Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>3</td>
</tr>
<tr>
<td>Intended Audience</td>
<td>4</td>
</tr>
<tr>
<td>Scope</td>
<td>4</td>
</tr>
<tr>
<td>2. MESSAGES SUPPORTED BY USIIS</td>
<td>4</td>
</tr>
<tr>
<td>3. HL7 MESSAGING STRUCTURE</td>
<td>5</td>
</tr>
<tr>
<td>4. HL7 DATA TYPES</td>
<td>6</td>
</tr>
<tr>
<td>5. SEGMENTS AND MESSAGE DETAILS</td>
<td>7</td>
</tr>
<tr>
<td>BHS—Batch Header Segment</td>
<td>12</td>
</tr>
<tr>
<td>BHS Field Definitions</td>
<td>13</td>
</tr>
<tr>
<td>BTS—Batch Trailer Segment</td>
<td>13</td>
</tr>
<tr>
<td>ERR—Error Segment</td>
<td>14</td>
</tr>
<tr>
<td>ERR field definitions:</td>
<td>14</td>
</tr>
<tr>
<td>FHS—File Header Segment</td>
<td>15</td>
</tr>
<tr>
<td>FHS Field Definitions</td>
<td>16</td>
</tr>
<tr>
<td>FTS—File Trailer Segment</td>
<td>16</td>
</tr>
<tr>
<td>MSA—Message Acknowledgement Segment</td>
<td>17</td>
</tr>
<tr>
<td>MSA Field Definitions</td>
<td>17</td>
</tr>
<tr>
<td>MSH—Message Header Segment</td>
<td>18</td>
</tr>
<tr>
<td>MSH Field Definitions</td>
<td>21</td>
</tr>
<tr>
<td>NK1—Next of Kin Segment</td>
<td>23</td>
</tr>
<tr>
<td>NK1 Field Definitions</td>
<td>27</td>
</tr>
<tr>
<td>NTE—Note Segment</td>
<td>29</td>
</tr>
<tr>
<td>NTE Field Definitions</td>
<td>29</td>
</tr>
<tr>
<td>OBX—Observation Result Segment</td>
<td>30</td>
</tr>
<tr>
<td>OBX Field Definitions</td>
<td>32</td>
</tr>
<tr>
<td>ORC—Order Request Segment</td>
<td>36</td>
</tr>
<tr>
<td>ORC Field Definitions</td>
<td>39</td>
</tr>
<tr>
<td>PD1—Patient Demographic Segment</td>
<td>40</td>
</tr>
<tr>
<td>PD1 Field Definitions</td>
<td>42</td>
</tr>
<tr>
<td>PID—Patient Identifier Segment</td>
<td>44</td>
</tr>
<tr>
<td>PID Field Definitions</td>
<td>48</td>
</tr>
<tr>
<td>QAK—Query Acknowledgement Segment</td>
<td>51</td>
</tr>
<tr>
<td>QAK Field Definitions</td>
<td>51</td>
</tr>
<tr>
<td>QPD—Query Parameter Definition Segment</td>
<td>52</td>
</tr>
<tr>
<td>QPD Field Definitions</td>
<td>52</td>
</tr>
<tr>
<td>RCP—Response Control Parameter Segment</td>
<td>53</td>
</tr>
<tr>
<td>RCP Field Definitions</td>
<td>54</td>
</tr>
<tr>
<td>RXA—Pharmacy/Treatment Administration Segment</td>
<td>54</td>
</tr>
<tr>
<td>RXA Field Definitions</td>
<td>57</td>
</tr>
<tr>
<td>RXR—Pharmacy/Treatment Route Segment</td>
<td>60</td>
</tr>
<tr>
<td>RXR Field Definitions</td>
<td>61</td>
</tr>
<tr>
<td>6. MESSAGES FOR TRANSMITTING IMMUNIZATION INFORMATION TO USIIS</td>
<td>62</td>
</tr>
<tr>
<td>Send Immunization Information to USIIS – VXU</td>
<td>62</td>
</tr>
<tr>
<td>USIIS Business Rules – VXU Segment</td>
<td>63</td>
</tr>
</tbody>
</table>
1. Introduction

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

![Figure 1: HL7 Guideline Document Hierarchy](image)

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

The second document is the CDC’s Implementation Guide for Immunization Data Transactions using Version 2.5.1 of the Health Level Seven (HL7) Standard Protocol, version 1.4, 11/9/2012. This guide gives specific instructions regarding how to report to immunization information systems. It leaves some implementation decisions to each state immunization information system. This guide and other technical information can be obtained from the CDC IIS website at http://www.cdc.gov/vaccines/programs/iis/technical-guidance/hl7.html.

The third document is this document. It describes State of Utah implementation decisions and defines what USIIS will and will not accept. It is written in accordance with the standards set in the first two documents. This Utah state implementation guide points out differences from the CDC Implementation Guide. In cases where this guide differs from the CDC Implementation Guide, this guide will provide both the CDC and Utah usage specification.
Intended Audience

This Utah Implementation Guide is intended for use by technical and implementation teams from Electronic Health Record (EHR) system vendors and other state IIS to implement an HL7 2.5.1 immunization interface with USIIS. The reader of this guide should have a HL7 foundation and be familiar with the contents of the CDC Implementation Guide.

Scope

This Utah Implementation Guide is intended to guide the implementation of an HL7 2.5.1 immunization interface between external Health Systems and USIIS. This includes:

- Sending immunization information for individuals to USIIS, to include demographic and immunization information
- Requesting immunization histories for individuals from USIIS
- USIIS responses to requests for immunization histories for individuals
- USIIS acknowledgments of receipt of immunization information
- USIIS error responses
- Note: USIIS does not yet support sending immunization forecasts.

Organization and Flow

This guide is designed to be consistent with the organization and flow of the CDC Implementation Guide. This chapter defines high-level use cases supported by USIIS. Subsequent chapters define how USIIS implements those use cases. Finally, this guide has an appendix example messages.

This guide is intended to be used in conjunction with the CDC Implementation Guide.

2. Messages Supported by USIIS

This section describes the messages supported by USIIS in terms of use cases.

<table>
<thead>
<tr>
<th>Use Case</th>
<th>Message Type</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Send Immunization Information to USIIS</td>
<td>VXU</td>
<td>For an external system to send immunization information to USIIS. Information may be a new record or an update to an existing record. It includes patient demographic information. In addition to EHR systems and other state IIS, external systems such as vital records could use this message to send immunization information to USIIS. USIIS will receive this information.</td>
</tr>
</tbody>
</table>
### Request an Immunization History from USIIS

**QBP**

For an external system to request an immunization history from USIIS.

### USIIS Returns Immunization History

**RSP**

USIIS returns one of five outcomes:

1. No match found
2. One match found, and immunization history is returned.
3. More than one match found, and the number is less than or equal to the maximum number allowed; immunization history is not returned.
4. More than one match found, but the number is more than the maximum number allowed; immunization history is not returned.
5. Error - Message is not well formed and has fatal errors.

### USIIS Returns Acknowledgment of Receipt of a Message

**ACK**

For USIIS to acknowledge receipt of a message from an external system.

**QCK**

This can be to acknowledge receipt of immunization information or a request for an immunization history.

The acknowledgement may indicate an accurate receipt or an error.

### 3. HL7 Messaging Structure

Chapter 3 of the CDC Implementation Guide contains basic descriptions of terms and definitions that are common to both the CDC and Utah guides. The majority of the terms and definitions will not be redefined in this guide.

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

<table>
<thead>
<tr>
<th>Usage Code</th>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Required</td>
<td>The sending application SHALL populate “R” elements with a non-empty value. The receiving application shall process or ignore the information conveyed by required elements. The receiving application may raise an error due to the absence of a required element.</td>
</tr>
<tr>
<td>RE</td>
<td>Required but may be empty</td>
<td>The sending application shall populate “RE” elements with a non-empty value if there is relevant data.</td>
</tr>
</tbody>
</table>
### Usage Code

<table>
<thead>
<tr>
<th>Usage Code</th>
<th>Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Conditional</td>
<td>This usage has an associated condition (predicate). If the condition is satisfied (predicate true): The sending application shall follow the USIIS usage for the element, which shall be R, RE, O or X. If the condition is not satisfied (predicate false): The sending application shall follow the USIIS usage for the element, which shall be R, RE, O or X.</td>
</tr>
<tr>
<td>O</td>
<td>Optional</td>
<td>These elements are entirely optional to provide by the sending system and also optional to consume by the IIS.</td>
</tr>
<tr>
<td>X</td>
<td>Not Supported</td>
<td>The element is not supported by USIIS. The sending application shall not populate “X” elements unless the guide indicates that the information may be sent and is ignored by USIIS.</td>
</tr>
</tbody>
</table>

### 4. HL7 Data Types

The CDC Implementation Guide contains clearly defined HL7 data types that are the building blocks of an HL7 message. Similar to the terms and definitions found in the HL7 Messaging Infrastructure section above, this guide will define unclear sections or further define Utah constraints.

USIIS adheres to the HL7 data types described in Chapter 4 of the CDC Implementation Guide.
5. Segments and Message Details

This chapter contains tables for each segment supported by USIIS.

USIIS usage that differs from CDC usage is described, to include further constraints on fields to accommodate USIIS business rules. Additional clarifications are provided as well.

Chapter 6 will address how these segments are assembled into specific messages that meet the use cases listed in Chapter 2.

Table 5-1 Message Segments

<table>
<thead>
<tr>
<th>Segment (Name)</th>
<th>Definition</th>
<th>Message Usage</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>BHS</td>
<td>The Batch Header Segment. The BHS segment wraps a group of 1 or more messages. These may be a mixture of acceptable message types. This segment is not required for real-time messaging—e.g., a stream of messages.</td>
<td>Any</td>
<td>Optional</td>
<td>C</td>
<td>Required at the beginning of any batch of messages. Not required for a real-time messaging.</td>
</tr>
<tr>
<td>BTS</td>
<td>Batch Trailer Segment. The BTS segment defines the end of a batch. It is required if the message has a matching BHS.</td>
<td>Any</td>
<td>Required if message starts with BHS.</td>
<td>Required if message starts with BHS.</td>
<td>Used to mark the end of any batch of messages. If the batch of messages starts with a BHS, then this segment is required.</td>
</tr>
<tr>
<td>ERR</td>
<td>Error Segment. The ERR segment reports information about errors in processing the message. The segment may repeat. Each error will have its own ERR segment.</td>
<td>ACK, RSP</td>
<td>Ability to create and process is required.</td>
<td>Ability for sending system to process is required.</td>
<td></td>
</tr>
<tr>
<td>Segment (Name)</td>
<td>Definition</td>
<td>Message Usage</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Note</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>FHS</td>
<td>File Header Segment. The FHS segment may be used to group one or more batches of messages. This is an optional segment, even if batches are sent. Its use is not anticipated for use in real-time transactions.</td>
<td>Any</td>
<td>Optional</td>
<td>Optional</td>
<td>Used to mark the beginning of a file of batches. Not accepted for a real-time messaging.</td>
</tr>
<tr>
<td>FTS</td>
<td>File Trailer Segment. The FTS segment defines the end of a file of batches. It is only used when the FHS segment is used.</td>
<td>Any</td>
<td>Required to terminate a file of batches. (Matches FHS)</td>
<td>Required to terminate a file of batches.</td>
<td>Used to mark the end of a file of batches. Required if FHS is used.</td>
</tr>
<tr>
<td>IN1, IN2, IN3</td>
<td>Insurance Segments. The IN1-IN3 segments contain insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.</td>
<td>VXU</td>
<td>Optional. These segments are not anticipated for use in immunization messages, but may be specified for local use.</td>
<td>Optional</td>
<td>USIIS does not support these segments and will not process the information.</td>
</tr>
<tr>
<td>MSA</td>
<td>Message Acknowledgment Segment. The MSA segment is included in the RSP and ACK messages. It contains information used to identify the receiver’s acknowledgement response to an identified prior message.</td>
<td>RSP, ACK</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending system to process is required.</td>
<td></td>
</tr>
<tr>
<td>MSH</td>
<td>Message Segment Header. The MSH segment defines the intent, source, destination, and some specifics of the syntax of a message.</td>
<td>All</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending system to create is required.</td>
<td>Required for all messages.</td>
</tr>
<tr>
<td>Segment (Name)</td>
<td>Definition</td>
<td>Message Usage</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Note</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>NK1</td>
<td>Next of Kin Segment. The NK1 segment contains information about the patient’s next of kin or other related parties.</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending system to create is required.</td>
<td></td>
</tr>
<tr>
<td>NTE</td>
<td>Note Segment. The NTE segment is used for sending notes and comments. It is used in relation to OBX in the VXU and RSP.</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending system to create is optional.</td>
<td>Used to carry a note related to the parent OBX segment.</td>
</tr>
<tr>
<td>OBX</td>
<td>Observation Result Segment. The OBX segment has several uses. It carries observations about the object of its parent segment. In the VXU/RSP it is associated with the RXA or immunization record. The basic format is a question and an answer.</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for the sending application to create is required.</td>
<td>Used to give important information related to an immunization (RXA).</td>
</tr>
<tr>
<td>ORC</td>
<td>Order Request Segment. The ORC segment is used to transmit fields that are common to all orders (all types of services that are requested). While not all immunizations recorded in an immunization message are able to be associated with an order, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for the sending application to create is required.</td>
<td>Used to give information about a group of one or more RXA.</td>
</tr>
<tr>
<td>PD1</td>
<td>Patient Demographic Segment. The PD1 segment contains additional demographic information that is likely to change about</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for</td>
<td>Ability for sending application to</td>
<td></td>
</tr>
<tr>
<td>Segment (Name)</td>
<td>Definition</td>
<td>Message Usage</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Note</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>the patient. In immunization messages, this is information about the need to protect the client’s information and how they should be part of reminder efforts and their current status in the IIS.</td>
<td>conformant systems.</td>
<td>create is required.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PID</td>
<td>Patient Identifier Segment. The PID segment contains patient identifying and demographic information that, for the most part, is not likely to change. Used by all applications as the primary means of communicating patient identification information frequently.</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending application to create is required.</td>
<td></td>
</tr>
<tr>
<td>PV1</td>
<td>Patient Visit Segment. The PV1 segment contains information related to a specific visit.</td>
<td>VXU, RSP</td>
<td>Optional</td>
<td>Optional. USIIS will not process this information.</td>
<td>Previously used to carry funding program eligibility status. HL7 2.5.1 requires using OBX for this purpose.</td>
</tr>
<tr>
<td>QAK</td>
<td>Query Acknowledgement Segment. The QAK segment contains information sent with responses to a query.</td>
<td>RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending application to process is required for a bi-directional interface.</td>
<td></td>
</tr>
<tr>
<td>QPD</td>
<td>Query Parameter Definition Segment.</td>
<td>QBP, RSP</td>
<td>Ability to create and process is required for</td>
<td>Ability for sending application to</td>
<td></td>
</tr>
<tr>
<td>Segment (Name)</td>
<td>Definition</td>
<td>Message Usage</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Note</td>
</tr>
<tr>
<td>---------------</td>
<td>------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>------</td>
</tr>
<tr>
<td>RCP</td>
<td>Response Control Parameter Segment</td>
<td>QBP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending application to process is required for a bi-directional interface.</td>
<td></td>
</tr>
<tr>
<td>RXA</td>
<td>Pharmacy/Treatment Administration Segment</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending application to create is required.</td>
<td></td>
</tr>
<tr>
<td>RXR</td>
<td>Pharmacy/Treatment Route Segment</td>
<td>VXU, RSP</td>
<td>Ability to create and process is required for conformant systems.</td>
<td>Ability for sending application to create is required.</td>
<td></td>
</tr>
</tbody>
</table>
### BHS—Batch Header Segment

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Batch Field Separator</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>The BHS.1 field shall be</td>
</tr>
<tr>
<td>2</td>
<td>Batch Encoding Characters</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>The BHS.2 field shall be ^~&amp;</td>
</tr>
<tr>
<td>3</td>
<td>Batch Sending Application</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>Batch Sending Facility</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>Batch Receiving Application</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>Batch Receiving Facility</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>7</td>
<td>Batch Creation Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>8</td>
<td>Batch Security</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>Batch Name/ID/Type</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>Batch Comment</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>11</td>
<td>Batch Control ID</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>12</td>
<td>Reference Batch Control ID</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
BHS Field Definitions

BHS-1 Batch Field Separator (ST) 00081

**Definition:** This field contains the separator between the segment ID and the first real field, BHS-2-batch encoding characters. The required value is |,(ASCII 124). Note that this field is different from other fields and immediately follows the Segment name code.

BHS-2 Batch Encoding Characters (ST) 00082

**Definition:** This field contains the four characters in the following order: the component separator, repetition separator, escape characters, and subcomponent separator. The required values are ^~\ (ASCII 94, 126, 92, and 38, respectively).

BTS—Batch Trailer Segment

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Batch Message Count</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>R</td>
<td></td>
<td>Required to indicate the count of individual messages contained in the batch.</td>
</tr>
<tr>
<td>2</td>
<td>Batch Comment</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>3</td>
<td>Batch Totals</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
ERR—Error Segment

Table 5-4 Error Segment (ERR)

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Error Code and Location</td>
<td>ELD</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td></td>
<td>ERR-1 is not supported for use in messages starting with HL7 version 2.5.</td>
</tr>
<tr>
<td>2</td>
<td>Error Location</td>
<td>ERL</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>HL7 Error Code</td>
<td>CWE</td>
<td>0357</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Severity</td>
<td>ID</td>
<td>0516</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Application Error Code</td>
<td>CWE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Application Error Parameter</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Diagnostic Information</td>
<td>TX</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>User Message</td>
<td>TX</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Inform Person Indicator</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Override Type</td>
<td>CWE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Override Reason Code</td>
<td>CWE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Help Desk Contact Point</td>
<td>XTN</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ERR field definitions:

USIIS will include one or more ERR segments in an ACK message with an acknowledgement code of AE (message was processed and errors are being reported). This indicates that USIIS had an fatal internal error and will process the message when resolved. No action is required from the sending application and the message should not be resent.
USIIS will include ERR segments in an ACK message with an acknowledgement code of AR (message was rejected). This indicates a violation error with the message content or format. The sending application should not resend the message – unless the error is fixed.

USIIS may include ERR segments in an ACK message with an acknowledgement code of AA (message was accepted without error). This indicates a warning regarding data quality. No action is required from the sending application and the message should not be resent.

**ERR-2 Error Location (ERL) 01812**

*Definition:* Identifies the location in a message related to the identified error, warning or message. Each error will have an ERR, so no repeats are allowed on this field.

**ERR-3 HL7 Error Code (CWE) 01813**

*Definition:* Identifies the HL7 error code. Refer to HL7 Table 0357 – Message Error Condition Codes for valid values.

**ERR-4 Severity (ID) 01814**

*Definition:* Identifies the severity of an application error. Refer to HL7 Table 0516 - Error severity for valid values. If ERR-3 has a value of "0", ERR-4 will have a value of "I".

**FHS—File Header Segment**

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>File Field Separator</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>The FHS.1 field shall be</td>
</tr>
<tr>
<td>2</td>
<td>File Encoding Characters</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>The FHS.2 field shall be ^~&amp;</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>File Sending Application</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>File Sending Facility</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>File Receiving Application</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>File Receiving Facility</td>
<td>HD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>7</td>
<td>File Creation Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>8</td>
<td>File Security</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>File Name/ID</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>File Header Comment</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>11</td>
<td>File Control ID</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>12</td>
<td>Reference File Control ID</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

**FHS Field Definitions**

**FHS-1 File Field Separator (ST) 00067**

*Definition:* This field has the same definition as the corresponding field in the MSH segment. The value shall be |.

**FHS-2 File Encoding Characters (ST) 00068**
**Definition:** This field has the same definition as the corresponding field in the MSH segment. The value shall be `^~\&`

**FTS—File Trailer Segment**

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>DataType</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>File Batch Count</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td></td>
<td>Required to indicate the number of batches contained in the file—if FHS is used.</td>
</tr>
<tr>
<td>2</td>
<td>File Trailer Comment</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

**MSA—Message Acknowledgement Segment**

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>DataType</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Acknowledgment Code</td>
<td>ID</td>
<td>0008</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>USIIS will value this field with AA indicating that the message was received. Note: AA does not indicate that the message was successfully processed into USIIS.</td>
</tr>
<tr>
<td>2</td>
<td>Message Control ID</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>3</td>
<td>Text Message</td>
<td>ST</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
MSA Field Definitions

**MSA-1 Acknowledgment Code (ID) 00018**

*Definition:* This field contains an acknowledgment code. See message processing rules. Refer to *HL7 Table 0008 - Acknowledgment code* for valid values.

USIIS will value this field with AA indicating that the message was received.

*Note:* AA does not indicate that the message was successfully processed into USIIS.

**MSA-2 Message Control ID (ST) 00010**

*Definition:* This field contains the Message Control ID (MSH-10) of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended. This field echoes the message control id sent in MSH-10 by the initiating system.

**MSH—Message Header Segment**

*Table 5-8 Message Header Segment (MSH)*
<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USII Cardinality</th>
<th>CDC Usage</th>
<th>USII Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Encoding Characters</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>This field shall be ^~&amp;</td>
</tr>
</tbody>
</table>
| 3   | Sending Application | HD        | 0361                 | [0..1]             | [0..1]           | RE        | R         | The sending application shall value this element with a USII- assigned code (that identifies the EHR system).  
In a QBP response, USII shall value this element with USII.                          |
| 4   | Sending Facility  | HD         | 0362                 | [0..1]             | [0..1]           | RE        | R         | The sending application shall value this element with the USII-assigned code of the Provider Location code.  
In a QBP response, USII shall value this element with UT0000.                           |
<p>| 5   | Receiving Application | HD      | 0361                 | [0..1]             | [0..1]           | RE        | R         | The sending application shall value this element with a USII-assigned code (that is an interface identifier). |</p>
<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USII S Cardinality</th>
<th>CDC Usage</th>
<th>USII S Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Receiving Facility</td>
<td>HD</td>
<td>0362</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>R</td>
<td>The sending application shall value this element with <strong>UT0000</strong>. In a QBP response, USII S shall value this element with the value that was provided in the MSH-4.1 of the corresponding VXU or QBP messages.</td>
</tr>
<tr>
<td>7</td>
<td>Date/Time Of Message</td>
<td>TS</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>R</td>
<td>The sending application shall value this element with the date/time the message was created. This will be used for logging.</td>
</tr>
<tr>
<td>8</td>
<td>Security</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USII S does not support; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Message Type</td>
<td>MSG</td>
<td>0076</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 10  | Message Control ID               | ST        | [1..1]               | [1..1]             | R                 | R         |             | The sending application shall value this element with a unique message identifier. See below for USIIS recommended format.  
In a QBP response, USIIS shall value this element with the MSH-10 provided in the corresponding VXU or QPB messages.                                     |
<p>| 11  | Processing ID                    | PT        | 0103                 | [1..1]             | [1..1]            | R         | R          | When in Production, the sending application shall value this element with P.                                                                            |
| 12  | Version ID                       | VID       | [1..1]               | [1..1]             | R                 | R         |             | The sending application shall send 2.5.1 in this element.                                                                                            |
| 13  | Sequence Number                  | NM        | [0..1]               | [0..1]             | O                 | X         |             | USIIS does not support; if sent it will be ignored.                                                                                                  |
| 14  | Continuation Pointer             | ST        | [0..1]               | [0..1]             | O                 | X         |             | USIIS does not support; if sent it will be ignored.                                                                                                  |
| 15  | Accept Acknowledgment Type       | ID        | 0155                 | [0..1]             | [0..1]            | RE        | RE         |                                                                                                                                                    |
| 16  | Application Acknowledgment Type  | ID        | 0155                 | [0..1]             | [0..1]            | RE        | RE         |                                                                                                                                                    |
| 17  | Country Code                     | ID        | 0399                 | [0..1]             | [0..1]            | O         | O          |                                                                                                                                                    |</p>
<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>Character Set</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIIS expects ASCII printable values.</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Principal Language Of Message</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIIS does not support; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Alternate Character Set Handling Scheme</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIIS does not support; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Message Profile Identifier</td>
<td>EI</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>C</td>
<td>C</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**MSH Field Definitions**

**MSH-1 Field Separator (ST) 00001**

*Definition:* This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. Required value is |, (ASCII 124).

**MSH-2 Encoding Characters (ST) 00002**

*Definition:* This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Required values are ^~\& (ASCII 94, 126, 92, and 38, respectively).

**MSH-3 Sending Application (HD) 00003**

*Definition:* This field contains the USIIIS-assigned code that represents the EHR system.

In a QBP response, USIIIS shall value this element with [USIIIS](#).

**MSH-4 Sending Facility (HD) 00004**

*Definition:* This field contains the USIIIS-assigned code of the Provider Location code. This field represents the submitter of the data contained in the message. Note: USIIIS should be contacted to obtain this value for each Provider.

In a QBP response, USIIIS shall value this element with [UT0000](#).
MSH-5 Receiving Application (HD) 00005

**Definition:** This field contains the USIIS-assigned code that represents an interface identifier.

MSH-6 Receiving Facility (HD) 00006

**Definition:** This field contains **UT0000**. USIIS shall value this element with the value that was provided in the MSH-4.1 of the corresponding VXU or QBP messages.

MSH-7 Date/Time of Message (TS) 00007

**Definition:** This field contains the date/time that the sending system created the message. The degree of precision should be at least to the minute.

MSH-9 Message Type (MSG) 00009

**Definition:** This field contains the message type, trigger event, and the message structure ID for the message. Message structure component is required.

MSH-10 Message Control ID (ST) 00010

**Definition:** This field contains an identifier assigned by the sending application that uniquely identifies a unique message instance. This identifier is unique within the scope of the sending facility (MSH-4), sending application (MSH-3), and the YYYYMMDD portion of message date (MSH-7).

**USIIS recommends the following format:** YYYYYMMDDTEXT9999..., where TEXT relates to the application and 9999... is a sequentially generated number that is unique for the date.

USIIS shall echo this ID back to the sending system in the Message acknowledgment segment (MSA).

MSH-11 Processing ID (PT) 00011

**Definition:** This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. Reference *Table HL7 0103*. The choices are Production, Debugging and Training. In most cases, **P** or Production should be used.

MSH-12 Version ID (VID) 00012
Definition: This field contains the identifier of the version of the HL7 messaging standard used in constructing, interpreting, and validating the message. Only the first component need be populated.

MSH-15 Accept Acknowledgment Type (ID) 00015

Definition: Refer to HL7 Table 0155 - Accept/application acknowledgment conditions for valid values. USIIS expects NE and will ignore other values.

MSH-16 Application Acknowledgment Type (ID) 00016

Definition: USIIS expects AL and will ignore other values.

MSH-17 Country Code (ID) 00017

Definition: This field contains the country of origin for the message. If this field is not valued, USIIS assumes the code is USA. Refer to HL7 Table 0399 – Country code.

MSH-18 Character Set (ID) 00018

Definition: USIIS expects ASCII printable and will ignore other values.

NK1—Next of Kin Segment

The NK1 segment contains information about the patient’s next of kin. Utilizing NK1-1 - set ID, multiple NK1 segments can be sent, each subsequent NK1 increments the previous set ID by 1. Therefore, if three NK1 were sent in one message, the first would have a set id of 1, the second would have 2 and the third would have 3.

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

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set ID - NK1</td>
<td>SI</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>Sequence number. 1 for 1st occurrence, 2 for the 2nd occurrence, etc. USIIS supports one occurrence;</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIS Cardinality</td>
<td>CDC Usage</td>
<td>USIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>------------------</td>
<td>-----------</td>
<td>------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Name</td>
<td>XPN</td>
<td>[1..*]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>additional occurrences will be ignored. Maximum lengths: Last name = 40 characters First name = 20 characters Middle name = 20 characters USIIS supports one occurrence of NK1 and will ignore multiple occurrences, if provided. USIIS considers the first name occurrence to be the legal name and ignores the Name Type code component NK-1.2.</td>
</tr>
<tr>
<td>3</td>
<td>Relationship</td>
<td>CE</td>
<td>0063</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>USIIS supports three relationship codes: MTH, FTH, GRD; other types will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>Address</td>
<td>XAD</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td>Maximum street length = 60 characters. Maximum city length = 28 characters.</td>
</tr>
<tr>
<td>5</td>
<td>Phone Number</td>
<td>XTN</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Business Phone Number</td>
<td>XTN</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>7</td>
<td>Contact Role</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Start Date</td>
<td>DT</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>End Date</td>
<td>DT</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>Next of Kin / Associated Parties Job Title</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>11</td>
<td>Next of Kin / Associated Parties Job Code/Class</td>
<td>JCC</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>12</td>
<td>Next of Kin / Associated Parties Employee Number</td>
<td>CX</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>13</td>
<td>Organization Name - NK1</td>
<td>XON</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>14</td>
<td>Marital Status</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>15</td>
<td>Administrative Sex</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>16</td>
<td>Date/Time of Birth</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>17</td>
<td>Living Dependency</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>18</td>
<td>Ambulatory Status</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>19</td>
<td>Citizenship</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>20</td>
<td>Primary Language</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>21</td>
<td>Living Arrangement</td>
<td>IS</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>22</td>
<td>Publicity Code</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>23</td>
<td>Protection Indicator</td>
<td>ID</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>24</td>
<td>Student Indicator</td>
<td>IS</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>25</td>
<td>Religion</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>26</td>
<td>Mother’s Maiden Name</td>
<td>XPN</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>27</td>
<td>Nationality</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>28</td>
<td>Ethnic Group</td>
<td>CE</td>
<td>0189</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Contact Reason</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>30</td>
<td>Contact Person’s Name</td>
<td>XPN</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>31</td>
<td>Contact Person’s Telephone Number</td>
<td>XTN</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>32</td>
<td>Contact Person’s Address</td>
<td>XAD</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>33</td>
<td>Next of Kin/Associated Party’s Identifiers</td>
<td>CX</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>34</td>
<td>Job Status</td>
<td>IS</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>35</td>
<td>Race</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>will be ignored.</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Handicap</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Contact Person Social Security Number</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Next of Kin Birth Place</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>VIP Indicator</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support; if sent it will be ignored.</td>
<td></td>
</tr>
</tbody>
</table>

**NK1 Field Definitions**

**NK1-1  Set ID - NK1 (SI) 00190**

**Definition:** This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be 1 (one), for the second occurrence, the sequence number shall be 2 (two), etc.

**Note:** USIIS supports one occurrence of the segment; additional occurrences will be ignored.

**NK1-2  Name (XPN) 00191**

**Definition:** This field contains the name of the next of kin. The legal name must be sent in the first sequence.

**Note:** USIIS does not support repetition of this field.

<table>
<thead>
<tr>
<th>Position</th>
<th>Field Name</th>
<th>USIIS Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Family name</td>
<td>Required. Maximum length: 40 characters.</td>
</tr>
<tr>
<td>2</td>
<td>Given name</td>
<td>Optional. Maximum length: 20 characters.</td>
</tr>
<tr>
<td>3</td>
<td>Middle initial or name</td>
<td>Optional. Maximum length: 20 characters.</td>
</tr>
<tr>
<td>4</td>
<td>Suffix</td>
<td>Optional.</td>
</tr>
</tbody>
</table>
NK1-3 Relationship (CE) 00192

**Definition:** This field contains the personal relationship that the next of kin has to the patient. Refer to *User-defined Table 0063 - Relationship* for valid values.

<table>
<thead>
<tr>
<th>Position</th>
<th>Field Name</th>
<th>USIIS Constraint</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Identifier</td>
<td>Required. USIIS accepts the following values: MTH, FTH or GRD. Other types—and the associated names, will be ignored.</td>
</tr>
<tr>
<td>2</td>
<td>Test</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>3</td>
<td>Name of coding system</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>Alternate identifier</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>Alternate text</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>Name of alternate coding system</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

NK1-4 Address (XAD) 00193

**Definition:** Maximum street length = 60 characters. Maximum city length = 28 characters.

NK1-5 Phone Number (XTN) 00194

**Definition:** The primary telephone number must be sent in the first sequence.

NK1-28 Ethnic Group (CE) 00125

USIIS accepts the following valid values from Table 0189.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td>N</td>
<td>Not Hispanic or Latino</td>
</tr>
</tbody>
</table>
**NK1-35 Race (CE) 00113**

USIIS accepts the following values for Race Codes.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1002-5</td>
<td>American Indian or Alaska Native</td>
</tr>
<tr>
<td>2028-9</td>
<td>Asian</td>
</tr>
<tr>
<td>2076-8</td>
<td>Native Hawaiian or Other Pacific Islander</td>
</tr>
<tr>
<td>2054-5</td>
<td>Black or African American</td>
</tr>
<tr>
<td>2106-3</td>
<td>White</td>
</tr>
<tr>
<td>2131-1</td>
<td>Other Race</td>
</tr>
<tr>
<td>(empty field)</td>
<td>Unknown/undetermined</td>
</tr>
</tbody>
</table>

**NTE—Note Segment**

The NTE segment is used for sending notes and comments. It is used in relation to OBX in the VXU and RSP.

**Table 5-10 Note Segment (NTE)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set ID - NTE</td>
<td>SI</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>2</td>
<td>Source of Comment</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>3</td>
<td>Comment</td>
<td>FT</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>Maximum 500 characters.</td>
</tr>
<tr>
<td>4</td>
<td>Comment Type</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
NTE Field Definitions

NTE-3 Comment (FT) 00098

**Definition:** This field contains the comment contained in the segment. Maximum length is 500 characters.

**OBX—Observation Result Segment**

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

**Table 5-11 Observation Segment (OBX)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set ID – OBX</td>
<td>SI</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>OBX sequence number. 1 for the 1(^{st}) occurrence, 2 for the 2(^{nd}) occurrence, etc.</td>
</tr>
<tr>
<td>2</td>
<td>Value Type</td>
<td>ID</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>USIIS supports <strong>CE</strong> and <strong>DT</strong>.</td>
</tr>
<tr>
<td>3</td>
<td>Observation Identifier</td>
<td>CE</td>
<td>NIP003</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>This value indicates the type of observation included in OBX-5. It poses the question that is answered by OBX-5. Refer to the <strong>Master Observation Table - Observation Identifiers and Values</strong> below.</td>
</tr>
<tr>
<td>4</td>
<td>Observation Sub-ID</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Observation Value</td>
<td>varies</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>This value indicates the observation. It is the answer to the question that is posed by OBX-3. Refer to <strong>Master Observation</strong></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Table Observation Identifiers and Values below.</td>
</tr>
<tr>
<td>6</td>
<td>Units</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(R / RE)</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>7</td>
<td>References Range</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>8</td>
<td>Abnormal Flags</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>Probability</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>Nature of Abnormal Test</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>11</td>
<td>Observation Result Status</td>
<td>ID</td>
<td>0085</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>12</td>
<td>Effective Date of Reference Range Values</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>User Defined Access Checks</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>14</td>
<td>Date/Time of the Observation</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td>If OBX-2 is valued DT.</td>
</tr>
<tr>
<td>15</td>
<td>Producer's Reference</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>16</td>
<td>Responsible Observer</td>
<td>XCN</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>17</td>
<td>Observation Method</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(RE/O)</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>18</td>
<td>Equipment Instance Identifier</td>
<td>EI</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>19</td>
<td>Date/Time of the Analysis</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>20</td>
<td>Reserved for harmonization with V2.6</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>21</td>
<td>Reserved for harmonization with V2.6</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>22</td>
<td>Reserved for harmonization with V2.6</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>23</td>
<td>Performing Organization Name</td>
<td>XON</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>24</td>
<td>Performing Organization Address</td>
<td>XAD</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>25</td>
<td>Performing Organization Medical Director</td>
<td>XCN</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

**OBX Field Definitions**

**OBX-1 Set ID - OBX (SI) 00569**

*Definition:* This field contains the sequence number. The first instance shall be set to 1 and each subsequent instance shall be the next number in sequence.

**OBX-2 Value Type (ID) 00570**

*Definition:* This field contains the format of the observation value in OBX. If the value is CE then the result must be a coded entry.
Note: USIIS supports CE and DT, reflecting the uses for OBX.

**OBX-3 Observation Identifier (CE) 00571**

**Definition:** This field contains a unique identifier for the observation being sent in the OBX segment.

Consider that OBX-3 poses the question and OBX-5 answers it. For example, OBX-3 may indicate **VIS Statement Published Date** and the value in OBX-5 is the answer, the date.

USIIS accepts and returns OBX for the following immunization-specific information:

- Vaccination Contraindication
- Vaccination Contraindication Effective Date
- Vaccination Reaction
- Immunity
- Vaccine Information Statement Published Date
- Vaccine Information Statement Presented Date
- Patient Eligibility for Vaccine Funding
- Vaccine Type

See the **Master Observation Table** below for valid values. USIIS will not process data sent for other uses.

**Note:** The 2.3.1 Implementation Guide used suffixes (e.g., LN to indicate linked) on the first sequence in OBX-3 to group related observations such as VIS dates for component vaccine. This is no longer acceptable. Grouping of related observations will be accomplished using Observation sub-id (OBX-4).

**OBX-4 Observation Sub-ID (ST) 00572**

**Definition:** This field is used to relate more than one observation to the same immunization by setting the value to the same number.

This field may also be used to link related components of an observation. Each component of the observation would share an Observation sub-id. For example, recording VIS Published Date and VIS Presented Date for a combination vaccination requires six (6) OBX segments. One OBX would indicate the vaccine group. It would have a pair of OBX indicating the VIS publication date and the VIS receipt date. These would have the same OBX-4 value to allow them to be linked. The second set of three would have another OBX-4 value common to each of them.
OBX-5 Observation Value (varies) 00573

**Definition:** This is the answer to the question posed in OBX-3. OBX-2 value type specifies the data type for this field.

USIIS accepts and returns OBX for: Immunization Contraindications, Immunization Reactions, Vaccine Information Published Date, Vaccine Information Statement Presented Date and Immunization Funding Source. See the following **Master Observation Table** for valid values.

**Master Observation Table – Observation Identifiers and Values**

USIIS supports the following OBX uses. If data are sent for other uses, USIIS will not process.

<table>
<thead>
<tr>
<th><strong>Observation Identifier</strong></th>
<th><strong>Observation Value</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OBX-3 “Question”</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Vaccine Funding Program</td>
<td>Vaccine Funding Program Eligibility Category</td>
</tr>
<tr>
<td>VIS published date</td>
<td>Vaccine Information Statement published date</td>
</tr>
<tr>
<td>VIS presented date</td>
<td>Vaccine Information Statement presented date</td>
</tr>
<tr>
<td>Contraindication</td>
<td>Vaccination Contraindication</td>
</tr>
<tr>
<td>Contraindication effective date</td>
<td></td>
</tr>
<tr>
<td>Reaction</td>
<td>Vaccination Reaction</td>
</tr>
<tr>
<td>Immunity</td>
<td>Disease with presumed immunity</td>
</tr>
<tr>
<td>Vaccine Type</td>
<td>For combination vaccines, the vaccine type the statement(s) provide information about. In the case when there are multiple vaccines that could be used, the correct choice is the &quot;unspecified&quot; formulation.</td>
</tr>
</tbody>
</table>

**Contraindications**

USIIS accepts the following values.

<table>
<thead>
<tr>
<th><strong>Code</strong></th>
<th><strong>Description</strong></th>
<th><strong>HL7 Table</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Description</td>
<td>Source</td>
</tr>
<tr>
<td>--------</td>
<td>------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>VXC30</td>
<td>Allergy (anaphylactic) to proteins of rodent or neural origin</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC17</td>
<td>Allergy (anaphylactic) to 2-phenoxyethanol</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC18</td>
<td>Allergy to baker’s yeast (anaphylactic)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>91930004</td>
<td>Allergy to eggs (anaphylactic)</td>
<td>SCT</td>
</tr>
<tr>
<td>294847001</td>
<td>Gelatin allergy (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>294468006</td>
<td>Neomycin allergy (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>VXC19</td>
<td>Allergy to thimerosal (anaphylactic)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC20</td>
<td>Allergy to previous dose of this vaccine or to any of its unlisted components (anaphylactic)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>402306009</td>
<td>Allergy to aluminum (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>300916003</td>
<td>Latex allergy (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>294530006</td>
<td>Polymyxin B allergy (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>VXC21</td>
<td>Previous history of intussusception</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC22</td>
<td>Encephalopathy within 7 days or previous dose of DTP or DTaP</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC23</td>
<td>Current fever with moderate-to-severe illness</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC24</td>
<td>Current acute illness, moderate to severe (with or without fever)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>276240003</td>
<td>Chronic disease (disorder)</td>
<td>SCT</td>
</tr>
<tr>
<td>VXC25</td>
<td>History of Arthus hypersensitivity reaction to a tetanus-containing vaccine administered &lt; 10 years previously</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC26</td>
<td>Underlying unstable, evolving neurologic disorders, (including seizure disorders, cerebral palsy, and developmental delay)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC27</td>
<td>Immunodeficiency due to any cause, including HIV (hematologic and solid tumors, congenital immunodeficiency, long-term immunosuppressive therapy, including steroids)</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>77386006</td>
<td>Patient currently pregnant (finding)</td>
<td>SCT</td>
</tr>
<tr>
<td>302215000</td>
<td>Thrombocytopenic disorder</td>
<td>SCT</td>
</tr>
<tr>
<td>161461006</td>
<td>History of purpura (situation)</td>
<td>SCT</td>
</tr>
<tr>
<td>294466005</td>
<td>Streptomyacin allergy (disorder)</td>
<td>CDCPHINVS</td>
</tr>
</tbody>
</table>

**Vaccination Reaction**
USIIS accepts the following values.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
<th>HL7 Table</th>
</tr>
</thead>
<tbody>
<tr>
<td>39579001</td>
<td>Anaphylaxis</td>
<td>SCT</td>
</tr>
<tr>
<td>VXC10</td>
<td>Collapse or shock-like state within 48 hours of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC11</td>
<td>Convulsions (fits, seizures) within 72 hours of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>8130809</td>
<td>Encephalopathy</td>
<td>SCT</td>
</tr>
<tr>
<td>VXC12</td>
<td>Fever of &gt;40.5°C (105°F) within 48 hours of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC13</td>
<td>Guillain-Barre syndrome (GBS) within 6 weeks of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC15</td>
<td>Intussusception within 30 days of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC9</td>
<td>Persistent, inconsolable crying lasting &gt; 3 hours within 48 hours of dose</td>
<td>CDCPHINVS</td>
</tr>
<tr>
<td>VXC14</td>
<td>Rash within 14 days of dose</td>
<td>CDCPHINVS</td>
</tr>
</tbody>
</table>

Table 0064, Financial Class / Vaccine Funding Program
USIIS accepts the following values.

<table>
<thead>
<tr>
<th>Code</th>
<th>Financial Class</th>
<th>VFC Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>V02</td>
<td>VFC Medicaid</td>
<td>Y</td>
</tr>
<tr>
<td>V03</td>
<td>VFC Uninsured</td>
<td>Y</td>
</tr>
<tr>
<td>V04</td>
<td>VFC American Indian/Alaskan Native</td>
<td>Y</td>
</tr>
<tr>
<td>V05</td>
<td>VFC Under-insured – at a FQHC</td>
<td>Y</td>
</tr>
<tr>
<td>V01</td>
<td>Not VFC eligible</td>
<td>N</td>
</tr>
<tr>
<td>V07</td>
<td>VFC Local-specific eligibility - CHIP</td>
<td>Y</td>
</tr>
</tbody>
</table>

Maintained for backward compatibility with HL7 2.3.1

<table>
<thead>
<tr>
<th>Code</th>
<th>Financial Class</th>
<th>VFC Qualified</th>
</tr>
</thead>
<tbody>
<tr>
<td>H01</td>
<td>Self Pay</td>
<td>N</td>
</tr>
<tr>
<td>H02</td>
<td>Medicaid</td>
<td>N</td>
</tr>
<tr>
<td>H03</td>
<td>Insured</td>
<td>N</td>
</tr>
<tr>
<td>V06</td>
<td>CHIP</td>
<td>Y</td>
</tr>
</tbody>
</table>
OBX-14 Date/Time of the Observation (DT) 00582

Definition: Records the date of the observation. Time component is optional.

**ORC—Order Request Segment**

The Common Order segment (ORC) is used to transmit fields that are common to a group of immunizations. While not all immunizations recorded in an immunization message are able to be associated with an order, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.

**Table 5-12 Common Order Segment (ORC)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIS Cardinality</th>
<th>CDC Usage</th>
<th>USIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Order Control</td>
<td>ID</td>
<td>0119</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>The value for VXU and RSP shall be RE.</td>
</tr>
<tr>
<td>2</td>
<td>Placer Order Number</td>
<td>EI</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Filler Order Number</td>
<td>EI</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>Unique identifier...</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Placer Group Number</td>
<td>EI</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Order Status</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Response Flag</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Quantity/Timing</td>
<td>TQ</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Parent</td>
<td>EIP</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>--------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>Date/Time of Transaction</td>
<td>TS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>element; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>Entered By</td>
<td>XCN</td>
<td>[0..1]</td>
<td></td>
<td>RE</td>
<td>RE</td>
<td></td>
<td>Name of person who entered or recorded the immunization. Maximum lengths (character) Last name = 40 First name = 20 Middle name = 20</td>
</tr>
<tr>
<td>11</td>
<td>Verified By</td>
<td>XCN</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>12</td>
<td>Ordering Provider</td>
<td>XCN</td>
<td>[0..1]</td>
<td></td>
<td>C(RE/O)</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>13</td>
<td>Enterer's Location</td>
<td>PL</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>14</td>
<td>Call Back Phone Number</td>
<td>XTN</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>15</td>
<td>Order Effective Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>16</td>
<td>Order Control Code Reason</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>17</td>
<td>Entering Organization</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>18</td>
<td>Entering Device</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>19</td>
<td>Action By</td>
<td>XCN</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>20</td>
<td>Advanced Beneficiary Notice Code</td>
<td>CE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>21</td>
<td>Ordering Facility Name</td>
<td>XON</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>22</td>
<td>Ordering Facility Address</td>
<td>XAD</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>23</td>
<td>Ordering Facility Phone Number</td>
<td>XTN</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>24</td>
<td>Ordering Provider Address</td>
<td>XAD</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>25</td>
<td>Order Status Modifier</td>
<td>CWE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>26</td>
<td>Advanced Beneficiary Notice Override Reason</td>
<td>CWE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>27</td>
<td>Filler’s Expected Availability Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>28</td>
<td>Confidentiality Code</td>
<td>CWE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>29</td>
<td>Order Type</td>
<td>CWE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>30</td>
<td>Enterer Authorization Mode</td>
<td>CNE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>31</td>
<td>Parent Universal Service Identifier</td>
<td>CWE</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
ORC Field Definitions

**ORC-1  Order Control (ID)  00215**

*Definition:* Determines the function of the order segment. The value for VXU and RSP shall be RE.

**ORC-3  Filler Order Number (EI)  00217**

*Definition:* The filler order number is used to identify uniquely the order among all orders sent by a provider organization that filled the order. In the case where a historic immunization is being recorded (i.e. from an immunization card), the sending system shall assign an identifier as if it were an immunization administered by the sending provider. In the case where an RXA is conveying information about an immunization that was not given (e.g. refused) the filler order number shall be 9999.

**ORC-10  Entered By (XCN)  00224**

*Definition:* This identifies the individual that entered the immunization information.

---

**PD1—Patient Demographic Segment**

The Patient Demographic Segment contains patient demographic information. Three primary uses for this information include: 1) indicating whether the person wants his/her data protected; and 2) whether the person wants to receive recall/reminder notices; and 3) the person’s current status in the registry.

*Table 5-13-Patient Demographic Segment (PD1)*

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Living Dependency</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Living Arrangement</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>Patient Primary Facility</td>
<td>XON</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Patient Primary Care Provider Name &amp; ID No.</td>
<td>XCN</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Student Indicator</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Handicap</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Living Will Code</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Organ Donor Code</td>
<td>IS</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Separate Bill</td>
<td>ID</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Duplicate Patient</td>
<td>CX</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Publicity Code</td>
<td>CE</td>
<td>0215</td>
<td>RE</td>
<td>RE</td>
<td>USIIS supports 01 or 02.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Protection Indicator</td>
<td>ID</td>
<td>0136</td>
<td>RE</td>
<td>RE</td>
<td>USIIS supports Y or N.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Protection Indicator Effective Date</td>
<td>DT</td>
<td>[0..1]</td>
<td>C(RE/X)</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Place of Worship</td>
<td>XON</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>15</td>
<td>Advance Directive Code</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>16</td>
<td>Immunization Registry Status</td>
<td>IS</td>
<td>0441</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Immunization Registry Status</td>
<td>DT</td>
<td>[0..1]</td>
<td>C(RE/X)</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>18</td>
<td>Publicity Code Effective Date</td>
<td>DT</td>
<td>[0..1]</td>
<td>C(RE/X)</td>
<td>X</td>
<td></td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>19</td>
<td>Military Branch</td>
<td>IS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>20</td>
<td>Military Rank/Grade</td>
<td>IS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>21</td>
<td>Military Status</td>
<td>IS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

**PD1 Field Definitions**

**PD1-11 Publicity Code (CE) 00743**
**Definition:** This field contains a code indicating the level of publicity allowed for the patient (e.g., No Publicity, Family Only). This refers to how a person wishes to be contacted for reminder or recall. Refer to *User-defined Table 0215 - Publicity Code* for suggested values.

**HL7 Table 0215, Publicity code**

USIIS accepts the following values.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>No reminder/recall</td>
</tr>
<tr>
<td>02</td>
<td>Reminder/recall any method</td>
</tr>
<tr>
<td>03</td>
<td>Reminder/recall – no calls</td>
</tr>
<tr>
<td>04</td>
<td>Reminder only – any method</td>
</tr>
<tr>
<td>05</td>
<td>Reminder only – no calls</td>
</tr>
<tr>
<td>06</td>
<td>Recall only – any method</td>
</tr>
<tr>
<td>07</td>
<td>Recall only – no calls</td>
</tr>
<tr>
<td>08</td>
<td>Reminder/recall – to provider</td>
</tr>
<tr>
<td>09</td>
<td>Reminder to provider</td>
</tr>
<tr>
<td>10</td>
<td>Only reminder to provider, no recall</td>
</tr>
<tr>
<td>11</td>
<td>Recall to provider</td>
</tr>
<tr>
<td>12</td>
<td>Only recall to provider, no reminder</td>
</tr>
</tbody>
</table>

**PD1-12 Protection Indicator (ID) 00744**

**Definition:** This field identifies whether a person’s information may be shared with other providers. If protection indicator is not actively determined by the clinician, it shall be empty.

<table>
<thead>
<tr>
<th>Protection State</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes, protect the data. Client (or guardian) has indicated that the information shall be protected.</td>
<td>Y</td>
</tr>
<tr>
<td>No, it is not necessary to protect data from other clinicians.</td>
<td>N</td>
</tr>
</tbody>
</table>
No determination has been made regarding client’s (or guardian’s) wishes regarding information sharing.

Note: Previous Implementation Guides stated that Y meant that a person’s information could be shared. This was an incorrect interpretation of the use of this field. The meaning now aligns with the definition of HL7. That is, Y means data must be protected.

**PD1-16 Immunization Registry Status (IS) 01569**

*Definition:* This field captures whether the sending provider organization considers this an active patient. Refer to *User-defined Table 0441 - Immunization Registry Status* for suggested values.

**HL7 Table 0441, Immunization Registry Status**

USIIS accepts the following values.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Active</td>
</tr>
<tr>
<td>I</td>
<td>Inactive – Unspecified</td>
</tr>
<tr>
<td>L</td>
<td>Inactive – Lost to follow-up (cannot contact)</td>
</tr>
<tr>
<td>M</td>
<td>Inactive – Moved or gone elsewhere</td>
</tr>
<tr>
<td>P</td>
<td>Inactive – Permanently (do not reactivate or enter new events to this record)</td>
</tr>
<tr>
<td>U</td>
<td>Unknown</td>
</tr>
</tbody>
</table>

**PID—Patient Identifier Segment**

The PID is used by all applications as the primary means of communicating patient identification information.

**Table 5-14-Patient Identifier Segment (PID)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Set ID - PID</td>
<td>SI</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Shall be valued 1 (one).</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------</td>
<td>-----------</td>
<td>---------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>---------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>Patient ID</td>
<td>CX</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
| 3   | Patient Identifier List    | CX        | [1..*]              | [1..*]             | R                 | R         |             | Patient identifier. USIIS supports:  
  
  **MR**: provider’s unique patient medical record number  
  **MA**: Medicaid number  
  **SS**: Social Security Number  
  **USIIS requires MR.**                                                                 |
| 4   | Alternate Patient ID       | CX        | [0..0]              | [0..0]             | X                 | X         |             | USIIS does not support this element; if sent it will be ignored.                       |
| 5   | Patient Name               | XPN       | [1..*]              | [1..1]             | R                 | R         |             | USIIS supports last name, first name, middle name and suffix.  
  
  **Maximum lengths**:  
  Last name = 40 characters  
  First name = 20 characters  
  Middle name = 20 characters  
  Repeating values will be ignored.  |
<p>| 6   | Mother’s Maiden Name       | XPN       | [0..1]              | [0..1]             | RE                | RE        |             | Maiden name only. <strong>Maximum length</strong> = 48 characters.  |
| 7   | Date/Time of Birth         | TS        | [1..1]              | [1..1]             | R                 | R         |             | Time component is optional. |</p>
<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Administrative Sex</td>
<td>IS</td>
<td>0001</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>Patient Alias</td>
<td>XPN</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>10</td>
<td>Race</td>
<td>CE</td>
<td>0005</td>
<td>[0..*]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Repeating values will be ignored.</td>
</tr>
<tr>
<td>11</td>
<td>Patient Address</td>
<td>XAD</td>
<td>[0..*]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td>Repeating values will be ignored. Accepted components: street, other designation, city, county, state, zip code.</td>
</tr>
<tr>
<td>12</td>
<td>County Code</td>
<td>IS</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>13</td>
<td>Phone Number - Home</td>
<td>XTN</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>RE</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>14</td>
<td>Phone Number - Business</td>
<td>XTN</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>15</td>
<td>Primary Language</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>16</td>
<td>Marital Status</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>17</td>
<td>Religion</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>18</td>
<td>Patient Account Number</td>
<td>CX</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>SSN Number - Patient</td>
<td>ST</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td>SSN should be included in PID-3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Driver's License Number - Patient</td>
<td>DLN</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Mother's Identifier</td>
<td>CX</td>
<td>[0..0]</td>
<td>[0..0]</td>
<td>X</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Ethnic Group</td>
<td>CE</td>
<td>0189</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Valid values: H, N, U, 2135-2, 2186-5.</td>
</tr>
<tr>
<td>23</td>
<td>Birth Place</td>
<td>ST</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Multiple Birth Indicator</td>
<td>ID</td>
<td>0136</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>O</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Birth Order</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(RE/O)</td>
<td>C(O)</td>
<td>If PID-24 is valued “Y”</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Citizenship</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Veterans Military Status</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Nationality</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Patient Death Date and</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(RE/)</td>
<td>C(O)</td>
<td>If PID-30 is valued “Y”</td>
<td></td>
</tr>
</tbody>
</table>

Updated: September-2016
<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>Patient Death Indicator</td>
<td>ID</td>
<td>0136</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>31</td>
<td>Identity Unknown Indicator</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Identity Reliability Code</td>
<td>IS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>O</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>Last Update Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Last Update Facility</td>
<td>HD</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>Species Code</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Breed Code</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>Strain</td>
<td>ST</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>Production Class Code</td>
<td>CE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>39</td>
<td>Tribal Citizenship</td>
<td>CWE</td>
<td>[0..1]</td>
<td></td>
<td>O</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
</tbody>
</table>
PID Field Definitions

PID-1 Set ID - PID (SI) 00104

Definition: This field should be valued 1 (one).

PID-3 Patient Identifier List (CX) 00106

Definition: This field contains the list of identifiers (one or more) used by the healthcare facility to uniquely identify a patient.

Note: USIIS requires a MR (Medical Record Number) type as the patient unique identifier. Two other types are accepted as repeating values: MA (Medicaid Number) and SS (Social Security Number).

PID-5 Patient Name (XPN) 00108

Definition: This field contains the names of the patient, The primary or legal name of the patient is reported first.

Note: USIIS supports one patient name; repeating values will not be processed.

Maximum name component lengths:
- Last name = 40 characters
- First name = 20 characters
- Middle name = 20 characters

PID-6 Mother’s Maiden Name (XPN) 00109

Definition: This field contains the family (last) name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name.

PID-7 Date/Time of Birth (TS) 00110

Definition: This field contains the patient’s date and time of birth.

Note: The time component is optional.

PID-8 Administrative Sex (IS) 00111

Definition: This field contains the patient’s sex. Refer to User-defined Table 0001 - Administrative Sex for valid values.

PID-10 Race (CE) 00113
**Definition:** This field refers to the patient’s race. Refer to *User-defined Table 0005 - Race* for valid values.

**Table 0005 – Race Code**

USIIS supports the following codes.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1002-5</td>
<td>American Indian or Alaska Native</td>
</tr>
<tr>
<td>2028-9</td>
<td>Asian</td>
</tr>
<tr>
<td>2076-8</td>
<td>Native Hawaiian or Other Pacific Islander</td>
</tr>
<tr>
<td>2054-5</td>
<td>Black or African American</td>
</tr>
<tr>
<td>2106-3</td>
<td>White</td>
</tr>
<tr>
<td>2131-1</td>
<td>Other Race</td>
</tr>
<tr>
<td></td>
<td>(empty field) Unknown/undetermined</td>
</tr>
</tbody>
</table>

**PID-11 Patient Address (XAD) 00114**

**Definition:** This field contains the mailing address of the patient.

**Note:** USIIS accepts the following components: street, other designation, city, county, state, zip code. Other components will be ignored. Repeating values will be ignored.

**PID-13 Phone Number - Home (XTN) 00116**

**Definition:** This field contains the patient’s personal phone numbers.

**PID-22 Ethnic Group (CE) 00125**

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

**Table 0189 – Ethnic group**

USIIS accepts the following valid values.

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>Hispanic or Latino</td>
</tr>
<tr>
<td>N</td>
<td>Not Hispanic or Latino</td>
</tr>
</tbody>
</table>
### PID-24 Multiple Birth Indicator (ID) 00127

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

- **Y** the patient was part of a multiple birth
- **N** the patient was a single birth

Empty multiple birth status is undetermined.

### PID-25 Birth Order (NM) 00128

**Definition:** When a patient was part of a multiple birth, a number indicating the patient’s birth order is entered in this field. If PID-24 is populated, then this field should be populated.

### QAK—Query Acknowledgement Segment

**Table 5-15-Query Acknowledgement Segment**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Query Tag</td>
<td>ST</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Query Response Status</td>
<td>ID</td>
<td>0208</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Message Query Name</td>
<td>CE</td>
<td>0471</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hit Count</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>This payload</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>Hits remaining</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>--------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ignored.</td>
</tr>
</tbody>
</table>

**QAK Field Definitions**

**QAK-1 Query Tag (ST) 00696**

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

**QAK-2 Query Response Status (ID) 00708**

*Definition:* Used when there is no record is found in USIIS that matches the query parameters, but where there is also no error. It is defined with *HL7 Table 0208 - Query Response Status*.

**Table 0208 – Query Response Status**

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OK</td>
<td>Data found, no errors (default)</td>
</tr>
<tr>
<td>NF</td>
<td>No data found, no errors</td>
</tr>
<tr>
<td>AE</td>
<td>Application error</td>
</tr>
<tr>
<td>NR</td>
<td>Application reject</td>
</tr>
<tr>
<td>TM</td>
<td>Too many candidates found.</td>
</tr>
</tbody>
</table>

**QAK-3 Message Query Name (CE) 01375**

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

**QPD – Query Parameter Definition Segment**

The QPD segment defines the parameters of the query.
### Table 5-16-Query Parameter Definition (QPD)

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Message Query Name</td>
<td>CE</td>
<td>0471</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>QPD-1 must be valued <strong>Z34</strong> to request an immunization history.</td>
</tr>
<tr>
<td>2</td>
<td>Query Tag</td>
<td>ST</td>
<td></td>
<td></td>
<td></td>
<td>R</td>
<td>R</td>
<td>Identify the query.</td>
</tr>
<tr>
<td>3-n</td>
<td>User Parameters (in successive fields)</td>
<td>varies</td>
<td></td>
<td></td>
<td></td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

**QPD Field Definitions**

**QPD-1 Message Query Name (CE) 01375**

*Definition:* This field contains the name of the query and must be **Z34** to indicate request an immunization history.

**QPD-2 Query Tag (ST) 00696**

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

This value remains constant for each message (i.e., all continuation messages) associated with the query.

*Note:* This field differs from *MSA-2-Message control ID* which may vary with each continuation message, since it is associated with each individual message, not the query as a whole.

USIIS shall echo it back as the first field in the query acknowledgement segment (QAK).

**QPD-3 User Parameters (Varies) 01435**

*Definition:* These successive parameter fields hold the values that the initiating system passes and carry user parameter data.
RCP – Response Control Parameter Segment

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

Table 5-17- Response Control Parameter

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Query Priority</td>
<td>ID</td>
<td>0091</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>This will be valued I for immediate.</td>
</tr>
<tr>
<td>2</td>
<td>Quantity Limited Request</td>
<td>CQ</td>
<td>0126</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>3</td>
<td>Response Modality</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>Execution and Delivery Time</td>
<td>TS</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>Modify Indicator</td>
<td>ID</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>Sort-by Field</td>
<td>SRT</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>7</td>
<td>Segment group inclusion</td>
<td>ID</td>
<td></td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>

RCP Field Definitions

RCP-1 Query Priority (ID) 00027

Definition: This field contains the time frame that the response is expected. Only I (Immediate) shall be used for this field.
RCP-2 Quantity Limited Request (CQ) 00031

**Definition:** This field contains the maximum length of the response that can be accepted by the requesting system—the maximum number of records to return.

Valid entries are numerical values (in the first component) given in the units specified in the second component.

The second component (Type) is constrained to **RD** (record).

**RXA-- Pharmacy/Treatment Administration Segment**

The RXA segment carries immunization data. It is a child of an ORC segment, which a repeating segment in the RSP and VXU messages.

Because ORC segments are allowed to repeat, an unlimited numbers of vaccinations may be included in a message. Each RXA must be preceded by an ORC.

**Table 5-18 Pharmacy/Treatment Administration (RXA)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Give Sub-ID Counter</td>
<td>NM</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>Constrained to 0 (zero).</td>
</tr>
<tr>
<td>2</td>
<td>Administration Sub-ID Counter</td>
<td>NM</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>Constrained to 1 (one). USIIS shall value this element with 999.</td>
</tr>
<tr>
<td>3</td>
<td>Date/Time Start of Administration (consent_date) (contra_date)</td>
<td>TS</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
<td>Vaccination date/time. Time component is optional. 3.1 (vaccination) 3.1 (contraindication)</td>
</tr>
<tr>
<td>4</td>
<td>Date/Time End of Administration</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>X</td>
<td></td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>----------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>Administered Code</td>
<td>CE</td>
<td>CVX</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>Code = CVX</td>
</tr>
<tr>
<td>6</td>
<td>Administered Amount</td>
<td>NM</td>
<td></td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Administered Units</td>
<td>CE</td>
<td>UCUM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(R/O)</td>
<td>C(R/O)</td>
<td>USIIS will assume mL if not valued.</td>
</tr>
<tr>
<td>8</td>
<td>Administered Dosage Form</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>9</td>
<td>Administration Notes</td>
<td>CE</td>
<td>NIP 00001</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>C(R/O)</td>
<td>R</td>
<td>Must send to indicate if the facility administered the immunization or whether the facility entered the immunization as part of the patient history. If RXA-9 is blank, USIIS assumes immunization was not administered.</td>
</tr>
<tr>
<td>10</td>
<td>Administering Provider</td>
<td>XCN</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Name of vaccinator.</td>
</tr>
<tr>
<td>11</td>
<td>Administered-at Location</td>
<td>LA2</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Administered Per (Time Unit)</td>
<td>ST</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>13</td>
<td>Administered Strength</td>
<td>NM</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>14</td>
<td>Administered Strength</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>---------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Units</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ignored.</td>
</tr>
<tr>
<td>15</td>
<td>Substance Lot Number</td>
<td>ST</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>C(R/O)</td>
<td></td>
<td></td>
<td>If RXA-9.1 is valued “00”</td>
</tr>
<tr>
<td>16</td>
<td>Substance Expiration Date</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>C(RE/O)</td>
<td></td>
<td></td>
<td>If RXA-15 is valued</td>
</tr>
<tr>
<td>17</td>
<td>Substance Manufacturer Name</td>
<td>CE</td>
<td>MVX</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>C(R/O)</td>
<td>MVX Code.</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Substance/Treatment Refusal Reason</td>
<td>CE</td>
<td>NIP 002</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>C(R/X)</td>
<td>C(R/X) If RXA-20 is valued “RE”</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Indication</td>
<td>CE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Completion Status</td>
<td>ID</td>
<td>0322</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>USIIS will load immunization if value is ‘CP’. USIIS will not load immunization if value is 'RE', 'NA', or 'PA'.</td>
</tr>
<tr>
<td>21</td>
<td>Action Code - RXA</td>
<td>ID</td>
<td>0323</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>USIIS supports A (add) and D (delete). To update a code, it must be deleted then added. U(update) is treated as an A(dd).</td>
</tr>
<tr>
<td>22</td>
<td>System Entry Date/Time</td>
<td>TS</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Administered Drug Strength Volume</td>
<td>NM</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>SEQ</td>
<td>Element Name</td>
<td>Data Type</td>
<td>Value set (HL Table)</td>
<td>CDC IG Cardinality</td>
<td>USIIS Cardinality</td>
<td>CDC Usage</td>
<td>USIIS Usage</td>
<td>Conditional Predicate</td>
</tr>
<tr>
<td>-----</td>
<td>-------------------------------------</td>
<td>-----------</td>
<td>----------------------</td>
<td>--------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>24</td>
<td>Administered Drug Strength Volume Units</td>
<td>CWE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Administered Barcode Identifier</td>
<td>CWE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Pharmacy Order Type</td>
<td>ID</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
<td></td>
</tr>
</tbody>
</table>

**RXA Field Definitions**

RXA-1 Give Sub-ID Counter (NM) 00342

*Definition:* Constrained to 0 (zero).

RXA-2 Administration Sub-ID Counter (NM) 00344

*Definition:* Constrained to 1 (one).

RXA-3 Date/Time Start of Administration (TS) 00345

*Definition:* The date this vaccination occurred. In the case of refusal or deferral, this is the date that the refusal or deferral was recorded. In the case of a refusal, it is the date the refusal was noted.

*Note:* Time component is optional.

RXA-4 Date/Time End of Administration (If Applies) (TS) 00346

*Definition:* If populated it should be = RXA-3. If empty, the date/time of RXA-3-Date/Time Start of Administration is assumed.

RXA-5 Administered Code (CE) 00347
**Definition:** If the immunization was administered, a CVX code should be used in the first triplet to code this field (see CVX Table maintained by the CDC, http://www.cdc.gov/vaccines/programs/iis/code-sets.html).

**RXA-6 Administered Amount (NM) 00348**

**Definition:** This field records the amount of vaccine administered. The units are expressed in the next field, RXA-7.

**RXA-7 Administered units (CE) 00349**

**Definition:** Valid value is mL. USIIS will assume mL if field is not valued.

**RXA-9 Administration Notes (CE) 00351**

**Definition:** This field is used to indicate whether this immunization record is based on a historical record or was given by the reporting provider. Refer to *NIP-defined Table 0001 - Immunization Information Source* for valid values. The first component shall contain the code, the second the free text and the third shall contain the name of the code system (NIP00001).

Must send to indicate if the facility administered the immunization or whether the facility entered the immunization as part of the patient history.

If RXA-9 is blank, USIIS assumes immunization was not administered.

**RXA-10 Administering Provider (XCN) 00352**

**Definition:** This field is intended to contain the name of the person who physically administered the vaccination.

**RXA-11 Administered-at Location (LA2) 00353**

**Definition:** The name and address of the facility that administered the immunization. Note that the components used are:

- Subcomponent 1: USIIS-assigned facility code.
- Subcomponent 2: Universal ID This shall be an OID, if populated.
- Subcomponent 3: Universal ID type (specify which universal id type)
- Note that if subcomponent 1 is populated, 2 and 3 should be empty. If subcomponent 2 is populated with an OID, subcomponent 3 must be populated with ISO.
- Component 4: The facility name/identifier.
Component 9-15: Facility address.
Components not specifically mentioned here are not expected in immunization messages.

**RXA-15 Substance Lot Number (ST) 01129**

**Definition:** This field contains the lot number of the immunization administered. It may remain empty if the dose is from a historical record. The lot number is the number printed on the label attached to the container holding the vaccine and on the packaging, which houses the container.

**RXA-16 Substance Expiration Date (TS) 01130**

**Definition:** This field contains the expiration date of the vaccine administered. It may remain empty if the dose is from a historical record. The vaccine expiration date does not always have a "day" component; therefore, such a date may be transmitted as YYYYMM.

**RXA-17 Substance Manufacturer Name (CE) 01131**

**Definition:** This field contains the manufacturer of the vaccine administered. MVX codes should be used to code this field. See CDC maintained list of MVX codes, http://www.cdc.gov/vaccines/programs/iis/code-sets.html.

**RXA-18 Substance/Treatment Refusal Reason (CE) 01136**

**Definition:** This field contains the reason the patient refused the immunization. Any entry in the field indicates that the patient did not receive the immunization. If this field is populated RXA-20, Completion Status shall be populated with RE.

**RXA-20 Completion Status (ID) 01223**

**Definition:** This field indicates if the dose was successfully given. It must be populated with RE if RXA-18 is populated with NA. If a dose was not completely administered or if the dose were not potent this field may be used to label the immunization. If this RXA has a CVX of 998 (no vaccine administered) then this shall be populated with NA.
USIIS will load immunization only if value is CP.

**RXA-21 Action Code – RXA (ID) 01224**

**Definition:** This field indicates the immunization action. Refer to Table 0323. If it is left empty, USIIS assumes the action code is A.
Note: USIIS does not support action code U (Update system). To update a code, it must be deleted and resent. If U is sent, USIIS processes as if A(dd).

ORC-3, Placer order number, may be used to link to a specific immunization if the system receiving the request has recorded this from the initial order. Local implementers should specify its’ use in a local implementation guide.

**RXR-- Pharmacy/Treatment Route Segment**

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

**Table 5-19 Pharmacy/Treatment Route (RXR)**

<table>
<thead>
<tr>
<th>SEQ</th>
<th>Element Name</th>
<th>Data Type</th>
<th>Value set (HL Table)</th>
<th>CDC IG Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Conditional Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Route</td>
<td>CE</td>
<td>0162</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Administration Site</td>
<td>CWE</td>
<td>0163</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Administration Device</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>4</td>
<td>Administration Method</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>5</td>
<td>Routing Instruction</td>
<td>CE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
<tr>
<td>6</td>
<td>Administration Site Modifier</td>
<td>CWE</td>
<td></td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>O</td>
<td>X</td>
<td>USIIS does not support this element; if sent it will be ignored.</td>
</tr>
</tbody>
</table>
RXR Field Definitions

RXR-1 Route (CE) 00309

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

RXR-2 Administration Site (CWE) 00310

*Definition:* This field contains the site of the administration route. Refer to Table 0163.
6. Messages for Transmitting Immunization Information to USIIS

This chapter describes each of the messages used to accomplish the use cases described in Chapter 2. These messages are built from the segments described in Chapter 5, Segments and Message Details. The Segments are built using the Data Types specified in Chapter 4.

**Table 6-20- USIIS Supported Messages**

<table>
<thead>
<tr>
<th>Message</th>
<th>Use Case</th>
<th>Related Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>VXU</td>
<td>Send Immunization History to USIIS</td>
<td>ACK</td>
</tr>
<tr>
<td>ACK</td>
<td>USIIS Sends Message Acknowledgement to external system</td>
<td>VXU, QBP</td>
</tr>
<tr>
<td>QBP</td>
<td>Request Immunization History from USIIS</td>
<td>RSP</td>
</tr>
<tr>
<td>RSP</td>
<td>USIIS Responds to Request for Immunization</td>
<td>QBP</td>
</tr>
<tr>
<td>BHS, BTS</td>
<td>Send to indicate the beginning and end of a batch of</td>
<td>BTS</td>
</tr>
<tr>
<td></td>
<td>immunization messages sent to USIIS.</td>
<td></td>
</tr>
<tr>
<td>FHS, FTS</td>
<td>Send to indicate the beginning and end of a file of</td>
<td>FTS</td>
</tr>
<tr>
<td></td>
<td>batches of immunization messages sent to USIIS.</td>
<td></td>
</tr>
</tbody>
</table>

USIIS does not support the following message: ADT.

**Send Immunization Information to USIIS – VXU**

Systems may send unsolicited immunization information to USIIS using a VXU message type. This may be information that is new to USIIS or may be an update to an existing record in USIIS. The following table lists the segments that are part of a VXU message. If other segments are sent, they will be ignored.
### Table 6-2—VXU Segment Usage

<table>
<thead>
<tr>
<th>Segment</th>
<th>CDC Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSH</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>Every message begins with an MSH.</td>
</tr>
<tr>
<td>PID</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>Every VXU has one or more PID segments.</td>
</tr>
<tr>
<td>PD1</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Every VXU has one or more PD1 segments.</td>
</tr>
<tr>
<td>NK1</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>RE</td>
<td>The PID segment may have zero or more NK1 segments.</td>
</tr>
</tbody>
</table>

*Order group:* Each VXU may have zero or more Order groups

<table>
<thead>
<tr>
<th>Segment</th>
<th>CDC Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC Usage</th>
<th>USIIS Usage</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORC</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td></td>
<td></td>
<td>The order group must have one ORC segment.</td>
</tr>
<tr>
<td>RXA</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>RE</td>
<td>Each ORC segment must have one RXA segment. Every RXA requires an ORC segment.</td>
</tr>
<tr>
<td>RXR</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Each RXA segment may have zero or one RXR segments.</td>
</tr>
<tr>
<td>OBX</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>RE</td>
<td>Each RXA segment may have zero or more OBX segments.</td>
</tr>
<tr>
<td>NTE</td>
<td>[0..1]</td>
<td>[0..1]</td>
<td>RE</td>
<td>RE</td>
<td>Each OBX segment may have zero or one NTE segment.</td>
</tr>
</tbody>
</table>

USIIS does process the following segments: GT1, PD1, IN1, IN2, IN3, PV1, PV2, TQ1, TQ2, SFT.

**USIIS Business Rules — VXU Segment**

1. Patients with a birth date in the future will be rejected.
2. Patients with any combination of the following first names will be rejected: Baby, Boy, Girl, Twin.
3. Patients with any combination of the following last names will be rejected: Decease, Adopt.
4. A RXA segment is usually expected, although USIIS will accept patient demographic information without immunization related segments.
5. Vaccinations with a vaccination date in the future will be rejected.
6. Vaccinations with a vaccination date before the patient’s birth date will be rejected.

**USIIS Immunization Information Message Acknowledgment – ACK**

USIIS returns an acknowledgement to the sending external system when a VXU message is received. The acknowledgment does not imply that the message did not contain errors.

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

<table>
<thead>
<tr>
<th>Segment</th>
<th>CDC Cardinality</th>
<th>USIIS Cardinality</th>
<th>CDC IG Usage</th>
<th>USIIS Usage</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSH</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td>MSH-9.2 returns what is sent. MSH-9.3 will be valued ACK.</td>
</tr>
<tr>
<td>MSA</td>
<td>[1..1]</td>
<td>[1..1]</td>
<td>R</td>
<td>R</td>
<td></td>
</tr>
<tr>
<td>ERR</td>
<td>[0..*]</td>
<td>[0..*]</td>
<td>RE</td>
<td>O</td>
<td></td>
</tr>
</tbody>
</table>

USIIS does not support the following segment: SFT

**Query and Response for an Immunization History – QPB and RSP**

Systems may send requests for immunization histories to USIIS using a QPB message type. USIIS supports queries for real-time, synchronous interfaces only—not for batches of messages.

### 7. Change History

<table>
<thead>
<tr>
<th>Version</th>
<th>Author</th>
<th>Date</th>
<th>Change</th>
<th>Section/Page</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Based on CDC HL7 Implementation Guide version 1.4 and errata, 11/9/2012</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>McConnell</td>
<td>22-Sep-2013</td>
<td>VXU functionality</td>
<td></td>
</tr>
<tr>
<td>1.2</td>
<td>McConnell</td>
<td>29-Sep-2016</td>
<td>VXU and QBP functionality</td>
<td></td>
</tr>
</tbody>
</table>
Appendix A: Code Tables

Code Tables, where different than the CDC Implementation Guide, are included in the Segments and Message Details chapter of this guide.
Appendix B: Guidance on Usage and Example Messages

**VXU Example**

```
MSH|^~&|USIS EHRCode|USIS ClinicCode|USIS InterfaceCode|UT0000|20120614110335||VXU^V04^VXU_V04|20120614EHR1011|P|2.5.1||NE|AL|
PID||548548390^^^^MR||MINNIE^SYLVA^MAY|MCDAY|20050924|F|2106-3|1740 BLISS AVE^^SALT LAKE CITY^UT^84108-2904||||646846410||NH|UT|
PD1|||||02|N|
NK1||PEACOCK^KRISAN|MTH^MOTHER^HL70063|4355125154|
ORC
RXA|0|999|20051129|20051129|110^DTaP-HEP B-IPV^CVX^90723^Diphtheria, tetanus toxoids, acellular pertussis vaccine, Hepatitis B, and poliovirus vaccine, inactivated (DTaP-HepB-IPV), for intramuscular use^CPT|0.5|ML|00^New Immunization Record^NIP0001|^ALSERD^ STACEY|||AC21A012BA|20140925|SKB^GLAXOSMITHKLINE (FORMERLY SMITHKLINE BEECHAM)^MVX|RE||CP|A|20121129|
RXR|IM^INTRAMUSCULAR^HL70162|LT^LEFT THIGH^HL70163|

Send Information about presenting vaccine information statement (VIS) to a patient
```

OBX|1|TS|29769-7^Date Vaccine Information Statement Presented^LN|1|20100518|

**Send Information about VIS published date**

```
OBX|1|TS|29768-9^Date Vaccine Information Statement Published^LN|1|20070517|
```

**Report Vaccine-specific Contraindication**

```
OBX|1|CE|30945-0^Vaccination Contraindication^CDCPHINVS|1| VXC21|
```

**Send Information about Vaccine-specific Financial Class**

```
OBX|3|CE|64994-7^Funding Source for Immunization^HL70064|1|H03|
```
Send Information about Vaccine-specific Reaction

OBX|3|CE|31044-4^Vaccination Reaction^ CDCPHINVS |1|VXC12|

ACK Example

MSH|^~\&|USIIS|UT0000^^UT0000|||20120611082732||QCK|USIIS2012061100002|P|2.5.1|||NE|AL|
MSA|AA|20120605CDP00485|

QCK Example

MSH|^~\&|USIIS|UT0000^^UT0000|||20120611082732||QCK|USIIS2012061100002|P|2.3.1|||NE|AL|
MSA|AA|20120605CDP00485|
QAK|20120605CDP00485|NF|

QPB and RSP Examples

A subsequent version of this Implementation Guide will include examples.