“ ”) as the field separator for all HL7 messages.
Encoding Characters	2	<ul style="list-style-type: none"> Registry will always put a value of “^~\&” in this field.
Sending Application	3	<ul style="list-style-type: none"> Registry will always include the version number of the instance of the software that has generated the message.
Sending Facility	4	<ul style="list-style-type: none"> Registry will always put a value of “AR0000” in this field.
Receiving Application	5	<ul style="list-style-type: none"> Registry will always set this to the value in the “Sending Application” field from the corresponding VXQ query.
Receiving Facility	6	<ul style="list-style-type: none"> Registry will always set this to the value of the “Sending Facility” field from the corresponding VXQ message.
Date/Time of Message	7	<ul style="list-style-type: none"> Registry will always put the system date and time the message was created in this field.
Security	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Message Type	9	<ul style="list-style-type: none"> Registry will always put a value of “VXR^V03” in this field.
Message Control ID	10	<ul style="list-style-type: none"> Registry will always put a value of “YYYYMMDDDE999999” in this field. The value can be interpreted as: <ul style="list-style-type: none"> YYYYMMDD = current system date when query was executed DE = 2 character abbreviation for Arkansas 999999 = sequential number indicating the number of HL7 messages sent from the Registry on the indicated date
Processing ID	11	<ul style="list-style-type: none"> Registry will always put a value of “P” in the first component of this field when the message is being processed by the production system.

FIELD NAME	FIELD NUMBER	NOTES
		<ul style="list-style-type: none"> Registry will always put a value of "T" in the first component of this field when the message is being processed by the test/training system. Registry will always leave the second component of this field empty.
Version ID	12	<ul style="list-style-type: none"> Registry will always put a value of "2.3.1" in this field.
Sequence Number	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Continuation Pointer	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Accept Acknowledgement Type	15	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field.
Application Acknowledgement Type	16	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field. (At this time, we do not intend to process responses to messages sent by the Registry, so there's no need for them to be sent back. This can be revisited if it causes issues for other systems using the interface.)
Country Code	17	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default country of USA).
Character Set	18	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default character set of "ASCII").
Principal Language of Message	19	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default principal language of "EN").
Alternate Character Set Handling	20	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default of not using alternate character set handling).
MSA Segment		
Acknowledgment Code	1	<ul style="list-style-type: none"> Registry will always respond using the original acknowledgement mode. Registry will only respond with a VXR message when the message was processed without error. Therefore, the only value that will be used here is "AA".
Message Control ID	2	<ul style="list-style-type: none"> Registry will always set this to the value of the "Message Control ID" field in the MSH segment from the corresponding VXQ message.
Text Message	3	<ul style="list-style-type: none"> Registry will always leave this field empty.
Expected Sequence Number	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Delayed Acknowledgement Type	5	<ul style="list-style-type: none"> Registry will always leave this field empty.
Error Condition	6	<ul style="list-style-type: none"> Registry will always leave this field empty.
QRD Segment		
Query Date/Time	1	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Date/Time" field in the QRD segment from the corresponding VXQ message.

FIELD NAME	FIELD NUMBER	NOTES
Query Format Code	2	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Format Code" field in the QRD segment from the corresponding VXQ message.
Query Priority	3	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Priority" field in the QRD segment from the corresponding VXQ message.
Query ID	4	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query ID" field in the QRD segment from the corresponding VXQ message.
Deferred Response Type	5	<ul style="list-style-type: none"> Registry will always set this to the value of the "Deferred Response Type" field in the QRD segment from the corresponding VXQ message.
Deferred Response Date/Time	6	<ul style="list-style-type: none"> Registry will always set this to the value of the "Deferred Response Date/Time" field in the QRD segment from the corresponding VXQ message.
Quantity Limited Request	7	<ul style="list-style-type: none"> Registry will always set this to the value of the "Quantity Limited Request" field in the QRD segment from the corresponding VXQ message or "100", whichever is less.
Who Subject Filter	8	<ul style="list-style-type: none"> Registry will always set this to the value of the "Who Subject Filter" field in the QRD segment from the corresponding VXQ message.
What Subject Filter	9	<ul style="list-style-type: none"> Registry will always set this to the value of the "What Subject Filter" field in the QRD segment from the corresponding VXQ message.
What Department Data Code	10	<ul style="list-style-type: none"> Registry will always set this to the value of the "What Department Data Code" field in the QRD segment from the corresponding VXQ message.
What Data Code Value Qualifier	11	<ul style="list-style-type: none"> Registry will always set this to the value of the "What Data Code Value Qualifier" field in the QRD segment from the corresponding VXQ message.
Query Results Level	12	<ul style="list-style-type: none"> Registry will always set this to the value of the "Query Results Level" field in the QRD segment from the corresponding VXQ message.
QRF Segment		
Where Subject Filter	1	<ul style="list-style-type: none"> Registry will always set this to the value of the "Where Subject Filter" field in the QRF segment from the corresponding VXQ message.
When Data Start Date/Time	2	<ul style="list-style-type: none"> Registry will always set this to the value of the "When Data Start Date/Time" field in the QRF segment from the corresponding VXQ message.
When Data End Date/Time	3	<ul style="list-style-type: none"> Registry will always set this to the value of the "When Data End Date/Time" field in the QRF segment from the corresponding VXQ message.
What User Qualifier	4	<ul style="list-style-type: none"> Registry will always set this to the value of the "What User Qualifier" field in the QRF segment from the corresponding VXQ message.
Other Query Subject Filter	5	<ul style="list-style-type: none"> Registry will always set this to the value of the "Other Query Subject Filter" field in the QRF segment from the corresponding VXQ message.
Which Date/Time	6	<ul style="list-style-type: none"> Registry will always set this to the value of the "Which

FIELD NAME	FIELD NUMBER	NOTES
Qualifier		Date/Time Qualifier” field in the QRF segment from the corresponding VXQ message.
Which Date/Time Status Qualifier	7	<ul style="list-style-type: none"> Registry will always set this to the value of the “Which Date/Time Status Qualifier” field in the QRF segment from the corresponding VXQ message.
Date/Time Selection Qualifier	8	<ul style="list-style-type: none"> Registry will always set this to the value of the “Date/Time Selection Qualifier” field in the QRF segment from the corresponding VXQ message.
When Quantity/Timing Qualifier	9	<ul style="list-style-type: none"> Registry will always set this to the value of the “When Quantity/Timing Qualifier” field in the QRF segment from the corresponding VXQ message.
<i>PID Segment</i>		
Set ID - PID	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide.
Patient ID	2	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Identifier List	3	<ul style="list-style-type: none"> Registry will provide the following field identifiers when their value is non-NULL in the database: <ul style="list-style-type: none"> MA (Medicaid Number) MC (Medicare Number) MR (Medical Record Number) SR (State Registry ID) MCI (Master Client Index)
Alternate Patient ID - PID	4	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Name	5	<ul style="list-style-type: none"> Registry will always include the patient’s full name as it is entered in the Registry and will set the name type component of this field to “L”.
Mother’s Maiden Name	6	<ul style="list-style-type: none"> Registry will always include the mother’s maiden name as it is entered in the Registry and will set the name type component of this field to “M”. Registry will leave this field empty if there is no mother’s maiden name for the patient.
Date of Birth	7	<ul style="list-style-type: none"> Registry will only value the date portion of this field. Registry will leave this field empty if there is no date of birth for the patient.
Sex	8	<ul style="list-style-type: none"> Registry will include one of the following values: <ul style="list-style-type: none"> M = Male F = Female U = Unknown T = Transgender Empty (if there is no gender for the patient in the Registry)
Patient Alias	9	<ul style="list-style-type: none"> Registry will always include the patient’s alias(es) as entered in the Registry and will set the name type component of this field to “A”. Registry will leave the field empty if there is no alias

FIELD NAME	FIELD NUMBER	NOTES
		information for the patient. <ul style="list-style-type: none"> Registry will include up to 5 instances of this segment with unique race values (depending on how many races are defined for the patient in the system).
Patient Race	10	<ul style="list-style-type: none"> Registry will use the approved values in version 2.4 of the HL7 standard and will include the value of "HL70005" as the coding system. Registry will leave the field empty if there is no race information for the patient. Registry will include up to 5 instances of this segment with unique race values (depending on how many races are defined for the patient in the system).
Patient Address	11	<ul style="list-style-type: none"> Registry will include the most recent mailing address it has for the patient and will use "M" in the Address Type component. Registry will leave the field empty if there is no mailing address information for the patient.
County Code	12	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Number - Home	13	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Home Phone = PRN (Equipment Type as "PH") Cell Phone = ORN (Equipment Type of "CP") Message Phone = ASN (Equipment Type of "PH") Pager = BPN (Equipment Type of "BP") Email Address = NET (Equipment Type of "Internet") Registry will only include a phone number type if there is a corresponding phone number for the patient in the system.
Patient Number - Business	14	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Work Phone = WPN (Equipment Type as "PH") Registry will only include a phone number type if there is a corresponding phone number for the patient in the system.
Primary Language	15	<ul style="list-style-type: none"> Registry will use the standard language definitions and will include "HL70296" in the coding system component. Registry will leave this field empty if there is no language information for the patient.
Marital Status	16	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Religion	17	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Account Number	18	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
SSN Number - Patient	19	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Driver's License Number	20	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Mother's Identifier	21	<ul style="list-style-type: none"> Registry will always leave this field empty.
Ethnic Group	22	<ul style="list-style-type: none"> Registry will use the standard ethnic group definitions and will include "HL70189" in the coding system component. Registry will leave this field empty if there is no ethnicity information for the patient.
Birth Place	23	<ul style="list-style-type: none"> Registry will always leave this field empty.
Multiple Birth Indicator	24	<ul style="list-style-type: none"> Registry will put a value of "Y" in this field whenever a patient is part of a multiple birth. Registry will leave this field empty in all other cases.
Birth Order	25	<ul style="list-style-type: none"> Registry will always leave this field empty.
Citizenship	26	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Veterans Military Status	27	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Nationality	28	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Death Date and Time	29	<ul style="list-style-type: none"> Registry will always leave this field empty.
Patient Death Indicator	30	<ul style="list-style-type: none"> Registry will put a value of "Y" in this field only when the patient is marked as deceased. Registry will leave this field empty in all other cases.
<i>PD1 Segment</i>		
Living Dependency	1	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Living Arrangement	2	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Primary Facility	3	<ul style="list-style-type: none"> Registry will always leave this field empty.
Patient Primary Care Provider Name and ID	4	<ul style="list-style-type: none"> Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Number		
Student Indicator	5	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Handicap	6	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Living Will	7	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Organ Donor	8	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Separate Bill	9	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Duplicate Patient	10	<ul style="list-style-type: none"> Registry will always leave this field empty.
Publicity Code	11	<ul style="list-style-type: none"> Registry will always leave this field empty.
Protection Indicator	12	<ul style="list-style-type: none"> When the patient is less than 18 years of age, the value will be "Y" In all other cases, the value will be NULL.
Protection Indicator Effective Date	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Place of Worship	14	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Advance Directive Code	15	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Immunization Registry Status	16	<ul style="list-style-type: none"> Registry will include the following values: <ul style="list-style-type: none"> A: Active I: Inactive L: Lost to Follow-up M: MOGE (Moved or Gone Elsewhere)
Immunization Registry Status Effective Date	17	<ul style="list-style-type: none"> For a status of A, the date included will be the date the person was opened in the Immunization program. For a status of I, L, or M, the date included will be the date the person was closed out of the Immunization program.
Publicity Code Effective Date	18	<ul style="list-style-type: none"> Registry will always leave this field empty.
NK1 Segment		
Set ID - NK1	1	Registry will conform to the standard numbering

FIELD NAME	FIELD NUMBER	NOTES
		approach defined in the Implementation Guide.
Name	2	<ul style="list-style-type: none"> Registry will always provide only legal names (i.e., the name type code component will have a value of "L").
Relationship	3	<ul style="list-style-type: none"> Registry will use the standard relationship definitions and will include "HL70063" in the coding system component.
Address	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Phone Number	5	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Home Phone designated as "PRN" (Equipment Type as "PH") Cell Phone designated as "ORN" (Equipment Type of "CP") Registry will only include a phone number type if there is a corresponding phone number for the next of kin in the system.
Business Phone Number	6	<ul style="list-style-type: none"> Registry will include the following phone numbers: <ul style="list-style-type: none"> Work Phone designated as "WPN" (Equipment Type as "PH") Registry will only include a phone number type if there is a corresponding phone number for the next of kin in the system.
Contact Role	7	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Start Date	8	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
End Date	9	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Job Title	10	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Job Code/Class	11	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/AP Employee Number	12	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Organization Name - NK1	13	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Marital Status	14	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly

FIELD NAME	FIELD NUMBER	NOTES
		apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Sex	15	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Date/Time of Birth	16	<ul style="list-style-type: none"> Registry will always leave this field empty.
Living Dependency	17	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Ambulatory Status	18	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Citizenship	19	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Primary Language	20	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Living Arrangement	21	<ul style="list-style-type: none"> Registry will always leave this field empty.
Publicity Code	22	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Protection Indicator	23	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Student Indicator	24	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Religion	25	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Mother's Maiden Name	26	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the c Registry will always leave this field empty.
Nationality	27	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Ethnic Group	28	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation

FIELD NAME	FIELD NUMBER	NOTES
		Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Reason	29	<ul style="list-style-type: none"> Registry will always leave this field empty.
Contact Person's Name	30	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Person's Telephone Number	31	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Person's Address	32	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Next of Kin/Associated Party's Identifiers	33	<ul style="list-style-type: none"> Registry will always leave this field empty.
Job Status	34	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Race	35	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Handicap	36	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contact Person Social Security Number	37	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
<i>PV1 Segment</i>		
Set ID - PV1	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide.
Patient Class	2	<ul style="list-style-type: none"> Registry will always put a value of "R" in this field.
Assigned Patient Location	3	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Admission Type	4	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Preadmit Number	5	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Prior Patient Location	6	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Attending Doctor	7	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Referring Doctor	8	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Consulting Doctor	9	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Hospital Service	10	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Temporary Location	11	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Preadmit Test Indicator	12	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Readmission Indicator	13	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Admit Source	14	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Ambulatory Status	15	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
VIP Indicator	16	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Admitting Doctor	17	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Patient Type	18	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the

FIELD NAME	FIELD NUMBER	NOTES
		Registry will always leave this field empty.
Visit Number	19	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Financial Class	20	<ul style="list-style-type: none"> Registry will use this to convey VFC Eligibility. The possible values are: <ul style="list-style-type: none"> V00 - VFC Eligibility not determined/unknown V01 - Not VFC Eligible V02 - VFC Eligible – Medicaid Eligible or Enrolled V03 - VFC Eligible - Uninsured V04 - VFC Eligible - American Indian or Alaskan Native V05 - VFC Eligible - Underinsured Registry will leave this field empty if no VFC eligibility information is available.
Charge Price Indicator	21	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Courtesy Code	22	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Credit Rating	23	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contract Code	24	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contract Effective Date	25	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contract Amount	26	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Contract Period	27	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Interest Code	28	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Transfer to Bad Debt Code	29	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.

FIELD NAME	FIELD NUMBER	NOTES
Transfer to Bad Debt Date	30	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Bad Debt Agency Code	31	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Bad Debt Transfer Amount	32	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Bad Debt Recovery Amount	33	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Delete Account Indicator	34	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Delete Account Date	35	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Discharge Disposition	36	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Discharged to Location	37	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Diet Type	38	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Servicing Facility	39	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Bed Status	40	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Account Status	41	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Pending Location	42	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the

FIELD NAME	FIELD NUMBER	NOTES
		Registry will always leave this field empty.
Prior Temporary Location	43	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Admit Date/Time	44	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Discharge Date/Time	45	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Current Patient Balance	46	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Total Charges	47	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Total Adjustments	48	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Total Payments	49	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Alternate Visit ID	50	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Visit Indicator	51	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Other Healthcare Provider	52	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
PV2 Segment		
	<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will not be included in VXR messages generated by the Registry.</i>	
IN1 Segment		
	<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will not be included in VXR messages generated by the Registry.</i>	
IN2 Segment		
	<i>Per the Recommendation of the CDC's Implementation Guide, this</i>	

FIELD NAME	FIELD NUMBER	NOTES
		<i>optional segment will not be included in VXR messages generated by the Registry.</i>
IN3 Segment		
		<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will not be included in VXR messages generated by the Registry.</i>
ORC Segment		
		<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will not be included in VXR messages generated by the Registry.</i>
RXA Segment		
Give Sub-ID Counter	1	<ul style="list-style-type: none"> Registry will always put a value of "0" in this field.
Administration Sub-ID Counter	2	<ul style="list-style-type: none"> Registry will always put a value of "999" in this field to indicate dose numbers are not being included in the vaccine information.
Date/Time Start of Administration	3	<ul style="list-style-type: none"> Registry will always include the YYYYMMDD value in this field for the date the vaccination was administered. Registry will not include any time-related values in this field.
Date/Time End Of Administration	4	<ul style="list-style-type: none"> Registry will always include the YYYYMMDD value in this field for the date the vaccination was administered. Note this field will always be the same as the "Date/Time Start of Administration" field.
Administered Code	5	<ul style="list-style-type: none"> Registry will always include the CVX code in the first triplet with a value of "CVX" for the coding system. <ul style="list-style-type: none"> Example: 08^hepatitis B vaccine, pediatric^CVX Registry will include the CPT code, as available, in the second triplet with a value of "CPT" for the coding system.
Administered Amount	6	<ul style="list-style-type: none"> Registry will always include the administered dose in this field. Registry will put a value of "999" in this field for refused vaccinations.
Administered Units	7	<ul style="list-style-type: none"> Registry will always include a value of "ML^ISO+" in this field. Registry will leave this field empty for refused vaccinations.
Administered Dosage Form	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Administration Notes	9	<ul style="list-style-type: none"> Registry will always include an indication of the source of the record in the first instance of this field. The possible values will be: <ul style="list-style-type: none"> "00^NEW IMMUNIZATION RECORD^NIP001" for vaccinations administered via the Registry. "01^HISTORICAL INFORMATION - SOURCE UNSPECIFIED" for vaccinations that are marked as historical in the Registry.

FIELD NAME	FIELD NUMBER	NOTES
		<ul style="list-style-type: none"> Registry will include any free text comments associated with the vaccination in the second instance of this field. If no comment exists, the second instance of this field will not be included in the message. Registry will leave this field empty for refused vaccinations.
Administering Provider	10	<ul style="list-style-type: none"> Registry will always put the name and title of the person having administered the vaccination in this field. Registry will leave this field empty for historical vaccinations.
Administering At Location	11	<ul style="list-style-type: none"> Registry will always include the name and address of the provider where the vaccination was administered in this field.
Administer per (time unit)	12	<ul style="list-style-type: none"> Registry will always leave this field empty.
Administered Strength	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Administered Strength Unit	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Substance Lot Number	15	<ul style="list-style-type: none"> Registry will include the lot number of the vaccine administered. Registry will leave this field empty when the inventory data is not available for historical vaccinations. Registry will leave this field empty for refused vaccinations.
Substance Expiration Date	16	<ul style="list-style-type: none"> Registry will include the YYYYMMDD value in this field. No time-related data will be included. Registry will leave this field empty when the data is not available for historical vaccinations. Registry will leave this field empty for refused vaccinations.
Substance Manufacturer Name	17	<ul style="list-style-type: none"> Registry will include the standard vaccine manufacturer code in this field and will set the coding system component to "HL70227". Registry will leave this field empty when the data is not available for historical vaccinations. Registry will leave this field empty for refused vaccinations.
Substance Refusal Reason	18	<ul style="list-style-type: none"> Registry will only include a value in this field when a vaccination has been refused. Registry will indicate the reason for refusal per table NIP0002.
Indication	19	<ul style="list-style-type: none"> Registry will always leave this field empty.
Completion Status	20	<ul style="list-style-type: none"> Registry will put a value of "CP" in this field (indicating administration was completed) for all administered and historical vaccinations. Registry will put a value of "RE" in this field (indicating administration was refused) for all refused vaccinations.
Action Code-RXA	21	<ul style="list-style-type: none"> Registry will always leave this field empty.
System Entry Date/Time	22	<ul style="list-style-type: none"> Registry will include the system date and time when the vaccination record was created.

FIELD NAME	FIELD NUMBER	NOTES
RXR Segment		
Route	1	<ul style="list-style-type: none"> Registry will include the route used to administer the vaccination and will put a value of "HL70162" in the coding system component.
Site	2	<ul style="list-style-type: none"> Registry will include the site used to administer the vaccination and will put a value of "HL70163" in the coding system component.
Administration Device	3	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Administration Method	4	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Routing Instruction	5	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
OBX Segment		
Set ID - OBX	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide.
Value Type	2	<ul style="list-style-type: none"> Registry will use the following value types as appropriate for each allowed observation identifier in OBX-3: <ul style="list-style-type: none"> CE DT NM ST TS
Observation Identifier	3	<ul style="list-style-type: none"> Registry will include the following data (with indicated LOINC codes) in VXR messages sent from the Registry when available for a vaccination: <ul style="list-style-type: none"> 1648-5^Tuberculosis Reaction^LN 29768-9^Date Vaccine Information Statement Published^LN 29769-7^Date Vaccine Information Statement Presented^LN 30979-9^Vaccines due next^LN 30979&30980-7^Date vaccine due^LN 30948-4^Vaccination Adverse event and treatment, if any^LN 30946-8^Vaccination contraindication effective date^LN 30944-3^Vaccination temporary contraindication expiration date^LN 30945-0^Vaccination contraindication^LN Registry will not include OBX segments to indicate the dose numbers. NOTE: this list can be revisited in the future if the information is desired by users of the system.
Observation Sub-	4	<ul style="list-style-type: none"> Registry will conform to the standard numbering

FIELD NAME	FIELD NUMBER	NOTES
ID		approach defined in the Implementation Guide.
Observation Value	5	<ul style="list-style-type: none"> Registry will include the appropriate value for the value type and identifier defined in OBX-2 and OBX-3.
Units	6	<ul style="list-style-type: none"> Registry will always leave this field empty.
References Range	7	<ul style="list-style-type: none"> Registry will always leave this field empty.
Abnormal Flags	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Probability	9	<ul style="list-style-type: none"> Registry will always leave this field empty.
Nature of Abnormal Test	10	<ul style="list-style-type: none"> Registry will always leave this field empty.
Observation Result Status	11	<ul style="list-style-type: none"> Registry will always value this field as an “F” indicating that the result is final.
Date Last Obs Normal Values	12	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
User Defined Access Checks	13	<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the Registry will always leave this field empty.
Date/Time of the Observation	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Producer’s ID	15	<ul style="list-style-type: none"> Registry will always leave this field empty.
Responsible Observer	16	<ul style="list-style-type: none"> Registry will always leave this field empty.
Observation Method	17	<ul style="list-style-type: none"> Registry will always leave this field empty.
<i>NTE Segment</i>		
Set ID - NTE	1	<ul style="list-style-type: none"> Registry will conform to the standard numbering approach defined in the Implementation Guide. Registry will only include an NTE segment in the VXR message if there is an OBX segment containing an indication of an adverse reaction (in which case it will contain the appropriate reaction).
Source of Comment	2	<ul style="list-style-type: none"> Registry will always leave this field empty. Registry will only include an NTE segment in the VXR message whenever there is an OBX segment containing an indication of an adverse reaction (in which case it will contain the appropriate reaction).
Comment	3	<ul style="list-style-type: none"> Registry will only include an NTE segment in the VXR message whenever there is an OBX segment containing an indication of an adverse reaction (in which case it will contain the appropriate reaction).
Comment Type	4	<ul style="list-style-type: none"> Registry will always leave this field empty. Registry will only include an NTE segment in the VXR message whenever there is an OBX segment containing an indication of an adverse reaction (in which case it will contain the appropriate reaction).

Table 6: Reference Information for VXR Message

VXU - Unsolicited Vaccination Record Update (VXU)

The VXU message is used by a provider to submit a vaccination they have administered within their clinic. As mentioned previously, the message should be formatted as specified in the referenced documentation. Table 7 contains notes for various fields as they pertain to the Registry.

When a matching patient record is found, the Registry will then review the data included in the VXU message.

- Patient demographic data in the message (including name, date of birth, etc.) will be used to update the relevant fields in the Registry.
 - One caveat to this is that the patient's birth information (e.g., date of birth, birth certificate ID, etc.) will only be updated in the Registry if the original record was created by the Vital Statistics system and the incoming message is from the Vital Statistics system.
- If an invalid value is set in the VXU message, the Registry will attempt to continue processing the rest of the values in the message, but it will return an acknowledgement of type 'AE'. The acknowledgement will indicate those values that were incorrect and could not be processed.
 - In the case of a required field, an invalid value may result in an acknowledgement of type 'AR' indicating the entire message has been rejected.
- If the vaccination in the message already exists in the Registry, the Registry will update any applicable fields with the valid data supplied in the VXU message.
- If the vaccination does not exist, the Registry will add the vaccination to the patient's record and will contain all valid data provided in the VXU message.
- If the vaccination has an administration date before the patient's date of birth, the vaccination will not be added to the Registry.
- If the Registry already has another vaccination on the same date with the same CVX code, the incoming vaccination will not be added to the Registry.
- If there is no RXA segment, the message will still be processed and the patient default clinic will be set to the clinic tied to the sending HL7 facility code.
- The HL7 message must have the segments in the order shown below if they are included otherwise data may not be processed correctly.
- Whenever an incoming VXU message matches to a patient marked as "opted out" in the Registry, the patient's record will not be modified and the Registry will return an ACK message indicating the patient has previously opted out.

Table 7 contains the detailed format definition for a VXU message sent to Arkansas WebIZ. The following conventions have been used:

- Required fields are in **bold** type and are marked appropriately in the REQ/OPT column
- Shaded cells will not be used by the ARKANSAS WEBIZ Registry.
- The REQ/OPT column will contain one of 3 values:
 - O – OptionalOptional fields may be left as NULL (i.e., no value supplied) in an

incoming message if the sending system does not track this data and/or does not include it in their submission. However, if a value is specified, it **must** be a valid value and format as specified below. Otherwise, an acknowledgement message of type 'AE' may be returned.

- **R - Required**
All required fields must contain a valid value and format as specified below. If a valid value is not submitted or if the value submitted is not in a valid format, an acknowledgement message of type 'AR' will be returned.
- **RE - Required but can be NULL**
While a field of this type is not required by the HL7 standard, ADH has deemed this extremely important data. Therefore, if the sending system supports any of these data elements, it must include them in the message. If a value is specified in the incoming message, it **must** be a valid value and format as specified below. Otherwise, an acknowledgement message of type 'AE' may be returned. ADH will be reviewing all incoming data (during the Testing process as well as post-production rollout) on a regular basis using various Data Quality reports in Arkansas WebIZ. Any provider not complying with these RE fields may be contacted directly by ADH to provide an explanation.
- An instruction to leave a field NULL means no value needs to be provided in that field. It would look like || when constructing the message.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
<i>MSH Segment</i>						
Field Separator	1	1	ST		R	<ul style="list-style-type: none"> Registry expects that incoming messages will use the pipe character (“ ”) as the field separator for all messages. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Encoding Characters	2	4	ST	^~\&	R	<ul style="list-style-type: none"> Registry expects that incoming messages will contain the recommended value of “^~\&” in this field. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Sending Application	3					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Sending Facility	4	180	HD	The ADH Immunization Program unique ID assigned to the provider	R	<ul style="list-style-type: none"> The ADH Immunization Program will assign a unique ID to each provider system interfacing with the Registry. This ID should be included in this field. Registry will include the ID provided here in the “Receiving Facility” field of the MSH segment of the response message. If an invalid ID is included or missing, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Receiving Application	5					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Receiving Facility	6	180	HD	Leave NULL or use a value of AR0000	R	<ul style="list-style-type: none"> Registry will allow two values in this field: <ul style="list-style-type: none"> Leave NULL A value of “AR0000” Any other value will be considered invalid, and the Registry will not process the message. It will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Date/Time of Message	7	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will archive this in the message log. It is unnecessary to provide the time portion of this time stamp field.
Security	8					<ul style="list-style-type: none"> Registry will ignore the contents of this field.
Message Type	9	7	CM	VXU^V04	R	<ul style="list-style-type: none"> Registry expects this to always be “VXU^V04” for this type of message. Registry will ignore any value in the Message Structure component of this field. If an invalid message type is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of “AR” indicating the message has been rejected.
Message Control ID	10	20	ST	a unique ID generated by the system sending the message	R	<ul style="list-style-type: none"> Should be a unique ID (within each system sending messages to the Registry) and is generated by the system sending the message. Registry will archive this in its message log.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						<ul style="list-style-type: none"> Registry will include the ID provided here in the "Message Control ID" field of the MSA segment of the response message. If no value is supplied, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Processing ID	11	3	PT	One of the following: D, P, or T	R	<ul style="list-style-type: none"> Registry will use the indicated system to generate the results for the query. Valid values are represented HL7- defined Table 0103 If an invalid Processing Id is included, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected. Registry will ignore the contents of the second component as it does not impact how the Registry will process the request.
Version ID	12	60	VID	2.3.1	R	<ul style="list-style-type: none"> Registry expects all messages to use version 2.3.1. If an unsupported version is indicated, the Registry will not process the message and will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected. NOTE: Additional versions may be made available as the need arises. Please contact the ADH Immunization Program to discuss any specific needs for other versions.
Sequence Number	13					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Continuation Pointer	14					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Accept Acknowledgement Type	15	2	ID	Leave NULL or use a value of NE	O	<ul style="list-style-type: none"> Registry does not support enhanced acknowledgement mode. Registry will only respond using the original acknowledgement mode (i.e., a value of NULL or "NE"). Registry will ignore any other value in this field and will process the message using the original acknowledgement mode.
Application Acknowledgment Type	16					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Country Code	17	3	ID	USA or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will originate in the USA (i.e., this field has a value of either "USA" or is NULL). Registry will ignore any other value in this field and will process the message as if it originated in the USA.
Character Set	18	10	ID	ASCII or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will use the ASCII character set (i.e., this field has a value of "ASCII" or is NULL). Registry will ignore any other value in this field and will process the message using the ASCII character set.
Principal Language of Message	19	60	CE	EN or leave NULL	O	<ul style="list-style-type: none"> Registry expects all messages will use English as the principal language (i.e., this field has a value of "EN" or is NULL). Registry will ignore any other value in this field and will process the message in English.
Alternate	20					<ul style="list-style-type: none"> Registry expects all messages submitted to it are not using character

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Character Set Handling						<ul style="list-style-type: none"> set switching (i.e., this field is NULL). Registry will ignore any other value in this field and will process the message without using alternate character sets.
PID Segment						
Set ID - PID	1	4	SI		O	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide.
Patient ID	2					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Identifier List	3	20	CX	<p>ID^check digit^code identifying check digit^assigning authority^Patient Identifier type^assigning facility</p> <p>This field can contain multiple sets. For example, a field containing a State Registry ID, Birth Record Number, and Social Security Number would look like the following:</p> <p>1234^^^^SR^~123456^^^^BR^~123456789^^^^SS^</p>	R	<ul style="list-style-type: none"> Registry will accept values for the following types of Patient identifier types. (The order listed here is the same order used to find records.) <ul style="list-style-type: none"> SR (State Registry ID) (This field must only contain numeric digits. If any non-numeric characters are found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.) BR (Birth Record Number) – will be stored as the patient's birth certificate ID in the Registry. SS (Social Security Number) (This field must include 9 digits after the system removes all non-numeric characters such as a dash (-), forward slash (/), spaces, etc. If 9 digits are not found, the system will ignore the value in this field. It will try to continue processing the message, but it will return an acknowledgement of type 'AE'.) MA (Medicaid Number) MC (Medicare Number) MR (Medical Record Number) – will be stored as a local identifier for the patient associated with the facility MCI (Master Client Index) Patient Identifier types are case sensitive and need to be in capital letters. If no valid values are received, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Alternate Patient ID - PID	4					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Name	5	48	XPN	<p>Lastname^Firstname^Middle^Suffix^Prefix^Degree^Name Type</p>	R	<ul style="list-style-type: none"> Registry expects the patient's full name in this field with a Name Type component of "L". <ul style="list-style-type: none"> Example: Simpson^Bart^Thomas^^^^L ... If no valid name is supplied, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected. If the Patient Identifier (PID-3) has a value of 'BR' then the patient's name information will be put into the Birth Record name fields also. Registry will not update the patient's name in its instance of the patient's record if that record was received from the Vital

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						<p>Statistics system.</p> <ul style="list-style-type: none"> NOTE: Name values will be parsed by the Registry to ensure a standardized format prior to searching for or updating a patient's record. This may result in slight variations of names submitted versus names returned.
Mother's Maiden Name	6	48	XPN	Lastname^Firstname^Middle^Suffix^Prefix^Degree^Name Type	O	<ul style="list-style-type: none"> Registry expects the Name Type component to be "M" if any value is entered in this field. <ul style="list-style-type: none"> Example: Simpson^^^^^^M Registry will ignore any value associated with other name type components.
Date/Time of Birth	7	26	TS	YYYYMMDD	RE	<ul style="list-style-type: none"> Registry will only use the date portion of any value in this time stamp field. There is no need to provide the time portion of the timestamp. If an invalid date is received, the Registry will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. Registry will ignore any time-related values in this field. Registry will not update the patient's date of birth in its instance of the patient's record if that record was received from the Vital Statistics system.
Sex	8	1	IS	One of the following: M, F, O, or U	O	<ul style="list-style-type: none"> Registry expects a valid value for the patient's gender in this field. See User-defined Table 0001 Registry will ignore any data in this field that is not a valid gender. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Patient Alias	9	48	XPN	Lastname^Firstname^Middle^Suffix^Prefix^Degree^Name Type	O	<ul style="list-style-type: none"> Registry expects the Name Type component to be "A" if any value is entered in this field. <ul style="list-style-type: none"> Example: Simpson^Bart^Tom^^^^A Registry will ignore any value associated with other name type components. NOTE: Name values will be parsed by the Registry to ensure a standardized format prior to searching for or updating a patient's record. This may result in slight variations of names submitted versus names returned.
Patient Race	10	80	CE	Identifier^Text^HL70005	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects the identifier to be an approved value in the User-defined Table 0005 or the US Race codes included in version 2.4 of the HL7 standard and the coding system component to be "HL70005". <ul style="list-style-type: none"> Examples <ul style="list-style-type: none"> 2106-3^White^HL70005 W^White^HL70005 Registry will save the race values in up to 5 instances of this segment. Any additional instances will be ignored. Registry will ignore any data in this field that is not a valid race. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Patient Address	11	106	XAD	AddressLine1^AddressLine2^City^StateAbbreviation^Zipcode^USA^M	RE	<ul style="list-style-type: none"> Registry accepts the following address types: <ul style="list-style-type: none"> BDL – City and State portions will be loaded into the Birth City and Birth State fields M – Mailing Address P – Physical Address All other address types will be accepted as the mailing address. Example: 4545 Bakers Lane^Apartment 9^San Antonio^TX^78214^USA^M Registry expects there to be either 5 or 9 digits in the zip code component after the system removes all non-numeric characters (e.g., dash (-), forward slash (/), spaces, etc.) If any of the components contain an invalid value (as defined in this document and/or the Implementation Guide), the Registry will ignore the component's value. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. Note that this may cause the resulting address in Arkansas WebIZ to be incomplete.
County Code	12					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Number - Home	13	40	XTN	999-999-9999^Telecommunication use code^Telecommunication equipment type^email address	O	<ul style="list-style-type: none"> Registry will interpret the Telecommunication use code values as follows: <ul style="list-style-type: none"> PRN → Home Phone ORN → Cell Phone ASN → Message Phone BPN → Pager NET → Email Address Registry will interpret the Telecommunication equipment type as follows: <ul style="list-style-type: none"> PH → Phone X.400 → email address Examples: <ul style="list-style-type: none"> 617-555-1212^PRN^PH OR ^NET^X.400^georgebush@yahoo.com Registry will ignore any other types. Registry will ignore any data in this field that is not a valid phone number (e.g., contains incorrect number of digits, etc.) It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Patient Number - Business	14	40	XTN	999-999-9999^Telecommunication use code^Telecommunication equipment type	O	<ul style="list-style-type: none"> Registry will interpret the Telecommunication use code values as follows: <ul style="list-style-type: none"> WPN → Work Phone Registry will interpret the Telecommunication equipment type as follows: <ul style="list-style-type: none"> PH → Phone Example: 617-555-1212^WPN^PH

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						<ul style="list-style-type: none"> Registry will ignore any other types. Registry will ignore any data in this field that is not a valid phone number (e.g., contains incorrect number of digits, etc.) It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Primary Language	15	60	CE	Identifier^Text^HL70296	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard language definition found in User-defined Table 0296 and the coding system component to be "HL70296". <ul style="list-style-type: none"> Example: EN^English^HL70296 Registry will ignore any data in this field that is not a valid language code. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Marital Status	16					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Religion	17					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Account Number	18					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
SSN Number - Patient	19					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Driver's License Number - Patient	20					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Mother's Identifier	21					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Ethnic Group	22	80	CE	Identifier^Text^HL70189	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard ethnic group definition found in User-defined Table 0189 and that coding system component to be "HL70189". Registry will ignore any data in this field that is not a valid ethnic group. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Birth Place	23	60	ST	Birth Place	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard text name of the birth facility and will load it into the Arkansas WebIZ Birth Facility field.
Multiple Birth Indicator	24	1	ID	One of the following: Y, N, or leave NULL	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard Yes/No indicator. Registry will ignore any data in this field that is not a valid Yes/No indicator. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Birth Order	25	2	NM	Leave NULL or an integer between 1-99	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be an integer greater than 0 indicating the birth order for the patient. If the value is > 1, then the multiple birth flag will be set to 'Y'. Registry will ignore any data in this field that is not a valid birth order. It

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Citizenship	26					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Veterans Military Status	27					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Nationality	28					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Death Date and Time	29	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will only use the date portion of any value in this field. There is no need to provide the time portion of the timestamp. Registry will ignore any data in this field that is not a valid date. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. Registry will ignore any time-related values in this field.
Patient Death Indicator	30	1	ID	One of the following: Y or N, or leave NULL	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard Y/N indicator. Registry will ignore any data in this field that is not a valid Y/N indicator. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
PD1 Segment						
Living Dependency	1					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Living Arrangement	2					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Primary Facility	3					<ul style="list-style-type: none"> Registry will ignore any value in this field. Please note, if a valid vaccination is included in the message, Registry will not use this field and instead will update the patient's home clinic based on the ID number of the system sending the VXU message.
Patient Primary Care Provider Name and ID Number	4					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Student Indicator	5					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Handicap	6					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Living will	7					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Organ Donor	8					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Separate Bill	9					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Duplicate Patient	10					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Publicity Code	11					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Protection Indicator	12	1	ID	One of the following: Y, N, or leave NULL	O	<ul style="list-style-type: none"> If the patient is 18 years old or less, Registry will load the vaccination regardless of the value of this field. If the patient is over 18, the Registry will load the record if this field is "Y", (sharing is allowed), or leave NULL. In all other cases, the Registry will not load the record.
Protection Indicator Effective Date	13					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Place of Worship	14					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Advance Directive Code	15					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Immunization Registry Status	16	1	IS	One of the following: A, I, L, M	O	<ul style="list-style-type: none"> Registry will accept the following values: <ul style="list-style-type: none"> A: Active in Immunization Program I: Inactive in Immunization Program L: Lost to Follow-up from the Immunization Program M: MOGE (Moved or Gone Elsewhere) from the Immunization Program If PD1-17 (Status Date) is not included when this field has a value then the registry will continue processing the message, but it will return an acknowledgement of type 'AE'.
Immunization Registry Status Effective Date	17	8	DT	YYYYMMDD	O	<ul style="list-style-type: none"> For a status of A, the date will be interpreted as the date the patient was opened in the Immunization Program. For a status of I, L, or M, the date will be interpreted as the date the patient was closed out of the Immunization Program. The date will be ignored under all other circumstances or when the registry status (PD1-16) field is NULL.
Publicity Code Effective Date	18					<ul style="list-style-type: none"> Registry will ignore any value in this field.
NK1 Segment						
Set ID - NK1	1	4	SI		R	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Name	2	48	XPN	Lastname^Firstname^Middle^ Suffix^Prefix^Degree^Name Type	O	<ul style="list-style-type: none"> Registry will only accept values with a Name Type of "L" (Legal) or "M" (Maiden). Registry will ignore any data in this field that is not a valid value. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Relationship	3	60	CE	Identifier^Text^HL70063	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a standard relationship definition found in User-defined Table 0063 and the coding system component to be "HL70063". A new patient contact will be created for each NK1 segment. <ul style="list-style-type: none"> Example: MTH^Mother^HL70063 In addition, the Registry will accept the following locally-defined values: <ul style="list-style-type: none"> BRM: Birth Mother – Loaded into the Birth Mother fields on the Patient Demographics screen Registry will ignore any data in this field that is not a valid relationship. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Address	4					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Phone Number	5	40	XTN	999-999- 9999^Telecommunication use code^Telecommunication equipment type	O	<ul style="list-style-type: none"> Registry will interpret the Telecommunication use code values as follows: <ul style="list-style-type: none"> PRN → Home Phone ORN → Cell Phone Registry will interpret the Telecommunication equipment type as follows: <ul style="list-style-type: none"> PH → Phone Example: 617-555-1212^PRN^PH Registry will ignore any other types or if there is no value in NK1-2 (Contact Name). Registry will ignore any data in this field that is not a valid phone number (e.g., contains incorrect number of digits, etc.) It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Business Phone Number	6	40	XTN	999-999- 9999^Telecommunication use code^Telecommunication equipment type	O	<ul style="list-style-type: none"> Registry will interpret the Telecommunication use code values as follows: <ul style="list-style-type: none"> WPN → Work Phone Registry will interpret the Telecommunication equipment type as follows: <ul style="list-style-type: none"> PH → Phone Example: 617-555-1212^WPN^PH Registry will ignore any other types. Registry will ignore any data in this field that is not a valid phone number (e.g., contains incorrect number of digits, etc.) It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Contact Role	7					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						Therefore, the contents of this field will be ignored.
Start Date	8					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
End Date	9					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Next of Kin/AP Job Title	10					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Next of Kin/AP Job Code/Class	11					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Next of Kin/AP Employee Number	12					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Organization Name - NK1	13					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Marital Status	14					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Sex	15					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Date/Time of Birth	16					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Living Dependency	17					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Ambulatory Status	18					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Citizenship	19					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Primary Language	20					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Living Arrangement	21					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Publicity Code	22					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Protection Indicator	23					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Student Indicator	24					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Religion	25					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Mother's Maiden Name	26					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Nationality	27					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Ethnic Group	28					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contact Reason	29	80	CE	Identifier^Text^HL70222	O	<ul style="list-style-type: none"> If a value is supplied in this field, the Registry expects it to be a contact reason value found in User-defined Table 0222 and the coding system component to be "HL70222". In addition to accepting the RR and PC contact reasons, the Registry will accept the following locally-defined contact reason values: <ul style="list-style-type: none"> PR: Primary – Indicates the contact associated with this segment should be marked as Primary in the Registry. (Any other contacts marked as Primary will no longer have this designation.) Example: PR^Primary^HL70222 Registry will ignore any data in this field that is not a valid relationship. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Contact Person's Name	30					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contact Person's Telephone Number	31					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contact Person's Address	32					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Next of Kin/Associated Party's Identifiers	33					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Job Status	34					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Race	35					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Handicap	36					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contact Person Social Security Number	37					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
PV1 Segment						
Set ID - PV1	1	4	SI		O	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide.
Patient Class	2	1	IS	R	R	<ul style="list-style-type: none"> Registry will ignore any value in this field and will treat all records as type "R". Since the Registry treats all records as type "R", the Registry will accept any value in the field and will NOT return a rejected Acknowledgement Code of "AR" in the ACK message.
Assigned Patient Location	3					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Admission Type	4					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Preadmit Number	5					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Prior Patient Location	6					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Attending Doctor	7					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Referring Doctor	8					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Consulting Doctor	9					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Hospital Service	10					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Temporary Location	11					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Preadmit Test Indicator	12					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Readmission Indicator	13					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Admit Source	14					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Ambulatory Status	15					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
VIP Indicator	16					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Admitting Doctor	17					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Patient Type	18					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Visit Number	19					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Financial Class	20	50	FC	VFC Eligibility Code^YYYYMMDD	O	<ul style="list-style-type: none"> Registry will accept valid VFC Eligibility codes in this field. The current list of valid values are: <ul style="list-style-type: none"> o V00 - VFC Eligibility not determined/unknown o V01 - Not VFC Eligible o V02 - VFC Eligible – Medicaid Eligible or Enrolled o V03 - VFC Eligible - Uninsured o V04 - VFC Eligible - American Indian or Alaskan Native o V05 - VFC Eligible - Underinsured Example: V01^20120828 Registry will ignore any data in this field that is not a valid financial class. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Charge Price Indicator	21					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Courtesy Code	22					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Credit Rating	23					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contract Code	24					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contract Effective Date	25					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contract Amount	26					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Contract Period	27					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Interest Code	28					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Transfer to Bad Debt Code	29					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Transfer to Bad Debt Date	30					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Bad Debt Agency Code	31					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Bad Debt Transfer Amount	32					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Bad Debt Recovery Amount	33					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Delete Account Indicator	34					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Delete Account Date	35					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Discharge Disposition	36					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Discharged to Location	37					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Diet Type	38					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Servicing Facility	39					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Bed Status	40					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Account Status	41					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
						Therefore, the contents of this field will be ignored.
Pending Location	42					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Prior Temporary Location	43					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Admit Date/Time	44					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Discharge Date/Time	45					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Current Patient Balance	46					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Total Charges	47					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Total Adjustments	48					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Total Payments	49					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Alternate Visit ID	50					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Visit Indicator	51					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Other Healthcare Provider	52					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
PV2 Segment						
						<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will be ignored if it is included in VXU messages sent to the Registry.</i>
IN1 Segment						
						<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will be ignored if it is included in VXU messages sent to the Registry.</i>
IN2 Segment						
						<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will be ignored if it is included in VXU messages sent to the Registry.</i>

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
<i>IN3 Segment</i>						
						<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will be ignored if it is included in VXU messages sent to the Registry.</i>
<i>ORC Segment</i>						
						<i>Per the Recommendation of the CDC's Implementation Guide, this optional segment will be ignored if it is included in VXU messages sent to the Registry.</i>
<i>RXA Segment</i>						
Give Sub-ID Counter	1	4	NM	0	R	<ul style="list-style-type: none"> Registry expects this value to always be "0". In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Administration Sub-ID Counter	2	4	NM	1-99 to represent dose given or 0 to indicate dose refused	R	<ul style="list-style-type: none"> Registry will document the refusal of a vaccine if the value is "0" AND the associated refusal reason (RXA-18) has a valid value. If the associated refusal reason is missing (RXA-18) then the registry will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'. Registry will ignore any dose numbers provided in this field. (Registry will number all doses within a series after the data has been merged with existing records in the system.) In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Date/Time Start Of Administration	3	26	TS	YYYYMMDD	R	<ul style="list-style-type: none"> Registry will only use the date portion of any value in this field. Registry will ignore any time-related values in this field. In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Date/Time End of Administration	4					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Administered Code	5	100	CE	CVX Identifier^CVX Text^CVX^CPT Identifier^CPT Text^CPT code	R	<ul style="list-style-type: none"> Registry assumes the first triplet will always contain the CVX code for the vaccine. The valid CVX Identifier and CVX Text values can be found in the HL7-defined Table 0292 Example: 08^hepatitis B vaccine, pediatric^CVX Registry assumes the second triplet, if included, will always contain the CPT code for the vaccine. Example: 05^DTAP-HIB^CVX^90721^DTAP-HIB^C4 The most up to date mapping of CVX and CPT codes are available on: http://www.cdc.gov/nip/registry/cpt.htm In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Administered Amount	6	20	NM	1-99 to represent administered amount or 999	R	<ul style="list-style-type: none"> Registry expects a valid amount in this field. Registry expects a value of "999" in this field for a refused

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
				to indicate dose refused		vaccine. <ul style="list-style-type: none"> In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Administered Units	7	60	CE	ML^ISO+	O	<ul style="list-style-type: none"> Registry expects a value of "ML^ISO+" in this field indicating the administered amount is measured in milliliters. Registry will ignore any other value in this field.
Administered Dosage Form	8					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Administration Notes	9	200	CE	Identifier^Text^Coding System	O	<ul style="list-style-type: none"> Registry will interpret this field to be either free text comments or an indication of the source of this record. To indicate the source of the record, the Registry expects one of the following values for the components: <ul style="list-style-type: none"> "00^NEW IMMUNIZATION RECORD^NIP001" for vaccinations administered. "01^HISTORICAL INFORMATION - SOURCE UNSPECIFIED" for vaccinations that are marked as historical. When the immunization is sent as administered (00^NEW IMMUNIZATION RECORD^NIP001) then the history flag is set to 'N'. To indicate a free text comment, the Registry expects the Identifier to be NULL. Example: ^this is free text Registry will ignore all other entries in this field.
Administering Provider	10					<ul style="list-style-type: none"> Registry will ignore any value in this field. Registry will use the provider/clinic indicated in the MSH segment of the field to associate the vaccination with a provider in the Registry.
Administered-At Location	11					<ul style="list-style-type: none"> Registry will ignore any value in this field. Registry will use the provider/clinic indicated in the MSH segment of the field to associate the vaccination with a provider in the Registry.
Administer per (time unit)	12					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Administered Strength	13					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Administered Strength Units	14					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Substance Lot Number	15	20	ST	Provide lot number here	RE	<ul style="list-style-type: none"> Registry will interpret any value included in this field as the lot number for the vaccination. If an invalid lot number value is supplied, the Registry will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Substance Expiration Date	16	26	TS	YYYYMMDD	O	<ul style="list-style-type: none"> Registry will only use the date-related portion of this field. Registry will ignore any time-related data in this field. Registry will ignore any data in this field that is not a valid date. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Substance Manufacturer	17	60	CE	Provide manufacturer code here	RE	<ul style="list-style-type: none"> Registry will accept any valid standard manufacturer code (i.e., MVX codes published by the CDC).

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Name						<ul style="list-style-type: none"> If an invalid value is supplied, the Registry will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Substance Refusal Reason	18	200	CE	Identifier^Text^NIP0002	O	<ul style="list-style-type: none"> Registry expects any Identifier and Text to map to the values in the NIP-defined Table 002 . Example: 00^Parental^NIP002 Registry will ignore any data in this field that is not a valid refusal reason. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Indication	19					<ul style="list-style-type: none"> Registry will ignore any value in this field.
Completion Status	20	2	ID	CP, RE, NA, or PA	O	<ul style="list-style-type: none"> Registry expects any value supplied here to be from the HL7-defined Table 0322 . Registry will ignore any data in this field that is not a valid completion status. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Action Code-RXA	21	2	ID	A, D, or U	O	<ul style="list-style-type: none"> Registry expects any value supplied here to be from the HL7-defined Table 0323 . Registry will add the record if it does not currently exist in the system. Registry will update the record if it already exists in the system. Registry will delete the record from the system if indicated in this field.
System Entry Date/Time	22					<ul style="list-style-type: none"> Registry will ignore any value in this field.
RXR Segment						
Route	1	60	CE	Identifier^Text^HL70162	R	<ul style="list-style-type: none"> Registry expects any Identifier and Text to map to the values in the HL7-defined Table 0162 . Registry expects the indicated value to have a value of "HL70162" in the name of the coding system component. Example: IM^INTRAMUSCULAR^HL70162 In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Site	2	60	CE	Identifier^Text^HL70163	O	<ul style="list-style-type: none"> Registry expects any Identifier and Text to map to the values in the HL7-defined Table 0163 . Registry expects the indicated value to have a value of "HL70163" in the name of the coding system component. Example: LA^LEFT ARM^HL70163 Registry will ignore any data in this field that is not a valid site. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Administration Device	3					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Administration Method	4					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Routing	5					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Instruction						optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
OBX Segment						
Set ID - OBX	1	4	SI		O	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide.
Value Type	2	3	ID	CE, DT, NM, ST, or TS	O	<ul style="list-style-type: none"> Registry expects this field to have one of the following values: <ul style="list-style-type: none"> CE DT NM ST TS
Observation Identifier	3	80	CE	Identifier^Text^LN	R	<ul style="list-style-type: none"> Registry will accept the following data (with indicated LOINC codes) in VXU messages sent to the Registry: <ul style="list-style-type: none"> 1648-5^Tuberculosis Reaction^LN 29768-9^Date Vaccine Information Statement Published^LN 29769-7^Date Vaccine Information Statement Presented^LN 30948-4^Vaccination Adverse event and treatment, if any^LN 30946-8^Vaccination contraindication effective date^LN 30944-3^Vaccination temporary contraindication expiration date^LN 30945-0^Vaccination contraindication^LN 8339-4^Body Weight at Birth^NM In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.
Observation Sub-ID	4	20	ST	1 in the first OBX segment for the same observation ID, 2 in the second OBX segment for the same observation ID, 3 in the third...	O	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide.
Observation Value	5	Variable	Varies	The data in this field must be of the format specified above in Value Type and Observation Identifier	O	<ul style="list-style-type: none"> Registry expects a value in this field that is consistent with that indicated by the values in OBX-2 and OBX-3. Registry will ignore any OBX segment with an invalid value in this field. It will attempt to continue processing the message, but it will return an acknowledgement of type 'AE'.
Units	6					<ul style="list-style-type: none"> Registry will always ignore this field.
References Range	7					<ul style="list-style-type: none"> Registry will always ignore this field.
Abnormal Flags	8					<ul style="list-style-type: none"> Registry will always ignore this field.
Probability	9					<ul style="list-style-type: none"> Registry will always ignore this field.
Nature of Abnormal Test	10					<ul style="list-style-type: none"> Registry will always ignore this field.
Observ Result Status	11	1	ID	F	R	<ul style="list-style-type: none"> Registry expects this field to always have a value of "F". In all other cases, the Registry will return an ACK message with an Acknowledgement Code of "AR" indicating the message has been rejected.

FIELD NAME	FIELD NBR	FIELD LENGTH	FIELD TYPE	FIELD FORMAT EXAMPLE	REQ/OPT	NOTES on VALID VALUES
Date Last Obs Normal Values	12					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
User Defined Access Checks	13					<ul style="list-style-type: none"> Per the recommendation in the CDC Implementation Guide, this is an optional field that does not directly apply to Immunization Registries. Therefore, the contents of this field will be ignored.
Date/Time of the Observation	14					<ul style="list-style-type: none"> Registry will always ignore this field.
Producer's ID	15					<ul style="list-style-type: none"> Registry will always ignore this field.
Responsible Observer	16					<ul style="list-style-type: none"> Registry will always ignore this field.
Observation Method	17					<ul style="list-style-type: none"> Registry will always ignore this field.
NTE Segment						
Set ID - NTE	1	4	SI	May be NULL, or contain an integer indicating multiple segments	O	<ul style="list-style-type: none"> Registry expects systems submitting VXU messages to use the standard numbering approach defined in the Implementation Guide.
Source of Comment	2					<ul style="list-style-type: none"> Registry will always ignore this field.
Comment	3	64K	FT	Provide comments here	O	<ul style="list-style-type: none"> Registry will include any information provided here as a comment attached to the specific vaccination in the Registry.
Comment Type	4					<ul style="list-style-type: none"> Registry will always ignore this field.

Table 7: Reference Information for VXU Message

The Registry will attempt to match the patient in the VXU message with a patient record in the Registry using the following guidelines.

1. If an MCI Number is supplied in the incoming message, then search for any record(s) matching that record.
 - a. If one and only one non-deleted record is found, then update the record based on the contents of the incoming message.
 - b. If no matches are found or if multiple matches are found, then continue processing with step 2.
2. If a State Registry ID is supplied in the incoming message and that record is not marked for deletion in the Registry, then the matching record (based only on patient ID) will be updated.
3. If no State Registry ID is supplied in the incoming message, the following guidelines will be applied:
 - a. If no DOB is supplied in the incoming message, then a new record will be created. (Past experiences with the interface have indicated it is better to create a potential duplicate that can be resolved manually in the system than to risk incorrectly matching records without the presence of a DOB.)
 - b. If a DOB is supplied, the Registry will attempt to find a matching record as follows:
 - i. First name supplied matches the patient's first name and the Last name supplied is similar to the patient's last name OR the Last name supplied matches the patient's last name and the First name supplied is similar to the patient's first name.
 - ii. The DOB supplied matches the patient's DOB. (Patient's without a DOB in the Registry cannot be matched to an incoming VXU message except through the State Registry ID parameter.)
 - c. If more than one record exists in the set of potential matching records, the following filters will be applied in the order indicated until either only a single record remains or until applying the filter would result in no matches remaining:
 - i. SSN
 - ii. Gender
 - iii. Medical Record Number
 - iv. Middle Name/Initial
 - v. Patient's Alias Name
 - vi. Mother's Maiden Name
 - vii. Mother's First and Last Name
 - viii. Birth State
 - d. If a single record remains in the set of potential matching records, it will be updated.
 - e. If multiple records or no records remain in the set of potential matching records, the patient in the incoming VXU message will be added to the Registry as a new record.

- i. This may lead to a duplicate record being created in the Registry. When this occurs, the deduplication features of the Registry can be used to combine the records into a single instance again.

For any update request, if there is a matching record that is marked for deletion in the Registry, it will not be considered as a potential matching record.

It is important to realize that by providing the ability to accept MCI number and using it as the primary search criteria, a provider will have the mechanism for updating any demographic information about a patient. This allows them to correct mistakes in key fields used to identify a patient (e.g., name, DOB, etc.), but it also allows them cause significant issues in the system if they do not pass the MCI number accurately.

By allowing a provider to search the Registry by State Registry ID number, they will have a mechanism for updating any field about a patient. However, they are restricted from doing this until they have previously searched for a patient and have uniquely matched the patient record from the Registry with a record in their local system.

(NOTE: The above description is not intended to imply anything regarding about the technical design of the queries used to locate matching records in the Registry. The goal is only to describe the general concept of how the searches will work.)

ACK - Acknowledgement Message (With Errors)

The ACK message is used in response to nearly any message received by the Registry where a significant error has been encountered. In general, the Registry will make every attempt to adequately process each message it receives and to overlook small, insignificant issues. The goal is to exchange data and not to “police” the format of incoming messages.

However, there are some circumstances when the Registry will be unable to process the incoming message. In this case, an ACK message will be generated.

As mentioned previously, the message should be formatted as specified in the referenced documentation. Table 8 contains notes for various fields as they pertain to the Registry.

FIELD NAME	FIELD NUMBER	NOTES
<i>MSH Segment</i>		
Field Separator	1	• Registry will always use the pipe character (“ ”) as the field separator for all HL7 messages.
Encoding Characters	2	• Registry will always put a value of “^~\&” in this field.
Sending Application	3	• Registry will always include the version number of the instance of the software that has generated the message.
Sending Facility	4	• Registry will always put a value of “AR0000” in this

FIELD NAME	FIELD NUMBER	NOTES
		field.
Receiving Application	5	<ul style="list-style-type: none"> Registry will always put the value of the "Sending Application" field in the corresponding message in this field.
Receiving Facility	6	<ul style="list-style-type: none"> Registry will always put the value of the "Sending Facility" field in the corresponding message in this field.
Date/Time of Message	7	<ul style="list-style-type: none"> Registry will always put the system date and time the message was created in this field.
Security	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Message Type	9	<ul style="list-style-type: none"> Registry will always put a value of "ACK^" in this field.
Message Control ID	10	<ul style="list-style-type: none"> Registry will always put a value of "YYYYMMDDDE999999" in this field. The value can be interpreted as: <ul style="list-style-type: none"> YYYYMMDD = current system date when query was executed DE = 2 character abbreviation for Arkansas 999999 = sequential number indicating the number of HL7 messages sent from the Registry on the indicated date
Processing ID	11	<ul style="list-style-type: none"> Registry will always put a value of "P" in the first component of this field when the message is being processed by the production system. Registry will always put a value of "T" in the first component of this field when the message is being processed by the test/training system. Registry will always leave the second component of this field empty.
Version ID	12	<ul style="list-style-type: none"> Registry will always put a value of "2.3.1" in this field.
Sequence Number	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Continuation Pointer	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Accept Acknowledgement Type	15	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field.
Application Acknowledgement Type	16	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field. (At this time, we do not intend to process responses to messages sent by the Registry, so there's no need for them to be sent back. This can be revisited if it causes issues for other systems using the interface.)
Country Code	17	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default country of USA).
Character Set	18	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default character set of "ASCII").
Principal Language of Message	19	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default principal language of "EN").
Alternate Character Set	20	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default of not using alternate character set handling).

FIELD NAME	FIELD NUMBER	NOTES
Handling		
MSA Segment		
Acknowledgment Code	1	<ul style="list-style-type: none"> Registry will always respond using the original acknowledgement mode. Registry will send one of three codes: <ul style="list-style-type: none"> AA: Indicates the message was accepted and no errors or warnings were generated AE: Indicates the message was processed, but one or more errors were generated AR: indicates one or more significant errors occurred and the message as rejected (i.e., it was not processed by the Registry)
Message Control ID	2	<ul style="list-style-type: none"> Registry will always put the value of the "Message Control ID" field in the MSH segment of the corresponding VXQ message in this field.
Text Message	3	<ul style="list-style-type: none"> Registry will include a detailed message indicating the error/issue that has been encountered and is preventing the system from processing the incoming message.
Expected Sequence Number	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Delayed Acknowledgment Type	5	<ul style="list-style-type: none"> Registry will always leave this field empty.
Error Condition	6	<ul style="list-style-type: none"> Registry will include the applicable indicator from table "HL70357" for the error encountered while processing the message.
ERR Segment		
Error Code and Location	1	<ul style="list-style-type: none"> Registry will include the relevant segment, sequence, and field position of the error(s), along with the applicable indicator from table "HL70357" for the error(s) encountered while processing the message.

Table 8: Reference Information for ACK Message

QCK - Query General Acknowledgement Message

The QCK message is a specialized instance of the ACK message that is only used when the Registry has received and successfully processed a VXQ message but does not find any matching records. As mentioned previously, the message should be formatted as specified in the referenced documentation. Table 9 contains notes for various fields as they pertain to the Registry.

FIELD NAME	FIELD NUMBER	NOTES
MSH Segment		
Field Separator	1	<ul style="list-style-type: none"> Registry will always use the pipe character (" ") as the field separator for all HL7 messages.
Encoding	2	<ul style="list-style-type: none"> Registry will always put a value of "^~\&" in this

FIELD NAME	FIELD NUMBER	NOTES
Characters		field.
Sending Application	3	<ul style="list-style-type: none"> Registry will always include the version number of the instance of the software that has generated the message.
Sending Facility	4	<ul style="list-style-type: none"> Registry will always put a value of "AR0000" in this field.
Receiving Application	5	<ul style="list-style-type: none"> Registry will always put the value of the "Sending Application" field in the corresponding message in this field.
Receiving Facility	6	<ul style="list-style-type: none"> Registry will always put the value of the "Sending Facility" field in the corresponding message in this field.
Date/Time of Message	7	<ul style="list-style-type: none"> Registry will always put the system date and time the message was created in this field.
Security	8	<ul style="list-style-type: none"> Registry will always leave this field empty.
Message Type	9	<ul style="list-style-type: none"> Registry will always put a value of "QCK^" in this field.
Message Control ID	10	<ul style="list-style-type: none"> Registry will always put a value of "YYYYMMDDDE999999" in this field. The value can be interpreted as: <ul style="list-style-type: none"> YYYYMMDD = current system date when query was executed DE = 2 character abbreviation for Arkansas 999999 = sequential number indicating the number of HL7 messages sent from the Registry on the indicated date
Processing ID	11	<ul style="list-style-type: none"> Registry will always put a value of "P" in the first component of this field when the message is being processed by the production system. Registry will always put a value of "T" in the first component of this field when the message is being processed by the test/training system. Registry will always leave the second component of this field empty.
Version ID	12	<ul style="list-style-type: none"> Registry will always put a value of "2.3.1" in this field.
Sequence Number	13	<ul style="list-style-type: none"> Registry will always leave this field empty.
Continuation Pointer	14	<ul style="list-style-type: none"> Registry will always leave this field empty.
Accept Acknowledgement Type	15	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field.
Application Acknowledgement Type	16	<ul style="list-style-type: none"> Registry will always put a value of "NE" in this field. (At this time, we do not intend to process responses to messages sent by the Registry, so there's no need for them to be sent back. This can be revisited if it causes issues for other systems using the interface.)
Country Code	17	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default country of USA).
Character Set	18	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default character set of "ASCII").

FIELD NAME	FIELD NUMBER	NOTES
Principal Language of Message	19	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default principal language of "EN").
Alternate Character Set Handling	20	<ul style="list-style-type: none"> Registry will always leave this field empty (implying a default of not using alternate character set handling).
<i>MSA Segment</i>		
Acknowledgment Code	1	<ul style="list-style-type: none"> Registry will always respond using the original acknowledgement mode. Registry will only respond with a QCK message when the message was processed without error but no matching records were found. Therefore, the only value that will be used here is "AA".
Message Control ID	2	<ul style="list-style-type: none"> Registry will always put the value of the "Message Control ID" field in the MSH segment of the corresponding VXQ message in this field.
Text Message	3	<ul style="list-style-type: none"> Registry will include a detailed message indicating the error/issue that has been encountered and is preventing the system from processing the incoming message.
Expected Sequence Number	4	<ul style="list-style-type: none"> Registry will always leave this field empty.
Delayed Acknowledgment Type	5	<ul style="list-style-type: none"> Registry will always leave this field empty.
Error Condition	6	<ul style="list-style-type: none"> Registry will include the applicable indicator from table "HL70357" for the error encountered while processing the message.
<i>ERR Segment</i>		
Error Code and Location	1	<ul style="list-style-type: none"> Registry will include the relevant segment, sequence, and field position of the error, along with the applicable indicator from table "HL70357" for the error encountered while processing the message.
<i>QAK Segment</i>		
Query Tag	1	<ul style="list-style-type: none"> Registry will include the ID provided here in the "Query ID" field of the QRD segment of the corresponding VXX or VXR response message.
Query Response Status	2	<ul style="list-style-type: none"> Registry will always respond with a value of "NF" in this field.

Table 9: Reference Information for QCK Message

Additional Items for Rollout

User IDs will need to be established prior to a provider beginning to use the HL7 interface as well as assigning the provider with a unique ID within the state. Each instance of a system that will communicate with the Registry will be required to have a unique ID. This ID will be used as part of the audit trail for any records that are created and/or updated as part of processing the message.

As part of this effort, the Registry will need to coordinate the update of some of the code tables in the system with ADH Immunization Program personnel. In addition, some code tables will need to be modified in order to allow these updated values to be accurately mapped to the relevant list of values for any of the message fields defined in the HL7 standard.