# ONC 2015 Edition Certification Test Data

**Immunization** 

Version 1.1.0

22nd February 2018

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## **ONC 2015 Test Plan**

This test plan is to be used for the ONC 2015 Edition Certification Testing of HealthIT modules. All test cases are required to be executed. The test plan includes a set of Administered Immunization test cases (Administration Group) and a set of Query and Response test cases (Evaluated History and Forecast Group).

## 1. Administration Group

## The administration group is design to test:

- (1) the creation of a broad scope of immunization messages including support for new and historical administrations, refusals, combination vaccines, patient consent and various observations including VIS and VFC.
- (2) the receipt and handling of various acknowledgement messages including application accept, application error, and application warning.

### **Test Cases consists of 2 steps:**

- (1) creating immunization messages based on the Immunization Messaging Standard (Z22 Profile-VXU Message) and specific Test Data, and
- (2) receiving acknowledgment messages based on the Immunization Messaging Standard (Z23 Profile-ACK Message).

## 1.1. IZ-AD-1\_Admin\_Child

Maximally populated child administration

## **Test Story**



A child (infant) is seen at a clinic. Historical vaccinations are recorded and new vaccines are administered and documented.

## **Comments**

No Comments

## Pre Condition

No PreCondition

## **Post Condition**

No PostCondition

## **Test Objectives**

This test case assesses the ability of the EHR to create an administration message containing historical and new administrations for a child including next of kin, patient consent, VIS, funding source and VFC data.

## **Evaluation Criteria**

## **Notes for Testers**

No Note

## 1.1.1. IZ-AD-1.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

## **Test Story**

## **Description**

A two month old male infant, Russell Clinton Richardson, is brought to a clinic for a well child visit by his mother Maria Elizabeth Richardson (nee Billington) and his father John William Richardson. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that the child previously received Hepatitis B vaccine 1 day after birth and 1 month after birth. The staff member determines that the patient needs DTaP, Hib, IPV, Rotavirus and Pneumococcal vaccinations. Because of the patient's status of Native American, he qualifies for all Vaccine For Children (VFC) supplied vaccines under the status of VFC eligible - American Indian/Alaska Native. The parents are given 5 Vaccine Information Sheets (VIS) to review. After reading them, they agree that the child should receive all the vaccinations recommended. They also agree that the data should be shared once it is incorporated into the local IIS. They indicate that reminders and recalls may be sent by any method. Appropriate doses of DTaP/Hib/IPV (Pentacel), Rotavirus (RotaTeq) and Pneumococcal (Prevnar 13) are selected from the clinic's stock of publically funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the doses to the patient and then enters the data into the EHR and transmits it to the IIS.

### Comments

No Comments

## **Pre Condition**

No PreCondition

### **Post Condition**

No PostCondition

## **Test Objectives**

Create an administration message containing historical (using CVX) and new administrations (using NDC)

Support for next of kin

Support for patient consent

Support for VIS

Support for funding source

Support for VFC data.

## **Evaluation Criteria**

Message Validation Report

### **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single

representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

## **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Presence-Configuration       |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150624073733.994-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-1.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                             |                              |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment<br>Type    | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      |                             |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
|            |                                       |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | Indincicit                   |

PID: Patient Identification =

| Location   | Data Element  | Data                             | Categorization               |
|------------|---|----------------------------------|------------------------------|
| PID-1      | Set ID - PID  | 1                                | Value-Profile Fixed          |
| PID-3      | Patient Identifier List                               |                                  |                              |
| PID-3.1    | ID Number   | 3123                             | Presence-Content Indifferent |
| PID-3.4    | Assigning Authority                                   |                                  |                              |
| PID-3.4.1  | Namespace ID  | NIST-MPI-1                       | Presence-Content Indifferent |
| PID-3.4.2  | Universal ID  |                                  | Indifferent                  |
| PID-3.4.3  | Universal ID Type                                     |                                  | Indifferent                  |
| PID-3.5    | Identifier Type Code                                  | MR                               | Value-Test Case Fixed        |
| PID-5      | Patient Name  |                                  |                              |
| PID-5.1    | Family Name   |                                  |                              |
| PID-5.1.1  | Surname   | Richardson                       | Presence-Content Indifferent |
| PID-5.2    | Given Name  | Russell                          | Presence-Content Indifferent |
| PID-5.3    | Second and Further Given<br>Names or Initials Thereof | Clint                            | Presence-Content Indifferent |
| PID-5.7    | Name Type Code  | L                                | Value-Test Case Fixed        |
| PID-6      | Mother's Maiden Name                                  |                                  |                              |
| PID-6.1    | Family Name   |                                  |                              |
| PID-6.1.1  | Surname   | Billington                       | Presence-Content Indifferent |
| PID-6.7    | Name Type Code  | M                                | Value-Profile Fixed          |
| PID-7      | Date/Time of Birth                                    |                                  |                              |
| PID-7.1    | Time  | 20150415                         | Presence-Content Indifferent |
| PID-8      | Administrative Sex                                    | M                                | Value-Test Case Fixed        |
| PID-10     | Race  |                                  |                              |
| PID-10.1   | Identifier  | 1002-5                           | Value-Test Case Fixed        |
| PID-10.2   | Text  | American Indian or Alaska Native | Presence-Test Case Proper    |
| PID-10.3   | Name of Coding System                                 | CDCREC                           | Value-Profile Fixed          |
| PID-11     | Patient Address                                       |                                  |                              |
| PID-11.1   | Street Address  |                                  |                              |
| PID-11.1.1 | Street or Mailing Address                             | 543 Blount Drive                 | Presence-Content Indifferent |
| PID-11.2   | Other Designation                                     |                                  | Indifferent                  |
| PID-11.3   | City  | Bozeman                          | Presence-Content Indifferent |
| PID-11.4   | State or Province                                     | MT                               | Presence-Content Indifferent |
| PID-11.5   | Zip or Postal Code                                    | 59715                            | Presence-Content Indifferent |
| PID-11.6   | Country   | USA                              | Presence-Content Indifferent |
| PID-11.7   | Address Type  | P                                | Value-Test Case Fixed List   |
| PID-13     | Phone Number - Home                                   |                                  |                              |
| PID-13.2   | Telecommunication Use Code                            | PRN                              | Value-Test Case Fixed        |
| PID-13.3   | Telecommunication Equipment Type                      | РН                               | Value-Test Case Fixed        |
| PID-13.4   | Email Address   |                                  | NonPresence                  |
| PID-13.6   | Area/City Code  | 406                              | Presence-Content Indifferent |
| PID-13.7   | Local Number  | 5557690                          | Presence-Content Indifferent |
| PID-22     | Ethnic Group  |                                  |                              |
| PID-22.1   | Identifier  | 2186-5                           | Value-Test Case Fixed        |
| PID-22.2   | Text  | Not Hispanic or Latino           | Presence-Test Case Proper    |
| PID-22.3   | Name of Coding System                                 | CDCREC                           | Value-Profile Fixed          |
| PID-24     | Multiple Birth Indicator                              | N                                | Value-Test Case Fixed        |
| PID-25     | Birth Order   | 1                                | Indifferent                  |
| PID-29     | Patient Death Date and Time                           |                                  |                              |
| PID-29.1   | Time  |                                  | NonPresence                  |
| PID-30     | Patient Death Indicator                               | N                                | Value-Test Case Fixed        |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                         | Categorization               |
|----------|--|------------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                              |                              |
| PD1-11.1 | Identifier                                     | 02                           | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - any method | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                      | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                            | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150624                     | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                            | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20150415                     | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150624                     | Presence-Content Indifferent |

## -NK1[\*] ---

## NK1 : Next of Kin / Associated Parties —

| Location  | Data Element  | Data             | Categorization               |
|-----------|---|------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1                | Value-Profile Fixed          |
| NK1-2     | Name  |                  |                              |
| NK1-2.1   | Family Name   |                  |                              |
| NK1-2.1.1 | Surname   | Richardson       | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Maria            | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof | Elizabeth        | Presence-Content Indifferent |
| NK1-2.7   | Name Type Code  | L                | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                  |                              |
| NK1-3.1   | Identifier  | MTH              | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Mother           | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063          | Value-Profile Fixed          |
| NK1-4     | Address   |                  |                              |
| NK1-4.1   | Street Address  |                  |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 543 Blount Drive | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                  | Indifferent                  |
| NK1-4.3   | City  | Bozeman          | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT               | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715            | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA              | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                  |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN              | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication<br>Equipment Type                   | РН               | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                  | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406              | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5557690          | Presence-Content Indifferent |

### -NK1: Next of Kin / Associated Parties -

| Location  | Data Element  | Data             | Categorization               |
|-----------|---|------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 2                | Value-Profile Fixed          |
| NK1-2     | Name  |                  |                              |
| NK1-2.1   | Family Name   |                  |                              |
| NK1-2.1.1 | Surname   | Richardson       | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | John             | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof | William          | Presence-Content Indifferent |
| NK1-2.7   | Name Type Code  | L                | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                  |                              |
| NK1-3.1   | Identifier  | FTH              | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Father           | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063          | Value-Profile Fixed          |
| NK1-4     | Address   |                  |                              |
| NK1-4.1   | Street Address  |                  |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 543 Blount Drive | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                  | Indifferent                  |
| NK1-4.3   | City  | Bozeman          | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT               | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715            | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA              | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                  |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN              | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment Type                      | СР               | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                  | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406              | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5558299          | Presence-Content Indifferent |

### -ORC[\*]-

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 3140            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 38766           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 8681            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 65138           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 7491            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 79539           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 31528           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 82668           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data           | Categorization               |
|------------|---|----------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0              | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1              | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     |                |                              |
| RXA-3.1    | Time  | 20150624       | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                |                              |
| RXA-5.1    | Identifier  | 49281-0560-05  | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | Pentacel       | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC            | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5            | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                |                              |
| RXA-7.1    | Identifier  | mL             | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL             | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM           | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                |                              |
| RXA-9.1    | Identifier  | 00             | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record     | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001         | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                |                              |
| RXA-10.1   | ID Number   | 7824           | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                |                              |
| RXA-10.2.1 | Surname   | Jackson        | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily           | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne        | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1      | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                | Indifferent                  |
| RXA-10.10  | Name Type Code  | L              | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN            | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                |                              |
| RXA-11.4   | Facility  |                |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1  | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 526434         | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                |                              |
| RXA-16.1   | Time  | 20150722       | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                |                              |
| RXA-17.1   | Identifier  | PMC            | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Sanofi Pasteur | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX            | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                |                              |
| RXA-18.1   | Identifier  |                | NonPresence                  |
| RXA-18.2   | Text  |                | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                | NonPresence                  |
| RXA-20     | Completion Status                                     | СР             | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A              | Value-Test Case Fixed        |

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                     |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4047-20       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | RotaTeq             | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 2.0                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 297961              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20150916            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                   | Value-Test Case Fixed        |

| Location   | Data Element  | Data          | Categorization               |
|------------|---|---------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0             | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1             | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |               |                              |
| RXA-3.1    | Time  | 20150624      | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |               |                              |
| RXA-5.1    | Identifier  | 00005-1971-01 | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | Prevnar 13    | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC           | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5           | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |               |                              |
| RXA-7.1    | Identifier  | mL            | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL            | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM          | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |               |                              |
| RXA-9.1    | Identifier  | 00            | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record    | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001        | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |               |                              |
| RXA-10.1   | ID Number   | 7824          | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |               |                              |
| RXA-10.2.1 | Surname   | Jackson       | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily          | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne       | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |               |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1     | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |               | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |               | Indifferent                  |
| RXA-10.10  | Name Type Code  | L             | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN           | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |               |                              |
| RXA-11.4   | Facility  |               |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1 | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |               | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |               | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 353480        | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |               |                              |
| RXA-16.1   | Time  | 20150729      | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |               |                              |
| RXA-17.1   | Identifier  | PFR           | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Pfizer, Inc   | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX           | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |               |                              |
| RXA-18.1   | Identifier  |               | NonPresence                  |
| RXA-18.2   | Text  |               | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |               | NonPresence                  |
| RXA-20     | Completion Status                                     | СР            | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A             | Value-Test Case Fixed        |

| Location   | Data Element  | Data                           | Categorization               |
|------------|---|--------------------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                              | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                              | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                                |                              |
| RXA-3.1    | Time  | 20150416                       | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                                |                              |
| RXA-5.1    | Identifier  | 45                             | Value-Test Case Fixed        |
| RXA-5.2    | Text  | Hep B, unspecified formulation | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | CVX                            | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 999                            | Value-Test Case Fixed        |
| RXA-7      | Administered Units                                    |                                |                              |
| RXA-7.1    | Identifier  |                                | NonPresence                  |
| RXA-7.2    | Text  |                                | NonPresence                  |
| RXA-7.3    | Name of Coding System                                 |                                | NonPresence                  |
| RXA-9      | Administration Notes                                  |                                |                              |
| RXA-9.1    | Identifier  | 01                             | Value-Test Case Fixed        |
| RXA-9.2    | Text  | Historical Administration      | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001                         | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                                |                              |
| RXA-10.1   | ID Number   |                                | Indifferent                  |
| RXA-10.2   | Family Name   |                                |                              |
| RXA-10.2.1 | Surname   |                                | Indifferent                  |
| RXA-10.3   | Given Name  |                                | Indifferent                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                                | Indifferent                  |
| RXA-10.9   | Assigning Authority                                   |                                |                              |
| RXA-10.9.1 | Namespace ID  |                                | Indifferent                  |
| RXA-10.9.2 | Universal ID  |                                | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                                | Indifferent                  |
| RXA-10.10  | Name Type Code  |                                | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  |                                | Indifferent                  |
| RXA-11     | Administered-at Location                              |                                |                              |
| RXA-11.4   | Facility  |                                |                              |
| RXA-11.4.1 | Namespace ID  |                                | Indifferent                  |
| RXA-11.4.2 | Universal ID  |                                | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                                | Indifferent                  |
| RXA-15     | Substance Lot Number                                  |                                | Indifferent                  |
| RXA-16     | Substance Expiration Date                             |                                |                              |
| RXA-16.1   | Time  |                                | Indifferent                  |
| RXA-17     | Substance Manufacturer Name                           |                                |                              |
| RXA-17.1   | Identifier  |                                | Indifferent                  |
| RXA-17.2   | Text  |                                | Indifferent                  |
| RXA-17.3   | Name of Coding System                                 |                                | Indifferent                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                                |                              |
| RXA-18.1   | Identifier  |                                | NonPresence                  |
| RXA-18.2   | Text  |                                | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                                | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                             | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                              | Value-Test Case Fixed        |

| Location   | <b>Data Element</b>                                   | Data                           | Categorization               |
|------------|---|--------------------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                              | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                              | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                                |                              |
| RXA-3.1    | Time  | 20150515                       | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                                |                              |
| RXA-5.1    | Identifier  | 45                             | Value-Test Case Fixed        |
| RXA-5.2    | Text  | Hep B, unspecified formulation | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | CVX                            | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 999                            | Value-Test Case Fixed        |
| RXA-7      | Administered Units                                    |                                |                              |
| RXA-7.1    | Identifier  |                                | NonPresence                  |
| RXA-7.2    | Text  |                                | NonPresence                  |
| RXA-7.3    | Name of Coding System                                 |                                | NonPresence                  |
| RXA-9      | Administration Notes                                  |                                |                              |
| RXA-9.1    | Identifier  | 01                             | Value-Test Case Fixed        |
| RXA-9.2    | Text  | Historical Administration      | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001                         | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                                |                              |
| RXA-10.1   | ID Number   |                                | Indifferent                  |
| RXA-10.2   | Family Name   |                                |                              |
| RXA-10.2.1 | Surname   |                                | Indifferent                  |
| RXA-10.3   | Given Name  |                                | Indifferent                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                                | Indifferent                  |
| RXA-10.9   | Assigning Authority                                   |                                |                              |
| RXA-10.9.1 | Namespace ID  |                                | Indifferent                  |
| RXA-10.9.2 | Universal ID  |                                | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                                | Indifferent                  |
| RXA-10.10  | Name Type Code  |                                | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  |                                | Indifferent                  |
| RXA-11     | Administered-at Location                              |                                |                              |
| RXA-11.4   | Facility  |                                |                              |
| RXA-11.4.1 | Namespace ID  |                                | Indifferent                  |
| RXA-11.4.2 | Universal ID  |                                | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                                | Indifferent                  |
| RXA-15     | Substance Lot Number                                  |                                |                              |
| RXA-16     | Substance Expiration Date                             |                                |                              |
| RXA-16.1   | Time  |                                | Indifferent                  |
| RXA-17     | Substance Manufacturer Name                           |                                |                              |
| RXA-17.1   | Identifier  |                                |                              |
| RXA-17.2   | Text  |                                |                              |
| RXA-17.3   | Name of Coding System                                 |                                |                              |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                                |                              |
| RXA-18.1   | Identifier  |                                | NonPresence                  |
| RXA-18.2   | Text  |                                | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                                | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                             | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                              | Value-Test Case Fixed        |

# RXR[\*] RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Thigh   | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

## RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data   | Categorization            |
|----------|-----------------------|--------|---------------------------|
| RXR-1    | Route                 |        |                           |
| RXR-1.1  | Identifier            | C38288 | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Oral   | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT   | Value-Profile Fixed       |
| RXR-2    | Administration Site   |        |                           |
| RXR-2.1  | Identifier            |        | NonPresence               |
| RXR-2.2  | Text                  |        | NonPresence               |
| RXR-2.3  | Name of Coding System |        | NonPresence               |

## RXR : Pharmacy/Treatment Route

| T        | D ( D)                | - In .        |                           |
|----------|-----------------------|---------------|---------------------------|
| Location | Data Element          | Data          | Categorization            |
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | LT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Left Thigh    | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

# OBX[\*] OBX : Observation/Result

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | VXC50                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Public                 | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data  | Categorization               |
|----------|------------------------------|---|------------------------------|
| OBX-1    | Set ID - OBX                 | 2   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |   |                              |
| OBX-3.1  | Identifier                   | 64994-7   | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility          | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |   |                              |
| OBX-5.1  | Identifier                   | V04   | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | VFC Eligible - American<br>Indian/Alaska Native | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064   | Value-Profile Fixed          |
| OBX-6    | Units                        |   |                              |
| OBX-6.1  | Identifier                   |   | NonPresence                  |
| OBX-6.2  | Text                         |   | NonPresence                  |
| OBX-6.3  | Name of Coding System        |   | NonPresence                  |
| OBX-11   | Observation Result Status    | F   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |   |                              |
| OBX-14.1 | Time                         | 20150624  | Presence-Content Indifferent |
| OBX-17   | Observation Method           |   |                              |
| OBX-17.1 | Identifier                   | VXC40   | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                                | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                                       | Value-Profile Fixed          |

| Location | Data Element                 | Data                     | Categorization               |
|----------|------------------------------|--------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                          |                              |
| OBX-3.1  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                          |                              |
| OBX-5.1  | Identifier                   | 253088698300017211160720 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Polio VIS                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6    | Units                        |                          |                              |
| OBX-6.1  | Identifier                   |                          | NonPresence                  |
| OBX-6.2  | Text                         |                          | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                          | NonPresence                  |
| OBX-11   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                          |                              |
| OBX-14.1 | Time                         | 20150624                 | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                          |                              |
| OBX-17.1 | Identifier                   |                          | Indifferent                  |
| OBX-17.2 | Text                         |                          | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                          | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

| Location | Data Element                 | Data                                 | Categorization               |
|----------|------------------------------|--------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 5                                    | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                   | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                      |                              |
| OBX-3.1  | Identifier                   | 69764-9                              | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type                        | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                   | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 4                                    | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                      |                              |
| OBX-5.1  | Identifier                   | 253088698300006611150402             | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Haemophilus Influenzae type b<br>VIS | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                            | Value-Profile Fixed          |
| OBX-6    | Units                        |                                      |                              |
| OBX-6.1  | Identifier                   |                                      | NonPresence                  |
| OBX-6.2  | Text                         |                                      | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                      | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                    | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                      |                              |
| OBX-14.1 | Time                         | 20150624                             | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                      |                              |
| OBX-17.1 | Identifier                   |                                      | Indifferent                  |
| OBX-17.2 | Text                         |                                      | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                                      | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
|          |                              |                    |                              |
| OBX-1    | Set ID - OBX                 | 6                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 4                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

| Location | Data Element                 | Data                                       | Categorization               |
|----------|------------------------------|--|------------------------------|
| OBX-1    | Set ID - OBX                 | 7  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE   | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |  |                              |
| OBX-3.1  | Identifier                   | 69764-9                                    | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type                              | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN   | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 5  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |  |                              |
| OBX-5.1  | Identifier                   | 253088698300003511070517                   | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Diphtheria/Tetanus/Pertussis<br>(DTaP) VIS | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                                  | Value-Profile Fixed          |
| OBX-6    | Units                        |  |                              |
| OBX-6.1  | Identifier                   |  | NonPresence                  |
| OBX-6.2  | Text                         |  | NonPresence                  |
| OBX-6.3  | Name of Coding System        |  | NonPresence                  |
| OBX-11   | Observation Result Status    | F  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |  |                              |
| OBX-14.1 | Time                         | 20150624                                   | Presence-Content Indifferent |
| OBX-17   | Observation Method           |  |                              |
| OBX-17.1 | Identifier                   |  | Indifferent                  |
| OBX-17.2 | Text                         |  | Indifferent                  |
| OBX-17.3 | Name of Coding System        |  | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 8                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 5                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | VXC50                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Public                 | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data  | Categorization               |
|----------|------------------------------|---|------------------------------|
| OBX-1    | Set ID - OBX                 | 2   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |   |                              |
| OBX-3.1  | Identifier                   | 64994-7   | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility          | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |   |                              |
| OBX-5.1  | Identifier                   | V04   | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | VFC Eligible - American<br>Indian/Alaska Native | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064   | Value-Profile Fixed          |
| OBX-6    | Units                        |   |                              |
| OBX-6.1  | Identifier                   |   | NonPresence                  |
| OBX-6.2  | Text                         |   | NonPresence                  |
| OBX-6.3  | Name of Coding System        |   | NonPresence                  |
| OBX-11   | Observation Result Status    | F   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |   |                              |
| OBX-14.1 | Time                         | 20150624  | Presence-Content Indifferent |
| OBX-17   | Observation Method           |   |                              |
| OBX-17.1 | Identifier                   | VXC40   | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                                | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                                       | Value-Profile Fixed          |

| Location | Data Element                 | Data                     | Categorization               |
|----------|------------------------------|--------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                          |                              |
| OBX-3.1  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                          |                              |
| OBX-5.1  | Identifier                   | 253088698300019611150415 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Rotavirus VIS            | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6    | Units                        |                          |                              |
| OBX-6.1  | Identifier                   |                          | NonPresence                  |
| OBX-6.2  | Text                         |                          | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                          | NonPresence                  |
| OBX-11   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                          |                              |
| OBX-14.1 | Time                         | 20150624                 | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                          |                              |
| OBX-17.1 | Identifier                   |                          | Indifferent                  |
| OBX-17.2 | Text                         |                          | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                          | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | VXC50                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Public                 | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data  | Categorization               |
|----------|------------------------------|---|------------------------------|
| OBX-1    | Set ID - OBX                 | 2   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |   |                              |
| OBX-3.1  | Identifier                   | 64994-7   | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility          | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |   |                              |
| OBX-5.1  | Identifier                   | V04   | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | VFC Eligible - American<br>Indian/Alaska Native | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064   | Value-Profile Fixed          |
| OBX-6    | Units                        |   |                              |
| OBX-6.1  | Identifier                   |   | NonPresence                  |
| OBX-6.2  | Text                         |   | NonPresence                  |
| OBX-6.3  | Name of Coding System        |   | NonPresence                  |
| OBX-11   | Observation Result Status    | F   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |   |                              |
| OBX-14.1 | Time                         | 20150624  | Presence-Content Indifferent |
| OBX-17   | Observation Method           |   |                              |
| OBX-17.1 | Identifier                   | VXC40   | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                                | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                                       | Value-Profile Fixed          |

| OBX : Observation/Result |                              |                                       |                              |
|--------------------------|------------------------------|---------------------------------------|------------------------------|
| Location                 | Data Element                 | Data                                  | Categorization               |
| OBX-1                    | Set ID - OBX                 | 3                                     | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | CE                                    | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                                       |                              |
| OBX-3.1                  | Identifier                   | 69764-9                               | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Document Type                         | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                                    | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                                     | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            |                                       |                              |
| OBX-5.1                  | Identifier                   | 253088698300015811151105              | Value-Test Case Fixed        |
| OBX-5.2                  | Text                         | Pneumococcal Conjugate<br>(PCV13) VIS | Presence-Test Case Proper    |
| OBX-5.3                  | Name of Coding System        | cdcgs1vis                             | Value-Profile Fixed          |
| OBX-6                    | Units                        |                                       |                              |
| OBX-6.1                  | Identifier                   |                                       | NonPresence                  |
| OBX-6.2                  | Text                         |                                       | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                                       | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                                     | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                                       |                              |
| OBX-14.1                 | Time                         | 20150624                              | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                                       |                              |
| OBX-17.1                 | Identifier                   |                                       | Indifferent                  |
| OBX-17.2                 | Text                         |                                       | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                                       | Indifferent                  |
|                          |                              |                                       |                              |

| OBX : Observation/Result |                              |                    |                              |
|--------------------------|------------------------------|--------------------|------------------------------|
| Location                 | Data Element                 | Data               | Categorization               |
| OBX-1                    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                    |                              |
| OBX-3.1                  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6                    | Units                        |                    |                              |
| OBX-6.1                  | Identifier                   |                    | NonPresence                  |
| OBX-6.2                  | Text                         |                    | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                    | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                    |                              |
| OBX-14.1                 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                    |                              |
| OBX-17.1                 | Identifier                   |                    | Indifferent                  |
| OBX-17.2                 | Text                         |                    | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                    | Indifferent                  |

## **Test Data Specification**

## -Patient Information -

| Element                  | Data                                  |
|--------------------------|---------------------------------------|
| Patient Name             | Russell Clint Richardson              |
| Mother's Maiden Name     | Billington                            |
| ID Number                | 3123                                  |
| Date/Time of Birth       | 04/15/2015                            |
| Administrative Sex       | Male                                  |
| Patient Address          | 543 Blount Drive Bozeman MT 59715 USA |
| Local Number             | (406)555-7690                         |
| Race                     | American Indian or Alaska Native      |
| Ethnic Group             | Not Hispanic or Latino                |
| Multiple Birth Indicator | No                                    |
| Birth Order              | 1                                     |

## Immunization Registry Information

| Element                                     | Data                         |
|---|------------------------------|
| Immunization Registry Status                | Active                       |
| Immunization Registry Status Effective Date | 04/15/2015                   |
| Publicity Code                              | Reminder/recall - any method |
| Publicity Code Effective Date               | 06/24/2015                   |
| Protection Indicator                        | No                           |
| Protection Indicator Effective Date         | 06/24/2015                   |

## Guardian or Responsible Party[\*] -

## Guardian or Responsible Party

| Element      | Data                                  |
|--------------|---------------------------------------|
| Name         | Maria Elizabeth Richardson            |
| Relationship | Mother                                |
| Address      | 543 Blount Drive Bozeman MT 59715 USA |
| Phone Number | (406)555-7690                         |

## Guardian or Responsible Party

|              | ı v                                   |
|--------------|---------------------------------------|
| Element      | Data                                  |
| Name         | John William Richardson               |
| Relationship | Father                                |
| Address      | 543 Blount Drive Bozeman MT 59715 USA |
| Phone Number | (406)555-8299                         |

## -Vaccine Administration Information[\*] ----

## -Vaccine Administration Information -

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | Pentacel        |
| Date/Time Start of Administration  | 06/24/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 526434          |
| Substance Expiration Date          | 07/22/2015      |
| Substance Manufacturer Name        | Sanofi Pasteur  |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Right Thigh     |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element                             | Data   |
|-------------------------------------|--|
| Vaccine Funding Source              | Public                                       |
| Vaccine Funding Program Eligibility | VFC Eligible - American Indian/Alaska Native |
| Document Type                       | Polio VIS                                    |
| Date Vis Presented                  | 06/24/2015                                   |
| Document Type                       | Haemophilus Influenzae type b VIS            |
| Date Vis Presented                  | 06/24/2015                                   |
| Document Type                       | Diphtheria/Tetanus/Pertussis (DTaP) VIS      |
| Date Vis Presented                  | 06/24/2015                                   |

## —Vaccine Administration Information ————

| Element                            | Data                |
|------------------------------------|---------------------|
| Administered Vaccine               | RotaTeq             |
| Date/Time Start of Administration  | 06/24/2015          |
| Administered Amount                | 2.0                 |
| Administered Units                 | mL                  |
| Administration Notes               | New Record          |
| Administering Provider             | Lily Jackson        |
| Substance Lot Number               | 297961              |
| Substance Expiration Date          | 09/16/2015          |
| Substance Manufacturer Name        | Merck and Co., Inc. |
| Substance/Treatment Refusal Reason |                     |
| Completion Status                  | Complete            |
| Action Code                        | Add                 |
| Route                              | Oral                |
| Administration Site                |                     |
| Entering Organization              | NISTEHRFacility     |
| Entered By                         | Lily Jackson        |
| Ordered By                         | Wilma Thomas        |

| Element                             | Data   |
|-------------------------------------|--|
| Vaccine Funding Source              | Public                                       |
| Vaccine Funding Program Eligibility | VFC Eligible - American Indian/Alaska Native |
| Document Type                       | Rotavirus VIS                                |
| Date Vis Presented                  | 06/24/2015                                   |

## ——Vaccine Administration Information ————

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | Prevnar 13      |
| Date/Time Start of Administration  | 06/24/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 353480          |
| Substance Expiration Date          | 07/29/2015      |
| Substance Manufacturer Name        | Pfizer, Inc     |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Left Thigh      |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element                             | Data   |
|-------------------------------------|--|
| Vaccine Funding Source              | Public                                       |
| Vaccine Funding Program Eligibility | VFC Eligible - American Indian/Alaska Native |
| Document Type                       | Pneumococcal Conjugate (PCV13) VIS           |
| Date Vis Presented                  | 06/24/2015                                   |

## -Vaccine Administration Information -

| Element                            | Data                           |
|------------------------------------|--------------------------------|
| Administered Vaccine               | Hep B, unspecified formulation |
| Date/Time Start of Administration  | 04/16/2015                     |
| Administered Amount                | 999                            |
| Administered Units                 |                                |
| Administration Notes               | Historical Administration      |
| Administering Provider             |                                |
| Substance Lot Number               |                                |
| Substance Expiration Date          |                                |
| Substance Manufacturer Name        |                                |
| Substance/Treatment Refusal Reason |                                |
| Completion Status                  | Complete                       |
| Action Code                        | Add                            |
| Route                              |                                |
| Administration Site                |                                |
| Entering Organization              | NISTEHRFacility                |
| Entered By                         | Lily Jackson                   |
| Ordered By                         |                                |

# 

| Element                            | Data                           |
|------------------------------------|--------------------------------|
| Administered Vaccine               | Hep B, unspecified formulation |
| Date/Time Start of Administration  | 05/15/2015                     |
| Administered Amount                | 999                            |
| Administered Units                 |                                |
| Administration Notes               | Historical Administration      |
| Administering Provider             |                                |
| Substance Lot Number               |                                |
| Substance Expiration Date          |                                |
| Substance Manufacturer Name        |                                |
| Substance/Treatment Refusal Reason |                                |
| Completion Status                  | Complete                       |
| Action Code                        | Add                            |
| Route                              |                                |
| Administration Site                |                                |
| Entering Organization              | NISTEHRFacility                |
| Entered By                         | Lily Jackson                   |
| Ordered By                         |                                |

## 1.1.2. IZ-AD-1.2 Receive ACK Z23

Test Step Type: TA\_RESPONDER

Tests the ability to consume a valid ACK message

### **Test Story**

### Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

### **Comments**

No Comments

### **Pre Condition**

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

### **Test Objectives**

No Test Objectives

### **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

### **Message Contents**

MSH : Message Header

| Location   | <b>Data Element</b>                | Data                               | Categorization |
|------------|------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                    |                |
| MSH-2      | Encoding Characters                | ^~\&                               |                |
| MSH-3      | Sending Application                |                                    |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                       |                                    |                |
| MSH-3.3    | Universal ID Type                  |                                    |                |
| MSH-4      | Sending Facility                   |                                    |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                       |                                    |                |
| MSH-4.3    | Universal ID Type                  |                                    |                |
| MSH-5      | Receiving Application              |                                    |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                       |                                    |                |
| MSH-5.3    | Universal ID Type                  |                                    |                |
| MSH-6      | Receiving Facility                 |                                    |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                       |                                    |                |
| MSH-6.3    | Universal ID Type                  |                                    |                |
| MSH-7      | Date/Time Of Message               |                                    |                |
| MSH-7.1    | Time                               | 20150624073734.034-0500            |                |
| MSH-9      | Message Type                       | 20130021073731.031 0300            |                |
| MSH-9.1    | Message Code                       | ACK                                |                |
| MSH-9.2    | Trigger Event                      | V04                                |                |
| MSH-9.3    | Message Structure                  | ACK                                |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>1.2_Receive_ACK_Z23 |                |
| MSH-11     | Processing ID                      | 1.2_tccorve_ricit_223              |                |
| MSH-11.1   | Processing ID                      | P                                  |                |
| MSH-12     | Version ID                         | 1                                  |                |
| MSH-12.1   | Version ID                         | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type         | NE                                 |                |
| MSH-16     | Application Acknowledgment Type    | NE NE                              |                |
| MSH-21     | Message Profile Identifier         |                                    |                |
| MSH-21.1   | Entity Identifier                  | Z23                                |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                       | CS CTIMI ( ) S                     |                |
| MSH-21.4   | Universal ID Type                  |                                    |                |
| MSH-22     | Sending Responsible Organization   |                                    |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                | INSTITUTE                          |                |
| MSH-22.6.1 | Namespace ID                       |                                    |                |
| MSH-22.6.2 | Universal ID                       |                                    |                |
| MSH-22.6.3 | Universal ID Type                  |                                    |                |
| MSH-22.7   | Identifier Type Code               |                                    |                |
| MSH-22.10  | Organization Identifier            |                                    |                |
| MSH-23     | Receiving Responsible Organization |                                    |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                |                                    |                |
| MSH-23.6.1 | Namespace ID                       |                                    |                |
| MSH-23.6.2 | Universal ID                       |                                    |                |
| MSH-23.6.3 | Universal ID Type                  |                                    |                |
|            |                                    |                                    |                |
| MSH-23.7   | Identifier Type Code               |                                    |                |
| MSH-23.10  | Organization Identifier            |                                    |                |

MSA : Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-1.1_Send_V04_Z22 |                |

# **Test Data Specification**

## -Patient Information -

| This information will be automatically supplied by the System |  |  |  |
|---|--|--|--|
| This information will be automatically supplied by the System |  |  |  |

# 1.2. IZ-AD-2\_Admin\_Adult

Adult administration

## **Test Story**

| т.   |      |     |             |
|------|------|-----|-------------|
| I)es | scri | ntı | on          |
|      | ,,,, |     | <b>U</b> 11 |

An adult is seen at a clinic. Historical vaccinations are recorded and new vaccines are administered and documented.

### **Comments**

No Comments

### Pre Condition

No PreCondition

### **Post Condition**

No PostCondition

### **Test Objectives**

This test case assesses the ability of the EHR to create an administration message for an adult containing historical and new administrations including VIS and not eligible VFC.

### **Evaluation Criteria**

### **Notes for Testers**

No Note

## 1.2.1. IZ-AD-2.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

### **Test Story**

### **Description**

A 32 year old female, Elise Wong, visits a clinic for a well woman visit. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that Elise has received her influenza vaccinations on 10/12/2014 and 11/12/2013, but is in need of a tetanus booster. Because of the patient's age she does not qualify for Vaccine For Children (VFC) supplied vaccine. Elise is given the appropriate Vaccine Information Sheet (VIS) to review. After reading it, she agrees to receive the recommended vaccination. She also agrees that the data should be shared once it is incorporated into the local IIS. She indicates that reminders and recalls may be sent by any method. An appropriate dose of Td (TENIVAC) is selected from the clinic's stock of privately funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the doses to the patient and then enters the data into the EHR and transmits it to the IIS.

#### **Comments**

No Comments

### **Pre Condition**

No PreCondition

### **Post Condition**

No PostCondition

### **Test Objectives**

Support for a "not eligible" VFC.

Support for both phone number and e-mail.

### **Evaluation Criteria**

Message Validation Report

### **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

| Messa | ge Contents |  |  |  |
|-------|-------------|--|--|--|
|       |             |  |  |  |

-MSH : Message Header -

| Location   | Data Element                          | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Presence-Configuration       |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150624084727.655-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU_V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-2.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                             |                              |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      | 1                           |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-23.10  | Organization Identifier               |                             | Indifferent                  |

PID : Patient Identification =

| Location    | Data Element  | Data                   | Categorization                |
|-------------|---|------------------------|-------------------------------|
| PID-1       | Set ID - PID  | 1                      | Value-Profile Fixed           |
| PID-3       | Patient Identifier List                               |                        |                               |
| PID-3.1     | ID Number   | 90012                  | Presence-Content Indifferent  |
| PID-3.4     | Assigning Authority                                   |                        |                               |
| PID-3.4.1   | Namespace ID  | NIST-MPI-1             | Presence-Content Indifferent  |
| PID-3.4.2   | Universal ID  | 14151-14111-1          | Indifferent                   |
|             |   |                        | Indifferent                   |
| PID-3.4.3   | Universal ID Type                                     | ) AD                   |                               |
| PID-3.5     | Identifier Type Code                                  | MR                     | Value-Test Case Fixed         |
| PID-5       | Patient Name  |                        |                               |
| PID-5.1     | Family Name   |                        |                               |
| PID-5.1.1   | Surname   | Wong                   | Presence-Content Indifferent  |
| PID-5.2     | Given Name  | Elise                  | Presence-Content Indifferent  |
| PID-5.3     | Second and Further Given<br>Names or Initials Thereof |                        | Indifferent                   |
| PID-5.7     | Name Type Code  | L                      | Value-Test Case Fixed         |
| PID-6       | Mother's Maiden Name                                  |                        |                               |
| PID-6.1     | Family Name   |                        |                               |
| PID-6.1.1   | Surname   |                        | Indifferent                   |
| PID-6.7     | Name Type Code  |                        | Indifferent                   |
| PID-7       | Date/Time of Birth                                    |                        |                               |
| PID-7.1     | Time  | 19830615               | Presence-Content Indifferent  |
| PID-8       | Administrative Sex                                    | F                      | Value-Test Case Fixed         |
| PID-10      | Race  |                        | Value Test Case Timed         |
| PID-10.1    | Identifier  | 2028-9                 | Value-Test Case Fixed         |
|             |   | Asian                  |                               |
| PID-10.2    | Text  |                        | Presence-Test Case Proper     |
| PID-10.3    | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed           |
| PID-11      | Patient Address                                       |                        |                               |
| PID-11.1    | Street Address  |                        |                               |
| PID-11.1.1  | Street or Mailing Address                             | 9200 Wellington Trail  | Presence-Content Indifferent  |
| PID-11.2    | Other Designation                                     |                        | Indifferent                   |
| PID-11.3    | City  | Bozeman                | Presence-Content Indifferent  |
| PID-11.4    | State or Province                                     | MT                     | Presence-Content Indifferent  |
| PID-11.5    | Zip or Postal Code                                    | 59715                  | Presence-Content Indifferent  |
| PID-11.6    | Country   | USA                    | Presence-Content Indifferent  |
| PID-11.7    | Address Type  | P                      | Value-Test Case Fixed List    |
| PID-13[1]   | Phone Number - Home                                   |                        |                               |
| PID-13[1].2 | Telecommunication Use Code                            | PRN                    | Value-Test Case Fixed         |
| PID-13[1].3 | Telecommunication Equipment Type                      | РН                     | Value-Test Case Fixed         |
| PID-13[1].4 | Email Address   |                        | NonPresence                   |
| PID-13[1].6 | Area/City Code  | 406                    | Presence-Content Indifferent  |
| PID-13[1].7 | Local Number  | 5557896                | Presence-Content Indifferent  |
| PID-13[1].7 | Phone Number - Home                                   |                        | 1 10501100-Content maniferent |
|             |   | NET                    | Value-Test Case Fixed         |
| PID-13[2].2 | Telecommunication Use Code                            | NET                    | value-1 est Case Fixed        |
| PID-13[2].3 | Telecommunication Equipment Type                      |                        | Indifferent                   |
| PID-13[2].4 | Email Address   | Elise.Wong@isp.com     | Presence-Content Indifferent  |
| PID-13[2].6 | Area/City Code  |                        | NonPresence                   |
| PID-13[2].7 | Local Number  |                        | NonPresence                   |
| PID-22      | Ethnic Group  |                        |                               |
| PID-22.1    | Identifier  | 2186-5                 | Value-Test Case Fixed         |
| PID-22.2    | Text  | Not Hispanic or Latino | Presence-Test Case Proper     |
| PID-22.3    | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed           |
| PID-24      | Multiple Birth Indicator                              | N                      | Value-Test Case Fixed         |

| PID-25   | Birth Order                 | 1 | Indifferent |
|----------|-----------------------------|---|-------------|
| PID-29   | Patient Death Date and Time |   |             |
| PID-29.1 | Time                        |   | NonPresence |
|          |                             |   |             |

PD1 : Patient Additional Demographic

| Location | Data Element                                | Data                         | Categorization               |
|----------|---|------------------------------|------------------------------|
| PD1-11   | Publicity Code                              |                              |                              |
| PD1-11.1 | Identifier                                  | 02                           | Value-Test Case Fixed        |
| PD1-11.2 | Text  | Reminder/recall - any method | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                       | HL70215                      | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                        | N                            | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date         | 20150624                     | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                | A                            | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status Effective Date | 19830615                     | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date               | 20150624                     | Presence-Content Indifferent |

### -ORC[\*]-

### ORC : Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 4422            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 13696           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

### ORC: Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 38760           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

### ORC: Common Order

| Location   | Data Element  | Data                          | Categorization               |
|------------|---|-------------------------------|------------------------------|
| ORC-1      | Order Control   | RE                            | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                               |                              |
| ORC-2.1    | Entity Identifier                                     | Entity Identifier Indifferent |                              |
| ORC-2.2    | Namespace ID  |                               |                              |
| ORC-2.3    | Universal ID  |                               | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                               | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                               |                              |
| ORC-3.1    | Entity Identifier                                     | 35508                         | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2                  | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                               | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                               | Indifferent                  |
| ORC-10     | Entered By  |                               |                              |
| ORC-10.1   | ID Number   | 7824                          | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                               |                              |
| ORC-10.2.1 | Surname   | Jackson                       | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily                          | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne                       | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                               |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1                     | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                               | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                               | Indifferent                  |
| ORC-10.10  | Name Type Code  | L                             | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN                           | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                               |                              |
| ORC-12.1   | ID Number   |                               | Indifferent                  |
| ORC-12.2   | Family Name   |                               |                              |
| ORC-12.2.1 | Surname   |                               | Indifferent                  |
| ORC-12.3   | Given Name  |                               | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                               | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                               |                              |
| ORC-12.9.1 | Namespace ID  |                               | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                               | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                               | Indifferent                  |
| ORC-12.10  | Name Type Code  |                               | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                               | Indifferent                  |
| ORC-17     | Entering Organization                                 |                               |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC                    | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility               | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362                       | Value-Profile Fixed          |

### RXA: Pharmacy/Treatment Administration —

| Location   | Data Element  | Data           | Categorization               |
|------------|---|----------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0              | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1              | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     |                |                              |
| RXA-3.1    | Time  | 20150624       | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                |                              |
| RXA-5.1    | Identifier  | 49281-0215-88  | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | TENIVAC        | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC            | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5            | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                |                              |
| RXA-7.1    | Identifier  | mL             | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL             | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM           | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                |                              |
| RXA-9.1    | Identifier  | 00             | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record     | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001         | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                |                              |
| RXA-10.1   | ID Number   | 7824           | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                |                              |
| RXA-10.2.1 | Surname   | Jackson        | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily           | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne        | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1      | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                | Indifferent                  |
| RXA-10.10  | Name Type Code  | L              | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN            | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                |                              |
| RXA-11.4   | Facility  |                |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1  | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 315841         | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                |                              |
| RXA-16.1   | Time  | 20151216       | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                |                              |
| RXA-17.1   | Identifier  | PMC            | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Sanofi Pasteur | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX            | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                |                              |
| RXA-18.1   | Identifier  |                | NonPresence                  |
| RXA-18.2   | Text  |                | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                | NonPresence                  |
| RXA-20     | Completion Status                                     | СР             | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A              | Value-Test Case Fixed        |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element  | Data                               | Categorization                               |
|------------|---|------------------------------------|--|
| RXA-1      | Give Sub-ID Counter                                   | 0                                  | Value-Profile Fixed                          |
| RXA-2      | Administration Sub-ID Counter                         | 1                                  | Value-Profile Fixed                          |
| RXA-3      | Date/Time Start of<br>Administration                  |                                    |  |
| RXA-3.1    | Time  | 20141012                           | Presence-Content Indifferent                 |
| RXA-5      | Administered Code                                     |                                    |  |
| RXA-5.1    | Identifier  | 88                                 | Value-Test Case Fixed                        |
| RXA-5.2    | Text  | influenza, unspecified formulation | Presence-Test Case Proper                    |
| RXA-5.3    | Name of Coding System                                 | CVX                                | Value-Profile Fixed                          |
| RXA-6      | Administered Amount                                   | 999                                | Value-Test Case Fixed                        |
| RXA-7      | Administered Units                                    |                                    |  |
| RXA-7.1    | Identifier  |                                    | NonPresence                                  |
| RXA-7.2    | Text  |                                    | NonPresence                                  |
| RXA-7.3    | Name of Coding System                                 |                                    | NonPresence                                  |
| RXA-9      | Administration Notes                                  |                                    |  |
| RXA-9.1    | Identifier  | 01                                 | Value-Test Case Fixed                        |
| RXA-9.2    | Text  | Historical Administration          | Presence-Test Case Proper                    |
| RXA-9.3    | Name of Coding System                                 | NIP001                             | Value-Profile Fixed                          |
| RXA-10     | Administering Provider                                |                                    | value 110me 1 med                            |
| RXA-10.1   | ID Number   |                                    | Indifferent                                  |
| RXA-10.1   | Family Name   |                                    | marrerent                                    |
| RXA-10.2.1 | Surname   |                                    | Indifferent                                  |
|            | Given Name  |                                    | Indifferent                                  |
| RXA-10.3   |   |                                    | Indifferent                                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                                    | Indifferent                                  |
| RXA-10.9   | Assigning Authority                                   |                                    |  |
| RXA-10.9.1 | Namespace ID  |                                    | Indifferent                                  |
| RXA-10.9.2 | Universal ID  |                                    | Indifferent                                  |
| RXA-10.9.3 | Universal ID Type                                     |                                    | Indifferent                                  |
| RXA-10.10  | Name Type Code  |                                    | Indifferent                                  |
| RXA-10.13  | Identifier Type Code                                  |                                    | Indifferent                                  |
| RXA-11     | Administered-at Location                              |                                    |  |
| RXA-11.4   | Facility  |                                    |  |
| RXA-11.4.1 | Namespace ID  |                                    | Indifferent                                  |
| RXA-11.4.2 | Universal ID  |                                    | Indifferent                                  |
| RXA-11.4.3 | Universal ID Type                                     |                                    | Indifferent                                  |
| RXA-15     | Substance Lot Number                                  |                                    | Indifferent                                  |
| RXA-16     | Substance Expiration Date                             |                                    |  |
| RXA-16.1   | Time  |                                    | Indifferent                                  |
| RXA-17     | Substance Manufacturer Name                           |                                    |  |
| RXA-17.1   | Identifier  |                                    | Indifferent                                  |
| RXA-17.2   | Text  |                                    | Indifferent                                  |
| RXA-17.3   | Name of Coding System                                 |                                    | Indifferent                                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                                    |  |
| RXA-18.1   | Identifier  |                                    | NonPresence                                  |
| RXA-18.2   | Text  |                                    | NonPresence                                  |
| RXA-18.2   | Name of Coding System                                 |                                    | NonPresence                                  |
| RXA-20     | Completion Status                                     | СР                                 | Value-Test Case Fixed                        |
| RXA-20     | Action Code - RXA                                     | A                                  | Value-Test Case Fixed  Value-Test Case Fixed |
| IAA-21     | Action Code - KAA                                     | / L                                | v and-10st Case 1'Ixed                       |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element  | Data                               | Categorization               |
|------------|---|------------------------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                                  | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                                  | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of                                    |                                    |                              |
|            | Administration  |                                    |                              |
| RXA-3.1    | Time  | 20131112                           | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                                    |                              |
| RXA-5.1    | Identifier  | 88                                 | Value-Test Case Fixed        |
| RXA-5.2    | Text  | influenza, unspecified formulation | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | CVX                                | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 999                                | Value-Test Case Fixed        |
| RXA-7      | Administered Units                                    |                                    |                              |
| RXA-7.1    | Identifier  |                                    | NonPresence                  |
| RXA-7.2    | Text  |                                    | NonPresence                  |
| RXA-7.3    | Name of Coding System                                 |                                    | NonPresence                  |
| RXA-9      | Administration Notes                                  |                                    |                              |
| RXA-9.1    | Identifier  | 01                                 | Value-Test Case Fixed        |
| RXA-9.2    | Text  | Historical Administration          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001                             | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                                    |                              |
| RXA-10.1   | ID Number   |                                    | Indifferent                  |
| RXA-10.2   | Family Name   |                                    | marrerent                    |
| RXA-10.2.1 | Surname   |                                    | Indifferent                  |
| RXA-10.2.1 | Given Name  |                                    | Indifferent                  |
| KAA-10.3   |   |                                    | Indifferent                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                                    | Indifferent                  |
| RXA-10.9   | Assigning Authority                                   |                                    |                              |
| RXA-10.9.1 | Namespace ID  |                                    | Indifferent                  |
| RXA-10.9.2 | Universal ID  |                                    | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                                    | Indifferent                  |
| RXA-10.10  | Name Type Code  |                                    | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  |                                    | Indifferent                  |
| RXA-11     | Administered-at Location                              |                                    |                              |
| RXA-11.4   | Facility  |                                    |                              |
| RXA-11.4.1 | Namespace ID  |                                    | Indifferent                  |
| RXA-11.4.2 | Universal ID  |                                    | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                                    | Indifferent                  |
| RXA-15     | Substance Lot Number                                  |                                    | Indifferent                  |
| RXA-16     | Substance Expiration Date                             |                                    |                              |
| RXA-16.1   | Time  |                                    | Indifferent                  |
| RXA-17     | Substance Manufacturer Name                           |                                    |                              |
| RXA-17.1   | Identifier  |                                    | Indifferent                  |
| RXA-17.2   | Text  |                                    | Indifferent                  |
| RXA-17.3   | Name of Coding System                                 |                                    | Indifferent                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                                    |                              |
| DYA 191    | Identifier  |                                    | NonPresence                  |
| RXA-18.1   |   |                                    | NonPresence                  |
| RXA-18.2   | Text  |                                    | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 | GD.                                | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                                 | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                                  | Value-Test Case Fixed        |

RXR : Pharmacy/Treatment Route =

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RD            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Deltoid | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

### -OBX[\*] -

### OBX : Observation/Result =

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

### OBX : Observation/Result =

| Location | Data Element                 | Data                                   | Categorization               |
|----------|------------------------------|--|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |  |                              |
| OBX-3.1  | Identifier                   | 64994-7                                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |  |                              |
| OBX-5.1  | Identifier                   | V01                                    | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Not VFC Eligible                       | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                                | Value-Profile Fixed          |
| OBX-6    | Units                        |  |                              |
| OBX-6.1  | Identifier                   |  | NonPresence                  |
| OBX-6.2  | Text                         |  | NonPresence                  |
| OBX-6.3  | Name of Coding System        |  | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |  |                              |
| OBX-14.1 | Time                         | 20150624                               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |  |                              |
| OBX-17.1 | Identifier                   | VXC40                                  | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                       | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                              | Value-Profile Fixed          |

### OBX : Observation/Result =

| Location | Data Element                 | Data                                | Categorization               |
|----------|------------------------------|-------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 3                                   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                     |                              |
| OBX-3.1  | Identifier                   | 69764-9                             | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type                       | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                                   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                     |                              |
| OBX-5.1  | Identifier                   | 253088698300028811170411            | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Tetanus/Diphtheria (Td) Vaccine VIS | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                           | Value-Profile Fixed          |
| OBX-6    | Units                        |                                     |                              |
| OBX-6.1  | Identifier                   |                                     | NonPresence                  |
| OBX-6.2  | Text                         |                                     | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                     |                              |
| OBX-14.1 | Time                         | 20150624                            | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                     |                              |
| OBX-17.1 | Identifier                   |                                     | Indifferent                  |
| OBX-17.2 | Text                         |                                     | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                                     | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

| Element                  | Data                                       |
|--------------------------|--|
| Patient Name             | Elise Wong                                 |
| Mother's Maiden Name     |  |
| ID Number                | 90012                                      |
| Date/Time of Birth       | 06/15/1983                                 |
| Administrative Sex       | Female                                     |
| Patient Address          | 9200 Wellington Trail Bozeman MT 59715 USA |
| Local Number             | (406)555-7896                              |
| Email                    | Elise.Wong@isp.com                         |
| Race                     | Asian                                      |
| Ethnic Group             | Not Hispanic or Latino                     |
| Multiple Birth Indicator | No   |
| Birth Order              | 1  |

| Element                                     | Data                         |  |
|---|------------------------------|--|
| Immunization Registry Status                | Active                       |  |
| Immunization Registry Status Effective Date | 06/15/1983                   |  |
| Publicity Code                              | Reminder/recall - any method |  |
| Publicity Code Effective Date               | 06/24/2015                   |  |
| Protection Indicator                        | No                           |  |
| Protection Indicator Effective Date         | 06/24/2015                   |  |

# -Vaccine Administration Information[\*] ----

# -Vaccine Administration Information -

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | TENIVAC         |
| Date/Time Start of Administration  | 06/24/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 315841          |
| Substance Expiration Date          | 12/16/2015      |
| Substance Manufacturer Name        | Sanofi Pasteur  |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Right Deltoid   |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element  | Data                                |  |
|--|-------------------------------------|--|
| Vaccine Funding Source Private                       |                                     |  |
| Vaccine Funding Program Eligibility Not VFC Eligible |                                     |  |
| Document Type  | Tetanus/Diphtheria (Td) Vaccine VIS |  |
| Date Vis Presented                                   | 06/24/2015                          |  |

# ——Vaccine Administration Information ————

| Element                            | Data                               |
|------------------------------------|------------------------------------|
| Administered Vaccine               | influenza, unspecified formulation |
| Date/Time Start of Administration  | 10/12/2014                         |
| Administered Amount                | 999                                |
| Administered Units                 |                                    |
| Administration Notes               | Historical Administration          |
| Administering Provider             |                                    |
| Substance Lot Number               |                                    |
| Substance Expiration Date          |                                    |
| Substance Manufacturer Name        |                                    |
| Substance/Treatment Refusal Reason |                                    |
| Completion Status                  | Complete                           |
| Action Code                        | Add                                |
| Route                              |                                    |
| Administration Site                |                                    |
| Entering Organization              | NISTEHRFacility                    |
| Entered By                         | Lily Jackson                       |
| Ordered By                         |                                    |

# Vaccine Administration Information –

| Element                            | Data                               |
|------------------------------------|------------------------------------|
| Administered Vaccine               | influenza, unspecified formulation |
| Date/Time Start of Administration  | 11/12/2013                         |
| Administered Amount                | 999                                |
| Administered Units                 |                                    |
| Administration Notes               | Historical Administration          |
| Administering Provider             |                                    |
| Substance Lot Number               |                                    |
| Substance Expiration Date          |                                    |
| Substance Manufacturer Name        |                                    |
| Substance/Treatment Refusal Reason |                                    |
| Completion Status                  | Complete                           |
| Action Code                        | Add                                |
| Route                              |                                    |
| Administration Site                |                                    |
| Entering Organization              | NISTEHRFacility                    |
| Entered By                         | Lily Jackson                       |
| Ordered By                         |                                    |

## 1.2.2. IZ-AD-2.2 Receive ACK Z23

Test Step Type: TA RESPONDER

Tests the ability to consume a valid ACK message

### **Test Story**

### Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

### **Comments**

No Comments

### **Pre Condition**

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

### **Test Objectives**

### **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

### **Message Contents**

MSH : Message Header

| Location   | Data Element                       | Data                               | Categorization |
|------------|------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                    |                |
| MSH-2      | Encoding Characters                | ^~\&                               |                |
| MSH-3      | Sending Application                |                                    |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                       |                                    |                |
| MSH-3.3    | Universal ID Type                  |                                    |                |
| MSH-4      | Sending Facility                   |                                    |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                       |                                    |                |
| MSH-4.3    | Universal ID Type                  |                                    |                |
| MSH-5      | Receiving Application              |                                    |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                       |                                    |                |
| MSH-5.3    | Universal ID Type                  |                                    |                |
| MSH-6      | Receiving Facility                 |                                    |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                       | -                                  |                |
| MSH-6.3    | Universal ID Type                  |                                    |                |
| MSH-7      | Date/Time Of Message               |                                    |                |
| MSH-7.1    | Time                               | 20150624084727.669-0500            |                |
| MSH-9      | Message Type                       |                                    |                |
| MSH-9.1    | Message Code                       | ACK                                |                |
| MSH-9.2    | Trigger Event                      | V04                                |                |
| MSH-9.3    | Message Structure                  | ACK                                |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>2.2_Receive_ACK_Z23 |                |
| MSH-11     | Processing ID                      | Z.Z_ROGGIVE_FIGHT_EZZ              |                |
| MSH-11.1   | Processing ID                      | P                                  |                |
| MSH-12     | Version ID                         |                                    |                |
| MSH-12.1   | Version ID                         | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type         | NE NE                              |                |
| MSH-16     | Application Acknowledgment Type    | NE                                 |                |
| MSH-21     | Message Profile Identifier         |                                    |                |
| MSH-21.1   | Entity Identifier                  | Z23                                |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                       |                                    |                |
| MSH-21.4   | Universal ID Type                  |                                    |                |
| MSH-22     | Sending Responsible Organization   |                                    |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                |                                    |                |
| MSH-22.6.1 | Namespace ID                       |                                    |                |
| MSH-22.6.2 | Universal ID                       |                                    |                |
| MSH-22.6.3 | Universal ID Type                  |                                    |                |
| MSH-22.7   | Identifier Type Code               |                                    |                |
| MSH-22.10  | Organization Identifier            |                                    |                |
| MSH-23     | Receiving Responsible Organization |                                    |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                |                                    |                |
| MSH-23.6.1 | Namespace ID                       |                                    |                |
| MSH-23.6.2 | Universal ID                       |                                    |                |
| MSH-23.6.3 | Universal ID Type                  |                                    |                |
|            | Identifier Type Code               |                                    |                |
| MSH-23.7   |                                    |                                    |                |
| MSH-23.10  | Organization Identifier            |                                    |                |

MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-2.1_Send_V04_Z22 |                |

# **Test Data Specification**

# -Patient Information -

| Element   | Data |  |
|---|------|--|
| This information will be automatically supplied by the System |      |  |

# 1.3. IZ-AD-3\_No\_Consent

Child administration without consent for sharing. Also test the ability to send the patient's full first and middle names.

## **Test Story**

### Description

A child is seen at a clinic. A new vaccine is administered and documented but the information is not to shared by the IIS.

### Comments

No Comments

### Pre Condition

No PreCondition

### **Post Condition**

No PostCondition

### **Test Objectives**

This test case assesses the ability of the EHR to create an administration message for a child containing a new administration but an indication that the data should not be shared. Also test the ability of the EHR to support full first and middle names.

### **Evaluation Criteria**

### **Notes for Testers**

No Note

## 1.3.1. IZ-AD-3.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

### **Test Story**

### **Description**

An eleven and a half year old female, Katherine Mackenzie Benton, is brought to a clinic for a third and final dose of HPV vaccine. She is accompanied by her mother Kari Michelle Benton (nee Jones). A clinic staff member collects basic patient demographic information including name, date of birth and sex. The mother is given the appropriate Vaccine Information Sheet (VIS) to review. After reading it, the mother agrees that the child should receive the HPV vaccine, but she chooses not to share the data once it is incorporated into the local IIS. She also declines any reminder or recall notifications. A clinic provider, Wilma Thomas (physician ID 654) places an order for the vaccination. While the patient is covered by insurance, the plan does not cover this vaccination and she qualifies for Vaccine For Children (VFC) supplied vaccines under the status of VFC eligible - Underinsured. An appropriate dose of HPV (Gardasil-9) is selected from the clinic's stock of publically funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the dose to the patient and then enters the data into the EHR and transmits it to the IIS.

#### Comments

No Comments

### **Pre Condition**

No PreCondition

### **Post Condition**

No PostCondition

### **Test Objectives**

Support for no consent given Support for a full middle name Support for a long first and middle name

### **Evaluation Criteria**

Message Validation Report

#### **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

|          | I               |  |  |
|----------|-----------------|--|--|
| <u> </u> |                 |  |  |
| M        | occago Contents |  |  |

**Message Contents** 

-MSH : Message Header -

| Location   | Data Element                          | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Presence-Configuration       |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150624093847.804-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU_V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-3.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                             |                              |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      | 1                           |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | Indifferent                  |
|            | Organization Identifier               |                             | Indifferent                  |

PID : Patient Identification =

| Location   | <b>Data Element</b>                                   | Data                   | Categorization                         |
|------------|---|------------------------|--|
| PID-1      | Set ID - PID  | 1                      | Value-Profile Fixed                    |
| PID-3      | Patient Identifier List                               |                        |  |
| PID-3.1    | ID Number   | 89778                  | Presence-Content Indifferent           |
| PID-3.4    | Assigning Authority                                   |                        |  |
| PID-3.4.1  | Namespace ID  | NIST-MPI-1             | Presence-Content Indifferent           |
| PID-3.4.2  | Universal ID  |                        | Indifferent                            |
| PID-3.4.3  | Universal ID Type                                     |                        | Indifferent                            |
| PID-3.5    | Identifier Type Code                                  | MR                     | Value-Test Case Fixed                  |
| PID-5      | Patient Name  | IVIIC                  | value-Test Case Tixed                  |
| PID-5.1    | Family Name   |                        |  |
| PID-5.1.1  | Surname   | Benton                 | Presence-Content Indifferent           |
| 110-3.1.1  | Suriane   | Denton                 | Presence Length-Content                |
| PID-5.2    | Given Name  | Katherine              | Indifferent                            |
| PID-5.3    | Second and Further Given<br>Names or Initials Thereof | Mackenzie              | Presence Length-Content<br>Indifferent |
| PID-5.7    | Name Type Code  | L                      | Value-Test Case Fixed                  |
| PID-6      | Mother's Maiden Name                                  |                        |  |
| PID-6.1    | Family Name   |                        |  |
| PID-6.1.1  | Surname   | Jones                  | Presence-Content Indifferent           |
| PID-6.7    | Name Type Code  | M                      | Value-Profile Fixed                    |
| PID-7      | Date/Time of Birth                                    |                        |  |
| PID-7.1    | Time  | 20031221               | Presence-Content Indifferent           |
| PID-8      | Administrative Sex                                    | F                      | Value-Test Case Fixed                  |
| PID-10     | Race  |                        |  |
| PID-10.1   | Identifier  | 2106-3                 | Value-Test Case Fixed                  |
| PID-10.2   | Text  | White                  | Presence-Test Case Proper              |
| PID-10.3   | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed                    |
| PID-11     | Patient Address                                       |                        | , and from the                         |
| PID-11.1   | Street Address  |                        |  |
| PID-11.1.1 | Street or Mailing Address                             | 89 West 21st Ave       | Presence-Content Indifferent           |
| PID-11.2   | Other Designation                                     |                        | Indifferent                            |
| PID-11.3   | City  | Bozeman                | Presence-Content Indifferent           |
| PID-11.4   | State or Province                                     | MT                     | Presence-Content Indifferent           |
| PID-11.5   | Zip or Postal Code                                    | 59715                  | Presence-Content Indifferent           |
| PID-11.6   | -   | USA                    | Presence-Content Indifferent           |
| PID-11.7   | Country Address Type                                  | P                      | Value-Test Case Fixed List             |
|            |   | r                      | Value-Test Case Fixed List             |
| PID-13     | Phone Number - Home                                   | DDM                    | VI TIONE                               |
| PID-13.2   | Telecommunication Use Code                            | PRN                    | Value-Test Case Fixed                  |
| PID-13.3   | Telecommunication Equipment Type                      | РН                     | Value-Test Case Fixed                  |
| PID-13.4   | Email Address   |                        | NonPresence                            |
| PID-13.6   | Area/City Code  | 406                    | Presence-Content Indifferent           |
| PID-13.7   | Local Number  | 5554019                | Presence-Content Indifferent           |
| PID-22     | Ethnic Group  |                        |  |
| PID-22.1   | Identifier  | 2186-5                 | Value-Test Case Fixed                  |
| PID-22.2   | Text  | Not Hispanic or Latino | Presence-Test Case Proper              |
| PID-22.3   | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed                    |
| PID-24     | Multiple Birth Indicator                              | N                      | Value-Test Case Fixed                  |
| PID-25     | Birth Order   | 1                      | Indifferent                            |
| PID-29     | Patient Death Date and Time                           |                        |  |
| PID-29.1   | Time  |                        | NonPresence                            |
| PID-30     | Patient Death Indicator                               | N                      | Value-Test Case Fixed                  |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data               | Categorization               |
|----------|--|--------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                    |                              |
| PD1-11.1 | Identifier                                     | 01                 | Value-Test Case Fixed        |
| PD1-11.2 | Text   | No reminder/recall | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215            | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | Y                  | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150624           | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                  | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20031221           | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150624           | Presence-Content Indifferent |

### NK1 : Next of Kin / Associated Parties

| Location  | Data Element  | Data             | Categorization               |
|-----------|---|------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1                | Value-Profile Fixed          |
| NK1-2     | Name  |                  |                              |
| NK1-2.1   | Family Name   |                  |                              |
| NK1-2.1.1 | Surname   | Benton           | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Kari             | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof | Michelle         | Presence-Content Indifferent |
| NK1-2.7   | Name Type Code  | L                | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                  |                              |
| NK1-3.1   | Identifier  | MTH              | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Mother           | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063          | Value-Profile Fixed          |
| NK1-4     | Address   |                  |                              |
| NK1-4.1   | Street Address  |                  |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 89 West 21st Ave | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                  | Indifferent                  |
| NK1-4.3   | City  | Bozeman          | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT               | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715            | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA              | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                  |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN              | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment<br>Type                   | РН               | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                  | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406              | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5554019          | Presence-Content Indifferent |

### ORC : Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 5237            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 31309           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     | 1                   |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4119-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | GARDASIL 9          | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     | i                            |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 795441              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20151223            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                   | Value-Test Case Fixed        |

RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RD            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Deltoid | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

### -OBX[\*] -

### OBX : Observation/Result =

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | VXC50                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Public                 | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

### OBX : Observation/Result =

| Location | Data Element                 | Data                                | Categorization               |
|----------|------------------------------|-------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                     |                              |
| OBX-3.1  | Identifier                   | 64994-7                             | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                     |                              |
| OBX-5.1  | Identifier                   | V05                                 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | VFC Eligible - Underinsured         | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                             | Value-Profile Fixed          |
| OBX-6    | Units                        |                                     |                              |
| OBX-6.1  | Identifier                   |                                     | NonPresence                  |
| OBX-6.2  | Text                         |                                     | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                     |                              |
| OBX-14.1 | Time                         | 20150624                            | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                     |                              |
| OBX-17.1 | Identifier                   | VXC40                               | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                    | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                           | Value-Profile Fixed          |

### OBX : Observation/Result =

| OBA : Observation/Result |                              |                          |                              |
|--------------------------|------------------------------|--------------------------|------------------------------|
| Location                 | Data Element                 | Data                     | Categorization               |
| OBX-1                    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                          |                              |
| OBX-3.1                  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            |                          |                              |
| OBX-5.1                  | Identifier                   | 253088698300029511161202 | Value-Test Case Fixed        |
| OBX-5.2                  | Text                         | HPV Vaccine VIS          | Presence-Test Case Proper    |
| OBX-5.3                  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6                    | Units                        |                          |                              |
| OBX-6.1                  | Identifier                   |                          | NonPresence                  |
| OBX-6.2                  | Text                         |                          | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                          | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                          |                              |
| OBX-14.1                 | Time                         | 20150624                 | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                          |                              |
| OBX-17.1                 | Identifier                   |                          | Indifferent                  |
| OBX-17.2                 | Text                         |                          | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                          | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

| Element                  | Data                                  |
|--------------------------|---------------------------------------|
| Patient Name             | Katherine Mackenzie Benton            |
| Mother's Maiden Name     | Jones                                 |
| ID Number                | 89778                                 |
| Date/Time of Birth       | 12/21/2003                            |
| Administrative Sex       | Female                                |
| Patient Address          | 89 West 21st Ave Bozeman MT 59715 USA |
| Local Number             | (406)555-4019                         |
| Race                     | White                                 |
| Ethnic Group             | Not Hispanic or Latino                |
| Multiple Birth Indicator | No                                    |
| Birth Order              | 1                                     |

| Immunization Registry Information           |                    |  |
|---|--------------------|--|
| Element                                     | Data               |  |
| Immunization Registry Status                | Active             |  |
| Immunization Registry Status Effective Date | 12/21/2003         |  |
| Publicity Code                              | No reminder/recall |  |
| Publicity Code Effective Date               | 06/24/2015         |  |
| Protection Indicator                        | Yes                |  |
| Protection Indicator Effective Date         | 06/24/2015         |  |

-Guardian or Responsible Party —

| Element      | Data                                  |
|--------------|---------------------------------------|
| Name         | Kari Michelle Benton                  |
| Relationship | Mother                                |
| Address      | 89 West 21st Ave Bozeman MT 59715 USA |
| Phone Number | (406)555-4019                         |

-Vaccine Administration Information -

| Element                            | Data                |  |
|------------------------------------|---------------------|--|
| Administered Vaccine               | GARDASIL 9          |  |
| Date/Time Start of Administration  | 06/24/2015          |  |
| Administered Amount                | 0.5                 |  |
| Administered Units                 | mL                  |  |
| Administration Notes               | New Record          |  |
| Administering Provider             | Lily Jackson        |  |
| Substance Lot Number               | 795441              |  |
| Substance Expiration Date          | 12/23/2015          |  |
| Substance Manufacturer Name        | Merck and Co., Inc. |  |
| Substance/Treatment Refusal Reason |                     |  |
| Completion Status                  | Complete            |  |
| Action Code                        | Add                 |  |
| Route                              | Intramuscular       |  |
| Administration Site                | Right Deltoid       |  |
| Entering Organization              | NISTEHRFacility     |  |
| Entered By                         | Lily Jackson        |  |
| Ordered By                         | Wilma Thomas        |  |

| Element                             | Data                        |
|-------------------------------------|-----------------------------|
| Vaccine Funding Source              | Public                      |
| Vaccine Funding Program Eligibility | VFC Eligible - Underinsured |
| Document Type                       | HPV Vaccine VIS             |
| Date Vis Presented                  | 06/24/2015                  |

## 1.3.2. IZ-AD-3.2 Receive ACK Z23

Test Step Type: TA RESPONDER

Tests the ability to consume a valid ACK message

#### **Test Story**

#### Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

#### **Comments**

No Comments

#### **Pre Condition**

A VXU message is generated by the EHR.

#### **Post Condition**

No PostCondition

#### **Test Objectives**

#### **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

#### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

## **Message Contents**

MSH : Message Header

| Location   | Data Element                       | Data                               | Categorization |
|------------|------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                    |                |
| MSH-2      | Encoding Characters                | ^~\&                               |                |
| MSH-3      | Sending Application                |                                    |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                       |                                    |                |
| MSH-3.3    | Universal ID Type                  |                                    |                |
| MSH-4      | Sending Facility                   |                                    |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                       |                                    |                |
| MSH-4.3    | Universal ID Type                  |                                    |                |
| MSH-5      | Receiving Application              |                                    |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                       |                                    |                |
| MSH-5.3    | Universal ID Type                  |                                    |                |
| MSH-6      | Receiving Facility                 |                                    |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                       | -                                  |                |
| MSH-6.3    | Universal ID Type                  |                                    |                |
| MSH-7      | Date/Time Of Message               |                                    |                |
| MSH-7.1    | Time                               | 20150624093847.806-0500            |                |
| MSH-9      | Message Type                       |                                    |                |
| MSH-9.1    | Message Code                       | ACK                                |                |
| MSH-9.2    | Trigger Event                      | V04                                |                |
| MSH-9.3    | Message Structure                  | ACK                                |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>3.2_Receive_ACK_Z23 |                |
| MSH-11     | Processing ID                      | J.Z_ROCCIVE_FICIN_EZS              |                |
| MSH-11.1   | Processing ID                      | P                                  |                |
| MSH-12     | Version ID                         |                                    |                |
| MSH-12.1   | Version ID                         | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type         | NE NE                              |                |
| MSH-16     | Application Acknowledgment Type    | NE                                 |                |
| MSH-21     | Message Profile Identifier         |                                    |                |
| MSH-21.1   | Entity Identifier                  | Z23                                |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                       |                                    |                |
| MSH-21.4   | Universal ID Type                  |                                    |                |
| MSH-22     | Sending Responsible Organization   |                                    |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                |                                    |                |
| MSH-22.6.1 | Namespace ID                       |                                    |                |
| MSH-22.6.2 | Universal ID                       |                                    |                |
| MSH-22.6.3 | Universal ID Type                  |                                    |                |
| MSH-22.7   | Identifier Type Code               |                                    |                |
| MSH-22.10  | Organization Identifier            |                                    |                |
| MSH-23     | Receiving Responsible Organization |                                    |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                |                                    |                |
| MSH-23.6.1 | Namespace ID                       |                                    |                |
| MSH-23.6.2 | Universal ID                       |                                    |                |
| MSH-23.6.3 | Universal ID Type                  |                                    |                |
|            | Identifier Type Code               |                                    |                |
| MSH-23.7   |                                    |                                    |                |
| MSH-23.10  | Organization Identifier            |                                    |                |

MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-3.1_Send_V04_Z22 |                |

## **Test Data Specification**

## -Patient Information -

| Element   | Data |  |
|---|------|--|
| This information will be automatically supplied by the System |      |  |

## 1.4. IZ-AD-4\_Delete\_Record

Child deleted administration

## **Test Story**



A child is seen at a clinic. A previously documented vaccination is deleted due to user error.

#### **Comments**

No Comments

#### Pre Condition

The IZ-AD-3\_No\_Consent test case has been successfully completed.

#### **Post Condition**

No PostCondition

#### **Test Objectives**

This test case assesses the ability of the EHR to create a delete message for a previously sent administration.

#### **Evaluation Criteria**

#### **Notes for Testers**

No Note

## 1.4.1. IZ-AD-4.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

#### **Test Story**

#### **Description**

After administering an HPV vaccination to the eleven and a half year old female Katherine Benton the clinician, Lily Jackson (ID 7824) realizes that the vaccination was documented on the incorrect patient chart. She deletes the vaccination from the patient chart and transmits the change to the IIS.

#### **Comments**

No Comments

#### **Pre Condition**

The IZ-AD-3.1 Send V04 Z22 test step has been successfully completed.

#### **Post Condition**

No PostCondition

#### **Test Objectives**

Support for sending delete notification.

#### **Evaluation Criteria**

Message Validation Report

#### **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

## **Message Contents**

-MSH : Message Header -

| Location   | <b>Data Element</b>                   | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Presence-Configuration       |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150624093847.804-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU_V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-4.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                             |                              |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      | 1                           |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | Indifferent                  |
|            | Organization Identifier               |                             | Indifferent                  |

PID : Patient Identification =

| Location   | <b>Data Element</b>                                | Data                   | Categorization               |
|------------|--|------------------------|------------------------------|
| PID-1      | Set ID - PID                                       | 1                      | Value-Profile Fixed          |
| PID-3      | Patient Identifier List                            |                        |                              |
| PID-3.1    | ID Number  | 89778                  | Presence-Content Indifferent |
| PID-3.4    | Assigning Authority                                |                        |                              |
| PID-3.4.1  | Namespace ID                                       | NIST-MPI-1             | Presence-Content Indifferent |
| PID-3.4.2  | Universal ID                                       | 1000                   | Indifferent                  |
| PID-3.4.3  | Universal ID Type                                  |                        | Indifferent                  |
| PID-3.5    | Identifier Type Code                               | MR                     | Value-Test Case Fixed        |
| PID-5      | Patient Name                                       |                        | variae Test Case Tinea       |
| PID-5.1    | Family Name  |                        |                              |
| PID-5.1.1  | Surname  | Benton                 | Presence-Content Indifferent |
| PID-5.2    | Given Name   | Katherine              | Presence-Content Indifferent |
| PID-5.3    | Second and Further Given Names or Initials Thereof | Mackenzie              | Presence-Content Indifferent |
| PID-5.7    | Name Type Code                                     | L                      | Value-Test Case Fixed        |
| PID-6      | Mother's Maiden Name                               |                        | , and Test Case I IACC       |
| PID-6.1    | Family Name  |                        |                              |
| PID-6.1.1  | Surname  | Jones                  | Presence-Content Indifferent |
| PID-6.7    | Name Type Code                                     | M                      | Value-Profile Fixed          |
| PID-7      | Date/Time of Birth                                 | IVI                    | varue-i rome i ixed          |
| PID-7.1    | Time   | 20031221               | Presence-Content Indifferent |
| PID-8      | Administrative Sex                                 | F                      | Value-Test Case Fixed        |
| PID-8      | Race   | Γ                      | value-Test Case Fixed        |
| PID-10.1   | Identifier   | 2106-3                 | Value-Test Case Fixed        |
| PID-10.1   | 1  | White                  |                              |
|            | Text   | -                      | Presence-Test Case Proper    |
| PID-10.3   | Name of Coding System                              | CDCREC                 | Value-Profile Fixed          |
| PID-11     | Patient Address                                    |                        |                              |
| PID-11.1   | Street Address                                     | 00.117 + 21 + 4        | D G + 1 1'00                 |
| PID-11.1.1 | Street or Mailing Address                          | 89 West 21st Ave       | Presence-Content Indifferent |
| PID-11.2   | Other Designation                                  | I_                     | Indifferent                  |
| PID-11.3   | City   | Bozeman                | Presence-Content Indifferent |
| PID-11.4   | State or Province                                  | MT                     | Presence-Content Indifferent |
| PID-11.5   | Zip or Postal Code                                 | 59715                  | Presence-Content Indifferent |
| PID-11.6   | Country  | USA                    | Presence-Content Indifferent |
| PID-11.7   | Address Type                                       | P                      | Value-Test Case Fixed List   |
| PID-13     | Phone Number - Home                                |                        |                              |
| PID-13.2   | Telecommunication Use Code                         | PRN                    | Value-Test Case Fixed        |
| PID-13.3   | Telecommunication Equipment Type                   | РН                     | Value-Test Case Fixed        |
| PID-13.4   | Email Address                                      |                        | NonPresence                  |
| PID-13.6   | Area/City Code                                     | 406                    | Presence-Content Indifferent |
| PID-13.7   | Local Number                                       | 5554019                | Presence-Content Indifferent |
| PID-22     | Ethnic Group                                       |                        |                              |
| PID-22.1   | Identifier   | 2186-5                 | Value-Test Case Fixed        |
| PID-22.2   | Text   | Not Hispanic or Latino | Presence-Test Case Proper    |
| PID-22.3   | Name of Coding System                              | CDCREC                 | Value-Profile Fixed          |
| PID-24     | Multiple Birth Indicator                           | N                      | Value-Test Case Fixed        |
| PID-25     | Birth Order  | 1                      | Indifferent                  |
| PID-29     | Patient Death Date and Time                        |                        |                              |
| PID-29.1   | Time   |                        | NonPresence                  |
| PID-30     | Patient Death Indicator                            | N                      | Value-Test Case Fixed        |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data               | Categorization               |
|----------|--|--------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                    |                              |
| PD1-11.1 | Identifier                                     | 01                 | Value-Test Case Fixed        |
| PD1-11.2 | Text   | No reminder/recall | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215            | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | Y                  | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150624           | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                  | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20031221           | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150624           | Presence-Content Indifferent |

#### NK1 : Next of Kin / Associated Parties

| Location  | Data Element  | Data             | Categorization               |
|-----------|---|------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1                | Value-Profile Fixed          |
| NK1-2     | Name  |                  |                              |
| NK1-2.1   | Family Name   |                  |                              |
| NK1-2.1.1 | Surname   | Benton           | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Kari             | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof | Michelle         | Presence-Content Indifferent |
| NK1-2.7   | Name Type Code  | L                | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                  |                              |
| NK1-3.1   | Identifier  | MTH              | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Mother           | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063          | Value-Profile Fixed          |
| NK1-4     | Address   |                  |                              |
| NK1-4.1   | Street Address  |                  |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 89 West 21st Ave | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                  | Indifferent                  |
| NK1-4.3   | City  | Bozeman          | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT               | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715            | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA              | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                  |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN              | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment<br>Type                   | РН               | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                  | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406              | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5554019          | Presence-Content Indifferent |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 5237            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 31309           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     | n                   |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4119-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | GARDASIL 9          | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 795441              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20151223            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | D                   | Value-Test Case Fixed        |

RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RD            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Deltoid | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

#### - OBX[\*] -

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | VXC50                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Public                 | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data                                | Categorization               |
|----------|------------------------------|-------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                     |                              |
| OBX-3.1  | Identifier                   | 64994-7                             | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                     |                              |
| OBX-5.1  | Identifier                   | V05                                 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | VFC Eligible - Underinsured         | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                             | Value-Profile Fixed          |
| OBX-6    | Units                        |                                     |                              |
| OBX-6.1  | Identifier                   |                                     | NonPresence                  |
| OBX-6.2  | Text                         |                                     | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                     |                              |
| OBX-14.1 | Time                         | 20150624                            | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                     |                              |
| OBX-17.1 | Identifier                   | VXC40                               | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                    | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                           | Value-Profile Fixed          |

| OBA: Observation/Result |                              |                          |                              |  |  |
|-------------------------|------------------------------|--------------------------|------------------------------|--|--|
| Location                | Data Element                 | Data                     | Categorization               |  |  |
| OBX-1                   | Set ID - OBX                 | 3                        | Value-Profile Fixed          |  |  |
| OBX-2                   | Value Type                   | CE                       | Value-Test Case Fixed        |  |  |
| OBX-3                   | Observation Identifier       |                          |                              |  |  |
| OBX-3.1                 | Identifier                   | 69764-9                  | Value-Test Case Fixed        |  |  |
| OBX-3.2                 | Text                         | Document Type            | Presence-Test Case Proper    |  |  |
| OBX-3.3                 | Name of Coding System        | LN                       | Value-Profile Fixed          |  |  |
| OBX-4                   | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |  |  |
| OBX-5                   | Observation Value            |                          |                              |  |  |
| OBX-5.1                 | Identifier                   | 253088698300029511161202 | Value-Test Case Fixed        |  |  |
| OBX-5.2                 | Text                         | HPV Vaccine VIS          | Presence-Test Case Proper    |  |  |
| OBX-5.3                 | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |  |  |
| DBX-6 Units             |                              |                          |                              |  |  |
| OBX-6.1                 | Identifier                   |                          | NonPresence                  |  |  |
| OBX-6.2                 | Text                         |                          | NonPresence                  |  |  |
| OBX-6.3                 | Name of Coding System        |                          | NonPresence                  |  |  |
| OBX-11                  | Observation Result Status    | F                        | Value-Profile Fixed          |  |  |
| OBX-14                  | Date/Time of the Observation |                          |                              |  |  |
| OBX-14.1                | Time                         | 20150624                 | Presence-Content Indifferent |  |  |
| OBX-17                  | Observation Method           |                          |                              |  |  |
| OBX-17.1                | Identifier                   |                          | Indifferent                  |  |  |
| OBX-17.2                | Text                         |                          | Indifferent                  |  |  |
| OBX-17.3                | Name of Coding System        |                          | Indifferent                  |  |  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         | NonPresence        |                              |
| OBX-6.3  | Name of Coding System        | NonPresence        |                              |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

## **Test Data Specification**

| Element                    | Data                                  |
|----------------------------|---------------------------------------|
| Patient Name               | Katherine Mackenzie Benton            |
| Mother's Maiden Name       | Jones                                 |
| ID Number                  | 89778                                 |
| Date/Time of Birth         | 12/21/2003                            |
| Administrative Sex         | Female                                |
| Patient Address            | 89 West 21st Ave Bozeman MT 59715 USA |
| Local Number (406)555-4019 |                                       |
| Race                       | White                                 |
| Ethnic Group               | Not Hispanic or Latino                |
| Multiple Birth Indicator   | No                                    |
| Birth Order                | 1                                     |

| Immunization Registry Information           |                    |  |  |  |
|---|--------------------|--|--|--|
| Element                                     | Data               |  |  |  |
| Immunization Registry Status                | Active             |  |  |  |
| Immunization Registry Status Effective Date | 12/21/2003         |  |  |  |
| Publicity Code                              | No reminder/recall |  |  |  |
| Publicity Code Effective Date               | 06/24/2015         |  |  |  |
| Protection Indicator                        | Yes                |  |  |  |
| Protection Indicator Effective Date         | 06/24/2015         |  |  |  |

-Guardian or Responsible Party —

| Element      | Data                                  |
|--------------|---------------------------------------|
| Name         | Kari Michelle Benton                  |
| Relationship | Mother                                |
| Address      | 89 West 21st Ave Bozeman MT 59715 USA |
| Phone Number | (406)555-4019                         |

-Vaccine Administration Information -

| Element                            | Data                |                     |  |
|------------------------------------|---------------------|---------------------|--|
| Administered Vaccine               | GARDASIL 9          |                     |  |
| Date/Time Start of Administration  | 06/24/2015          |                     |  |
| Administered Amount                | 0.5                 |                     |  |
| Administered Units                 | mL                  |                     |  |
| Administration Notes               | New Record          |                     |  |
| Administering Provider             | Lily Jackson        |                     |  |
| Substance Lot Number               | 795441              |                     |  |
| Substance Expiration Date          | 12/23/2015          |                     |  |
| Substance Manufacturer Name        | Merck and Co., Inc. | Merck and Co., Inc. |  |
| Substance/Treatment Refusal Reason |                     |                     |  |
| Completion Status                  | Complete            |                     |  |
| Action Code                        | Delete              |                     |  |
| Route                              | Intramuscular       |                     |  |
| Administration Site                | Right Deltoid       |                     |  |
| Entering Organization              | NISTEHRFacility     |                     |  |
| Entered By                         | Lily Jackson        |                     |  |
| Ordered By                         | Wilma Thomas        |                     |  |

| Element                             | Data                        |  |
|-------------------------------------|-----------------------------|--|
| Vaccine Funding Source              | Public                      |  |
| Vaccine Funding Program Eligibility | VFC Eligible - Underinsured |  |
| Document Type                       | HPV Vaccine VIS             |  |
| Date Vis Presented                  | 06/24/2015                  |  |

## 1.4.2. IZ-AD-4.2 Receive ACK Z23

Test Step Type: TA RESPONDER

Tests the ability to consume a valid ACK message

### **Test Story**

#### Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

#### **Comments**

No Comments

#### **Pre Condition**

A VXU message is generated by the EHR.

#### **Post Condition**

No PostCondition

#### **Test Objectives**

#### **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

#### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

## **Message Contents**

MSH : Message Header

| Location   | Data Element                       | Data                               | Categorization |
|------------|------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                    |                |
| MSH-2      | Encoding Characters                | \^~\&                              |                |
| MSH-3      | Sending Application                |                                    |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                       |                                    |                |
| MSH-3.3    | Universal ID Type                  |                                    |                |
| MSH-4      | Sending Facility                   |                                    |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                       |                                    |                |
| MSH-4.3    | Universal ID Type                  |                                    |                |
| MSH-5      | Receiving Application              |                                    |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                       |                                    |                |
| MSH-5.3    | Universal ID Type                  |                                    |                |
| MSH-6      | Receiving Facility                 |                                    |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                       |                                    |                |
| MSH-6.3    | Universal ID Type                  |                                    |                |
| MSH-7      | Date/Time Of Message               |                                    |                |
| MSH-7.1    | Time                               | 20150624093847.806-0500            |                |
| MSH-9      | Message Type                       |                                    |                |
| MSH-9.1    | Message Code                       | ACK                                |                |
| MSH-9.2    | Trigger Event                      | V04                                |                |
| MSH-9.3    | Message Structure                  | ACK                                |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>4.2 Receive ACK Z23 |                |
| MSH-11     | Processing ID                      | 1.2_Receive_Reix_225               |                |
| MSH-11.1   | Processing ID                      | P                                  |                |
| MSH-12     | Version ID                         |                                    |                |
| MSH-12.1   | Version ID                         | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type         | NE                                 |                |
| MSH-16     | Application Acknowledgment Type    | NE                                 |                |
| MSH-21     | Message Profile Identifier         |                                    |                |
| MSH-21.1   | Entity Identifier                  | Z23                                |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                       | CDCTIM(VS                          |                |
| MSH-21.4   | Universal ID Type                  |                                    |                |
| MSH-22     | Sending Responsible Organization   |                                    |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                |                                    |                |
| MSH-22.6.1 | Namespace ID                       |                                    |                |
| MSH-22.6.2 | Universal ID                       |                                    |                |
| MSH-22.6.3 | Universal ID Type                  |                                    |                |
| MSH-22.7   | Identifier Type Code               |                                    |                |
| MSH-22.10  | Organization Identifier            |                                    |                |
| MSH-23     | Receiving Responsible Organization |                                    |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                |                                    |                |
| MSH-23.6.1 | Namespace ID                       |                                    |                |
| MSH-23.6.2 | Universal ID                       |                                    |                |
| MSH-23.6.3 | Universal ID Type                  |                                    |                |
|            | Identifier Type Code               |                                    |                |
| MSH-23.7   |                                    |                                    |                |
| MSH-23.10  | Organization Identifier            |                                    |                |

MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-4.1_Send_V04_Z22 |                |

# **Test Data Specification**

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|              |    |    |   |    |      |        |

| 1 WOON 11101 MWOON  |      |  |  |  |  |
|---|------|--|--|--|--|
| Element   | Data |  |  |  |  |
| This information will be automatically supplied by the System |      |  |  |  |  |
|   |      |  |  |  |  |

## 1.5. IZ-AD-5\_Refusal

Child administration with refusal. Also test multiple birth indicator.

## **Test Story**



The second child of a set of twins is seen at a clinic. New vaccinations are administered but an additional one is refused by the parents.

#### **Comments**

No Comments

#### Pre Condition

No PreCondition

#### **Post Condition**

No PostCondition

## **Test Objectives**

This test case assesses the ability of the EHR to create an administration message for child whose parents have refused an immunization and to support multiple birth indicator and order.

#### **Evaluation Criteria**

#### **Notes for Testers**

No Note

## 1.5.1. IZ-AD-5.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

#### **Test Story**

#### **Description**

A 1 year old male, Tyler Owen Banks, is brought to a clinic for a well child visit. He is accompanied by his father Karl Leonard Banks. Tyler's twin brother, born 5 minutes before Tyler, was not able to make it to the clinic. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that the child requires Hib, Hep A, MMR and Varicella vaccinations. The child is covered by insurance and does not qualify for all Vaccine For Children (VFC) supplied vaccines. The father is given the appropriate Vaccine Information Sheets (VIS) to review. After reading them, the father agrees that the child should receive the Hib, Hep A and MMR vaccines but refuses the Varicella vaccine. He also agrees that the data should be shared once it is incorporated into the local IIS. Appropriate doses of Hib (HIBERIX), Hep A (VAQTA) and MMR (M-M-R II) are selected from the clinic's stock of privately funded vaccines. A clinician, Lily Jackson (ID 456) prepares and administers the doses to the patient and then enters the data into the EHR and transmits it to the IIS.

#### **Comments**

No Comments

#### **Pre Condition**

No PreCondition

#### **Post Condition**

No PostCondition

#### **Test Objectives**

Support for an immunization refusal

Support for multiple birth indicator and order

#### **Evaluation Criteria**

Message Validation Report

#### **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

|          | I               |  |  |
|----------|-----------------|--|--|
| <u> </u> |                 |  |  |
| M        | occago Contents |  |  |

**Message Contents** 

-MSH : Message Header -

| Location   | Data Element                          | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | \^~\&                       | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Indifferent                  |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150624093847.808-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU_V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-5.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                             |                              |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment<br>Type    | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      |                             |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Indifferent                  |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Indifferent                  |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
|            |                                       |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | mannerent                    |

PID : Patient Identification =

| Location   | Data Element  | Data                   | Categorization                |
|------------|---|------------------------|-------------------------------|
| PID-1      | Set ID - PID  | 1                      | Value-Profile Fixed           |
| PID-3      | Patient Identifier List                               |                        |                               |
| PID-3.1    | ID Number   | 8891                   | Presence-Content Indifferent  |
| PID-3.4    | Assigning Authority                                   |                        |                               |
| PID-3.4.1  | Namespace ID  | NIST-MPI-1             | Presence-Content Indifferent  |
| PID-3.4.2  | Universal ID  |                        | Indifferent                   |
| PID-3.4.3  | Universal ID Type                                     |                        | Indifferent                   |
| PID-3.5    | Identifier Type Code                                  | MR                     | Value-Test Case Fixed         |
| PID-5      | Patient Name  |                        |                               |
| PID-5.1    | Family Name   |                        |                               |
| PID-5.1.1  | Surname   | Banks                  | Presence-Content Indifferent  |
| PID-5.2    | Given Name  | Tyler                  | Presence-Content Indifferent  |
| PID-5.3    | Second and Further Given<br>Names or Initials Thereof | Owen                   | Presence-Content Indifferent  |
| PID-5.7    | Name Type Code  | L                      | Value-Test Case Fixed         |
| PID-6      | Mother's Maiden Name                                  |                        |                               |
| PID-6.1    | Family Name   |                        |                               |
| PID-6.1.1  | Surname   |                        | Indifferent                   |
| PID-6.7    | Name Type Code  |                        | Indifferent                   |
| PID-7      | Date/Time of Birth                                    |                        |                               |
| PID-7.1    | Time  | 20140602               | Presence-Content Indifferent  |
| PID-8      | Administrative Sex                                    | M                      | Value-Test Case Fixed         |
| PID-10     | Race  |                        | , various resist class raised |
| PID-10.1   | Identifier  | 2106-3                 | Value-Test Case Fixed         |
| PID-10.2   | Text  | White                  | Presence-Test Case Proper     |
| PID-10.3   | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed           |
| PID-11     | Patient Address                                       |                        | variae Frome Fraca            |
| PID-11.1   | Street Address  |                        |                               |
| PID-11.1.1 | Street or Mailing Address                             | 924 Sycamore Lane      | Presence-Content Indifferent  |
| PID-11.2   | Other Designation                                     | 224 Sycamore Lane      | Indifferent                   |
| PID-11.3   | City  | Bozeman                | Presence-Content Indifferent  |
| PID-11.4   | State or Province                                     | MT                     | Presence-Content Indifferent  |
| PID-11.5   | Zip or Postal Code                                    | 59715                  | Presence-Content Indifferent  |
| PID-11.6   | Country   | USA                    | Presence-Content Indifferent  |
| PID-11.7   | Address Type  | P                      | Value-Test Case Fixed List    |
| PID-13     | Phone Number - Home                                   | r                      | value-Test Case Fixed List    |
| PID-13.2   | Telecommunication Use Code                            | PRN                    | Value-Test Case Fixed         |
| F1D-13.2   | Telecommunication Equipment                           |                        | value-Test Case Fixed         |
| PID-13.3   | Туре  | PH                     | Value-Test Case Fixed         |
| PID-13.4   | Email Address   |                        | NonPresence                   |
| PID-13.6   | Area/City Code  | 406                    | Presence-Content Indifferent  |
| PID-13.7   | Local Number  | 5555835                | Presence-Content Indifferent  |
| PID-22     | Ethnic Group  |                        |                               |
| PID-22.1   | Identifier  | 2186-5                 | Value-Test Case Fixed         |
| PID-22.2   | Text  | Not Hispanic or Latino | Presence-Test Case Proper     |
| PID-22.3   | Name of Coding System                                 | CDCREC                 | Value-Profile Fixed           |
| PID-24     | Multiple Birth Indicator                              | Y                      | Indifferent                   |
| PID-25     | Birth Order   | 2                      | Indifferent                   |
| PID-29     | Patient Death Date and Time                           |                        |                               |
| PID-29.1   | Time  |                        | NonPresence                   |
| PID-30     | Patient Death Indicator                               | N                      | Indifferent                   |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                          | Categorization               |
|----------|--|-------------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                               |                              |
| PD1-11.1 | Identifier                                     | 08                            | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - to provider | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                       | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                             | Indifferent                  |
| PD1-13   | Protection Indicator Effective Date            | 20150624                      | Indifferent                  |
| PD1-16   | Immunization Registry Status                   | A                             | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20040602                      | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150624                      | Presence-Content Indifferent |

#### NK1: Next of Kin / Associated Parties

| Location  | Data Element  | Data              | Categorization               |
|-----------|---|-------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1                 | Value-Profile Fixed          |
| NK1-2     | Name  |                   |                              |
| NK1-2.1   | Family Name   |                   |                              |
| NK1-2.1.1 | Surname   | Banks             | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Karl              | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof | Leonard           | Indifferent                  |
| NK1-2.7   | Name Type Code  | L                 | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                   |                              |
| NK1-3.1   | Identifier  | FTH               | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Father            | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063           | Value-Profile Fixed          |
| NK1-4     | Address   |                   |                              |
| NK1-4.1   | Street Address  |                   |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 924 Sycamore Lane | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                   | Indifferent                  |
| NK1-4.3   | City  | Bozeman           | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT                | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715             | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA               | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                 | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                   |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN               | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment Type                      | РН                | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                   | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406               | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5555835           | Presence-Content Indifferent |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 5645            | Indifferent                  |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 22515           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Indifferent                  |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Indifferent                  |
| ORC-17.2   | Text  | NISTEHRFacility | Indifferent                  |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Indifferent                  |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 5027            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 12128           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 7239            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 50588           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 9999            | Value-Profile Fixed          |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0               | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1               | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     |                 |                              |
| RXA-3.1    | Time  | 20150624        | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                 |                              |
| RXA-5.1    | Identifier  | 58160-0806-01   | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | HIBERIX         | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC             | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5             | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                 |                              |
| RXA-7.1    | Identifier  | mL              | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL              | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM            | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                 |                              |
| RXA-9.1    | Identifier  | 00              | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record      | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001          | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                 |                              |
| RXA-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                 |                              |
| RXA-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                 |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                 | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| RXA-10.10  | Name Type Code  | L               | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                 |                              |
| RXA-11.4   | Facility  |                 |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1   | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                 | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                 | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 328734          | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                 |                              |
| RXA-16.1   | Time  | 20150923        | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           | 20130723        | Tresence content maniferent  |
| RXA-17.1   | Identifier  | SKB             | Value-Test Case Fixed        |
| RXA-17.2   | Text  | GlaxoSmithKline | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX             | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal Reason                    | HI VA           | value Home Hace              |
| RXA-18.1   | Identifier  |                 | NonPresence                  |
| RXA-18.2   | Text  |                 | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                 | NonPresence                  |
| RXA-20     | Completion Status                                     | СР              | Value-Test Case Fixed        |
| 1011 20    | Completion Status                                     | A               | Value-Test Case Fixed        |

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                     |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4095-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | VAQTA               | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 208940              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20160120            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                   | Value-Test Case Fixed        |

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                     |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4681-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | M-M-R II            | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 134301              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20151028            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                   | Value-Test Case Fixed        |

| Location   | Data Element  | Data              | Categorization               |
|------------|---|-------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                 | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                 | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                   |                              |
| RXA-3.1    | Time  | 20150624          | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                   |                              |
| RXA-5.1    | Identifier  | 21                | Value-Test Case Fixed        |
| RXA-5.2    | Text  | varicella         | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | CVX               | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 999               | Value-Test Case Fixed        |
| RXA-7      | Administered Units                                    |                   |                              |
| RXA-7.1    | Identifier  |                   | NonPresence                  |
| RXA-7.2    | Text  |                   | NonPresence                  |
| RXA-7.3    | Name of Coding System                                 |                   | NonPresence                  |
| RXA-9      | Administration Notes                                  |                   |                              |
| RXA-9.1    | Identifier  |                   | Indifferent                  |
| RXA-9.2    | Text  |                   | Indifferent                  |
| RXA-9.3    | Name of Coding System                                 |                   | Indifferent                  |
| RXA-10     | Administering Provider                                |                   |                              |
| RXA-10.1   | ID Number   |                   | Indifferent                  |
| RXA-10.2   | Family Name   |                   |                              |
| RXA-10.2.1 | Surname   |                   | Indifferent                  |
| RXA-10.3   | Given Name  |                   | Indifferent                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                   | Indifferent                  |
| RXA-10.9   | Assigning Authority                                   |                   |                              |
| RXA-10.9.1 | Namespace ID  |                   | Indifferent                  |
| RXA-10.9.2 | Universal ID  |                   | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                   | Indifferent                  |
| RXA-10.10  | Name Type Code  |                   | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  |                   | Indifferent                  |
| RXA-11     | Administered-at Location                              |                   |                              |
| RXA-11.4   | Facility  |                   |                              |
| RXA-11.4.1 | Namespace ID  |                   | Indifferent                  |
| RXA-11.4.2 | Universal ID  |                   | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                   | Indifferent                  |
| RXA-15     | Substance Lot Number                                  |                   | Indifferent                  |
| RXA-16     | Substance Expiration Date                             |                   |                              |
| RXA-16.1   | Time  |                   | Indifferent                  |
| RXA-17     | Substance Manufacturer Name                           |                   |                              |
| RXA-17.1   | Identifier  |                   | Indifferent                  |
| RXA-17.2   | Text  |                   | Indifferent                  |
| RXA-17.3   | Name of Coding System                                 |                   | Indifferent                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                   |                              |
| RXA-18.1   | Identifier  | 00                | Value-Test Case Fixed        |
| RXA-18.2   | Text  | Parental decision | Presence-Test Case Proper    |
| RXA-18.3   | Name of Coding System                                 | NIP002            | Value-Profile Fixed          |
| RXA-20     | Completion Status                                     | RE                | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                 | Value-Test Case Fixed        |

# RXR[\*] RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Thigh   | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

#### RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Thigh   | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

## RXR : Pharmacy/Treatment Route

| Location | Data Element          | Data         | Categorization            |
|----------|-----------------------|--------------|---------------------------|
| RXR-1    | Route                 |              |                           |
| RXR-1.1  | Identifier            | C38299       | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Subcutaneous | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT         | Value-Profile Fixed       |
| RXR-2    | Administration Site   |              |                           |
| RXR-2.1  | Identifier            | LT           | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Left Thigh   | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163      | Value-Profile Fixed       |

|                          |                              | BX[*]                  |                              |
|--------------------------|------------------------------|------------------------|------------------------------|
| OBX : Observation/Result |                              |                        |                              |
| Location                 | Data Element                 | Data                   | Categorization               |
| OBX-1                    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                        |                              |
| OBX-3.1                  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            |                        |                              |
| OBX-5.1                  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2                  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3                  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6                    | Units                        |                        |                              |
| OBX-6.1                  | Identifier                   |                        | NonPresence                  |
| OBX-6.2                  | Text                         |                        | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                        | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                        |                              |
| OBX-14.1                 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                        |                              |
| OBX-17.1                 | Identifier                   |                        | Indifferent                  |
| OBX-17.2                 | Text                         |                        | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data                                   | Categorization            |
|----------|------------------------------|--|---------------------------|
| OBX-1    | Set ID - OBX                 | 2                                      | Value-Profile Fixed       |
| OBX-2    | Value Type                   | CE                                     | Value-Test Case Fixed     |
| OBX-3    | Observation Identifier       |  |                           |
| OBX-3.1  | Identifier                   | 64994-7                                | Value-Test Case Fixed     |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility | Presence-Test Case Proper |
| OBX-3.3  | Name of Coding System        | LN                                     | Value-Profile Fixed       |
| OBX-4    | Observation Sub-ID           | 2                                      | Presence-Test Case Proper |
| OBX-5    | Observation Value            |  |                           |
| OBX-5.1  | Identifier                   | V01                                    | Value-Test Case Fixed     |
| OBX-5.2  | Text                         | Not VFC Eligible                       | Presence-Test Case Proper |
| OBX-5.3  | Name of Coding System        | HL70064                                | Value-Profile Fixed       |
| OBX-6    | Units                        |  |                           |
| OBX-6.1  | Identifier                   |  | NonPresence               |
| OBX-6.2  | Text                         |  | NonPresence               |
| OBX-6.3  | Name of Coding System        |  | NonPresence               |
| OBX-11   | Observation Result Status    | F                                      | Value-Profile Fixed       |
| OBX-14   | Date/Time of the Observation |  |                           |
| OBX-14.1 | Time                         | 20150624                               | Indifferent               |
| OBX-17   | Observation Method           |  |                           |
| OBX-17.1 | Identifier                   | VXC40                                  | Indifferent               |
| OBX-17.2 | Text                         | per immunization                       | Indifferent               |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                              | Indifferent               |

| Location | Data Element                 | Data                         | Categorization            |
|----------|------------------------------|------------------------------|---------------------------|
| OBX-1    | Set ID - OBX                 | 3                            | Value-Profile Fixed       |
| OBX-2    | Value Type                   | CE                           | Value-Test Case Fixed     |
| OBX-3    | Observation Identifier       |                              |                           |
| OBX-3.1  | Identifier                   | 69764-9                      | Value-Test Case Fixed     |
| OBX-3.2  | Text                         | Document Type                | Presence-Test Case Proper |
| OBX-3.3  | Name of Coding System        | LN                           | Value-Profile Fixed       |
| OBX-4    | Observation Sub-ID           | 3                            | Presence-Test Case Proper |
| OBX-5    | Observation Value            |                              |                           |
| OBX-5.1  | Identifier                   | 253088698300026411151105     | Value-Test Case Fixed     |
| OBX-5.2  | Text                         | Multi Pediatric Vaccines VIS | Presence-Test Case Proper |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                    | Value-Profile Fixed       |
| OBX-6    | Units                        |                              |                           |
| OBX-6.1  | Identifier                   |                              | NonPresence               |
| OBX-6.2  | Text                         |                              | NonPresence               |
| OBX-6.3  | Name of Coding System        |                              | NonPresence               |
| OBX-11   | Observation Result Status    | F                            | Value-Profile Fixed       |
| OBX-14   | Date/Time of the Observation |                              |                           |
| OBX-14.1 | Time                         | 20150624                     | Indifferent               |
| OBX-17   | Observation Method           |                              |                           |
| OBX-17.1 | Identifier                   |                              | Indifferent               |
| OBX-17.2 | Text                         |                              | Indifferent               |
| OBX-17.3 | Name of Coding System        |                              | Indifferent               |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Indifferent                  |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

| Location | Data Element                 | Data                                   | Categorization               |
|----------|------------------------------|--|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |  |                              |
| OBX-3.1  | Identifier                   | 64994-7                                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |  |                              |
| OBX-5.1  | Identifier                   | V01                                    | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Not VFC Eligible                       | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                                | Value-Profile Fixed          |
| OBX-6    | Units                        |  |                              |
| OBX-6.1  | Identifier                   |  | NonPresence                  |
| OBX-6.2  | Text                         |  | NonPresence                  |
| OBX-6.3  | Name of Coding System        |  | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |  |                              |
| OBX-14.1 | Time                         | 20150624                               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |  |                              |
| OBX-17.1 | Identifier                   | VXC40                                  | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                       | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                              | Value-Profile Fixed          |

| Location | Data Element                 | Data                     | Categorization               |
|----------|------------------------------|--------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                          |                              |
| OBX-3.1  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                          |                              |
| OBX-5.1  | Identifier                   | 253088698300004211160720 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Hepatitis A VIS          | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6    | Units                        |                          |                              |
| OBX-6.1  | Identifier                   |                          | NonPresence                  |
| OBX-6.2  | Text                         |                          | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                          | NonPresence                  |
| OBX-11   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                          |                              |
| OBX-14.1 | Time                         | 20150624                 | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                          |                              |
| OBX-17.1 | Identifier                   |                          | Indifferent                  |
| OBX-17.2 | Text                         |                          | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                          | Indifferent                  |

OBX : Observation/Result =

| Location | Data Element                 | Data               | Categorization               |  |
|----------|------------------------------|--------------------|------------------------------|--|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |  |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |  |
| OBX-3    | Observation Identifier       |                    |                              |  |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |  |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |  |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |  |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |  |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |  |
| OBX-6    | Units                        |                    |                              |  |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |  |
| OBX-6.2  | Text                         |                    | NonPresence                  |  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |  |
| OBX-14   | Date/Time of the Observation |                    |                              |  |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |  |
| OBX-17   | Observation Method           |                    |                              |  |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |  |
| OBX-17.2 | Text                         |                    | Indifferent                  |  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |  |

## OBX : Observation/Result =

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

## OBX : Observation/Result =

| Location | Data Element                 | Data                                   | Categorization               |
|----------|------------------------------|--|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |  |                              |
| OBX-3.1  | Identifier                   | 64994-7                                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |  |                              |
| OBX-5.1  | Identifier                   | V01                                    |                              |
| OBX-5.2  | Text                         | Not VFC Eligible                       |                              |
| OBX-5.3  | Name of Coding System        | HL70064                                |                              |
| OBX-6    | Units                        |  |                              |
| OBX-6.1  | Identifier                   |  | NonPresence                  |
| OBX-6.2  | Text                         |  | NonPresence                  |
| OBX-6.3  | Name of Coding System        |  | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |  |                              |
| OBX-14.1 | Time                         | 20150624                               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |  |                              |
| OBX-17.1 | Identifier                   | VXC40                                  | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                       | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                              | Value-Profile Fixed          |

| Location | Data Element                 | Data                      | Categorization               |
|----------|------------------------------|---------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 3                         | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                        | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                           |                              |
| OBX-3.1  | Identifier                   | 69764-9                   | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type             | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                        | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                         | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                           |                              |
| OBX-5.1  | Identifier                   | 253088698300012711180212  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Measles/Mumps/Rubella VIS | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                 | Value-Profile Fixed          |
| OBX-6    | Units                        |                           |                              |
| OBX-6.1  | Identifier                   |                           | NonPresence                  |
| OBX-6.2  | Text                         |                           | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                           | NonPresence                  |
| OBX-11   | Observation Result Status    | F                         | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                           |                              |
| OBX-14.1 | Time                         | 20150624                  | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                           |                              |
| OBX-17.1 | Identifier                   |                           | Indifferent                  |
| OBX-17.2 | Text                         |                           | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                           | Indifferent                  |
|          |                              |                           |                              |

| OBX : Observation/Result |                              |                    |                              |
|--------------------------|------------------------------|--------------------|------------------------------|
| Location                 | Data Element                 | Data               | Categorization               |
| OBX-1                    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                    |                              |
| OBX-3.1                  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            | 20150624           |                              |
| OBX-6                    | Units                        |                    |                              |
| OBX-6.1                  | Identifier                   |                    | NonPresence                  |
| OBX-6.2                  | Text                         |                    | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                    | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                    |                              |
| OBX-14.1                 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                    |                              |
| OBX-17.1                 | Identifier                   |                    | Indifferent                  |
| OBX-17.2                 | Text                         |                    | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

# -Patient Information -

| Element                  | Data                                   |
|--------------------------|--|
| Patient Name             | Tyler Owen Banks                       |
| Mother's Maiden Name     |  |
| ID Number                | 8891                                   |
| Date/Time of Birth       | 06/02/2014                             |
| Administrative Sex       | Male                                   |
| Patient Address          | 924 Sycamore Lane Bozeman MT 59715 USA |
| Local Number             | (406)555-5835                          |
| Race                     | White                                  |
| Ethnic Group             | Not Hispanic or Latino                 |
| Multiple Birth Indicator | Yes                                    |
| Birth Order              | 2                                      |

# Immunization Registry Information

| Element                                     | Data                          |
|---|-------------------------------|
| Immunization Registry Status                | Active                        |
| Immunization Registry Status Effective Date | 06/02/2004                    |
| Publicity Code                              | Reminder/recall - to provider |
| Publicity Code Effective Date               | 06/24/2015                    |
| Protection Indicator                        | No                            |
| Protection Indicator Effective Date         | 06/24/2015                    |

# Guardian or Responsible Party

| Element      | Data                                   |
|--------------|--|
| Name         | Karl Leonard Banks                     |
| Relationship | Father                                 |
| Address      | 924 Sycamore Lane Bozeman MT 59715 USA |
| Phone Number | (406)555-5835                          |

# -Vaccine Administration Information[\*] -----

## -Vaccine Administration Information -

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | HIBERIX         |
| Date/Time Start of Administration  | 06/24/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 328734          |
| Substance Expiration Date          | 09/23/2015      |
| Substance Manufacturer Name        | GlaxoSmithKline |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Right Thigh     |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element                             | Data                         |
|-------------------------------------|------------------------------|
| Vaccine Funding Source              | Private                      |
| Vaccine Funding Program Eligibility | Not VFC Eligible             |
| Document Type                       | Multi Pediatric Vaccines VIS |
| Date Vis Presented                  | 06/24/2015                   |

# ——Vaccine Administration Information ————

| Element                            | Data                |
|------------------------------------|---------------------|
| Administered Vaccine               | VAQTA               |
| Date/Time Start of Administration  | 06/24/2015          |
| Administered Amount                | 0.5                 |
| Administered Units                 | mL                  |
| Administration Notes               | New Record          |
| Administering Provider             | Lily Jackson        |
| Substance Lot Number               | 208940              |
| Substance Expiration Date          | 01/20/2016          |
| Substance Manufacturer Name        | Merck and Co., Inc. |
| Substance/Treatment Refusal Reason |                     |
| Completion Status                  | Complete            |
| Action Code                        | Add                 |
| Route                              | Intramuscular       |
| Administration Site                | Right Thigh         |
| Entering Organization              | NISTEHRFacility     |
| Entered By                         | Lily Jackson        |
| Ordered By                         | Wilma Thomas        |

| Element                             | Data             |
|-------------------------------------|------------------|
| Vaccine Funding Source              | Private          |
| Vaccine Funding Program Eligibility | Not VFC Eligible |
| Document Type                       | Hepatitis A VIS  |
| Date Vis Presented                  | 06/24/2015       |

## ——Vaccine Administration Information —————

| Element                            | Data                |
|------------------------------------|---------------------|
| Administered Vaccine               | M-M-R II            |
| Date/Time Start of Administration  | 06/24/2015          |
| Administered Amount                | 0.5                 |
| Administered Units                 | mL                  |
| Administration Notes               | New Record          |
| Administering Provider             | Lily Jackson        |
| Substance Lot Number               | 134301              |
| Substance Expiration Date          | 10/28/2015          |
| Substance Manufacturer Name        | Merck and Co., Inc. |
| Substance/Treatment Refusal Reason |                     |
| Completion Status                  | Complete            |
| Action Code                        | Add                 |
| Route                              | Subcutaneous        |
| Administration Site                | Left Thigh          |
| Entering Organization              | NISTEHRFacility     |
| Entered By                         | Lily Jackson        |
| Ordered By                         | Wilma Thomas        |

| Element                             | Data                      |
|-------------------------------------|---------------------------|
| Vaccine Funding Source              | Private                   |
| Vaccine Funding Program Eligibility | Not VFC Eligible          |
| Document Type                       | Measles/Mumps/Rubella VIS |
| Date Vis Presented                  | 06/24/2015                |

## -Vaccine Administration Information -

| Element                            | Data              |
|------------------------------------|-------------------|
| Administered Vaccine               | varicella         |
| Date/Time Start of Administration  | 06/24/2015        |
| Administered Amount                | 999               |
| Administered Units                 |                   |
| Administration Notes               |                   |
| Administering Provider             |                   |
| Substance Lot Number               |                   |
| Substance Expiration Date          |                   |
| Substance Manufacturer Name        |                   |
| Substance/Treatment Refusal Reason | Parental decision |
| Completion Status                  | Refused           |
| Action Code                        | Add               |
| Route                              |                   |
| Administration Site                |                   |
| Entering Organization              | NISTEHRFacility   |
| Entered By                         | Lily Jackson      |
| Ordered By                         |                   |

## 1.5.2. IZ-AD-5.2 Receive ACK Z23

Test Step Type: TA RESPONDER

Tests the ability to consume a valid ACK message

## **Test Story**

## Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

#### **Comments**

No Comments

## **Pre Condition**

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

## **Test Objectives**

#### **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

## **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

## **Message Contents**

MSH : Message Header

| Field Separator            |  | Categorization   |
|----------------------------|--|--|
|                            |  |  |
| Encoding Characters        | \^~\&  |  |
| Sending Application        |  |  |
| Namespace ID               | NISTIISAPP   |  |
| Universal ID               |  |  |
| Universal ID Type          |  |  |
|                            |  |  |
|                            | NISTIISFAC   |  |
| Universal ID               |  |  |
| Universal ID Type          |  |  |
|                            |  |  |
|                            | NISTEHRAPP   |  |
|                            |  |  |
|                            |  |  |
|                            |  |  |
|                            | NISTEHRFAC   |  |
| -                          |  |  |
|                            |  |  |
|                            |  |  |
| Time                       | 20150624093847.822-0500  |  |
|                            | 201000210700171022 0000  |  |
|                            | ACK  |  |
|                            | <u> </u>   |  |
|                            | 1  |  |
| Message Control ID         | NIST-IZ-AD-  |  |
| Processing ID              |  |  |
|                            | p  |  |
|                            | 1  |  |
|                            | 251  |  |
|                            | -  |  |
| Application Acknowledgment | NE   |  |
|                            |  |  |
|                            | 723  |  |
|                            |  |  |
| -                          | e Berrini, y B   |  |
| <del>-</del>               |  |  |
|                            |  |  |
|                            | 1  |  |
|                            | 1.1311151116   |  |
|                            |  |  |
|                            |  |  |
| <del>-</del>               |  |  |
|                            |  |  |
|                            |  |  |
| Receiving Responsible      |  |  |
|                            | NISTEHRFAC   |  |
|                            |  |  |
|                            |  |  |
|                            |  |  |
| <del>-</del>               |  |  |
|                            |  |  |
|                            |  |  |
|                            | Universal ID Universal ID Type  Sending Facility Namespace ID Universal ID Type  Receiving Application Namespace ID Universal ID Universal ID Type  Receiving Facility Namespace ID Universal ID Type  Date/Time Of Message Time  Message Type Message Code Trigger Event Message Structure  Message Structure  Message Control ID  Processing ID Version ID Version ID Accept Acknowledgment Type Application Acknowledgment Type Message Profile Identifier Entity Identifier Namespace ID Universal ID Universal ID Type Sending Responsible Organization Organization Name Assigning Authority Namespace ID Universal ID | Universal ID Universal ID Type  Sending Facility Namespace ID Universal ID Date/Time Of Message Time 20150624093847.822-0500 Message Type Message Code ACK Trigger Event Vo4 Message Structure ACK MIST-IZ-AD- 5.2 Receive_ACK_Z23 Processing ID Processing ID Processing ID Processing ID Processing ID Version ID Version ID Version ID Version ID Cocphinve Application Acknowledgment Type Message Profile Identifier Entity Identifier Assigning Authority Namespace ID Universal ID Un |

MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-5.1_Send_V04_Z22 |                |

# **Test Data Specification**

## -Patient Information -

| Element   | Data |  |
|---|------|--|
| This information will be automatically supplied by the System |      |  |

# 1.6. IZ-AD-6\_Update\_Record

Child updated administration

## **Test Story**

## Description

A child is seen at a clinic. A previously documented vaccination is updated to correct inaccurate information..

## **Comments**

No Comments

## Pre Condition

The IZ-AD-5\_Refusal test case has been successfully completed.

## **Post Condition**

No PostCondition

## **Test Objectives**

This test case asses the ability of the EHR to create an update message for a previously sent administration.

## **Evaluation Criteria**

## **Notes for Testers**

No Note

## 1.6.1. IZ-AD-6.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

## **Test Story**

### **Description**

After documenting vaccinations for Tyler Owen Banks the clinician, Lily Jackson (ID 456) recognizes that an error was made during data entry for the Hepatitis A vaccine. The Lot Number was entered incorrectly. She updates the data in the EHR and transmits it to the IIS.

#### Comments

No Comments

#### Pre Condition

The IZ-AD-5.1 Send V04 Z22 test step has been successfully completed.

#### **Post Condition**

No PostCondition

## **Test Objectives**

Support for sending an update notification.

#### **Evaluation Criteria**

Message Validation Report.

Lot number that appears in RXA-15 in the message submitted for Test Case 5 will be changed in the message submitted for Test Case 6.

### **Notes for Testers**

Lot number in test message changed from 208940 in Test Case 5 to 208490 in Test Case 6. Since lot numbers cannot be pre-defined in the Test Data, the Test Suite does not automatically check for exact data in RXA-15; therefore, the Tester must manually verify that the lot number used in the test message for Test Case 5 was changed in the test message for Test Case 6. For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

MSH : Message Header

| Location   | Data Element                       | Data                        | Categorization               |
|------------|------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                    | İ                           | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                |                             |                              |
| MSH-3.1    | Namespace ID                       | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                       |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                  |                             | Indifferent                  |
| MSH-4      | Sending Facility                   |                             |                              |
| MSH-4.1    | Namespace ID                       | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                       |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                  |                             | Indifferent                  |
| MSH-5      | Receiving Application              |                             |                              |
| MSH-5.1    | Namespace ID                       | NISTIISAPP                  | Presence-Configuration       |
| MSH-5.2    | Universal ID                       |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                  |                             | Indifferent                  |
| MSH-6      | Receiving Facility                 |                             |                              |
| MSH-6.1    | Namespace ID                       | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                       |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                  |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message               |                             | Indifferent                  |
| MSH-7.1    | Time                               | 20150624093847.808-0500     | Presence-System Generated    |
| MSH-9      | Message Type                       | 20130021093017.000 0300     | Tesence System Generated     |
| MSH-9.1    | Message Code                       | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                      | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                  | VXU_V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                 |                             |                              |
| MSH-11     |                                    | NIST-IZ-AD-6.1_Send_V04_Z22 | Presence-System Generated    |
|            | Processing ID                      | P                           | Presence-Content Indifferent |
| MSH-11.1   | Processing ID                      | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                         | 0.51                        | 77 1 D C1 D' 1               |
| MSH-12.1   | Version ID                         | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type         | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type    | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier         |                             |                              |
| MSH-21.1   | Entity Identifier                  | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                       |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                  |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization   |                             |                              |
| MSH-22.1   | Organization Name                  | NISTEHRFAC                  | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                |                             |                              |
| MSH-22.6.1 | Namespace ID                       |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                       |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                  |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code               |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier            |                             | Indifferent                  |
| MSH-23     | Receiving Responsible Organization |                             |                              |
| MSH-23.1   | Organization Name                  | NISTIISFAC                  | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                |                             |                              |
| MSH-23.6.1 | Namespace ID                       |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                       |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                  |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code               |                             | Indifferent                  |
|            | Organization Identifier            |                             | Indifferent                  |

PID : Patient Identification =

| Location   | Data Element                                       | Data                   | Categorization               |
|------------|--|------------------------|------------------------------|
| PID-1      | Set ID - PID                                       | 1                      | Value-Profile Fixed          |
| PID-3      | Patient Identifier List                            |                        |                              |
| PID-3.1    | ID Number  | 8891                   | Presence-Content Indifferent |
| PID-3.4    | Assigning Authority                                |                        |                              |
| PID-3.4.1  | Namespace ID                                       | NIST-MPI-1             | Presence-Content Indifferent |
| PID-3.4.2  | Universal ID                                       |                        | Indifferent                  |
| PID-3.4.3  | Universal ID Type                                  |                        | Indifferent                  |
| PID-3.5    | Identifier Type Code                               | MR                     | Value-Test Case Fixed        |
| PID-5      | Patient Name                                       |                        | , unu 1937 cust 1 med        |
| PID-5.1    | Family Name  |                        |                              |
| PID-5.1.1  | Surname  | Banks                  | Presence-Content Indifferent |
| PID-5.2    | Given Name   | Tyler                  | Presence-Content Indifferent |
| PID-5.3    | Second and Further Given Names or Initials Thereof | Owen                   | Presence-Content Indifferent |
| PID-5.7    | Name Type Code                                     | L                      | Value-Test Case Fixed        |
| PID-6      | Mother's Maiden Name                               |                        | . IIII 100 Cust I mou        |
| PID-6.1    | Family Name  |                        |                              |
| PID-6.1.1  | Surname  |                        | Indifferent                  |
| PID-6.7    | Name Type Code                                     |                        | Indifferent                  |
| PID-7      | Date/Time of Birth                                 |                        |                              |
| PID-7.1    | Time   | 20140602               | Presence-Content Indifferent |
| PID-8      | Administrative Sex                                 | M                      | Value-Test Case Fixed        |
| PID-10     | Race   | IVI                    | value-Test Case Fixed        |
| PID-10.1   | Identifier   | 2106-3                 | Value-Test Case Fixed        |
| PID-10.2   | Text   | White                  | Presence-Test Case Proper    |
| PID-10.2   |  | CDCREC                 | Value-Profile Fixed          |
|            | Name of Coding System  Patient Address             | CDCKEC                 | value-Florile Fixed          |
| PID-11     |  |                        |                              |
| PID-11.1   | Street Address                                     | 0245                   | Danasa Cantant I. d'Cant     |
| PID-11.1.1 | Street or Mailing Address                          | 924 Sycamore Lane      | Presence-Content Indifferent |
| PID-11.2   | Other Designation                                  | D.                     | Indifferent                  |
| PID-11.3   | City   | Bozeman                | Presence-Content Indifferent |
| PID-11.4   | State or Province                                  | MT                     | Presence-Content Indifferent |
| PID-11.5   | Zip or Postal Code                                 | 59715                  | Presence-Content Indifferent |
| PID-11.6   | Country  | USA                    | Presence-Content Indifferent |
| PID-11.7   | Address Type                                       | P                      | Value-Test Case Fixed List   |
| PID-13     | Phone Number - Home                                | 1                      |                              |
| PID-13.2   | Telecommunication Use Code                         | PRN                    | Value-Test Case Fixed        |
| PID-13.3   | Telecommunication Equipment Type                   | РН                     | Value-Test Case Fixed        |
| PID-13.4   | Email Address                                      |                        | Indifferent                  |
| PID-13.6   | Area/City Code                                     | 406                    | Presence-Content Indifferent |
| PID-13.7   | Local Number                                       | 5555835                | Presence-Content Indifferent |
| PID-22     | Ethnic Group                                       |                        |                              |
| PID-22.1   | Identifier   | 2186-5                 | Value-Test Case Fixed        |
| PID-22.2   | Text   | Not Hispanic or Latino | Presence-Test Case Proper    |
| PID-22.3   | Name of Coding System                              | CDCREC                 | Value-Profile Fixed          |
| PID-24     | Multiple Birth Indicator                           | Y                      | Value-Test Case Fixed        |
| PID-25     | Birth Order  | 2                      | Value-Test Case Fixed        |
| PID-29     | Patient Death Date and Time                        |                        |                              |
| PID-29.1   | Time   |                        | NonPresence                  |
| PID-30     | Patient Death Indicator                            | N                      | Value-Test Case Fixed        |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                          | Categorization               |
|----------|--|-------------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                               |                              |
| PD1-11.1 | Identifier                                     | 08                            | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - to provider | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                       | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                             | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150624                      | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                             | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20040602                      | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150624                      | Presence-Content Indifferent |

## NK1 : Next of Kin / Associated Parties

| TIKI : Next of Kill / Associated Parties |   |                   |                              |
|--|---|-------------------|------------------------------|
| Location                                 | Data Element  | Data              | Categorization               |
| NK1-1                                    | Set ID - NK1  | 1                 | Value-Profile Fixed          |
| NK1-2                                    | Name  |                   |                              |
| NK1-2.1                                  | Family Name   |                   |                              |
| NK1-2.1.1                                | Surname   | Banks             | Presence-Content Indifferent |
| NK1-2.2                                  | Given Name  | Karl              | Presence-Content Indifferent |
| NK1-2.3                                  | Second and Further Given<br>Names or Initials Thereof | Leonard           | Presence-Content Indifferent |
| NK1-2.7                                  | Name Type Code  | L                 | Value-Test Case Fixed        |
| NK1-3                                    | Relationship  |                   |                              |
| NK1-3.1                                  | Identifier  | FTH               | Value-Test Case Fixed        |
| NK1-3.2                                  | Text  | Father            | Presence-Test Case Proper    |
| NK1-3.3                                  | Name of Coding System                                 | HL70063           | Value-Profile Fixed          |
| NK1-4                                    | Address   |                   |                              |
| NK1-4.1                                  | Street Address  |                   |                              |
| NK1-4.1.1                                | Street or Mailing Address                             | 924 Sycamore Lane | Presence-Content Indifferent |
| NK1-4.2                                  | Other Designation                                     |                   | Indifferent                  |
| NK1-4.3                                  | City  | Bozeman           | Presence-Content Indifferent |
| NK1-4.4                                  | State or Province                                     | MT                | Presence-Content Indifferent |
| NK1-4.5                                  | Zip or Postal Code                                    | 59715             | Presence-Content Indifferent |
| NK1-4.6                                  | Country   | USA               | Presence-Content Indifferent |
| NK1-4.7                                  | Address Type  | P                 | Value-Test Case Fixed List   |
| NK1-5                                    | Phone Number  |                   |                              |
| NK1-5.2                                  | Telecommunication Use Code                            | PRN               | Value-Test Case Fixed        |
| NK1-5.3                                  | Telecommunication Equipment Type                      | РН                | Value-Test Case Fixed        |
| NK1-5.4                                  | Email Address   |                   | Indifferent                  |
| NK1-5.6                                  | Area/City Code  | 406               | Presence-Content Indifferent |
| NK1-5.7                                  | Local Number  | 5555835           | Presence-Content Indifferent |

## ORC: Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 5027            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 12128           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     | 1                   |                              |
| RXA-3.1    | Time  | 20150624            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4095-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | VAQTA               | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Value-Test Case Fixed        |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 208490              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20160120            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | U                   | Value-Test Case Fixed        |

RXR : Pharmacy/Treatment Route =

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | RT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Right Thigh   | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

## OBX[\*] —

## OBX : Observation/Result -

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150624               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

## OBX : Observation/Result =

| Location | Data Element                 | Data                                | Categorization               |
|----------|------------------------------|-------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                     |                              |
| OBX-3.1  | Identifier                   | 64994-7                             | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                     |                              |
| OBX-5.1  | Identifier                   | V01                                 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Not VFC Eligible                    | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                             | Value-Profile Fixed          |
| OBX-6    | Units                        |                                     |                              |
| OBX-6.1  | Identifier                   |                                     | NonPresence                  |
| OBX-6.2  | Text                         |                                     | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                     |                              |
| OBX-14.1 | Time                         | 20150624                            | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                     |                              |
| OBX-17.1 | Identifier                   | VXC40                               | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                    | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                           | Value-Profile Fixed          |

## OBX : Observation/Result =

| OBA: Observation/Result |                              |                          |                              |  |
|-------------------------|------------------------------|--------------------------|------------------------------|--|
| Location                | Data Element                 | Data                     | Categorization               |  |
| OBX-1                   | Set ID - OBX                 | 3                        | Value-Profile Fixed          |  |
| OBX-2                   | Value Type                   | CE                       | Value-Test Case Fixed        |  |
| OBX-3                   | Observation Identifier       |                          |                              |  |
| OBX-3.1                 | Identifier                   | 69764-9                  | Value-Test Case Fixed        |  |
| OBX-3.2                 | Text                         | Document Type            | Presence-Test Case Proper    |  |
| OBX-3.3                 | Name of Coding System        | LN                       | Value-Profile Fixed          |  |
| OBX-4                   | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |  |
| OBX-5                   | Observation Value            |                          |                              |  |
| OBX-5.1                 | Identifier                   | 253088698300004211160720 | Value-Test Case Fixed        |  |
| OBX-5.2                 | Text                         | Hepatitis A VIS          | Presence-Test Case Proper    |  |
| OBX-5.3                 | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |  |
| OBX-6                   | Units                        |                          |                              |  |
| OBX-6.1                 | Identifier                   |                          | NonPresence                  |  |
| OBX-6.2                 | Text                         |                          | NonPresence                  |  |
| OBX-6.3                 | Name of Coding System        |                          | NonPresence                  |  |
| OBX-11                  | Observation Result Status    | F                        | Value-Profile Fixed          |  |
| OBX-14                  | Date/Time of the Observation |                          |                              |  |
| OBX-14.1                | Time                         | 20150624                 | Presence-Content Indifferent |  |
| OBX-17                  | Observation Method           |                          |                              |  |
| OBX-17.1                | Identifier                   |                          | Indifferent                  |  |
| OBX-17.2                | Text                         |                          | Indifferent                  |  |
| OBX-17.3                | Name of Coding System        |                          | Indifferent                  |  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150624           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150624           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

| Element                  | Data                                   |
|--------------------------|--|
| Patient Name             | Tyler Owen Banks                       |
| Mother's Maiden Name     |  |
| ID Number                | 8891                                   |
| Date/Time of Birth       | 06/02/2014                             |
| Administrative Sex       | Male                                   |
| Patient Address          | 924 Sycamore Lane Bozeman MT 59715 USA |
| Local Number             | (406)555-5835                          |
| Race                     | White                                  |
| Ethnic Group             | Not Hispanic or Latino                 |
| Multiple Birth Indicator | Yes                                    |
| Birth Order              | 2                                      |

| Immunization Registry Information           |                               |  |
|---|-------------------------------|--|
| Element                                     | Data                          |  |
| Immunization Registry Status                | Active                        |  |
| Immunization Registry Status Effective Date | 06/02/2004                    |  |
| Publicity Code                              | Reminder/recall - to provider |  |
| Publicity Code Effective Date               | 06/24/2015                    |  |
| Protection Indicator                        | No                            |  |
| Protection Indicator Effective Date         | 06/24/2015                    |  |

-Guardian or Responsible Party —

| Element      | Data                                   |
|--------------|--|
| Name         | Karl Leonard Banks                     |
| Relationship | Father                                 |
| Address      | 924 Sycamore Lane Bozeman MT 59715 USA |
| Phone Number | (406)555-5835                          |

-Vaccine Administration Information -

| Element                            | Data                |  |
|------------------------------------|---------------------|--|
| Administered Vaccine               | VAQTA               |  |
| Date/Time Start of Administration  | 06/24/2015          |  |
| Administered Amount                | 0.5                 |  |
| Administered Units                 | mL                  |  |
| Administration Notes               | New Record          |  |
| Administering Provider             | Lily Jackson        |  |
| Substance Lot Number               | 208490              |  |
| Substance Expiration Date          | 01/20/2016          |  |
| Substance Manufacturer Name        | Merck and Co., Inc. |  |
| Substance/Treatment Refusal Reason |                     |  |
| Completion Status                  | Complete            |  |
| Action Code                        | Update              |  |
| Route                              | Intramuscular       |  |
| Administration Site                | Right Thigh         |  |
| Entering Organization              | NISTEHRFacility     |  |
| Entered By                         | Lily Jackson        |  |
| Ordered By                         | Wilma Thomas        |  |

| Element                             | Data             |
|-------------------------------------|------------------|
| Vaccine Funding Source              | Private          |
| Vaccine Funding Program Eligibility | Not VFC Eligible |
| Document Type                       | Hepatitis A VIS  |
| Date Vis Presented                  | 06/24/2015       |

## 1.6.2. IZ-AD-6.2 Receive ACK Z23

Test Step Type: TA\_RESPONDER

ests the ability to consume a valid ACK message

## **Test Story**

### Description

The IIS returns a positive acknowledgement message indicating that no errors were found during the course of filing the message.

#### **Comments**

No Comments

## **Pre Condition**

A VXU message is generated by the EHR.

#### **Post Condition**

No PostCondition

## **Test Objectives**

## **Evaluation Criteria**

The acknowledgement message is consumed by the system responsible for the content of the administration message without error.

## **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

## **Message Contents**

MSH : Message Header

| Location   | <b>Data Element</b>                | Data                               | Categorization |
|------------|------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                    |                |
| MSH-2      | Encoding Characters                | ^~\&                               |                |
| MSH-3      | Sending Application                |                                    |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                       |                                    |                |
| MSH-3.3    | Universal ID Type                  |                                    |                |
| MSH-4      | Sending Facility                   |                                    |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                       |                                    |                |
| MSH-4.3    | Universal ID Type                  |                                    |                |
| MSH-5      | Receiving Application              |                                    |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                       |                                    |                |
| MSH-5.3    | Universal ID Type                  |                                    |                |
| MSH-6      | Receiving Facility                 |                                    |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                       |                                    |                |
| MSH-6.3    | Universal ID Type                  |                                    |                |
| MSH-7      | Date/Time Of Message               |                                    |                |
| MSH-7.1    | Time                               | 20150624093847.822-0500            |                |
| MSH-9      | Message Type                       |                                    |                |
| MSH-9.1    | Message Code                       | ACK                                |                |
| MSH-9.2    | Trigger Event                      | V04                                |                |
| MSH-9.3    | Message Structure                  | ACK                                |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>6.2 Receive ACK Z23 |                |
| MSH-11     | Processing ID                      | O.2_Receive_Reix_225               |                |
| MSH-11.1   | Processing ID                      | P                                  |                |
| MSH-12     | Version ID                         |                                    |                |
| MSH-12.1   | Version ID                         | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type         | NE                                 |                |
| MSH-16     | Application Acknowledgment Type    | NE                                 |                |
| MSH-21     | Message Profile Identifier         |                                    |                |
| MSH-21.1   | Entity Identifier                  | Z23                                |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                       | CDCFTIII ( V S                     |                |
| MSH-21.4   | Universal ID Type                  |                                    |                |
| MSH-22     | Sending Responsible Organization   |                                    |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                |                                    |                |
| MSH-22.6.1 | Namespace ID                       |                                    |                |
| MSH-22.6.2 | Universal ID                       |                                    |                |
| MSH-22.6.3 | Universal ID Type                  |                                    |                |
| MSH-22.7   | Identifier Type Code               |                                    |                |
| MSH-22.10  | Organization Identifier            |                                    |                |
| MSH-23     | Receiving Responsible Organization |                                    |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                |                                    |                |
| MSH-23.6.1 | Namespace ID                       |                                    |                |
| MSH-23.6.2 | Universal ID                       |                                    |                |
| MSH-23.6.3 | Universal ID Type                  |                                    |                |
|            | Identifier Type Code               |                                    |                |
| MSH-23.7   |                                    |                                    |                |
| MSH-23.10  | Organization Identifier            |                                    |                |

MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-6.1_Send_V04_Z22 |                |

# **Test Data Specification**

## -Patient Information -

| Element   | Data |
|---|------|
| This information will be automatically supplied by the System |      |
|   |      |

# 1.7. IZ-AD-7\_Historical\_IIS-Error

Historical administration resulting in fatal error

## **Test Story**

## Description

A patient is seen at a clinic. A historical vaccination is recorded but the IIS is unable to process the administration message, rejects it and returns a fatal error in the acknowledgement message.

#### **Comments**

The test case simulates the IIS issuing an acknowledgement error due to an internal error even though the message is valid.

## Pre Condition

No PreCondition

### **Post Condition**

The returned error must be visible in the EHR.

## **Test Objectives**

This test case assesses the ability of the EHR to accept an acknowledgement message with a fatal error being returned by the IIS.

## **Evaluation Criteria**

Administered Message: Validation Report with no Errors

Acknowledgement Message: An indication of a error (See Juror Document)

## **Notes for Testers**

No Note

# 1.7.1. IZ-AD-7.1\_Send\_V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

## **Test Story**

## **Description**

A 66 year old female, Helen Barrett, comes to a clinic for a physical. A clinic staff member collects basic patient demographic information including name, date of birth and sex. She indicates that reminders and recalls may be sent by any method. The patient reports that she received a Zoster vaccination at a local pharmacy on her 65th birthday. The clinic staff determine that no further vaccinations are required. A clinician, Lily Jackson (ID 7824) enters the historical data into the EHR and transmits it to the IIS.

#### **Comments**

No Comments

#### Pre Condition

No PreCondition

#### Post Condition

No PostCondition

## **Test Objectives**

Support for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) to include:

- 1. Identifier
- 2. Identifier Type Code
- 3. Assigning Authority for the Identifier

Support for both phone number and e-mail.

## **Evaluation Criteria**

Message Validation Report.

## **Notes for Testers**

## **Message Contents**

-MSH : Message Header -

| Location   | <b>Data Element</b>                   | Data                        | Categorization               |  |
|------------|---------------------------------------|-----------------------------|------------------------------|--|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |  |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |  |
| MSH-3      | Sending Application                   |                             |                              |  |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |  |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-4      | Sending Facility                      |                             |                              |  |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |  |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-5      | Receiving Application                 |                             |                              |  |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Presence-Configuration       |  |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-6      | Receiving Facility                    |                             |                              |  |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |  |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-7      | Date/Time Of Message                  |                             |                              |  |
| MSH-7.1    | Time                                  | 20150625121047.839-0500     | Presence-System Generated    |  |
| MSH-9      | Message Type                          |                             |                              |  |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |  |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |  |
| MSH-9.3    | Message Structure                     | VXU_V04                     | Value-Profile Fixed          |  |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-7.1 Send V04 Z22 | Presence-System Generated    |  |
| MSH-11     | Processing ID                         |                             |                              |  |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |  |
| MSH-12     | Version ID                            |                             |                              |  |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |  |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |  |
| MSH-16     | Application Acknowledgment Type       | AL                          | Value-Profile Fixed          |  |
| MSH-21     | Message Profile Identifier            |                             |                              |  |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |  |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |  |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-22     | Sending Responsible Organization      |                             |                              |  |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Presence-Configuration       |  |
| MSH-22.6   | Assigning Authority                   |                             |                              |  |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-IZ-1                | Presence-Configuration       |  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |  |
| MSH-22.7   | Identifier Type Code                  | XX                          | Value-Test Case Fixed        |  |
| MSH-22.10  | Organization Identifier               | 100-6482                    | Presence-Configuration       |  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |  |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Presence-Configuration       |  |
| MSH-23.6   | Assigning Authority                   |                             |                              |  |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-IZ-1                | Presence-Configuration       |  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |  |
|            |                                       | vv                          | Value-Test Case Fixed        |  |
| MSH-23.7   | Identifier Type Code                  | XX                          | value-rest Case rixen        |  |

PID : Patient Identification =

| Location    | Data Element  | Data                     | Categorization               |  |
|-------------|---|--------------------------|------------------------------|--|
|             |   |                          |                              |  |
| PID-1       | Set ID - PID  | 1                        | Value-Profile Fixed          |  |
| PID-3       | Patient Identifier List                               |                          | D C : 17 1100                |  |
| PID-3.1     | ID Number   | 7120                     | Presence-Content Indifferent |  |
| PID-3.4     | Assigning Authority                                   |                          |                              |  |
| PID-3.4.1   | Namespace ID  | NIST-MPI-1               | Presence-Content Indifferent |  |
| PID-3.4.2   | Universal ID  |                          | Indifferent                  |  |
| PID-3.4.3   | Universal ID Type                                     |                          | Indifferent                  |  |
| PID-3.5     | Identifier Type Code                                  | MR                       | Value-Test Case Fixed        |  |
| PID-5       | Patient Name  |                          |                              |  |
| PID-5.1     | Family Name   |                          |                              |  |
| PID-5.1.1   | Surname   | Barrett                  | Presence-Content Indifferent |  |
| PID-5.2     | Given Name  | Helen                    | Presence-Content Indifferent |  |
| PID-5.3     | Second and Further Given<br>Names or Initials Thereof |                          | Indifferent                  |  |
| PID-5.7     | Name Type Code  | L                        | Value-Test Case Fixed        |  |
| PID-6       | Mother's Maiden Name                                  |                          |                              |  |
| PID-6.1     | Family Name   |                          |                              |  |
| PID-6.1.1   | Surname   |                          | Indifferent                  |  |
| PID-6.7     | Name Type Code  |                          | Indifferent                  |  |
| PID-7       | Date/Time of Birth                                    |                          |                              |  |
| PID-7.1     | Time  | 19500317                 | Presence-Content Indifferent |  |
| PID-8       | Administrative Sex                                    | F                        | Value-Test Case Fixed        |  |
|             |   | <b>F</b>                 | Value-Test Case Fixed        |  |
| PID-10      | Race  | lator a                  |                              |  |
| PID-10.1    | Identifier  | 2106-3                   | Value-Test Case Fixed        |  |
| PID-10.2    | Text  | White                    | Presence-Test Case Proper    |  |
| PID-10.3    | Name of Coding System                                 | CDCREC                   | Value-Profile Fixed          |  |
| PID-11      | Patient Address                                       |                          |                              |  |
| PID-11.1    | Street Address  |                          |                              |  |
| PID-11.1.1  | Street or Mailing Address                             | 763 Main St              | Presence-Content Indifferent |  |
| PID-11.2    | Other Designation                                     |                          | Indifferent                  |  |
| PID-11.3    | City  | Bozeman                  | Presence-Content Indifferent |  |
| PID-11.4    | State or Province                                     | MT                       | Presence-Content Indifferent |  |
| PID-11.5    | Zip or Postal Code                                    | 59715                    | Presence-Content Indifferent |  |
| PID-11.6    | Country   | USA                      | Presence-Content Indifferent |  |
| PID-11.7    | Address Type  | P                        | Value-Test Case Fixed List   |  |
| PID-13[1]   | Phone Number - Home                                   |                          |                              |  |
| PID-13[1].2 | Telecommunication Use Code                            | PRN                      | Value-Test Case Fixed        |  |
| PID-13[1].3 | Telecommunication Equipment Type                      | РН                       | Value-Test Case Fixed        |  |
| PID-13[1].4 | Email Address   |                          | NonPresence                  |  |
| PID-13[1].6 | Area/City Code  | 406                      | Presence-Content Indifferent |  |
| PID-13[1].7 | Local Number  | 5554064                  | Presence-Content Indifferent |  |
| PID-13[2]   | Phone Number - Home                                   |                          |                              |  |
| PID-13[2].2 | Telecommunication Use Code                            | NET                      | Value-Test Case Fixed        |  |
| PID-13[2].3 | Telecommunication Equipment Type                      |                          | Indifferent                  |  |
| PID-13[2].4 | Email Address   | Helen.Barrett@isp.com    | Presence-Content Indifferent |  |
|             | Area/City Code  | Troisin.Darrettagisp.com | NonPresence                  |  |
| PID-13[2].6 | Local Number  |                          | NonPresence                  |  |
| PID-13[2].7 |   |                          | Nonriesence                  |  |
| PID-22      | Ethnic Group  | 2106.5                   | 17.1 m : 0 =: 1              |  |
| PID-22.1    | Identifier  | 2186-5                   | Value-Test Case Fixed        |  |
| PID-22.2    | Text  | Not Hispanic or Latino   | Presence-Test Case Proper    |  |
| PID-22.3    | Name of Coding System                                 | CDCREC                   | Value-Profile Fixed          |  |
| PID-24      | Multiple Birth Indicator                              | N                        | Value-Test Case Fixed        |  |
| PID-25      | Birth Order   | 1                        | Indifferent                  |  |

| PID-29   | Patient Death Date and Time |   |                       |
|----------|-----------------------------|---|-----------------------|
| PID-29.1 | Time                        |   | NonPresence           |
| PID-30   | Patient Death Indicator     | N | Value-Test Case Fixed |

## PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                         | Categorization               |
|----------|--|------------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                              |                              |
| PD1-11.1 | Identifier                                     | 02                           | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - any method | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                      | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | Y                            | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150625                     | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                            | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 19500317                     | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150625                     | Presence-Content Indifferent |

## ORC : Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 53100           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | <b>Data Element</b>                   | Data                      | Categorization               |
|------------|---------------------------------------|---------------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                   | 0                         | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter         | 1                         | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration     | 1                         |                              |
| RXA-3.1    | Time                                  | 20150317                  | Presence-Content Indifferent |
| RXA-5      | Administered Code                     |                           |                              |
| RXA-5.1    | Identifier                            | 121                       | Value-Test Case Fixed        |
| RXA-5.2    | Text                                  | zoster                    | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                 | CVX                       | Value-Profile Fixed          |
| RXA-6      | Administered Amount                   | 999                       | Value-Test Case Fixed        |
| RXA-7      | Administered Units                    |                           |                              |
| RXA-7.1    | Identifier                            |                           | NonPresence                  |
| RXA-7.2    | Text                                  |                           | NonPresence                  |
| RXA-7.3    | Name of Coding System                 |                           | NonPresence                  |
| RXA-9      | Administration Notes                  |                           | T (OIII 1 S S OII S )        |
| RXA-9.1    | Identifier                            | 01                        | Value-Test Case Fixed        |
| RXA-9.2    | Text                                  | Historical Administration | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                 | NIP001                    | Value-Profile Fixed          |
| RXA-10     | Administering Provider                |                           | y didd 1101110 1 11100       |
| RXA-10.1   | ID Number                             |                           | Indifferent                  |
| RXA-10.2   | Family Name                           |                           |                              |
| RXA-10.2.1 | Surname                               |                           | Indifferent                  |
| RXA-10.3   | Given Name                            |                           | Indifferent                  |
|            | Second and Further Given              |                           |                              |
| RXA-10.4   | Names or Initials Thereof             |                           | Indifferent                  |
| RXA-10.9   | Assigning Authority                   |                           |                              |
| RXA-10.9.1 | Namespace ID                          | Indifferent               |                              |
| RXA-10.9.2 | Universal ID                          |                           | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                     |                           | Indifferent                  |
| RXA-10.10  | Name Type Code                        |                           | Indifferent                  |
| RXA-10.13  | Identifier Type Code                  |                           | Indifferent                  |
| RXA-11     | Administered-at Location              |                           |                              |
| RXA-11.4   | Facility                              |                           |                              |
| RXA-11.4.1 | Namespace ID                          |                           | Indifferent                  |
| RXA-11.4.2 | Universal ID                          |                           | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                     |                           | Indifferent                  |
| RXA-15     | Substance Lot Number                  |                           | Indifferent                  |
| RXA-16     | Substance Expiration Date             |                           |                              |
| RXA-16.1   | Time                                  |                           | Indifferent                  |
| RXA-17     | Substance Manufacturer Name           |                           |                              |
| RXA-17.1   | Identifier                            |                           | Indifferent                  |
| RXA-17.2   | Text                                  |                           | Indifferent                  |
| RXA-17.3   | Name of Coding System                 |                           | Indifferent                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason |                           |                              |
| RXA-18.1   | Identifier                            |                           | NonPresence                  |
| RXA-18.2   | Text                                  |                           | NonPresence                  |
| RXA-18.3   | Name of Coding System                 |                           | NonPresence                  |
| RXA-20     | Completion Status                     | СР                        | Value-Test Case Fixed        |
| 1021/1-20  | Completion Status                     | CI                        | varue-Test Case Fixeu        |

| n | 4 • |    | 4  | •  | c   |    | 4 •  |    |   |
|---|-----|----|----|----|-----|----|------|----|---|
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| Element                    | Data                             |
|----------------------------|----------------------------------|
| Patient Name Helen Barrett |                                  |
| Mother's Maiden Name       |                                  |
| ID Number                  | 7120                             |
| Date/Time of Birth         | 03/17/1950                       |
| Administrative Sex         | Female                           |
| Patient Address            | 763 Main St Bozeman MT 59715 USA |
| Local Number (406)555-4064 |                                  |
| Email                      | Helen.Barrett@isp.com            |
| Race                       | White                            |
| Ethnic Group               | Not Hispanic or Latino           |
| Multiple Birth Indicator   | No                               |
| Birth Order                | 1                                |

# -Immunization Registry Information -

| Element                                     | Data                         |
|---|------------------------------|
| Immunization Registry Status                | Active                       |
| Immunization Registry Status Effective Date | 03/17/1950                   |
| Publicity Code                              | Reminder/recall - any method |
| Publicity Code Effective Date               | 06/25/2015                   |
| Protection Indicator                        | Yes                          |
| Protection Indicator Effective Date         | 06/25/2015                   |

## -Vaccine Administration Information -

| Element                            | Data                      |
|------------------------------------|---------------------------|
| Administered Vaccine               | zoster                    |
| Date/Time Start of Administration  | 03/17/2015                |
| Administered Amount                | 999                       |
| Administered Units                 |                           |
| Administration Notes               | Historical Administration |
| Administering Provider             |                           |
| Substance Lot Number               |                           |
| Substance Expiration Date          |                           |
| Substance Manufacturer Name        |                           |
| Substance/Treatment Refusal Reason |                           |
| Completion Status                  | Complete                  |
| Action Code                        | Add                       |
| Route                              |                           |
| Administration Site                |                           |
| Entering Organization              | NISTEHRFacility           |
| Entered By                         | Lily Jackson              |
| Ordered By                         |                           |

# 1.7.2. IZ-AD-7.2\_Receive\_ACK\_Z23

Test Step Type: TA\_RESPONDER

Tests the ability to consume an ACK message containing a fatal error

## **Test Story**

## **Description**

The IIS has a mapping error in their CVX table and is unable to recognize the CVX code sent in RXA-5 even though it is valid. The IIS is unable to identify the appropriate vaccine, which is a required element, and rejects the message. The acknowledgement message returned contains an error for the table mapping.

#### **Comments**

No Comments

#### Pre Condition

A VXU message is generated by the EHR.

#### **Post Condition**

No PostCondition

## **Test Objectives**

Support for accepting an acknowledgement message with a fatal error being returned by the IIS and to display some notification to an end user.

#### **Evaluation Criteria**

The error returned in the acknowledgement message is visible in the system responsible for the content of the administration message.

### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

## **Message Contents**

MSH : Message Header

| Location         | Data Element                          | Data                               | Categorization |  |
|------------------|---------------------------------------|------------------------------------|----------------|--|
| MSH-1            | Field Separator                       |                                    |                |  |
| MSH-2            | Encoding Characters                   | ^~\&                               |                |  |
| MSH-3            | Sending Application                   |                                    |                |  |
| MSH-3.1          | Namespace ID                          | NISTIISAPP                         |                |  |
| MSH-3.2          | Universal ID                          |                                    |                |  |
| MSH-3.3          | Universal ID Type                     |                                    |                |  |
| MSH-4            | Sending Facility                      |                                    |                |  |
| MSH-4.1          | Namespace ID                          | NISTIISFAC                         |                |  |
| MSH-4.2          | Universal ID                          |                                    |                |  |
| MSH-4.3          | Universal ID Type                     |                                    |                |  |
| MSH-5            | Receiving Application                 |                                    |                |  |
| MSH-5.1          | Namespace ID                          | NISTEHRAPP                         |                |  |
| MSH-5.2          | Universal ID                          | THO I BITTUIT                      |                |  |
| MSH-5.3          | Universal ID Type                     |                                    |                |  |
| MSH-6            | Receiving Facility                    |                                    |                |  |
| MSH-6.1          | Namespace ID                          | NISTEHRFAC                         |                |  |
| MSH-6.2          | Universal ID                          | THO TEING AC                       |                |  |
| MSH-6.3          | Universal ID Type                     |                                    |                |  |
| MSH-7            | Date/Time Of Message                  |                                    |                |  |
| MSH-7.1          | Time                                  | 20150625121047.853-0500            |                |  |
|                  |                                       | 20130023121047.833-0300            |                |  |
| MSH-9            | Message Type                          | ACK                                |                |  |
| MSH-9.1          | Message Code                          |                                    |                |  |
| MSH-9.2          | Trigger Event                         | V04                                |                |  |
| MSH-9.3          | Message Structure                     | ACK                                |                |  |
| MSH-10           | Message Control ID                    | NIST-IZ-AD-<br>7.2_Receive_ACK_Z23 |                |  |
| MSH-11           | Processing ID                         |                                    |                |  |
| MSH-11.1         | Processing ID                         | P                                  |                |  |
| MSH-12           | Version ID                            |                                    |                |  |
| MSH-12.1         | Version ID                            | 2.5.1                              |                |  |
| MSH-15           | Accept Acknowledgment Type            | NE                                 |                |  |
| MSH-16           | Application Acknowledgment Type       | NE                                 |                |  |
| MSH-21           | Message Profile Identifier            |                                    |                |  |
| MSH-21.1         | Entity Identifier                     | Z23                                |                |  |
| MSH-21.2         | Namespace ID                          | CDCPHINVS                          |                |  |
| MSH-21.3         | Universal ID                          |                                    |                |  |
| MSH-21.4         | Universal ID Type                     |                                    |                |  |
| MSH-22           | Sending Responsible Organization      |                                    |                |  |
| MSH-22.1         | Organization Name                     | NISTIISFAC                         |                |  |
| MSH-22.6         | Assigning Authority                   |                                    |                |  |
| MSH-22.6.1       | Namespace ID                          | NIST-AA-IZ-1                       |                |  |
| MSH-22.6.2       | Universal ID                          |                                    |                |  |
| MSH-22.6.3       | Universal ID Type                     |                                    |                |  |
| MSH-22.7         | Identifier Type Code                  | XX                                 |                |  |
| MSH-22.10        | Organization Identifier               | 100-3322                           |                |  |
| MSH-23           | Receiving Responsible<br>Organization |                                    |                |  |
| MSH-23.1         | Organization Name                     | NISTEHRFAC                         |                |  |
| MSH-23.6         | Assigning Authority                   |                                    |                |  |
| MSH-23.6.1       | Namespace ID                          | NIST-AA-IZ-1                       |                |  |
| MSH-23.6.2       | Universal ID                          | 1                                  |                |  |
| MSH-23.6.3       | Universal ID Type                     |                                    |                |  |
| MSH-23.7         | Identifier Type Code                  | XX                                 |                |  |
| MSH-23.10        | Organization Identifier               | 100-6482                           |                |  |
| <u>мыл-25.10</u> | Organization Identifier               | 100-0402                           |                |  |

## MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AE                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-7.1_Send_V04_Z22 |                |

|       | $\mathbf{n}$ |   |    |     |
|-------|--------------|---|----|-----|
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| Location | Data Element           | Data  | Categorization |
|----------|------------------------|---|----------------|
| ERR-2    | Error Location         |   |                |
| ERR-2.1  | Segment ID             | RXA   |                |
| ERR-2.2  | Segment Sequence       | 1   |                |
| ERR-2.3  | Field Position         | 5   |                |
| ERR-2.4  | Field Repetition       | 1   |                |
| ERR-2.5  | Component Number       | 1   |                |
| ERR-2.6  | Sub-Component Number   |   |                |
| ERR-3    | HL7 Error Code         |   |                |
| ERR-3.1  | Identifier             | 999   |                |
| ERR-3.2  | Text                   | Application error                                 |                |
| ERR-3.3  | Name of Coding System  | HL70357   |                |
| ERR-4    | Severity               | E   |                |
| ERR-5    | Application Error Code |   |                |
| ERR-5.1  | Identifier             | 5   |                |
| ERR-5.2  | Text                   | Table value not found                             |                |
| ERR-5.3  | Name of Coding System  | HL70533   |                |
| ERR-8    | User Message           | Vaccine code not recognized -<br>message rejected |                |

# **Test Data Specification**

## -Patient Information

| Element   | Data |  |
|---|------|--|
| This information will be automatically supplied by the System |      |  |

## 1.8. IZ-AD-8\_Admin\_IIS-Warning

New administration resulting in soft error

## **Test Story**

## Description

A patient is seen at a clinic. A new administration is recorded. The IIS is able to process the administration message but finds a soft error (warning) which it returns in the acknowledgement message.

#### **Comments**

The test case simulates the IIS issuing an acknowledgement warning due to an internal warning even though the message is valid.

## Pre Condition

No PreCondition

## **Post Condition**

The returned warning must be visible in the EHR-S.

## **Test Objectives**

The test case targets the EHR-S capability of supporting OIDs (e.g., in MSH-3 and for assigning authorities) for administered message and assesses the ability of the EHR-S to accept an acknowledgement message with a soft error (warning) being returned by the IIS.

#### **Evaluation Criteria**

Administered Message: Validation Report with no Errors

Acknowledgement Message: An indication of a warning (See Juror Document)

## **Notes for Testers**

No Note

## 1.8.1. IZ-AD-8.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

## **Test Story**

### **Description**

A 1 month old female, Ashley Jennifer Broadway, is brought to a clinic for a well child visit by her mother Ellen Broadway (nee Layton). A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that the child requires a Hep B vaccination. The child is covered by insurance and does not qualify for all Vaccine For Children (VFC) supplied vaccines. The mother is given the Vaccine Information Sheet (VIS) to review. After reading it, she agrees that the child should receive the Hep B vaccine. She also agrees that the data should be shared once it is incorporated into the local IIS. She indicates that reminders and recalls should not be made via a phone call. An appropriate dose of Hep B (ENGERIX-B) is selected from the clinic's stock of privately funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the doses to the patient and enters the data into the EHR and transmits it to the IIS.

#### Comments

No Comments

#### **Pre Condition**

No PreCondition

## **Post Condition**

No PostCondition

## **Test Objectives**

Support of OIDs.

### **Evaluation Criteria**

Message Validation Report.

## **Notes for Testers**

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

# **Message Contents**

MSH : Message Header

| Location    | Data Element                          | Data                          | Categorization               |
|-------------|---------------------------------------|-------------------------------|------------------------------|
| MSH-1       | Field Separator                       | i e                           | Value-Profile Fixed          |
| MSH-2       | Encoding Characters                   | ^~\&                          | Value-Profile Fixed          |
| MSH-3       | Sending Application                   |                               |                              |
| MSH-3.1     | Namespace ID                          | NISTEHRAPP                    | Presence-Configuration       |
| MSH-3.2     | Universal ID                          | 2.16.840.1.113883.3.72.5.40.1 | Presence-Test Case Proper    |
| MSH-3.3     | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-4       | Sending Facility                      |                               |                              |
| MSH-4.1     | Namespace ID                          | NISTEHRFAC                    | Presence-Configuration       |
| MSH-4.2     | Universal ID                          | 2.16.840.1.113883.3.72.5.40.2 | Presence-Test Case Proper    |
| MSH-4.3     | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-5       | Receiving Application                 |                               |                              |
| MSH-5.1     | Namespace ID                          | NISTIISAPP                    | Presence-Configuration       |
| MSH-5.2     | Universal ID                          | 2.16.840.1.113883.3.72.5.40.3 | Presence-Test Case Proper    |
| MSH-5.3     | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-6       | Receiving Facility                    |                               |                              |
| MSH-6.1     | Namespace ID                          | NISTIISFAC                    | Presence-Configuration       |
| MSH-6.2     | Universal ID                          | 2.16.840.1.113883.3.72.5.40.4 | Presence-Test Case Proper    |
| MSH-6.3     | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-7       | Date/Time Of Message                  |                               | I TOMO I MOU                 |
| MSH-7.1     | Time                                  | 20150625103328.757-0500       | Presence-System Generated    |
| MSH-9       | Message Type                          | 20130023103320.737 0300       | resence System Generated     |
| MSH-9.1     | Message Code                          | VXU                           | Value-Profile Fixed          |
| MSH-9.2     | Trigger Event                         | V04                           | Value-Profile Fixed          |
| MSH-9.3     | Message Structure                     | VXU V04                       | Value-Profile Fixed          |
| MSH-10      | Message Control ID                    |                               | 1                            |
| MSH-11      |                                       | NIST-IZ-AD-8.1_Send_V04_Z22   | Presence-System Generated    |
|             | Processing ID                         | P                             | Presence-Content Indifferent |
| MSH-11.1    | Processing ID                         | P                             | Presence-Content Indifferent |
| MSH-12      | Version ID                            | 0.5.1                         | V 1 D C1 E' 1                |
| MSH-12.1    | Version ID                            | 2.5.1                         | Value-Profile Fixed          |
| MSH-15      | Accept Acknowledgment Type            | ER                            | Value-Profile Fixed          |
| MSH-16      | Application Acknowledgment Type       | AL                            | Value-Profile Fixed          |
| MSH-21      | Message Profile Identifier            |                               |                              |
| MSH-21.1    | Entity Identifier                     | Z22                           | Value-Profile Fixed          |
| MSH-21.2    | Namespace ID                          | CDCPHINVS                     | Value-Profile Fixed          |
| MSH-21.3    | Universal ID                          |                               | Indifferent                  |
| MSH-21.4    | Universal ID Type                     |                               | Indifferent                  |
| MSH-22      | Sending Responsible Organization      | 1                             |                              |
| MSH-22.1    | Organization Name                     | NISTEHRFAC                    | Presence-Configuration       |
| MSH-22.6    | Assigning Authority                   |                               |                              |
| MSH-22.6.1  | Namespace ID                          | NIST-AA-IZ-1                  | Presence-Configuration       |
| MSH-22.6.2  | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9 | Presence-Test Case Proper    |
| MSH-22.6.3  | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-22.7    | Identifier Type Code                  | XX                            | Value-Test Case Fixed        |
| MSH-22.10   | Organization Identifier               | 100-6482                      | Presence-Configuration       |
| MSH-23      | Receiving Responsible<br>Organization |                               |                              |
| MSH-23.1    | Organization Name                     | NISTIISFAC                    | Presence-Configuration       |
| MSH-23.6    | Assigning Authority                   |                               |                              |
| MSH-23.6.1  | Namespace ID                          | NIST-AA-IZ-1                  | Presence-Configuration       |
| MSH-23.6.2  | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9 | Presence-Test Case Proper    |
| MSH-23.6.3  | Universal ID Type                     | ISO                           | Value-Profile Fixed          |
| MSH-23.7    | Identifier Type Code                  | XX                            | Value-Test Case Fixed        |
| 1.1U11 WU.1 | 1 Identified Type Code                |                               | , and took Cube I incu       |

PID : Patient Identification =

| Location   | Data Element                                       | Data                          | Categorization                          |
|------------|--|-------------------------------|---|
| PID-1      | Set ID - PID                                       | 1                             | Value-Profile Fixed                     |
| PID-3      | Patient Identifier List                            |                               |   |
| PID-3.1    | ID Number  | 77100                         | Presence-Content Indifferent            |
| PID-3.4    | Assigning Authority                                |                               |   |
| PID-3.4.1  | Namespace ID                                       | NIST-MPI-1                    | Presence-Content Indifferent            |
| PID-3.4.2  | Universal ID                                       | 2.16.840.1.113883.3.72.5.40.5 | Presence-Test Case Proper               |
| PID-3.4.3  | Universal ID Type                                  | ISO                           | Value-Profile Fixed                     |
| PID-3.5    | Identifier Type Code                               | MR                            | Value-Test Case Fixed                   |
| PID-5      | Patient Name                                       |                               |   |
| PID-5.1    | Family Name  |                               |   |
| PID-5.1.1  | Surname  | Broadway                      | Presence-Content Indifferent            |
| PID-5.2    | Given Name   | Ashley                        | Presence-Content Indifferent            |
| PID-5.3    | Second and Further Given Names or Initials Thereof | Jennifer                      | Presence-Content Indifferent            |
| PID-5.7    | Name Type Code                                     | L                             | Value-Test Case Fixed                   |
| PID-6      | Mother's Maiden Name                               |                               | - I I I I I I I I I I I I I I I I I I I |
| PID-6.1    | Family Name  |                               |   |
| PID-6.1.1  | Surname  | Layton                        | Presence-Content Indifferent            |
| PID-6.7    | Name Type Code                                     | M                             | Value-Profile Fixed                     |
| PID-7      | Date/Time of Birth                                 | ***                           | , and I follo I fact                    |
| PID-7.1    | Time   | 20150516                      | Presence-Content Indifferent            |
| PID-8      | Administrative Sex                                 | F                             | Value-Test Case Fixed                   |
| PID-10     | Race   | r                             | Value-Test Case Fixed                   |
| PID-10.1   | Identifier   | 2054-5                        | Value-Test Case Fixed                   |
| PID-10.1   | Text   | African American              | Presence-Test Case Proper               |
| PID-10.2   |  | 1                             | Value-Profile Fixed                     |
| PID-10.3   | Name of Coding System  Patient Address             | CDCREC                        | value-Proffie Fixed                     |
|            |  |                               |   |
| PID-11.1   | Street Address                                     | 001 N. d. 10d. Gr             | D C + 1 1'CC +                          |
| PID-11.1.1 | Street or Mailing Address                          | 901 North 12th St             | Presence-Content Indifferent            |
| PID-11.2   | Other Designation                                  | D.                            | Indifferent                             |
| PID-11.3   | City   | Bozeman                       | Presence-Content Indifferent            |
| PID-11.4   | State or Province                                  | MT                            | Presence-Content Indifferent            |
| PID-11.5   | Zip or Postal Code                                 | 59715                         | Presence-Content Indifferent            |
| PID-11.6   | Country  | USA                           | Presence-Content Indifferent            |
| PID-11.7   | Address Type                                       | P                             | Value-Test Case Fixed List              |
| PID-13     | Phone Number - Home                                |                               |   |
| PID-13.2   | Telecommunication Use Code                         | PRN                           | Value-Test Case Fixed                   |
| PID-13.3   | Telecommunication Equipment Type                   | РН                            | Value-Test Case Fixed                   |
| PID-13.4   | Email Address                                      |                               | NonPresence                             |
| PID-13.6   | Area/City Code                                     | 406                           | Presence-Content Indifferent            |
| PID-13.7   | Local Number                                       | 5552262                       | Presence-Content Indifferent            |
| PID-22     | Ethnic Group                                       |                               |   |
| PID-22.1   | Identifier   | 2186-5                        | Value-Test Case Fixed                   |
| PID-22.2   | Text   | Not Hispanic or Latino        | Presence-Test Case Proper               |
| PID-22.3   | Name of Coding System                              | CDCREC                        | Value-Profile Fixed                     |
| PID-24     | Multiple Birth Indicator                           | N                             | Value-Test Case Fixed                   |
| PID-25     | Birth Order  | 1                             | Indifferent                             |
| PID-29     | Patient Death Date and Time                        |                               |   |
| PID-29.1   | Time   |                               | NonPresence                             |
| PID-30     | Patient Death Indicator                            | N                             | Value-Test Case Fixed                   |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                       | Categorization               |
|----------|--|----------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                            |                              |
| PD1-11.1 | Identifier                                     | 03                         | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - no calls | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                    | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                          | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150625                   | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                          | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20150516                   | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150625                   | Presence-Content Indifferent |

# NK1 : Next of Kin / Associated Parties

| Location  | Data Element  | Data              | Categorization               |
|-----------|---|-------------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1                 | Value-Profile Fixed          |
| NK1-2     | Name  |                   |                              |
| NK1-2.1   | Family Name   |                   |                              |
| NK1-2.1.1 | Surname   | Broadway          | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Ellen             | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof |                   | Indifferent                  |
| NK1-2.7   | Name Type Code  | L                 | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                   |                              |
| NK1-3.1   | Identifier  | MTH               | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Mother            | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063           | Value-Profile Fixed          |
| NK1-4     | Address   |                   |                              |
| NK1-4.1   | Street Address  |                   |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 901 North 12th St | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                   | Indifferent                  |
| NK1-4.3   | City  | Bozeman           | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT                | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715             | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA               | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P                 | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                   |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN               | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment Type                      | РН                | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                   | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406               | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5552262           | Presence-Content Indifferent |

# ORC : Common Order

| Location   | Data Element  | Data                           | Categorization               |
|------------|---|--------------------------------|------------------------------|
| ORC-1      | Order Control   | RE                             | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                                |                              |
| ORC-2.1    | Entity Identifier                                     | 3881                           | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2                   | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  | 2.16.840.1.113883.3.72.5.40.10 | Presence-Test Case Proper    |
| ORC-2.4    | Universal ID Type                                     | ISO                            | Value-Profile Fixed          |
| ORC-3      | Filler Order Number                                   |                                |                              |
| ORC-3.1    | Entity Identifier                                     | 13926                          | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2                   | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  | 2.16.840.1.113883.3.72.5.40.10 | Presence-Test Case Proper    |
| ORC-3.4    | Universal ID Type                                     | ISO                            | Value-Profile Fixed          |
| ORC-10     | Entered By  |                                |                              |
| ORC-10.1   | ID Number   | 7824                           | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                                |                              |
| ORC-10.2.1 | Surname   | Jackson                        | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily                           | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne                        | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                                |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1                      | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  | 2.16.840.1.113883.3.72.5.40.7  | Presence-Test Case Proper    |
| ORC-10.9.3 | Universal ID Type                                     | ISO                            | Value-Profile Fixed          |
| ORC-10.10  | Name Type Code  | L                              | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN                            | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                                |                              |
| ORC-12.1   | ID Number   | 654                            | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                                |                              |
| ORC-12.2.1 | Surname   | Thomas                         | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma                          | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth                      | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                                |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1                      | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  | 2.16.840.1.113883.3.72.5.40.7  | Presence-Test Case Proper    |
| ORC-12.9.3 | Universal ID Type                                     | ISO                            | Value-Profile Fixed          |
| ORC-12.10  | Name Type Code  | L                              | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD                             | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                                |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC                     | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility                | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362                        | Value-Profile Fixed          |

RXA: Pharmacy/Treatment Administration

| Location  | Data Element                          | Data                           | Categorization               |
|---|---------------------------------------|--------------------------------|------------------------------|
| RXA-1   | Give Sub-ID Counter                   | 0                              | Value-Profile Fixed          |
| RXA-2   | Administration Sub-ID Counter         | 1                              | Value-Profile Fixed          |
| RXA-3   | Date/Time Start of Administration     | 1                              |                              |
| RXA-3.1   | Time                                  | 20150625                       | Presence-Content Indifferent |
| RXA-5   | Administered Code                     |                                |                              |
| RXA-5.1   | Identifier                            | 58160-0820-01                  | Value-Test Case Fixed List   |
| RXA-5.2   | Text                                  | ENGERIX-B                      | Presence-Test Case Proper    |
| RXA-5.3   | Name of Coding System                 | NDC                            | Value-Profile Fixed          |
| RXA-6   | Administered Amount                   | 0.5                            | Presence-Test Case Proper    |
| RXA-7   | Administered Units                    |                                |                              |
| RXA-7.1   | Identifier                            | mL                             | Value-Test Case Fixed        |
| RXA-7.2   | Text                                  | mL                             | Presence-Test Case Proper    |
| RXA-7.3   | Name of Coding System                 | UCUM                           | Value-Profile Fixed          |
| RXA-9   | Administration Notes                  |                                |                              |
| RXA-9.1   | Identifier                            | 00                             | Value-Test Case Fixed        |
| RXA-9.2   | Text                                  | New Record                     | Presence-Test Case Proper    |
| RXA-9.3   | Name of Coding System                 | NIP001                         | Value-Profile Fixed          |
| RXA-10  | Administering Provider                |                                |                              |
| RXA-10.1  | ID Number                             | 7824                           | Presence-Content Indifferent |
| RXA-10.2  | Family Name                           |                                |                              |
| RXA-10.2.1  | Surname                               | Jackson                        | Presence-Content Indifferent |
| RXA-10.3  | Given Name                            | Lily                           | Presence-Content Indifferent |
| RXA-10.4 Second and Further Given Names or Initials Thereof |                                       | Suzanne                        | Presence-Content Indifferent |
| RXA-10.9  | Assigning Authority                   |                                |                              |
| RXA-10.9.1  | Namespace ID                          | NIST-PI-1                      | Presence-Content Indifferent |
| RXA-10.9.2  | Universal ID                          | 2.16.840.1.113883.3.72.5.40.7  | Presence-Test Case Proper    |
| RXA-10.9.3  | Universal ID Type                     | ISO                            | Value-Profile Fixed          |
| RXA-10.10   | Name Type Code                        | L                              | Value-Test Case Fixed        |
| RXA-10.13   | Identifier Type Code                  | PRN                            | Value-Test Case Fixed List   |
| RXA-11  | Administered-at Location              |                                |                              |
| RXA-11.4  | Facility                              |                                |                              |
| RXA-11.4.1  | Namespace ID                          | NIST-Clinic-1                  | Presence-Content Indifferent |
| RXA-11.4.2  | Universal ID                          | 2.16.840.1.113883.3.72.5.40.12 | Presence-Test Case Proper    |
| RXA-11.4.3  | Universal ID Type                     | ISO                            | Value-Profile Fixed          |
| RXA-15  | Substance Lot Number                  | 797397                         | Presence-Content Indifferent |
| RXA-16  | Substance Expiration Date             |                                |                              |
| RXA-16.1  | Time                                  | 20151203                       | Presence-Content Indifferent |
| RXA-17  | Substance Manufacturer Name           |                                |                              |
| RXA-17.1  | Identifier                            | SKB                            | Value-Test Case Fixed        |
| RXA-17.2  | Text                                  | GlaxoSmithKline                | Presence-Test Case Proper    |
| RXA-17.3  | Name of Coding System                 | MVX                            | Value-Profile Fixed          |
| RXA-18  | Substance/Treatment Refusal<br>Reason |                                |                              |
| RXA-18.1  | Identifier                            |                                | NonPresence                  |
| RXA-18.2  | Text                                  |                                | NonPresence                  |
| RXA-18.3  | Name of Coding System                 |                                | NonPresence                  |
| RXA-20  | Completion Status                     | СР                             | Value-Test Case Fixed        |
| RXA-21  | Action Code - RXA                     | A                              | Value-Test Case Fixed        |

RXR : Pharmacy/Treatment Route =

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | LT            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Left Thigh    | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

# OBX[\*] —

# OBX : Observation/Result =

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150625               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

# OBX : Observation/Result =

| Location | Data Element                 | Data                                | Categorization               |
|----------|------------------------------|-------------------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                   | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                                     |                              |
| OBX-3.1  | Identifier                   | 64994-7                             | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                   | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                                     |                              |
| OBX-5.1  | Identifier                   | V01                                 | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Not VFC Eligible                    | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                             | Value-Profile Fixed          |
| OBX-6    | Units                        |                                     |                              |
| OBX-6.1  | Identifier                   |                                     | NonPresence                  |
| OBX-6.2  | Text                         |                                     | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                                     |                              |
| OBX-14.1 | Time                         | 20150625                            | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                                     |                              |
| OBX-17.1 | Identifier                   | VXC40                               | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                    | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                           | Value-Profile Fixed          |

### OBX : Observation/Result -

| OBX : Observation/Result |                              |                          |                              |
|--------------------------|------------------------------|--------------------------|------------------------------|
| Location                 | Data Element                 | Data                     | Categorization               |
| OBX-1                    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                          |                              |
| OBX-3.1                  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            |                          |                              |
| OBX-5.1                  | Identifier                   | 253088698300005911160720 | Value-Test Case Fixed        |
| OBX-5.2                  | Text                         | Hepatitis B VIS          | Presence-Test Case Proper    |
| OBX-5.3                  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6                    | Units                        |                          |                              |
| OBX-6.1                  | Identifier                   |                          | NonPresence                  |
| OBX-6.2                  | Text                         |                          | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                          | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                          |                              |
| OBX-14.1                 | Time                         | 20150625                 | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                          |                              |
| OBX-17.1                 | Identifier                   |                          | Indifferent                  |
| OBX-17.2                 | Text                         |                          | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                          | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150625           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150625           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

| Element Data             |  |  |
|--------------------------|--|--|
| Patient Name             | Ashley Jennifer Broadway               |  |
| Mother's Maiden Name     | Layton                                 |  |
| ID Number                | 77100                                  |  |
| Date/Time of Birth       | 05/16/2015                             |  |
| Administrative Sex       | Female                                 |  |
| Patient Address          | 901 North 12th St Bozeman MT 59715 USA |  |
| Local Number             | (406)555-2262                          |  |
| Race                     | African American                       |  |
| Ethnic Group             | Not Hispanic or Latino                 |  |
| Multiple Birth Indicator | No                                     |  |
| Birth Order              | 1                                      |  |

| Immunization Registry Information ———————————————————————————————————— |                            |  |
|--|----------------------------|--|
| Element  | Data                       |  |
| Immunization Registry Status   | Active                     |  |
| Immunization Registry Status Effective Date                            | 05/16/2015                 |  |
| Publicity Code   | Reminder/recall - no calls |  |
| Publicity Code Effective Date  | 06/25/2015                 |  |
| Protection Indicator   | No                         |  |
| Protection Indicator Effective Date                                    | 06/25/2015                 |  |

-Guardian or Responsible Party —

| Element      | Data                                   |
|--------------|--|
| Name         | Ellen Broadway                         |
| Relationship | Mother                                 |
| Address      | 901 North 12th St Bozeman MT 59715 USA |
| Phone Number | (406)555-2262                          |

-Vaccine Administration Information -

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | ENGERIX-B       |
| Date/Time Start of Administration  | 06/25/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 797397          |
| Substance Expiration Date          | 12/03/2015      |
| Substance Manufacturer Name        | GlaxoSmithKline |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Left Thigh      |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element                             | Data             |
|-------------------------------------|------------------|
| Vaccine Funding Source              | Private          |
| Vaccine Funding Program Eligibility | Not VFC Eligible |
| Document Type                       | Hepatitis B VIS  |
| Date Vis Presented                  | 06/25/2015       |

# 1.8.2. IZ-AD-8.2 Receive ACK Z23

Test Step Type: TA INITIATOR

Tests the ability to consume an ACK message containing a warning

# **Test Story**

### **Description**

A mapping error in the IIS software results in the IIS being unable to recognize the administration site sent in RXR-2 even though it is valid. The acknowledgement message returned contains a warning for an invalid value.

#### Comments

No Comments

# **Pre Condition**

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

# **Test Objectives**

Support for accepting an acknowledgement message with a warning being returned by the IIS and to display some notification to an end user.

#### **Evaluation Criteria**

The warning returned in the acknowledgement message is visible in the system responsible for the content of the administration message.

#### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

# **Message Contents**

- MSH : Message Header -

| Location   | Data Element  | Data                           | Categorization |
|------------|---|--------------------------------|----------------|
| MSH-1      | Field Separator                                     |                                |                |
| MSH-2      | Encoding Characters                                 | ^~\&                           |                |
| MSH-3      | Sending Application                                 |                                |                |
| MSH-3.1    | Namespace ID  | NISTIISAPP                     |                |
| MSH-3.2    | Universal ID  | 2.16.840.1.113883.3.72.5.40.3  |                |
| MSH-3.3    | Universal ID Type                                   | ISO                            |                |
| MSH-4      | Sending Facility                                    |                                |                |
| MSH-4.1    | Namespace ID  | NISTIISFAC                     |                |
| MSH-4.2    | Universal ID  | 2.16.840.1.113883.3.72.5.40.4  |                |
| MSH-4.3    | Universal ID Type                                   | ISO                            |                |
| MSH-5      | Receiving Application                               |                                |                |
| MSH-5.1    | Namespace ID  | NISTEHRAPP                     |                |
| MSH-5.2    | Universal ID  | 2.16.840.1.113883.3.72.5.40.1  |                |
| MSH-5.3    | Universal ID Type                                   | ISO                            |                |
| MSH-6      | Receiving Facility                                  |                                |                |
| MSH-6.1    | Namespace ID  | NISTEHRFAC                     |                |
| MSH-6.2    | Universal ID  | 2.16.840.1.113883.3.72.5.40.2  |                |
| MSH-6.3    | Universal ID Type                                   | ISO                            |                |
| MSH-7      | Date/Time Of Message                                | 100                            |                |
| MSH-7.1    | Time  | 20150625103328.758-0500        |                |
| MSH-9      | Message Type  | 20130023103328.738-0300        |                |
| MSH-9.1    | Message Code  | ACK                            |                |
| MSH-9.2    | Trigger Event                                       | V04                            |                |
|            | Message Structure                                   | ACK                            |                |
| MSH-9.3    |   | NIST-IZ-AD-                    |                |
| MSH-10     | Message Control ID                                  | 8.2_Receive_ACK_Z23            |                |
| MSH-11     | Processing ID                                       | 1                              |                |
| MSH-11.1   | Processing ID                                       | P                              |                |
| MSH-12     | Version ID  |                                |                |
| MSH-12.1   | Version ID  | 2.5.1                          |                |
| MSH-15     | Accept Acknowledgment Type                          | NE                             |                |
| MSH-16     | Application Acknowledgment Type                     | NE                             |                |
| MSH-21     | Message Profile Identifier                          |                                |                |
| MSH-21.1   | Entity Identifier                                   | Z23                            |                |
| MSH-21.2   | Namespace ID  | CDCPHINVS                      |                |
| MSH-21.3   | Universal ID  |                                |                |
| MSH-21.4   | Universal ID Type                                   |                                |                |
| MSH-22     | Sending Responsible Organization                    |                                |                |
| MSH-22.1   | Organization Name                                   | NISTIISFAC                     |                |
| MSH-22.6   | Assigning Authority                                 |                                |                |
| MSH-22.6.1 | Namespace ID  | NIST-AA-IZ-1                   |                |
| MSH-22.6.2 | Universal ID  | 2.16.840.1.113883.3.72.5.40.9  |                |
| MSH-22.6.3 | Universal ID Type                                   | ISO                            |                |
| MSH-22.7   | Identifier Type Code                                | XX                             |                |
| MSH-22.10  | Organization Identifier                             | 100-3322                       |                |
| MSH-23     | Receiving Responsible<br>Organization               |                                |                |
| MSH-23.1   | Organization Name                                   | NISTEHRFAC                     |                |
| MSH-23.6   | Assigning Authority                                 |                                |                |
| MSH-23.6.1 | Namespace ID  | NIST-AA-IZ-1                   |                |
|            | 1 mileopuee 1D                                      | 1                              |                |
|            | Universal ID  | 12 16 840 1 113883 3 77 5 40 9 |                |
| MSH-23.6.2 | Universal ID Type                                   | 2.16.840.1.113883.3.72.5.40.9  |                |
|            | Universal ID Universal ID Type Identifier Type Code | ISO                            |                |

# MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AE                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-8.1_Send_V04_Z22 |                |

ERR : Error

| Location | Data Element           | Data   | Categorization |
|----------|------------------------|--|----------------|
| ERR-2    | Error Location         |  |                |
| ERR-2.1  | Segment ID             | RXR  |                |
| ERR-2.2  | Segment Sequence       | 1  |                |
| ERR-2.3  | Field Position         | 2  |                |
| ERR-2.4  | Field Repetition       | 1  |                |
| ERR-2.5  | Component Number       | 1  |                |
| ERR-2.6  | Sub-Component Number   |  |                |
| ERR-3    | HL7 Error Code         |  |                |
| ERR-3.1  | Identifier             | 999  |                |
| ERR-3.2  | Text                   | Application error  |                |
| ERR-3.3  | Name of Coding System  | HL70357  |                |
| ERR-4    | Severity               | W  |                |
| ERR-5    | Application Error Code |  |                |
| ERR-5.1  | Identifier             | 5  |                |
| ERR-5.2  | Text                   | Table value not found  |                |
| ERR-5.3  | Name of Coding System  | HL70533  |                |
| ERR-8    | User Message           | Administration Site not recognized - site data will not be saved |                |

# **Test Data Specification**

# -Patient Information

| Element  | Data   |
|--|--------|
| This information will be automatically supplied by the | System |

# 1.9. IZ-AD-9\_Admin\_IIS-2Warnings

New administration resulting in multiple soft errors

# **Test Story**

# Description

A patient is seen at a clinic. A new administration is recorded. The IIS is able to process the administration message but finds multiple soft errors (warnings) which it returns in the acknowledgement message.

# Comments

The test case simulates the IIS issuing an acknowledgement warning due to an internal warning even though the message is valid.

# Pre Condition

No PreCondition

# **Post Condition**

The returned warnings must be visible in the EHR.

# **Test Objectives**

This test case assesses the ability of the EHR to accept an acknowledgement message with multiple soft errors (warnings) being returned by the IIS.

#### **Evaluation Criteria**

Administered Message: Validation Report with no Errors

Acknowledgement Message: An indication of warnings (See Juror Document)

# **Notes for Testers**

No Note

# 1.9.1. IZ-AD-9.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

# **Test Story**

### **Description**

A 4 year old female, Lacy Wells, is brought to a clinic for a well child visit by her guardian Janelle Trudeau. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider, Wilma Thomas (physician ID 654) reviews the patient's vaccination history and determines that the child requires DTaP, polio, MMR and varicella vaccinations. The child is covered by insurance and does not qualify for all Vaccine For Children (VFC) supplied vaccines. The guardian is given the appropriate Vaccine Information Sheet (VIS) to review. After reading it, she agrees that the child should receive all the vaccines. She also agrees that the data should be shared once it is incorporated into the local IIS. She indicates that all reminder and recall notifications should be routed to the provider. Appropriate doses of DTap-IPV (KINRIX) and MMRV (ProQuad) are selected from the clinic's stock of privately funded vaccines. A clinician, Lily Jackson (ID 7824) prepares and administers the doses to the patient and enters the data into the EHR and transmits it to the IIS.

#### Comments

No Comments

#### **Pre Condition**

No PreCondition

# **Post Condition**

No PostCondition

# **Test Objectives**

### **Evaluation Criteria**

Message Validation Report.

#### Notes for Testers

For new administration messages, the vaccine is communicated using NDC codes in RXA-5 (Administered Code). For a given vaccine, one or more NDC codes may be appropriate to message. For this reason, RXA-5.1 is categorized as "Value - Test Case Fixed List" and allows for multiple valid values. The Message Content and Example Message data contain a single representative valid NDC code for example purposes.

ONC has determined that, from a regulatory/program perspective, an HIT Module cannot be required to be able to generate messages with the Vaccine Funding Source OBX segment for 2015 Edition certification testing. For certification purposes, ONC permits Testers to ignore the error notification generated by the NIST Immunization Test Suite when this segment is missing. Since the product under test will have to meet state reporting requirements when implemented, and many states require this information, it may be beneficial for HIT Modules to demonstrate support for the Vaccine Funding Source OBX segment during 2015 Edition certification testing.

# **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                        | Categorization               |
|------------|---------------------------------------|-----------------------------|------------------------------|
| MSH-1      | Field Separator                       |                             | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                        | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                             |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                  | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                             | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-4      | Sending Facility                      |                             |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                  | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                             | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-5      | Receiving Application                 |                             |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                  | Indifferent                  |
| MSH-5.2    | Universal ID                          |                             | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-6      | Receiving Facility                    |                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                  | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                             | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                             | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                             |                              |
| MSH-7.1    | Time                                  | 20150625115038.030-0500     | Presence-System Generated    |
| MSH-9      | Message Type                          |                             |                              |
| MSH-9.1    | Message Code                          | VXU                         | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | V04                         | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | VXU V04                     | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-9.1 Send V04 Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                             |                              |
| MSH-11.1   | Processing ID                         | P                           | Presence-Content Indifferent |
| MSH-12     | Version ID                            | 1                           | Tesence Content marrierent   |
| MSH-12.1   | Version ID                            | 2.5.1                       | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                          | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                          | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                             |                              |
| MSH-21.1   | Entity Identifier                     | Z22                         | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                   | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                             | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                             | Indifferent                  |
| MSH-22     | Sending Responsible Organization      |                             |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                  | Indifferent                  |
| MSH-22.6   | Assigning Authority                   |                             |                              |
| MSH-22.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-22.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  |                             | Indifferent                  |
| MSH-22.10  | Organization Identifier               |                             | Indifferent                  |
| MSH-23     | Receiving Responsible<br>Organization |                             |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                  | Indifferent                  |
| MSH-23.6   | Assigning Authority                   |                             |                              |
| MSH-23.6.1 | Namespace ID                          |                             | Indifferent                  |
| MSH-23.6.2 | Universal ID                          |                             | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                             | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  |                             | Indifferent                  |
|            | Organization Identifier               |                             | Indifferent                  |

PID : Patient Identification =

| Location             | Data Element                                       | Data                                  | Categorization               |
|----------------------|--|---------------------------------------|------------------------------|
| PID-1                | Set ID - PID                                       | 1                                     | Value-Profile Fixed          |
| PID-3                | Patient Identifier List                            |                                       |                              |
| PID-3.1              | ID Number  | 22533                                 | Presence-Content Indifferent |
| PID-3.4              | Assigning Authority                                |                                       |                              |
| PID-3.4.1            | Namespace ID                                       | NIST-MPI-1                            | Presence-Content Indifferent |
| PID-3.4.2            | Universal ID                                       |                                       | Indifferent                  |
| PID-3.4.3            | Universal ID Type                                  |                                       | Indifferent                  |
| PID-3.5              | Identifier Type Code                               | MR                                    | Value-Test Case Fixed        |
| PID-5                | Patient Name                                       | I I I I I I I I I I I I I I I I I I I | vario Test Case Fraca        |
| PID-5.1              | Family Name  |                                       |                              |
| PID-5.1.1            | Surname  | Wells                                 | Presence-Content Indifferent |
| PID-5.2              | Given Name   | Lacy                                  | Presence-Content Indifferent |
| PID-5.3              | Second and Further Given Names or Initials Thereof | Lacy                                  | Indifferent                  |
| PID-5.7              | Name Type Code                                     | L                                     | Value-Test Case Fixed        |
| PID-6                | Mother's Maiden Name                               |                                       | , and Test Case I IACU       |
| PID-6.1              | Family Name  |                                       |                              |
| PID-6.1.1            | Surname  |                                       | Indifferent                  |
| PID-6.7              | Name Type Code                                     |                                       | Indifferent                  |
| PID-7                | Date/Time of Birth                                 |                                       | Indifferent                  |
| PID-7.1              | Time   | 20110430                              | Presence-Content Indifferent |
| PID-8                | Administrative Sex                                 | F                                     | Value-Test Case Fixed        |
| PID-8                | Race   | Γ                                     | Value-Test Case Fixed        |
| PID-10.1             | Identifier   | 2106-3                                | Value-Test Case Fixed        |
| PID-10.1<br>PID-10.2 |  | White                                 |                              |
|                      | Text   | -                                     | Presence-Test Case Proper    |
| PID-10.3             | Name of Coding System                              | CDCREC                                | Value-Profile Fixed          |
| PID-11               | Patient Address                                    |                                       |                              |
| PID-11.1             | Street Address                                     | 1031 1 0 1 0                          | D G + 1 1100                 |
| PID-11.1.1           | Street or Mailing Address                          | 12 North Oak St                       | Presence-Content Indifferent |
| PID-11.2             | Other Designation                                  | la la                                 | Indifferent                  |
| PID-11.3             | City   | Bozeman                               | Presence-Content Indifferent |
| PID-11.4             | State or Province                                  | MT                                    | Presence-Content Indifferent |
| PID-11.5             | Zip or Postal Code                                 | 59715                                 | Presence-Content Indifferent |
| PID-11.6             | Country  | USA                                   | Presence-Content Indifferent |
| PID-11.7             | Address Type                                       | P                                     | Value-Test Case Fixed List   |
| PID-13               | Phone Number - Home                                | 1                                     |                              |
| PID-13.2             | Telecommunication Use Code                         | PRN                                   | Value-Test Case Fixed        |
| PID-13.3             | Telecommunication Equipment Type                   | РН                                    | Value-Test Case Fixed        |
| PID-13.4             | Email Address                                      |                                       | NonPresence                  |
| PID-13.6             | Area/City Code                                     | 406                                   | Presence-Content Indifferent |
| PID-13.7             | Local Number                                       | 5552914                               | Presence-Content Indifferent |
| PID-22               | Ethnic Group                                       |                                       |                              |
| PID-22.1             | Identifier   | 2186-5                                | Value-Test Case Fixed        |
| PID-22.2             | Text   | Not Hispanic or Latino                | Presence-Test Case Proper    |
| PID-22.3             | Name of Coding System                              | CDCREC                                | Value-Profile Fixed          |
| PID-24               | Multiple Birth Indicator                           | N                                     | Indifferent                  |
| PID-25               | Birth Order  | 1                                     | Indifferent                  |
| PID-29               | Patient Death Date and Time                        |                                       |                              |
| PID-29.1             | Time   |                                       | NonPresence                  |
| PID-30               | Patient Death Indicator                            | N                                     | Indifferent                  |

PD1 : Patient Additional Demographic

| Location | Data Element                                   | Data                          | Categorization               |
|----------|--|-------------------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                               |                              |
| PD1-11.1 | Identifier                                     | 08                            | Value-Test Case Fixed        |
| PD1-11.2 | Text   | Reminder/recall - to provider | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215                       | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                             | Indifferent                  |
| PD1-13   | Protection Indicator Effective Date            | 20150625                      | Indifferent                  |
| PD1-16   | Immunization Registry Status                   | A                             | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20110430                      | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150625                      | Presence-Content Indifferent |

# NK1 : Next of Kin / Associated Parties

| Location  | Data Element  | Data            | Categorization               |
|-----------|---|-----------------|------------------------------|
| NK1-1     | Set ID - NK1  | 1               | Value-Profile Fixed          |
| NK1-2     | Name  |                 |                              |
| NK1-2.1   | Family Name   |                 |                              |
| NK1-2.1.1 | Surname   | Trudeau         | Presence-Content Indifferent |
| NK1-2.2   | Given Name  | Janelle         | Presence-Content Indifferent |
| NK1-2.3   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| NK1-2.7   | Name Type Code  | L               | Value-Test Case Fixed        |
| NK1-3     | Relationship  |                 |                              |
| NK1-3.1   | Identifier  | GRD             | Value-Test Case Fixed        |
| NK1-3.2   | Text  | Guardian        | Presence-Test Case Proper    |
| NK1-3.3   | Name of Coding System                                 | HL70063         | Value-Profile Fixed          |
| NK1-4     | Address   |                 |                              |
| NK1-4.1   | Street Address  |                 |                              |
| NK1-4.1.1 | Street or Mailing Address                             | 12 North Oak St | Presence-Content Indifferent |
| NK1-4.2   | Other Designation                                     |                 | Indifferent                  |
| NK1-4.3   | City  | Bozeman         | Presence-Content Indifferent |
| NK1-4.4   | State or Province                                     | MT              | Presence-Content Indifferent |
| NK1-4.5   | Zip or Postal Code                                    | 59715           | Presence-Content Indifferent |
| NK1-4.6   | Country   | USA             | Presence-Content Indifferent |
| NK1-4.7   | Address Type  | P               | Value-Test Case Fixed List   |
| NK1-5     | Phone Number  |                 |                              |
| NK1-5.2   | Telecommunication Use Code                            | PRN             | Value-Test Case Fixed        |
| NK1-5.3   | Telecommunication Equipment Type                      | РН              | Value-Test Case Fixed        |
| NK1-5.4   | Email Address   |                 | Indifferent                  |
| NK1-5.6   | Area/City Code  | 406             | Presence-Content Indifferent |
| NK1-5.7   | Local Number  | 5552914         | Presence-Content Indifferent |

# ORC: Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 657             | Indifferent                  |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 68544           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Indifferent                  |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Indifferent                  |
| ORC-17.2   | Text  | NISTEHRFacility | Indifferent                  |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Indifferent                  |

# ORC: Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     | 7553            | Presence-Content Indifferent |
| ORC-2.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 8671            | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   | 654             | Presence-Content Indifferent |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   | Thomas          | Presence-Content Indifferent |
| ORC-12.3   | Given Name  | Wilma           | Presence-Content Indifferent |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof | Elizabeth       | Presence-Content Indifferent |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-12.13  | Identifier Type Code                                  | MD              | Value-Test Case Fixed List   |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

# RXA: Pharmacy/Treatment Administration —

| Location   | Data Element  | Data                | Categorization               |
|------------|---|---------------------|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                   | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1                   | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of<br>Administration                  |                     |                              |
| RXA-3.1    | Time  | 20150625            | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |                     |                              |
| RXA-5.1    | Identifier  | 00006-4171-01       | Value-Test Case Fixed List   |
| RXA-5.2    | Text  | ProQuad             | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | NDC                 | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 0.5                 | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |                     |                              |
| RXA-7.1    | Identifier  | mL                  | Value-Test Case Fixed        |
| RXA-7.2    | Text  | mL                  | Presence-Test Case Proper    |
| RXA-7.3    | Name of Coding System                                 | UCUM                | Value-Profile Fixed          |
| RXA-9      | Administration Notes                                  |                     |                              |
| RXA-9.1    | Identifier  | 00                  | Value-Test Case Fixed        |
| RXA-9.2    | Text  | New Record          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001              | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |                     |                              |
| RXA-10.1   | ID Number   | 7824                | Presence-Content Indifferent |
| RXA-10.2   | Family Name   |                     |                              |
| RXA-10.2.1 | Surname   | Jackson             | Presence-Content Indifferent |
| RXA-10.3   | Given Name  | Lily                | Presence-Content Indifferent |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne             | Presence-Content Indifferent |
| RXA-10.9   | Assigning Authority                                   |                     |                              |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1           | Presence-Content Indifferent |
| RXA-10.9.2 | Universal ID  |                     | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-10.10  | Name Type Code  | L                   | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  | PRN                 | Value-Test Case Fixed List   |
| RXA-11     | Administered-at Location                              |                     |                              |
| RXA-11.4   | Facility  |                     |                              |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1       | Presence-Content Indifferent |
| RXA-11.4.2 | Universal ID  |                     | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |                     | Indifferent                  |
| RXA-15     | Substance Lot Number                                  | 407453              | Presence-Content Indifferent |
| RXA-16     | Substance Expiration Date                             |                     |                              |
| RXA-16.1   | Time  | 20151015            | Presence-Content Indifferent |
| RXA-17     | Substance Manufacturer Name                           |                     |                              |
| RXA-17.1   | Identifier  | MSD                 | Value-Test Case Fixed        |
| RXA-17.2   | Text  | Merck and Co., Inc. | Presence-Test Case Proper    |
| RXA-17.3   | Name of Coding System                                 | MVX                 | Value-Profile Fixed          |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                     |                              |
| RXA-18.1   | Identifier  |                     | NonPresence                  |
| RXA-18.2   | Text  |                     | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |                     | NonPresence                  |
| RXA-20     | Completion Status                                     | СР                  | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A                   | Value-Test Case Fixed        |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element                                       | Data            | Categorization                            |
|------------|--|-----------------|---|
| RXA-1      | Give Sub-ID Counter                                | 0               | Value-Profile Fixed                       |
| RXA-2      | Administration Sub-ID Counter                      | 1               | Value-Profile Fixed                       |
| RXA-3      | Date/Time Start of<br>Administration               |                 |   |
| RXA-3.1    | Time   | 20150625        | Presence-Content Indifferent              |
| RXA-5      | Administered Code                                  |                 |   |
| RXA-5.1    | Identifier   | 58160-0812-01   | Value-Test Case Fixed List                |
| RXA-5.2    | Text   | KINRIX          | Presence-Test Case Proper                 |
| RXA-5.3    | Name of Coding System                              | NDC             | Value-Profile Fixed                       |
| RXA-6      | Administered Amount                                | 0.5             | Presence-Test Case Proper                 |
| RXA-7      | Administered Units                                 |                 |   |
| RXA-7.1    | Identifier   | mL              | Value-Test Case Fixed                     |
| RXA-7.2    | Text   | mL              | Presence-Test Case Proper                 |
| RXA-7.3    | Name of Coding System                              | UCUM            | Value-Profile Fixed                       |
| RXA-9      | Administration Notes                               |                 |   |
| RXA-9.1    | Identifier   | 00              | Value-Test Case Fixed                     |
| RXA-9.2    | Text   | New Record      | Presence-Test Case Proper                 |
| RXA-9.3    | Name of Coding System                              | NIP001          | Value-Profile Fixed                       |
| RXA-10     | Administering Provider                             |                 | , 11100 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 |
| RXA-10.1   | ID Number  | 7824            | Presence-Content Indifferent              |
| RXA-10.2   | Family Name  |                 | 1000000 000000 00000                      |
| RXA-10.2.1 | Surname  | Jackson         | Presence-Content Indifferent              |
| RXA-10.3   | Given Name   | Lily            | Presence-Content Indifferent              |
| RXA-10.4   | Second and Further Given Names or Initials Thereof | Suzanne         | Presence-Content Indifferent              |
| RXA-10.9   | Assigning Authority                                |                 |   |
| RXA-10.9.1 | Namespace ID                                       | NIST-PI-1       | Presence-Content Indifferent              |
| RXA-10.9.2 | Universal ID                                       |                 | Indifferent                               |
| RXA-10.9.3 | Universal ID Type                                  |                 | Indifferent                               |
| RXA-10.10  | Name Type Code                                     | L               | Value-Test Case Fixed                     |
| RXA-10.13  | Identifier Type Code                               | PRN             | Value-Test Case Fixed List                |
| RXA-11     | Administered-at Location                           |                 |   |
| RXA-11.4   | Facility   |                 |   |
| RXA-11.4.1 | Namespace ID                                       | NIST-Clinic-1   | Presence-Content Indifferent              |
| RXA-11.4.2 | Universal ID                                       |                 | Indifferent                               |
| RXA-11.4.3 | Universal ID Type                                  |                 | Indifferent                               |
| RXA-15     | Substance Lot Number                               | 88402           | Presence-Content Indifferent              |
| RXA-16     | Substance Expiration Date                          |                 |   |
| RXA-16.1   | Time   | 20150730        | Presence-Content Indifferent              |
| RXA-17     | Substance Manufacturer Name                        |                 |   |
| RXA-17.1   | Identifier   | SKB             | Value-Test Case Fixed                     |
| RXA-17.2   | Text   | GlaxoSmithKline | Presence-Test Case Proper                 |
| RXA-17.3   | Name of Coding System                              | MVX             | Value-Profile Fixed                       |
| RXA-18     | Substance/Treatment Refusal<br>Reason              |                 |   |
| RXA-18.1   | Identifier   |                 | NonPresence                               |
| RXA-18.2   | Text   |                 | NonPresence                               |
| RXA-18.3   | Name of Coding System                              |                 | NonPresence                               |
| RXA-20     | Completion Status                                  | СР              | Value-Test Case Fixed                     |
| KAA-20     |  |                 | I USU CUSU I IAUG                         |

| RXR[*]                                    |                       |               |                           |  |
|---|-----------------------|---------------|---------------------------|--|
| Location Data Element Data Categorization |                       |               |                           |  |
| RXR-1                                     | Route                 |               |                           |  |
| RXR-1.1                                   | Identifier            | C38299        | Value-Test Case Fixed     |  |
| RXR-1.2                                   | Text                  | Subcutaneous  | Presence-Test Case Proper |  |
| RXR-1.3                                   | Name of Coding System | NCIT          | Value-Profile Fixed       |  |
| RXR-2                                     | Administration Site   |               |                           |  |
| RXR-2.1                                   | Identifier            | RD            | Value-Test Case Fixed     |  |
| RXR-2.2                                   | Text                  | Right Deltoid | Presence-Test Case Proper |  |
| RXR-2.3                                   | Name of Coding System | HL70163       | Value-Profile Fixed       |  |

# RXR : Pharmacy/Treatment Route —

| Location | Data Element          | Data          | Categorization            |
|----------|-----------------------|---------------|---------------------------|
| RXR-1    | Route                 |               |                           |
| RXR-1.1  | Identifier            | C28161        | Value-Test Case Fixed     |
| RXR-1.2  | Text                  | Intramuscular | Presence-Test Case Proper |
| RXR-1.3  | Name of Coding System | NCIT          | Value-Profile Fixed       |
| RXR-2    | Administration Site   |               |                           |
| RXR-2.1  | Identifier            | LD            | Value-Test Case Fixed     |
| RXR-2.2  | Text                  | Left Deltoid  | Presence-Test Case Proper |
| RXR-2.3  | Name of Coding System | HL70163       | Value-Profile Fixed       |

# -OBX[\*] -

# OBX : Observation/Result —

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
|          |                              | Data                   |                              |
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150625               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

# OBX : Observation/Result =

| Location | Data Element                 | Data                                | Categorization            |
|----------|------------------------------|-------------------------------------|---------------------------|
| OBX-1    | Set ID - OBX                 | 2                                   | Value-Profile Fixed       |
| OBX-2    | Value Type                   | CE                                  | Value-Test Case Fixed     |
| OBX-3    | Observation Identifier       |                                     |                           |
| OBX-3.1  | Identifier                   | 64994-7                             | Value-Test Case Fixed     |
| OBX-3.2  | Text                         | Vaccine Funding Program Eligibility | Presence-Test Case Proper |
| OBX-3.3  | Name of Coding System        | LN                                  | Value-Profile Fixed       |
| OBX-4    | Observation Sub-ID           | 2                                   | Presence-Test Case Proper |
| OBX-5    | Observation Value            |                                     |                           |
| OBX-5.1  | Identifier                   | V01                                 | Value-Test Case Fixed     |
| OBX-5.2  | Text                         | Not VFC Eligible                    | Presence-Test Case Proper |
| OBX-5.3  | Name of Coding System        | HL70064                             | Value-Profile Fixed       |
| OBX-6    | Units                        |                                     |                           |
| OBX-6.1  | Identifier                   |                                     | NonPresence               |
| OBX-6.2  | Text                         |                                     | NonPresence               |
| OBX-6.3  | Name of Coding System        |                                     | NonPresence               |
| OBX-11   | Observation Result Status    | F                                   | Value-Profile Fixed       |
| OBX-14   | Date/Time of the Observation |                                     |                           |
| OBX-14.1 | Time                         | 20150625                            | Indifferent               |
| OBX-17   | Observation Method           |                                     |                           |
| OBX-17.1 | Identifier                   | VXC40                               | Indifferent               |
| OBX-17.2 | Text                         | per immunization                    | Indifferent               |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                           | Indifferent               |

# OBX : Observation/Result =

| Location | Data Element                 | Data                                  | Categorization            |
|----------|------------------------------|---------------------------------------|---------------------------|
| OBX-1    | Set ID - OBX                 | 3                                     | Value-Profile Fixed       |
| OBX-2    | Value Type                   | CE                                    | Value-Test Case Fixed     |
| OBX-3    | Observation Identifier       |                                       |                           |
| OBX-3.1  | Identifier                   | 69764-9                               | Value-Test Case Fixed     |
| OBX-3.2  | Text                         | Document Type                         | Presence-Test Case Proper |
| OBX-3.3  | Name of Coding System        | LN                                    | Value-Profile Fixed       |
| OBX-4    | Observation Sub-ID           | 3                                     | Presence-Test Case Proper |
| OBX-5    | Observation Value            |                                       |                           |
| OBX-5.1  | Identifier                   | 253088698300013411180212              | Value-Test Case Fixed     |
| OBX-5.2  | Text                         | Measles/Mumps/Rubella/Varice<br>  VIS | Presence-Test Case Proper |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                             | Value-Profile Fixed       |
| OBX-6    | Units                        |                                       |                           |
| OBX-6.1  | Identifier                   |                                       | NonPresence               |
| OBX-6.2  | Text                         |                                       | NonPresence               |
| OBX-6.3  | Name of Coding System        |                                       | NonPresence               |
| OBX-11   | Observation Result Status    | F                                     | Value-Profile Fixed       |
| OBX-14   | Date/Time of the Observation |                                       |                           |
| OBX-14.1 | Time                         | 20150625                              | Indifferent               |
| OBX-17   | Observation Method           |                                       |                           |
| OBX-17.1 | Identifier                   |                                       | Indifferent               |
| OBX-17.2 | Text                         |                                       | Indifferent               |
| OBX-17.3 | Name of Coding System        |                                       | Indifferent               |

# OBX : Observation/Result —

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150625           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150625           | Indifferent                  |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# OBX : Observation/Result —

| Location | Data Element                 | Data                   | Categorization               |
|----------|------------------------------|------------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 1                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                        |                              |
| OBX-3.1  | Identifier                   | 30963-3                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Source | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 1                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |                        |                              |
| OBX-5.1  | Identifier                   | PHC70                  | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Private                | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | CDCPHINVS              | Value-Profile Fixed          |
| OBX-6    | Units                        |                        |                              |
| OBX-6.1  | Identifier                   |                        | NonPresence                  |
| OBX-6.2  | Text                         |                        | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                        | NonPresence                  |
| OBX-11   | Observation Result Status    | F                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                        |                              |
| OBX-14.1 | Time                         | 20150625               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                        |                              |
| OBX-17.1 | Identifier                   |                        | Indifferent                  |
| OBX-17.2 | Text                         |                        | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                        | Indifferent                  |

# OBX : Observation/Result =

| Location | Data Element                 | Data                                   | Categorization               |
|----------|------------------------------|--|------------------------------|
| OBX-1    | Set ID - OBX                 | 2                                      | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                     | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |  |                              |
| OBX-3.1  | Identifier                   | 64994-7                                | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Vaccine Funding Program<br>Eligibility | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                     | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 2                                      | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |  |                              |
| OBX-5.1  | Identifier                   | V01                                    | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Not VFC Eligible                       | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | HL70064                                | Value-Profile Fixed          |
| OBX-6    | Units                        |  |                              |
| OBX-6.1  | Identifier                   |  | NonPresence                  |
| OBX-6.2  | Text                         |  | NonPresence                  |
| OBX-6.3  | Name of Coding System        |  | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                      | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |  |                              |
| OBX-14.1 | Time                         | 20150625                               | Presence-Content Indifferent |
| OBX-17   | Observation Method           |  |                              |
| OBX-17.1 | Identifier                   | VXC40                                  | Value-Test Case Fixed        |
| OBX-17.2 | Text                         | per immunization                       | Presence-Test Case Proper    |
| OBX-17.3 | Name of Coding System        | CDCPHINVS                              | Value-Profile Fixed          |

### OBX : Observation/Result -

| OBX : Observation/Result |                              |                          |                              |
|--------------------------|------------------------------|--------------------------|------------------------------|
| Location                 | Data Element                 | Data                     | Categorization               |
| OBX-1                    | Set ID - OBX                 | 3                        | Value-Profile Fixed          |
| OBX-2                    | Value Type                   | CE                       | Value-Test Case Fixed        |
| OBX-3                    | Observation Identifier       |                          |                              |
| OBX-3.1                  | Identifier                   | 69764-9                  | Value-Test Case Fixed        |
| OBX-3.2                  | Text                         | Document Type            | Presence-Test Case Proper    |
| OBX-3.3                  | Name of Coding System        | LN                       | Value-Profile Fixed          |
| OBX-4                    | Observation Sub-ID           | 3                        | Presence-Test Case Proper    |
| OBX-5                    | Observation Value            |                          |                              |
| OBX-5.1                  | Identifier                   | 253088698300017211160720 | Value-Test Case Fixed        |
| OBX-5.2                  | Text                         | Polio VIS                | Presence-Test Case Proper    |
| OBX-5.3                  | Name of Coding System        | cdcgs1vis                | Value-Profile Fixed          |
| OBX-6                    | Units                        |                          |                              |
| OBX-6.1                  | Identifier                   |                          | NonPresence                  |
| OBX-6.2                  | Text                         |                          | NonPresence                  |
| OBX-6.3                  | Name of Coding System        |                          | NonPresence                  |
| OBX-11                   | Observation Result Status    | F                        | Value-Profile Fixed          |
| OBX-14                   | Date/Time of the Observation |                          |                              |
| OBX-14.1                 | Time                         | 20150625                 | Presence-Content Indifferent |
| OBX-17                   | Observation Method           |                          |                              |
| OBX-17.1                 | Identifier                   |                          | Indifferent                  |
| OBX-17.2                 | Text                         |                          | Indifferent                  |
| OBX-17.3                 | Name of Coding System        |                          | Indifferent                  |

# OBX : Observation/Result =

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 4                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 3                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150625           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150625           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# OBX : Observation/Result -

| Location | <b>Data Element</b>          | Data                                    | Categorization               |
|----------|------------------------------|---|------------------------------|
| OBX-1    | Set ID - OBX                 | 5                                       | Value-Profile Fixed          |
| OBX-2    | Value Type                   | CE                                      | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |   |                              |
| OBX-3.1  | Identifier                   | 69764-9                                 | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Document Type                           | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                                      | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 4                                       | Presence-Test Case Proper    |
| OBX-5    | Observation Value            |   |                              |
| OBX-5.1  | Identifier                   | 253088698300003511070517                | Value-Test Case Fixed        |
| OBX-5.2  | Text                         | Diphtheria/Tetanus/Pertussis (DTaP) VIS | Presence-Test Case Proper    |
| OBX-5.3  | Name of Coding System        | cdcgs1vis                               | Value-Profile Fixed          |
| OBX-6    | Units                        |   |                              |
| OBX-6.1  | Identifier                   |   | NonPresence                  |
| OBX-6.2  | Text                         |   | NonPresence                  |
| OBX-6.3  | Name of Coding System        |   | NonPresence                  |
| OBX-11   | Observation Result Status    | F                                       | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |   |                              |
| OBX-14.1 | Time                         | 20150625                                | Presence-Content Indifferent |
| OBX-17   | Observation Method           |   |                              |
| OBX-17.1 | Identifier                   |   | Indifferent                  |
| OBX-17.2 | Text                         |   | Indifferent                  |
| OBX-17.3 | Name of Coding System        |   | Indifferent                  |

| Location | Data Element                 | Data               | Categorization               |
|----------|------------------------------|--------------------|------------------------------|
| OBX-1    | Set ID - OBX                 | 6                  | Value-Profile Fixed          |
| OBX-2    | Value Type                   | DT                 | Value-Test Case Fixed        |
| OBX-3    | Observation Identifier       |                    |                              |
| OBX-3.1  | Identifier                   | 29769-7            | Value-Test Case Fixed        |
| OBX-3.2  | Text                         | Date Vis Presented | Presence-Test Case Proper    |
| OBX-3.3  | Name of Coding System        | LN                 | Value-Profile Fixed          |
| OBX-4    | Observation Sub-ID           | 4                  | Presence-Test Case Proper    |
| OBX-5    | Observation Value            | 20150625           | Presence-Content Indifferent |
| OBX-6    | Units                        |                    |                              |
| OBX-6.1  | Identifier                   |                    | NonPresence                  |
| OBX-6.2  | Text                         |                    | NonPresence                  |
| OBX-6.3  | Name of Coding System        |                    | NonPresence                  |
| OBX-11   | Observation Result Status    | F                  | Value-Profile Fixed          |
| OBX-14   | Date/Time of the Observation |                    |                              |
| OBX-14.1 | Time                         | 20150625           | Presence-Content Indifferent |
| OBX-17   | Observation Method           |                    |                              |
| OBX-17.1 | Identifier                   |                    | Indifferent                  |
| OBX-17.2 | Text                         |                    | Indifferent                  |
| OBX-17.3 | Name of Coding System        |                    | Indifferent                  |

# **Test Data Specification**

| Element                  | Data                                 |
|--------------------------|--------------------------------------|
| Patient Name             | Lacy Wells                           |
| Mother's Maiden Name     |                                      |
| ID Number                | 22533                                |
| Date/Time of Birth       | 04/30/2011                           |
| Administrative Sex       | Female                               |
| Patient Address          | 12 North Oak St Bozeman MT 59715 USA |
| Local Number             | (406)555-2914                        |
| Race                     | White                                |
| Ethnic Group             | Not Hispanic or Latino               |
| Multiple Birth Indicator | No                                   |
| Birth Order              | 1                                    |

| Immunization Registry Information           |                               |  |  |
|---|-------------------------------|--|--|
| Element                                     | Data                          |  |  |
| Immunization Registry Status                | Active                        |  |  |
| Immunization Registry Status Effective Date | 04/30/2011                    |  |  |
| Publicity Code                              | Reminder/recall - to provider |  |  |
| Publicity Code Effective Date               | 06/25/2015                    |  |  |
| Protection Indicator                        | No                            |  |  |
| Protection Indicator Effective Date         | 06/25/2015                    |  |  |

# —Guardian or Responsible Party —

| Element      | Data                                 |
|--------------|--------------------------------------|
| Name         | Janelle Trudeau                      |
| Relationship | Guardian                             |
| Address      | 12 North Oak St Bozeman MT 59715 USA |
| Phone Number | (406)555-2914                        |

# $-{f V}$ accine Administration Information[\*] -

# -Vaccine Administration Information -

| Element                            | Data                |
|------------------------------------|---------------------|
| Administered Vaccine               | ProQuad             |
| Date/Time Start of Administration  | 06/25/2015          |
| Administered Amount                | 0.5                 |
| Administered Units                 | mL                  |
| Administration Notes               | New Record          |
| Administering Provider             | Lily Jackson        |
| Substance Lot Number               | 407453              |
| Substance Expiration Date          | 10/15/2015          |
| Substance Manufacturer Name        | Merck and Co., Inc. |
| Substance/Treatment Refusal Reason |                     |
| Completion Status                  | Complete            |
| Action Code                        | Add                 |
| Route                              | Subcutaneous        |
| Administration Site                | Right Deltoid       |
| Entering Organization              | NISTEHRFacility     |
| Entered By                         | Lily Jackson        |
| Ordered By                         | Wilma Thomas        |

| Element                             | Data                                |  |
|-------------------------------------|-------------------------------------|--|
| Vaccine Funding Source              | Private                             |  |
| Vaccine Funding Program Eligibility | Not VFC Eligible                    |  |
| Document Type                       | Measles/Mumps/Rubella/Varicella VIS |  |
| Date Vis Presented                  | 06/25/2015                          |  |

# ——Vaccine Administration Information ———

| Element                            | Data            |
|------------------------------------|-----------------|
| Administered Vaccine               | KINRIX          |
| Date/Time Start of Administration  | 06/25/2015      |
| Administered Amount                | 0.5             |
| Administered Units                 | mL              |
| Administration Notes               | New Record      |
| Administering Provider             | Lily Jackson    |
| Substance Lot Number               | 88402           |
| Substance Expiration Date          | 07/30/2015      |
| Substance Manufacturer Name        | GlaxoSmithKline |
| Substance/Treatment Refusal Reason |                 |
| Completion Status                  | Complete        |
| Action Code                        | Add             |
| Route                              | Intramuscular   |
| Administration Site                | Left Deltoid    |
| Entering Organization              | NISTEHRFacility |
| Entered By                         | Lily Jackson    |
| Ordered By                         | Wilma Thomas    |

| Element                             | Data                                    |
|-------------------------------------|---|
| Vaccine Funding Source              | Private                                 |
| Vaccine Funding Program Eligibility | Not VFC Eligible                        |
| Document Type                       | Polio VIS                               |
| Date Vis Presented                  | 06/25/2015                              |
| Document Type                       | Diphtheria/Tetanus/Pertussis (DTaP) VIS |
| Date Vis Presented                  | 06/25/2015                              |

# 1.9.2. IZ-AD-9.2 Receive ACK Z23

Test Step Type: TA\_RESPONDER

Tests the ability to consume an ACK message containing multiple warnings

# **Test Story**

### **Description**

A mapping error in the IIS software results in the IIS being unable to recognize either administration site sent in RXR-2 even though it is valid. The acknowledgement message returned contains warnings for the invalid values.

#### Comments

No Comments

# **Pre Condition**

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

# **Test Objectives**

Support for accepting an acknowledgement message with multiple warnings being returned by the IIS and to display some notification to an end user.

#### **Evaluation Criteria**

The warnings returned in the acknowledgement message are visible in the system responsible for the content of the administration message.

#### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

# **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                               | Categorization |
|------------|---------------------------------------|------------------------------------|----------------|
| MSH-1      | Field Separator                       |                                    |                |
| MSH-2      | Encoding Characters                   | ^~\&                               |                |
| MSH-3      | Sending Application                   |                                    |                |
| MSH-3.1    | Namespace ID                          | NISTIISAPP                         |                |
| MSH-3.2    | Universal ID                          |                                    |                |
| MSH-3.3    | Universal ID Type                     |                                    |                |
| MSH-4      | Sending Facility                      |                                    |                |
| MSH-4.1    | Namespace ID                          | NISTIISFAC                         |                |
| MSH-4.2    | Universal ID                          |                                    |                |
| MSH-4.3    | Universal ID Type                     |                                    |                |
| MSH-5      | Receiving Application                 |                                    |                |
| MSH-5.1    | Namespace ID                          | NISTEHRAPP                         |                |
| MSH-5.2    | Universal ID                          |                                    |                |
| MSH-5.3    | Universal ID Type                     |                                    |                |
| MSH-6      | Receiving Facility                    |                                    |                |
| MSH-6.1    | Namespace ID                          | NISTEHRFAC                         |                |
| MSH-6.2    | Universal ID                          |                                    |                |
| MSH-6.3    | Universal ID Type                     |                                    |                |
| MSH-7      | Date/Time Of Message                  |                                    |                |
| MSH-7.1    | Time                                  | 20150625115038.044-0500            |                |
| MSH-9      | Message Type                          |                                    |                |
| MSH-9.1    | Message Code                          | ACK                                |                |
| MSH-9.2    | Trigger Event                         | V04                                |                |
| MSH-9.3    | Message Structure                     | ACK                                |                |
| MSH-10     | Message Control ID                    | NIST-IZ-AD-<br>9.2 Receive ACK Z23 |                |
| MSH-11     | Processing ID                         |                                    |                |
| MSH-11.1   | Processing ID                         | P                                  |                |
| MSH-12     | Version ID                            |                                    |                |
| MSH-12.1   | Version ID                            | 2.5.1                              |                |
| MSH-15     | Accept Acknowledgment Type            | NE                                 |                |
| MSH-16     | Application Acknowledgment Type       | NE                                 |                |
| MSH-21     | Message Profile Identifier            |                                    |                |
| MSH-21.1   | Entity Identifier                     | Z23                                |                |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                          |                |
| MSH-21.3   | Universal ID                          |                                    |                |
| MSH-21.4   | Universal ID Type                     |                                    |                |
| MSH-22     | Sending Responsible Organization      |                                    |                |
| MSH-22.1   | Organization Name                     | NISTIISFAC                         |                |
| MSH-22.6   | Assigning Authority                   |                                    |                |
| MSH-22.6.1 | Namespace ID                          |                                    |                |
| MSH-22.6.2 | Universal ID                          |                                    |                |
| MSH-22.6.3 | Universal ID Type                     |                                    |                |
| MSH-22.7   | Identifier Type Code                  |                                    |                |
| MSH-22.10  | Organization Identifier               |                                    |                |
| MSH-23     | Receiving Responsible<br>Organization |                                    |                |
| MSH-23.1   | Organization Name                     | NISTEHRFAC                         |                |
| MSH-23.6   | Assigning Authority                   |                                    |                |
| MSH-23.6.1 | Namespace ID                          |                                    |                |
| MSH-23.6.2 | Universal ID                          |                                    |                |
| MSH-23.6.3 | Universal ID Type                     |                                    |                |
|            | Identifier Type Code                  |                                    |                |
| MSH-23.7   |                                       |                                    |                |
| MSH-23.10  | Organization Identifier               |                                    |                |

# MSA: Message Acknowledgment

| Location | Data Element        | Data                        | Categorization |
|----------|---------------------|-----------------------------|----------------|
| MSA-1    | Acknowledgment Code | AE                          |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-9.1_Send_V04_Z22 |                |

# ERR[\*] -

# ERR : Error

| Location | <b>Data Element</b>    | Data   | Categorization |
|----------|------------------------|--|----------------|
| ERR-2    | Error Location         |  |                |
| ERR-2.1  | Segment ID             | RXR  |                |
| ERR-2.2  | Segment Sequence       | 1  |                |
| ERR-2.3  | Field Position         | 2  |                |
| ERR-2.4  | Field Repetition       | 1  |                |
| ERR-2.5  | Component Number       | 1  |                |
| ERR-2.6  | Sub-Component Number   |  |                |
| ERR-3    | HL7 Error Code         |  |                |
| ERR-3.1  | Identifier             | 999  |                |
| ERR-3.2  | Text                   | Application error  |                |
| ERR-3.3  | Name of Coding System  | HL70357  |                |
| ERR-4    | Severity               | W  |                |
| ERR-5    | Application Error Code |  |                |
| ERR-5.1  | Identifier             | 5  |                |
| ERR-5.2  | Text                   | Table value not found  |                |
| ERR-5.3  | Name of Coding System  | HL70533  |                |
| ERR-8    | User Message           | Administration Site not recognized - site data will not be saved |                |

# ERR : Error -

| Location | Data Element           | Data   | Categorization |
|----------|------------------------|--|----------------|
| ERR-2    | Error Location         |  |                |
| ERR-2.1  | Segment ID             | RXR  |                |
| ERR-2.2  | Segment Sequence       | 2  |                |
| ERR-2.3  | Field Position         | 2  |                |
| ERR-2.4  | Field Repetition       | 1  |                |
| ERR-2.5  | Component Number       | 1  |                |
| ERR-2.6  | Sub-Component Number   |  |                |
| ERR-3    | HL7 Error Code         |  |                |
| ERR-3.1  | Identifier             | 999  |                |
| ERR-3.2  | Text                   | Application error  |                |
| ERR-3.3  | Name of Coding System  | HL70357  |                |
| ERR-4    | Severity               | W  |                |
| ERR-5    | Application Error Code |  |                |
| ERR-5.1  | Identifier             | 5  |                |
| ERR-5.2  | Text                   | Table value not found  |                |
| ERR-5.3  | Name of Coding System  | HL70533  |                |
| ERR-8    | User Message           | Administration Site not recognized - site data will not be saved |                |

# ———Patient Information————

| Element   | Data |
|---|------|
| This information will be automatically supplied by the System |      |

# 1.10. IZ-AD-10 Historical IIS-SysError

Historical administration resulting in system error

# **Test Story**

# Description

A patient is seen at a clinic. A historical vaccination is recorded but the IIS is unable to process the administration message, rejects it and returns a fatal error in the acknowledgement message.

#### **Comments**

The test case simulates the IIS issuing an acknowledgement error due to an internal error even though the message is valid.

# **Pre Condition**

No PreCondition

# **Post Condition**

The returned error must be visible in the EHR.

# **Test Objectives**

This test case assesses the ability of the EHR to accept an acknowledgement message with a fatal system error being returned by the IIS.

# **Evaluation Criteria**

Administered Message: Validation Report with no Errors

Acknowledgement Message: An indication of a error (See Juror Document)

# **Notes for Testers**

No Note

# 1.10.1. IZ-AD-10.1 Send V04 Z22

Test Step Type: SUT INITIATOR

Tests the ability to create a valid VXU^V04 message

### **Test Story**

### Description

A 68 year old male, Manuel Diego Vasquez, comes to a clinic for a physical. A clinic staff member collects basic patient demographic information including name, date of birth and sex. He declines further recall and reminder notifications. The patient reports that he received a pneumococcal vaccination at a local pharmacy on October 21, 2014. The clinic staff determine that no further vaccinations are required. A clinician, Lily Jackson (ID 7824) enters the historical data into the EHR and transmits it to the IIS.

# that no further vaccinations are required. A clinician, Lily Jackson (ID 7824) enters the historical data into the EHR and transmits it to the IIS. Comments No Comments Pre Condition No PreCondition No PostCondition Test Objectives Evaluation Criteria Message Validation Report. Notes for Testers No Note

### **Message Contents**

MSH : Message Header

| Location   | Data Element                     | Data                             | Categorization               |
|------------|----------------------------------|----------------------------------|------------------------------|
| MSH-1      | Field Separator                  | i e                              | Value-Profile Fixed          |
| MSH-2      | Encoding Characters              | ^~\&                             | Value-Profile Fixed          |
| MSH-3      | Sending Application              |                                  |                              |
| MSH-3.1    | Namespace ID                     | NISTEHRAPP                       | Presence-Configuration       |
| MSH-3.2    | Universal ID                     |                                  | Indifferent                  |
| MSH-3.3    | Universal ID Type                |                                  | Indifferent                  |
| MSH-4      | Sending Facility                 |                                  |                              |
| MSH-4.1    | Namespace ID                     | NISTEHRFAC                       | Presence-Configuration       |
| MSH-4.2    | Universal ID                     |                                  | Indifferent                  |
| MSH-4.3    | Universal ID Type                |                                  | Indifferent                  |
| MSH-5      | Receiving Application            |                                  |                              |
| MSH-5.1    | Namespace ID                     | NISTIISAPP                       | Presence-Configuration       |
| MSH-5.2    | Universal ID                     | THE THE T                        | Indifferent                  |
| MSH-5.3    | Universal ID Type                |                                  | Indifferent                  |
| MSH-6      | Receiving Facility               |                                  |                              |
| MSH-6.1    | Namespace ID                     | NISTIISFAC                       | Presence-Configuration       |
| MSH-6.2    | Universal ID                     | No Filo Filo                     | Indifferent                  |
| MSH-6.3    | Universal ID Type                |                                  | Indifferent                  |
| MSH-7      | Date/Time Of Message             |                                  | And it vient                 |
| MSH-7.1    | Time                             | 20150625072816.601-0500          | Presence-System Generated    |
| MSH-9      | Message Type                     | 20130023072810.001-0300          | Tresence-System Generated    |
| MSH-9.1    | Message Code                     | VXU                              | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                    | V04                              | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                | VXU_V04                          | Value-Profile Fixed          |
| MSH-10     | Message Control ID               | NIST-IZ-AD-<br>10.1_Send_V04_Z22 | Presence-System Generated    |
| MSH-11     | Processing ID                    | 10.1_Schu_v0+_E22                |                              |
| MSH-11.1   | Processing ID                    | P                                | Presence-Content Indifferent |
| MSH-12     | Version ID                       |                                  | resence-content manterent    |
| MSH-12.1   | Version ID                       | 2.5.1                            | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type       | ER                               | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type  | AL                               | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier       |                                  |                              |
| MSH-21.1   | Entity Identifier                | Z22                              | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                     | CDCPHINVS                        | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                     | CDCTIMITYS                       | Indifferent                  |
| MSH-21.4   | Universal ID Type                |                                  | Indifferent                  |
| MSH-22     | Sending Responsible Organization |                                  | Indifferent                  |
| MSH-22.1   | Organization Name                | NISTEHRFAC                       | Presence-Configuration       |
| MSH-22.6   | Assigning Authority              | NISTERIKFAC                      | riesence-Configuration       |
| MSH-22.6.1 | Namespace ID                     |                                  | Indifferent                  |
| MSH-22.6.2 | Universal ID                     |                                  | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                |                                  | Indifferent                  |
| MSH-22.7   | Identifier Type Code             |                                  | Indifferent                  |
| MSH-22.10  | Organization Identifier          |                                  | Indifferent                  |
|            | Receiving Responsible            |                                  | maniciont                    |
| MSH-23     | Organization                     | NICTUCEAC                        | Decree Confirmation          |
| MSH-23.1   | Organization Name                | NISTIISFAC                       | Presence-Configuration       |
| MSH-23.6   | Assigning Authority              |                                  | I. 1:00                      |
| MSH-23.6.1 | Namespace ID                     |                                  | Indifferent                  |
| MSH-23.6.2 | Universal ID                     |                                  | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                |                                  | Indifferent                  |
| MSH-23.7   | Identifier Type Code             |                                  | Indifferent                  |
| MSH-23.10  | Organization Identifier          |                                  | Indifferent                  |

PID: Patient Identification

| Location  | Data Element  | Data                   | Categorization  |
|---|---|------------------------|---|
| PID-1   | Set ID - PID  | 1                      | Value-Profile Fixed   |
| PID-3   | Patient Identifier List   |                        |   |
| PID-3.1   | ID Number   | 21142                  | Presence-Content Indifferent  |
| PID-3.4   | Assigning Authority   |                        |   |
| PID-3.4.1   | Namespace ID  | NIST-MPI-1             | Presence-Content Indifferent  |
| PID-3.4.2   | Universal ID  |                        | Indifferent   |
| PID-3.4.3   | Universal ID Type   |                        | Indifferent   |
| PID-3.5   | Identifier Type Code  | MR                     | Value-Test Case Fixed   |
| PID-5   | Patient Name  |                        |   |
| PID-5.1   | Family Name   |                        |   |
| PID-5.1.1   | Surname   | Vasquez                | Presence-Content Indifferent  |
| PID-5.2   | Given Name  | Manuel                 | Presence-Content Indifferent  |
| PID-5.3   | Second and Further Given<br>Names or Initials Thereof                                   | Diego                  | Presence-Content Indifferent  |
| PID-5.7   | Name Type Code  | L                      | Value-Test Case Fixed   |
| PID-6   | Mother's Maiden Name  |                        |   |
| PID-6.1   | Family Name   |                        |   |
| PID-6.1.1   | Surname   |                        | Indifferent   |
| PID-6.7   | Name Type Code  |                        | Indifferent   |
| PID-7   | Date/Time of Birth  |                        |   |
| PID-7.1   | Time  | 19470215               | Presence-Content Indifferent  |
| PID-8   | Administrative Sex  | M                      | Value-Test Case Fixed   |
| PID-10  | Race  |                        | varue-rest case rixed   |
| PID-10.1  | Identifier  | 2106-3                 | Value-Test Case Fixed   |
| PID-10.1  | Text  | White                  | Presence-Test Case Proper   |
| PID-10.2  |   | CDCREC                 | Value-Profile Fixed   |
| PID-10.3  | Name of Coding System  Patient Address  | CDCREC                 | value-Florine Fixed   |
|   |   |                        |   |
| PID-11.1  | Street Address  | 205 P. 1. 4            | D G I 1'00  |
| PID-11.1.1  | Street or Mailing Address   | 227 Park Ave           | Presence-Content Indifferent  |
| PID-11.2  | Other Designation   | I_                     | Indifferent   |
| PID-11.3  | City  | Bozeman                | Presence-Content Indifferent  |
| PID-11.4  | State or Province   | MT                     | Presence-Content Indifferent  |
| PID-11.5  | Zip or Postal Code  | 59715                  | Presence-Content Indifferent  |
| PID-11.6  | Country   | USA                    | Presence-Content Indifferent  |
| PID-11.7  | Address Type  | P                      | Value-Test Case Fixed List  |
| PID-13[1]   | Phone Number - Home   |                        |   |
| PID-13[1].2   | Telecommunication Use Code  | PRN                    | Value-Test Case Fixed   |
| PID-13[1].3   | Telecommunication Equipment Type  | РН                     | Value-Test Case Fixed   |
| PID-13[1].4   | Email Address   |                        | NonPresence   |
| PID-13[1].6   | Area/City Code  | 406                    | Presence-Content Indifferent  |
| PID-13[1].7   | Local Number  | 5555815                | Presence-Content Indifferent  |
| PID-13[2]   | Phone Number - Home   |                        |   |
|   |   |                        |   |
| PID-13[2].2   | Telecommunication Use Code  | NET                    | Value-Test Case Fixed   |
|   | Telecommunication Use Code Telecommunication Equipment Type                             | NET                    | Value-Test Case Fixed Indifferent                                   |
| PID-13[2].2   | Telecommunication Equipment   | NET                    |   |
| PID-13[2].2<br>PID-13[2].3  | Telecommunication Equipment<br>Type   |                        | Indifferent   |
| PID-13[2].2<br>PID-13[2].3<br>PID-13[2].4   | Telecommunication Equipment Type Email Address  |                        | Indifferent  Presence-Content Indifferent                           |
| PID-13[2].2<br>PID-13[2].3<br>PID-13[2].4<br>PID-13[2].6<br>PID-13[2].7           | Telecommunication Equipment Type Email Address Area/City Code                           |                        | Indifferent  Presence-Content Indifferent NonPresence               |
| PID-13[2].2<br>PID-13[2].3<br>PID-13[2].4<br>PID-13[2].6                          | Telecommunication Equipment Type Email Address Area/City Code Local Number              |                        | Indifferent  Presence-Content Indifferent NonPresence               |
| PID-13[2].2<br>PID-13[2].3<br>PID-13[2].4<br>PID-13[2].6<br>PID-13[2].7<br>PID-22 | Telecommunication Equipment Type Email Address Area/City Code Local Number Ethnic Group | Manuel.Vasquez@isp.com | Indifferent  Presence-Content Indifferent  NonPresence  NonPresence |

| PID-24<br>PID-25 | Multiple Birth Indicator<br>Birth Order | N<br>1 | Value-Test Case Fixed<br>Indifferent |
|------------------|---|--------|--------------------------------------|
| PID-29           | Patient Death Date and Time             |        |                                      |
| PID-29.1         | Time                                    |        | NonPresence                          |
| PID-30           | Patient Death Indicator                 | N      | Value-Test Case Fixed                |

PD1 : Patient Additional Demographic —

| Location | Data Element                                   | Data               | Categorization               |
|----------|--|--------------------|------------------------------|
| PD1-11   | Publicity Code                                 |                    |                              |
| PD1-11.1 | Identifier                                     | 01                 | Value-Test Case Fixed        |
| PD1-11.2 | Text   | No reminder/recall | Presence-Test Case Proper    |
| PD1-11.3 | Name of Coding System                          | HL70215            | Value-Profile Fixed          |
| PD1-12   | Protection Indicator                           | N                  | Value-Test Case Fixed        |
| PD1-13   | Protection Indicator Effective Date            | 20150625           | Presence-Content Indifferent |
| PD1-16   | Immunization Registry Status                   | A                  | Value-Test Case Fixed        |
| PD1-17   | Immunization Registry Status<br>Effective Date | 20150625           | Presence-Content Indifferent |
| PD1-18   | Publicity Code Effective Date                  | 20150625           | Presence-Content Indifferent |

### ORC : Common Order

| Location   | Data Element  | Data            | Categorization               |
|------------|---|-----------------|------------------------------|
| ORC-1      | Order Control   | RE              | Value-Profile Fixed          |
| ORC-2      | Placer Order Number                                   |                 |                              |
| ORC-2.1    | Entity Identifier                                     |                 | Indifferent                  |
| ORC-2.2    | Namespace ID  |                 | Indifferent                  |
| ORC-2.3    | Universal ID  |                 | Indifferent                  |
| ORC-2.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-3      | Filler Order Number                                   |                 |                              |
| ORC-3.1    | Entity Identifier                                     | 31165           | Presence-Content Indifferent |
| ORC-3.2    | Namespace ID  | NIST-AA-IZ-2    | Presence-Content Indifferent |
| ORC-3.3    | Universal ID  |                 | Indifferent                  |
| ORC-3.4    | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10     | Entered By  |                 |                              |
| ORC-10.1   | ID Number   | 7824            | Presence-Content Indifferent |
| ORC-10.2   | Family Name   |                 |                              |
| ORC-10.2.1 | Surname   | Jackson         | Presence-Content Indifferent |
| ORC-10.3   | Given Name  | Lily            | Presence-Content Indifferent |
| ORC-10.4   | Second and Further Given<br>Names or Initials Thereof | Suzanne         | Presence-Content Indifferent |
| ORC-10.9   | Assigning Authority                                   |                 |                              |
| ORC-10.9.1 | Namespace ID  | NIST-PI-1       | Presence-Content Indifferent |
| ORC-10.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-10.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-10.10  | Name Type Code  | L               | Value-Test Case Fixed        |
| ORC-10.13  | Identifier Type Code                                  | PRN             | Value-Test Case Fixed List   |
| ORC-12     | Ordering Provider                                     |                 |                              |
| ORC-12.1   | ID Number   |                 | Indifferent                  |
| ORC-12.2   | Family Name   |                 |                              |
| ORC-12.2.1 | Surname   |                 | Indifferent                  |
| ORC-12.3   | Given Name  |                 | Indifferent                  |
| ORC-12.4   | Second and Further Given<br>Names or Initials Thereof |                 | Indifferent                  |
| ORC-12.9   | Assigning Authority                                   |                 |                              |
| ORC-12.9.1 | Namespace ID  |                 | Indifferent                  |
| ORC-12.9.2 | Universal ID  |                 | Indifferent                  |
| ORC-12.9.3 | Universal ID Type                                     |                 | Indifferent                  |
| ORC-12.10  | Name Type Code  |                 | Indifferent                  |
| ORC-12.13  | Identifier Type Code                                  |                 | Indifferent                  |
| ORC-17     | Entering Organization                                 |                 |                              |
| ORC-17.1   | Identifier  | NISTEHRFAC      | Presence-Content Indifferent |
| ORC-17.2   | Text  | NISTEHRFacility | Presence-Content Indifferent |
| ORC-17.3   | Name of Coding System                                 | HL70362         | Value-Profile Fixed          |

| Location   | Data Element  | Data   | Categorization               |
|------------|---|--|------------------------------|
| RXA-1      | Give Sub-ID Counter                                   | 0  | Value-Profile Fixed          |
| RXA-2      | Administration Sub-ID Counter                         | 1  | Value-Profile Fixed          |
| RXA-3      | Date/Time Start of Administration                     | ı  |                              |
| RXA-3.1    | Time  | 20141021   | Presence-Content Indifferent |
| RXA-5      | Administered Code                                     |  |                              |
| RXA-5.1    | Identifier  | 152  | Value-Test Case Fixed        |
| RXA-5.2    | Text  | Pneumococcal Conjugate,<br>unspecified formulation | Presence-Test Case Proper    |
| RXA-5.3    | Name of Coding System                                 | CVX  | Value-Profile Fixed          |
| RXA-6      | Administered Amount                                   | 999  | Presence-Test Case Proper    |
| RXA-7      | Administered Units                                    |  |                              |
| RXA-7.1    | Identifier  |  | Indifferent                  |
| RXA-7.2    | Text  |  | Indifferent                  |
| RXA-7.3    | Name of Coding System                                 |  | Indifferent                  |
| RXA-9      | Administration Notes                                  |  |                              |
| RXA-9.1    | Identifier  | 01   | Value-Test Case Fixed        |
| RXA-9.2    | Text  | Historical Administration                          | Presence-Test Case Proper    |
| RXA-9.3    | Name of Coding System                                 | NIP001   | Value-Profile Fixed          |
| RXA-10     | Administering Provider                                |  |                              |
| RXA-10.1   | ID Number   |  | Indifferent                  |
| RXA-10.2   | Family Name   |  |                              |
| RXA-10.2.1 | Surname   |  | Indifferent                  |
| RXA-10.3   | Given Name  |  | Indifferent                  |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |  | Indifferent                  |
| RXA-10.9   | Assigning Authority                                   |  |                              |
| RXA-10.9.1 | Namespace ID  |  | Indifferent                  |
| RXA-10.9.2 | Universal ID  |  | Indifferent                  |
| RXA-10.9.3 | Universal ID Type                                     |  | Indifferent                  |
| RXA-10.10  | Name Type Code  |  | Indifferent                  |
| RXA-10.13  | Identifier Type Code                                  |  | Indifferent                  |
| RXA-11     | Administered-at Location                              |  |                              |
| RXA-11.4   | Facility  |  |                              |
| RXA-11.4.1 | Namespace ID  |  | Indifferent                  |
| RXA-11.4.2 | Universal ID  |  | Indifferent                  |
| RXA-11.4.3 | Universal ID Type                                     |  | Indifferent                  |
| RXA-15     | Substance Lot Number                                  |  | Indifferent                  |
| RXA-16     | Substance Expiration Date                             |  |                              |
| RXA-16.1   | Time  |  | Indifferent                  |
| RXA-17     | Substance Manufacturer Name                           |  |                              |
| RXA-17.1   | Identifier  |  | Indifferent                  |
| RXA-17.2   | Text  |  | Indifferent                  |
| RXA-17.3   | Name of Coding System                                 |  | Indifferent                  |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |  |                              |
| RXA-18.1   | Identifier  |  | NonPresence                  |
| RXA-18.2   | Text  |  | NonPresence                  |
| RXA-18.3   | Name of Coding System                                 |  | NonPresence                  |
| RXA-20     | Completion Status                                     | СР   | Value-Test Case Fixed        |
| RXA-21     | Action Code - RXA                                     | A  | Value-Test Case Fixed        |

# -Patient Information -

| Element                  | Data                              |
|--------------------------|-----------------------------------|
| Patient Name             | Manuel Diego Vasquez              |
| Mother's Maiden Name     |                                   |
| ID Number                | 21142                             |
| Date/Time of Birth       | 02/15/1947                        |
| Administrative Sex       | Male                              |
| Patient Address          | 227 Park Ave Bozeman MT 59715 USA |
| Local Number             | (406)555-5815                     |
| Email                    | Manuel.Vasquez@isp.com            |
| Race                     | White                             |
| Ethnic Group             | Hispanic or Latino                |
| Multiple Birth Indicator | No                                |
| Birth Order              | 1                                 |

# -Immunization Registry Information -

| Element                                     | Data               |
|---|--------------------|
| Immunization Registry Status                | Active             |
| Immunization Registry Status Effective Date | 06/25/2015         |
| Publicity Code                              | No reminder/recall |
| Publicity Code Effective Date               | 06/25/2015         |
| Protection Indicator                        | No                 |
| Protection Indicator Effective Date         | 06/25/2015         |

# -Vaccine Administration Information -

| Element                            | Data  |
|------------------------------------|---|
| Administered Vaccine               | Pneumococcal Conjugate, unspecified formulation |
| Date/Time Start of Administration  | 10/21/2014                                      |
| Administered Amount                | 999   |
| Administered Units                 |   |
| Administration Notes               | Historical Administration                       |
| Administering Provider             |   |
| Substance Lot Number               |   |
| Substance Expiration Date          |   |
| Substance Manufacturer Name        |   |
| Substance/Treatment Refusal Reason |   |
| Completion Status                  | Complete  |
| Action Code                        | Add   |
| Route                              |   |
| Administration Site                |   |
| Entering Organization              | NISTEHRFacility                                 |
| Entered By                         | Lily Jackson                                    |
| Ordered By                         |   |

# 1.10.2. IZ-AD-10.2\_Receive\_ACK\_Z23

Test Step Type: TA\_RESPONDER

Tests the ability to consume an ACK message containing a system error

### **Test Story**

### Description

Due to an error in the IIS software, the IIS is unable to recognize the HL7 version ID sent in MSH-12 even though it is valid. The acknowledgement message returned contains an error for an unsupported version ID.

### Comments

No Comments

### Pre Condition

A VXU message is generated by the EHR.

### **Post Condition**

No PostCondition

### **Test Objectives**

Support for accepting an acknowledgement message with a fatal system error being returned by the IIS and to display some notification to an end user.

### **Evaluation Criteria**

The error returned in the acknowledgement message is visible in the system responsible for the content of the administration message.

### **Notes for Testers**

**Important note regarding the MSH-10 and MSA-2:** The NIST acknowledgment message is predefined and is based on the VXU message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the ACK message. The NIST ACK test message can be modified such that MSA-2 matches MSH-10 of the VXU message generated by the system-under test.

### **Message Contents**

MSH : Message Header

| Location   | Data Element                       | Data                                | Categorization |
|------------|------------------------------------|-------------------------------------|----------------|
| MSH-1      | Field Separator                    |                                     |                |
| MSH-2      | Encoding Characters                | ^~\&                                |                |
| MSH-3      | Sending Application                |                                     |                |
| MSH-3.1    | Namespace ID                       | NISTIISAPP                          |                |
| MSH-3.2    | Universal ID                       |                                     |                |
| MSH-3.3    | Universal ID Type                  |                                     |                |
| MSH-4      | Sending Facility                   |                                     |                |
| MSH-4.1    | Namespace ID                       | NISTIISFAC                          |                |
| MSH-4.2    | Universal ID                       |                                     |                |
| MSH-4.3    | Universal ID Type                  |                                     |                |
| MSH-5      | Receiving Application              |                                     |                |
| MSH-5.1    | Namespace ID                       | NISTEHRAPP                          |                |
| MSH-5.2    | Universal ID                       |                                     |                |
| MSH-5.3    | Universal ID Type                  |                                     |                |
| MSH-6      | Receiving Facility                 |                                     |                |
| MSH-6.1    | Namespace ID                       | NISTEHRFAC                          |                |
| MSH-6.2    | Universal ID                       |                                     |                |
| MSH-6.3    | Universal ID Type                  |                                     |                |
| MSH-7      | Date/Time Of Message               |                                     |                |
| MSH-7.1    | Time                               | 20150625072816.602-0500             |                |
| MSH-9      | Message Type                       |                                     |                |
| MSH-9.1    | Message Code                       | ACK                                 |                |
| MSH-9.2    | Trigger Event                      | V04                                 |                |
| MSH-9.3    | Message Structure                  | ACK                                 |                |
| MSH-10     | Message Control ID                 | NIST-IZ-AD-<br>10.2_Receive_ACK_Z23 |                |
| MSH-11     | Processing ID                      | 10.2_Receive_Renc_E25               |                |
| MSH-11.1   | Processing ID                      | P                                   |                |
| MSH-12     | Version ID                         |                                     |                |
| MSH-12.1   | Version ID                         | 2.5.1                               |                |
| MSH-15     | Accept Acknowledgment Type         | NE                                  |                |
| MSH-16     | Application Acknowledgment Type    | NE                                  |                |
| MSH-21     | Message Profile Identifier         |                                     |                |
| MSH-21.1   | Entity Identifier                  | Z23                                 |                |
| MSH-21.2   | Namespace ID                       | CDCPHINVS                           |                |
| MSH-21.3   | Universal ID                       |                                     |                |
| MSH-21.4   | Universal ID Type                  |                                     |                |
| MSH-22     | Sending Responsible Organization   |                                     |                |
| MSH-22.1   | Organization Name                  | NISTIISFAC                          |                |
| MSH-22.6   | Assigning Authority                |                                     |                |
| MSH-22.6.1 | Namespace ID                       |                                     |                |
| MSH-22.6.2 | Universal ID                       |                                     |                |
| MSH-22.6.3 | Universal ID Type                  |                                     |                |
| MSH-22.7   | Identifier Type Code               |                                     |                |
| MSH-22.10  | Organization Identifier            |                                     |                |
| MSH-23     | Receiving Responsible Organization |                                     |                |
| MSH-23.1   | Organization Name                  | NISTEHRFAC                          |                |
| MSH-23.6   | Assigning Authority                |                                     |                |
| MSH-23.6.1 | Namespace ID                       |                                     |                |
| MSH-23.6.2 | Universal ID                       |                                     |                |
| MSH-23.6.3 | Universal ID Type                  |                                     |                |
| MSH-23.7   | Identifier Type Code               |                                     |                |
|            |                                    |                                     |                |
| MSH-23.10  | Organization Identifier            |                                     |                |

### MSA: Message Acknowledgment

| Location | Data Element        | Data                             | Categorization |
|----------|---------------------|----------------------------------|----------------|
| MSA-1    | Acknowledgment Code | AR                               |                |
| MSA-2    | Message Control ID  | NIST-IZ-AD-<br>10.1_Send_V04_Z22 |                |

ERR : Error =

| Location | <b>Data Element</b>    | Data  | Categorization |
|----------|------------------------|---|----------------|
| ERR-2    | Error Location         |   |                |
| ERR-2.1  | Segment ID             | MSH   |                |
| ERR-2.2  | Segment Sequence       | 1   |                |
| ERR-2.3  | Field Position         | 12  |                |
| ERR-2.4  | Field Repetition       | 1   |                |
| ERR-2.5  | Component Number       | 1   |                |
| ERR-2.6  | Sub-Component Number   |   |                |
| ERR-3    | HL7 Error Code         |   |                |
| ERR-3.1  | Identifier             | 203   |                |
| ERR-3.2  | Text                   | Unsupported Version ID                          |                |
| ERR-3.3  | Name of Coding System  | HL70357   |                |
| ERR-4    | Severity               | Е   |                |
| ERR-5    | Application Error Code |   |                |
| ERR-5.1  | Identifier             |   |                |
| ERR-5.2  | Text                   |   |                |
| ERR-5.3  | Name of Coding System  |   |                |
| ERR-8    | User Message           | Version ID not recognized -<br>message rejected |                |

# **Test Data Specification**

# -Patient Information

| Element  | Data   |
|--|--------|
| This information will be automatically supplied by the | System |

# 2. Evaluated History and Forecast Group

### Test the EHR-S capability to:

- (1) To create well-formed queries
- (2) Accept the response messages

The possibilities include:

- (1) evaluated history and forecast
- (2) too many patients found, or
- (3) no patients found.

A juror document (inspection check list) is provided that indicates the content that is expected to be displayed.

(3) Display of evaluated history and forecast

### **Test Cases consists of 2 steps:**

- (1) create query messages based on Immunization Messaging Standard (Z44 Profile) and specific Test Data, and
- (2) receive (Z42 Profile) messages and display evaluated history and forecast OR receive (Z33 Profile) and display too many patients found or no patients found.

# 2.1. IZ-QR-1\_Query\_Child

Query for a child with immunization history. A response message with evaluated history and forecast is returned

### **Test Story**

### **Description**

A male child patient, Cameron A. Fairchild, is brought to the clinic for an annual visit. A staff person locates his medical record in the EHR-S. The staff person confirms demographic information, including address. The staff person triggers a request to the IIS for an evaluated history and forecast for the child. The IIS performs a search for Cameron A. Fairchild and finds one high-confidence match. The IIS generates an evaluated history and forecast for Cameron and returns this to the EHR-S. One dose of vaccine was not administrated at the correct age and is marked as not valid. The EHR-S displays the evaluated history and forecast, including the not valid dose.

### **Comments**

No Comments

### Pre Condition

Person exists in the querying system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have existing immunization events in their EHR.

Person does have an immunization history in the IIS (simulated by the NIST Test Tool).

### **Post Condition**

The clinician is able to view the evaluated history and forecast from the IIS. There is no obligation to incorporate the data into the EHR-S or maintain the displayed evaluated history and forecast.

### **Test Objectives**

Evaluates EHR-S ability to create a well formed query for a child. Evaluates EHR-S ability to accept and display a response with evaluated history and forecast for that person.

### **Evaluation Criteria**

Tester inspects patient record; confirms that the patients does not have existing immunization events.

Confirms valid query message using Message Validation Report.

Confirms valid receipt and display of response message using the Juror Document.

### **Notes for Testers**

The NIST tool is simulating a response from the IIS.

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

# 2.1.1. IZ-QR-1.1 Query Q11 Z44

Test Step Type: SUT INITIATOR

Query requests an evaluated history and forecast for a young adult

### **Test Story**

### **Description**

A male child patient, Cameron A. Fairchild, is brought to the clinic for an annual visit. A staff person locates his medical record in the EHR-S. The staff person confirms demographic information, including address. The Staff person triggers a request to the IIS for an evaluated history and forecast for the child.

### **Comments**

Most of the test data is categorized as Test Case Fixed. It is important that the data is entered into the querying system as specified to enable linking the response message to the patient record.

### **Pre Condition**

Person exists in the system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have existing immunization events in their EHR.

Person does have an immunization history in the IIS.

### **Post Condition**

The IIS return an evaluated history and forecast for the person.

### **Test Objectives**

Test the ability of the system to successfully create a query message based on the given test data.

### **Evaluation Criteria**

Tester inspects patient record; confirms that the patients does not have existing immunization events.

Confirms valid query message using Message Validation Report.

### **Notes for Testers**

If the HIT Module being tested is unable to control the Patient ID Number value that it creates (1) QPD-3.1 in the Query message can be populated with a different value than the one provided in the test data; (2) the Tester can ignore the associated error notification generated by the Tool; and (3) the Response message also must be modified accordingly.

### **Message Contents**

MSH : Message Header

| Field Separator Encoding Characters |  | Value-Profile Fixed   |
|-------------------------------------|--|---|
|                                     | A \ 0  |   |
|                                     | ^~\&   | Value-Profile Fixed   |
| Sending Application                 |  |   |
| Namespace ID                        | NISTEHRAPP   | Presence-Configuration  |
| Universal ID                        |  | Indifferent   |
| Universal ID Type                   |  | Indifferent   |
|                                     |  |   |
|                                     | NISTEHRFAC   | Presence-Configuration  |
| -                                   |  | Indifferent   |
| -                                   |  | Indifferent   |
|                                     |  |   |
|                                     | NISTIISAPP   | Presence-Configuration  |
|                                     | 1.00   | Indifferent   |
|                                     |  | Indifferent   |
|                                     |  |   |
|                                     | NISTIISFAC   | Presence-Configuration  |
| •                                   |  | Indifferent   |
|                                     |  | Indifferent   |
|                                     |  | Indifferent   |
|                                     | 20141031145233 0500  | Presence-System Generated   |
|                                     | 20141031143233-0300  | Treschee-System Generated   |
|                                     | ODD  | Value-Profile Fixed   |
|                                     | 1  | Value-Profile Fixed   |
|                                     | 1  | 1   |
|                                     |  | Value-Profile Fixed   |
| -                                   | NIST-IZ-QR-1.1_Query_Q11_Z44   | Presence-System Generated   |
|                                     |  | D C I 1100  |
|                                     | P  | Presence-Content Indifferent  |
|                                     | la s s   |   |
|                                     |  | Value-Profile Fixed   |
|                                     | ER   | Value-Profile Fixed   |
| Туре                                | AL   | Value-Profile Fixed   |
| Message Profile Identifier          |  |   |
| Entity Identifier                   | Z44  | Value-Profile Fixed   |
| Namespace ID                        | CDCPHINVS  | Value-Profile Fixed   |
| Universal ID                        |  | Indifferent   |
| Universal ID Type                   |  | Indifferent   |
| Sending Responsible Organization    | 1  |   |
| Organization Name                   | NISTEHRFAC   | Presence-Configuration  |
| Assigning Authority                 |  |   |
| Namespace ID                        | NIST-AA-1  | Presence-Configuration  |
| Universal ID                        |  | Indifferent   |
| Universal ID Type                   |  | Indifferent   |
| Identifier Type Code                | XX   | Value-Test Case Fixed   |
| Organization Identifier             | 100-6482   | Presence-Configuration  |
| Receiving Responsible Organization  |  |   |
| Organization Name                   | NISTIISFAC   | Presence-Configuration  |
| Assigning Authority                 |  |   |
| Namespace ID                        | NIST-AA-1  | Presence-Configuration  |
| Universal ID                        |  | Indifferent   |
| -                                   |  | Indifferent   |
|                                     | XX   | Value-Test Case Fixed   |
|                                     | -  | Presence-Configuration  |
|                                     | Sending Facility  Namespace ID  Universal ID  Universal ID Type  Receiving Application  Namespace ID  Universal ID  Universal ID  Universal ID Type  Receiving Facility  Namespace ID  Universal ID  Universal ID Type  Date/Time Of Message  Time  Message Type  Message Code  Trigger Event  Message Structure  Message Structure  Message Control ID  Processing ID  Version ID  Version ID  Accept Acknowledgment Type  Application Acknowledgment Type  Message Profile Identifier  Entity Identifier  Namespace ID  Universal ID Type  Sending Responsible Organization  Organization Name  Assigning Authority  Namespace ID  Universal ID Type  Identifier Type Code  Organization Identifier  Receiving Responsible  Organization  Organization Name  Assigning Authority  Namespace ID  Universal ID Type  Identifier Type Code  Organization Identifier | Sending Facility  Namespace ID  Universal ID  Universal ID Type  Receiving Application  Namespace ID  Universal ID  Outer Ime  Date/Time Of Message  Time  20141031145233-0500  Message Type  Message Code  QBP  Trigger Event  Q11  Message Structure  QBP Q11  Message Structure  QBP Q11  Message Control ID  NIST-IZ-QR-1.1_Query_Q11_Z44  Processing ID  Processing ID  Processing ID  Processing ID  Accept Acknowledgment Type  Application Acknowledgment Type  Message Profile Identifier  Entity Identifier  Entity Identifier  Entity Identifier  Z44  Namespace ID  Universal ID  NIST-AA-1  Universal ID  Universal ID  Universal ID  Universal ID  NIST-AA-1  Universal ID  Universal ID  Universal ID  NIST-AA-1  

QPD: Query Parameter Definition =

| Location  | Data Element                     | Data                                   | Categorization                               |
|-----------|----------------------------------|--|--|
| QPD-1     | Message Query Name               |  |  |
| QPD-1.1   | Identifier                       | Z44                                    | Value-Profile Fixed                          |
| QPD-1.2   | Text                             | Request Evaluated History and Forecast | Value-Profile Fixed                          |
| QPD-1.3   | Name of Coding System            | CDCPHINVS                              | Value-Profile Fixed                          |
| QPD-2     | Query Tag                        | IZ-1.1-2015                            | Presence-System Generated                    |
| QPD-3     | PatientList                      | 12.1.1.2013                            | Tresence Bystem Generated                    |
| QPD-3.1   | ID Number                        | 171122                                 | Value-Test Case Fixed                        |
| QPD-3.4   | Assigning Authority              | 1,1122                                 | , value 16st cust 1 inte                     |
| QPD-3.4.1 | Namespace ID                     | NIST-MPI-1                             | Value-Test Case Fixed                        |
| QPD-3.4.2 | Universal ID                     |  | Indifferent                                  |
| QPD-3.4.3 | Universal ID Type                |  | Indifferent                                  |
| QPD-3.5   | Identifier Type Code             | MR                                     | Value-Test Case Fixed                        |
| QPD-4     | PatientName                      | MIC                                    | variet Test Case Fixed                       |
| QPD-4.1   | Family Name                      |  |  |
| QPD-4.1.1 | Surname                          | Fairchild                              | Value-Test Case Fixed                        |
| QPD-4.2   | Given Name                       | Cameron                                | Value-Test Case Fixed  Value-Test Case Fixed |
| QFD-4.2   | Second and Further Given         | Cameron                                | value-Test Case Fixed                        |
| QPD-4.3   | Names or Initials Thereof        | A                                      | Value-Test Case Fixed                        |
| QPD-4.7   | Name Type Code                   | L                                      | Value-Test Case Fixed                        |
| QPD-5     | PatientMotherMaidenName          |  |  |
| QPD-5.1   | Family Name                      |  |  |
| QPD-5.1.1 | Surname                          | Fairlady                               | Value-Test Case Fixed                        |
| QPD-5.7   | Name Type Code                   | M                                      | Value-Profile Fixed                          |
| QPD-6     | PatientDateOfBirth               |  |  |
| QPD-6.1   | Time                             | 20090214                               | Value-Test Case Fixed                        |
| QPD-7     | Patient Sex                      | M                                      | Value-Test Case Fixed                        |
| QPD-8     | Patient Address                  |  |  |
| QPD-8.1   | Street Address                   |  |  |
| QPD-8.1.1 | Street or Mailing Address        | 105 Laurel Run Rd                      | Value-Test Case Fixed                        |
| QPD-8.2   | Other Designation                |  | Indifferent                                  |
| QPD-8.3   | City                             | Bozeman                                | Value-Test Case Fixed                        |
| QPD-8.4   | State or Province                | MT                                     | Value-Test Case Fixed                        |
| QPD-8.5   | Zip or Postal Code               |  | Indifferent                                  |
| QPD-8.6   | Country                          |  | Indifferent                                  |
| QPD-8.7   | Address Type                     | P                                      | Value-Test Case Fixed List                   |
| QPD-9     | Phone                            |  |  |
| QPD-9.2   | Telecommunication Use Code       |  | Indifferent                                  |
| QPD-9.3   | Telecommunication Equipment Type |  | Indifferent                                  |
| QPD-9.4   | Email Address                    |  |  |
| QPD-9.6   | Area/City Code                   |  | Indifferent                                  |
| QPD-9.7   | Local Number                     |  | Indifferent                                  |
| QPD-10    | Multiple birth indicator         |  | Indifferent                                  |
| QPD-11    | Birth order                      |  | Indifferent                                  |

| RCP : Response Control Parameter |                          |         |                           |
|----------------------------------|--------------------------|---------|---------------------------|
| Location                         | Data Element             | Data    | Categorization            |
| RCP-1                            | Query Priority           | I       | Value-Test Case Fixed     |
| RCP-2                            | Quantity Limited Request |         |                           |
| RCP-2.1                          | Quantity                 | 1       | Value-Profile Fixed       |
| RCP-2.2                          | Units                    |         |                           |
| RCP-2.2.1                        | Identifier               | RD      | Value-Profile Fixed       |
| RCP-2.2.2                        | Text                     | Records | Presence-Test Case Proper |
| RCP-2.2.3                        | Name of Coding System    | HL70126 | Value-Profile Fixed       |

# **Test Data Specification**

| Element              | Data                         |
|----------------------|------------------------------|
| Patient Name         | Cameron A Fairchild          |
| Mother's Maiden Name | Fairlady                     |
| ID Number            | 171122                       |
| Date/Time of Birth   | 02/14/2009                   |
| Sex                  | Male                         |
| Patient Address      | 105 Laurel Run Rd Bozeman MT |
| Patient Phone        |                              |
| Birth Indicator      | No                           |
| Birth Order          |                              |

# 2.1.2. IZ-QR-1.2\_Response\_K11\_Z42

Test Step Type: TA RESPONDER

No Description

### **Test Story**

### **Description**

The IIS performs a search for Cameron A. Fairchild and finds one high-confidence match. The IIS generates an evaluated history and forecast for Cameron and returns this to the EHR-S. One dose of vaccine was not administrated at the correct age and is marked as not valid. The EHR-S displays the evaluated history and forecast, including the not valid dose.

### **Comments**

No Comments

### Pre Condition

A query is performed by the sending system. The IIS (simulated by the NIST test tool) contains an immunization events for the person.

### **Post Condition**

The response is made available to the EHR-S for processing. The clinician is able to view the evaluated history and forecast from the IIS. There is no obligation to incorporate the data into the EHR-S or maintain the displayed evaluated history and forecast.

### **Test Objectives**

Receive a response message containing the evaluated history and forecast; display evaluated history and forecast.

### **Evaluation Criteria**

Confirms valid receipt and display of response message using the Juror Document.

### **Notes for Testers**

**Important note regarding the Query Tag (QPD-2):** The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

**Important note regarding the MSH-10 and MSA-2:** The NIST response message is predefined and is based on the query message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the response message. The NIST response test message can be modified such that MSA-2 matches MSH-10 of the query message generated by the system-under test.

### **Message Contents**

MSH : Message Header

| Location     | Data Element                          | Data                                | Categorization |
|--------------|---------------------------------------|-------------------------------------|----------------|
| MSH-1        | Field Separator                       |                                     |                |
| MSH-2        | Encoding Characters                   | \^~\&                               |                |
| MSH-3        | Sending Application                   |                                     |                |
| MSH-3.1      | Namespace ID                          | NISTIISAPP                          |                |
| MSH-3.2      | Universal ID                          |                                     |                |
| MSH-3.3      | Universal ID Type                     |                                     |                |
| MSH-4        | Sending Facility                      |                                     |                |
| MSH-4.1      | Namespace ID                          | NISTIISFAC                          |                |
| MSH-4.2      | Universal ID                          |                                     |                |
| MSH-4.3      | Universal ID Type                     |                                     |                |
| MSH-5        | Receiving Application                 |                                     |                |
| MSH-5.1      | Namespace ID                          | NISTEHRAPP                          |                |
| MSH-5.2      | Universal ID                          |                                     |                |
| MSH-5.3      | Universal ID Type                     |                                     |                |
| MSH-6        | Receiving Facility                    |                                     |                |
| MSH-6.1      | Namespace ID                          | NISTEHRFAC                          |                |
| MSH-6.2      | Universal ID                          |                                     |                |
| MSH-6.3      | Universal ID Type                     |                                     |                |
| MSH-7        | Date/Time Of Message                  |                                     |                |
| MSH-7.1      | Time                                  | 20151031145233-0500                 |                |
| MSH-9        | Message Type                          |                                     |                |
| MSH-9.1      | Message Code                          | RSP                                 |                |
| MSH-9.2      | Trigger Event                         | K11                                 |                |
| MSH-9.3      | Message Structure                     | RSP_K11                             |                |
| MSH-10       | Message Control ID                    | NIST-IZ-QR-<br>1.2 Response K11 Z42 |                |
| MSH-11       | Processing ID                         |                                     |                |
| MSH-11.1     | Processing ID                         | P                                   |                |
| MSH-12       | Version ID                            |                                     |                |
| MSH-12.1     | Version ID                            | 2.5.1                               |                |
| MSH-15       | Accept Acknowledgment Type            | NE                                  |                |
| MSH-16       | Application Acknowledgment Type       | NE                                  |                |
| MSH-21       | Message Profile Identifier            |                                     |                |
| MSH-21.1     | Entity Identifier                     | Z42                                 |                |
| MSH-21.2     | Namespace ID                          | CDCPHINVS                           |                |
| MSH-21.3     | Universal ID                          |                                     |                |
| MSH-21.4     | Universal ID Type                     |                                     |                |
| MSH-22       | Sending Responsible Organization      |                                     |                |
| MSH-22.1     | Organization Name                     | NISTIISFAC                          |                |
| MSH-22.6     | Assigning Authority                   |                                     |                |
| MSH-22.6.1   | Namespace ID                          | NIST-AA-1                           |                |
| MSH-22.6.2   | Universal ID                          |                                     |                |
| MSH-22.6.3   | Universal ID Type                     |                                     |                |
| MSH-22.7     | Identifier Type Code                  | XX                                  |                |
| MSH-22.10    | Organization Identifier               | 100-3322                            |                |
| MSH-23       | Receiving Responsible<br>Organization |                                     |                |
| MSH-23.1     | Organization Name                     | NISTEHRFAC                          |                |
| MSH-23.6     | Assigning Authority                   |                                     |                |
| MSH-23.6.1   |                                       | NIST-AA-1                           |                |
| WISI1-23.0.1 | Namespace ID                          |                                     |                |
| MSH-23.6.2   | Namespace ID Universal ID             |                                     |                |
| MSH-23.6.2   | Universal ID                          |                                     |                |
|              |                                       | XX                                  |                |

### MSA : Message Acknowledgment -

| Location | Data Element        | Data                         | Categorization |
|----------|---------------------|------------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                           |                |
| MSA-2    | Message Control ID  | NIST-IZ-QR-1.1_Query_Q11_Z44 |                |

### QAK : Query Acknowledgment =

| Location | Data Element          | Data                                   | Categorization |
|----------|-----------------------|--|----------------|
| QAK-1    | Query Tag             | IZ-1.1-2015                            |                |
| QAK-2    | Query Response Status | OK                                     |                |
| QAK-3    | Message Query Name    |  |                |
| QAK-3.1  | Identifier            | Z44                                    |                |
| QAK-3.2  | Text                  | Request Evaluated History and Forecast |                |
| QAK-3.3  | Name of Coding System | CDCPHINVS                              |                |

QPD : Query Parameter Definition =

| Location  | Data Element  | Data                                   | Categorization |
|-----------|---|--|----------------|
| QPD-1     | Message Query Name                                    |  |                |
| QPD-1.1   | Identifier  | Z44                                    |                |
| QPD-1.2   | Text  | Request Evaluated History and Forecast |                |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                              |                |
| QPD-2     | Query Tag   | IZ-1.1-2015                            |                |
| QPD-3     | PatientList   |  |                |
| QPD-3.1   | ID Number   | 171122                                 |                |
| QPD-3.4   | Assigning Authority                                   |  |                |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                             |                |
| QPD-3.4.2 | Universal ID  |  |                |
| QPD-3.4.3 | Universal ID Type                                     |  |                |
| QPD-3.5   | Identifier Type Code                                  | MR                                     |                |
| QPD-4     | PatientName   |  |                |
| QPD-4.1   | Family Name   |  |                |
| QPD-4.1.1 | Surname   | Fairchild                              |                |
| QPD-4.2   | Given Name  | Cameron                                |                |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof | A                                      |                |
| QPD-4.7   | Name Type Code  | L                                      |                |
| QPD-5     | PatientMotherMaidenName                               |  |                |
| QPD-5.1   | Family Name   |  |                |
| QPD-5.1.1 | Surname   | Fairlady                               |                |
| QPD-5.7   | Name Type Code  | M                                      |                |
| QPD-6     | PatientDateOfBirth                                    |  |                |
| QPD-6.1   | Time  | 20090214                               |                |
| QPD-7     | Patient Sex   | M                                      |                |
| QPD-8     | Patient Address                                       |  |                |
| QPD-8.1   | Street Address  |  |                |
| QPD-8.1.1 | Street or Mailing Address                             | 105 Laurel Run Rd                      |                |
| QPD-8.2   | Other Designation                                     |  |                |
| QPD-8.3   | City  | Bozeman                                |                |
| QPD-8.4   | State or Province                                     | MT                                     |                |
| QPD-8.5   | Zip or Postal Code                                    | 1111                                   |                |
| QPD-8.6   | Country   |  |                |
| QPD-8.7   | Address Type  | P                                      |                |
| QPD-9     | Phone   | -                                      |                |
| QPD-9.2   | Telecommunication Use Code                            |  |                |
| QPD-9.3   | Telecommunication Equipment Type                      |  |                |
| QPD-9.4   | Email Address   |  |                |
| QPD-9.6   | Area/City Code  |  |                |
| QPD-9.7   | Local Number  |  |                |
| QPD-10    | Multiple birth indicator                              |  |                |
| QPD-11    | Birth order   |  |                |
| ζ-2       | Sim order   |  |                |

### PID: Patient Identification

| Location     | <b>Data Element</b>                                   | Data              | Categorization |
|--------------|---|-------------------|----------------|
| PID-1        | Set ID - PID  | 1                 |                |
| PID-3[1]     | Patient Identifier List                               |                   |                |
| PID-3[1].1   | ID Number   | 171122            |                |
| PID-3[1].4   | Assigning Authority                                   |                   |                |
| PID-3[1].4.1 | Namespace ID  | NIST-MPI-1        |                |
| PID-3[1].4.2 | Universal ID  |                   |                |
| PID-3[1].4.3 | Universal ID Type                                     |                   |                |
| PID-3[1].5   | Identifier Type Code                                  | MR                |                |
| PID-3[2]     | Patient Identifier List                               |                   |                |
| PID-3[2].1   | ID Number   | 34500907          |                |
| PID-3[2].4   | Assigning Authority                                   |                   |                |
| PID-3[2].4.1 | Namespace ID  | NIST-IIS-MPI      |                |
| PID-3[2].4.2 | Universal ID  |                   |                |
| PID-3[2].4.3 | Universal ID Type                                     |                   |                |
| PID-3[2].5   | Identifier Type Code                                  | SR                |                |
| PID-5        | Patient Name  |                   |                |
| PID-5.1      | Family Name   |                   |                |
| PID-5.1.1    | Surname   | Fairchild         |                |
| PID-5.2      | Given Name  | Cameron           |                |
| PID-5.3      | Second and Further Given<br>Names or Initials Thereof | A                 |                |
| PID-5.7      | Name Type Code  | L                 |                |
| PID-7        | Date/Time of Birth                                    |                   |                |
| PID-7.1      | Time  | 20090214          |                |
| PID-8        | Administrative Sex                                    | M                 |                |
| PID-11       | Patient Address                                       |                   |                |
| PID-11.1     | Street Address  |                   |                |
| PID-11.1.1   | Street or Mailing Address                             | 105 Laurel Run Rd |                |
| PID-11.2     | Other Designation                                     |                   |                |
| PID-11.3     | City  | Bozeman           |                |
| PID-11.4     | State or Province                                     | MT                |                |
| PID-11.5     | Zip or Postal Code                                    |                   |                |
| PID-11.6     | Country   |                   |                |
| PID-11.7     | Address Type  | P                 |                |
| PID-30       | Patient Death Indicator                               |                   |                |

### -orc[\*]-

### ORC : Common Order

| Location | Data Element          | Data            | Categorization |
|----------|-----------------------|-----------------|----------------|
| ORC-1    | Order Control         | RE              |                |
| ORC-2    | Placer Order Number   |                 |                |
| ORC-2.1  | Entity Identifier     |                 |                |
| ORC-2.2  | Namespace ID          |                 |                |
| ORC-2.3  | Universal ID          |                 |                |
| ORC-2.4  | Universal ID Type     |                 |                |
| ORC-3    | Filler Order Number   |                 |                |
| ORC-3.1  | Entity Identifier     | 197023          |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2    |                |
| ORC-3.3  | Universal ID          |                 |                |
| ORC-3.4  | Universal ID Type     |                 |                |
| ORC-17   | Entering Organization |                 |                |
| ORC-17.1 | Identifier            | NISTEHRFAC      |                |
| ORC-17.2 | Text                  | NISTEHRFacility |                |
| ORC-17.3 | Name of Coding System | HL70362         |                |

### ORC : Common Order

| Location | Data Element          | Data         | Categorization |
|----------|-----------------------|--------------|----------------|
| ORC-1    | Order Control         | RE           |                |
| ORC-2    | Placer Order Number   |              |                |
| ORC-2.1  | Entity Identifier     |              |                |
| ORC-2.2  | Namespace ID          |              |                |
| ORC-2.3  | Universal ID          |              |                |
| ORC-2.4  | Universal ID Type     |              |                |
| ORC-3    | Filler Order Number   |              |                |
| ORC-3.1  | Entity Identifier     | 197027       |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2 |                |
| ORC-3.3  | Universal ID          |              |                |
| ORC-3.4  | Universal ID Type     |              |                |
| ORC-17   | Entering Organization |              |                |
| ORC-17.1 | Identifier            |              |                |
| ORC-17.2 | Text                  |              |                |
| ORC-17.3 | Name of Coding System |              |                |

### ORC : Common Order

| Location | Data Element          | Data         | Categorization |
|----------|-----------------------|--------------|----------------|
| ORC-1    | Order Control         | RE           |                |
| ORC-2    | Placer Order Number   |              |                |
| ORC-2.1  | Entity Identifier     |              |                |
| ORC-2.2  | Namespace ID          |              |                |
| ORC-2.3  | Universal ID          |              |                |
| ORC-2.4  | Universal ID Type     |              |                |
| ORC-3    | Filler Order Number   |              |                |
| ORC-3.1  | Entity Identifier     | 197028       |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2 |                |
| ORC-3.3  | Universal ID          |              |                |
| ORC-3.4  | Universal ID Type     |              |                |
| ORC-17   | Entering Organization |              |                |
| ORC-17.1 | Identifier            |              |                |
| ORC-17.2 | Text                  |              |                |
| ORC-17.3 | Name of Coding System |              |                |

### ORC : Common Order

| Location | Data Element          | Data         | Categorization |
|----------|-----------------------|--------------|----------------|
| ORC-1    | Order Control         | RE           |                |
| ORC-2    | Placer Order Number   |              |                |
| ORC-2.1  | Entity Identifier     |              |                |
| ORC-2.2  | Namespace ID          |              |                |
| ORC-2.3  | Universal ID          |              |                |
| ORC-2.4  | Universal ID Type     |              |                |
| ORC-3    | Filler Order Number   |              |                |
| ORC-3.1  | Entity Identifier     | 197028       |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2 |                |
| ORC-3.3  | Universal ID          |              |                |
| ORC-3.4  | Universal ID Type     |              |                |
| ORC-17   | Entering Organization |              |                |
| ORC-17.1 | Identifier            |              |                |
| ORC-17.2 | Text                  |              |                |
| ORC-17.3 | Name of Coding System |              |                |

### ORC : Common Order

| Location | Data Element          | Data         | Categorization |
|----------|-----------------------|--------------|----------------|
| ORC-1    | Order Control         | RE           |                |
| ORC-2    | Placer Order Number   |              |                |
| ORC-2.1  | Entity Identifier     |              |                |
| ORC-2.2  | Namespace ID          |              |                |
| ORC-2.3  | Universal ID          |              |                |
| ORC-2.4  | Universal ID Type     |              |                |
| ORC-3    | Filler Order Number   |              |                |
| ORC-3.1  | Entity Identifier     | 197028       |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2 |                |
| ORC-3.3  | Universal ID          |              |                |
| ORC-3.4  | Universal ID Type     |              |                |
| ORC-17   | Entering Organization |              |                |
| ORC-17.1 | Identifier            |              |                |
| ORC-17.2 | Text                  |              |                |
| ORC-17.3 | Name of Coding System |              |                |

| ODG   | ~     |           |
|-------|-------|-----------|
| -ORC: | Commo | n Order - |

| Location | Data Element          | Data            | Categorization |
|----------|-----------------------|-----------------|----------------|
| ORC-1    | Order Control         | RE              |                |
| ORC-2    | Placer Order Number   |                 |                |
| ORC-2.1  | Entity Identifier     |                 |                |
| ORC-2.2  | Namespace ID          |                 |                |
| ORC-2.3  | Universal ID          |                 |                |
| ORC-2.4  | Universal ID Type     |                 |                |
| ORC-3    | Filler Order Number   |                 |                |
| ORC-3.1  | Entity Identifier     | 9999            |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2    |                |
| ORC-3.3  | Universal ID          |                 |                |
| ORC-3.4  | Universal ID Type     |                 |                |
| ORC-17   | Entering Organization |                 |                |
| ORC-17.1 | Identifier            | NISTEHRFAC      |                |
| ORC-17.2 | Text                  | NISTEHRFacility |                |
| ORC-17.3 | Name of Coding System | HL70362         |                |

# RXA[\*] RXA : Pharmacy/Treatment Administration

| Location   | Data Element                                       | Data              | Categorization |
|------------|--|-------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                | 0                 |                |
| RXA-2      | Administration Sub-ID Counter                      | 1                 |                |
| RXA-3      | Date/Time Start of<br>Administration               |                   |                |
| RXA-3.1    | Time   | 20090415          |                |
| RXA-5      | Administered Code                                  |                   |                |
| RXA-5.1    | Identifier   | 45                |                |
| RXA-5.2    | Text   | Hep B Unspec      |                |
| RXA-5.3    | Name of Coding System                              | CVX               |                |
| RXA-6      | Administered Amount                                | 999               |                |
| RXA-7      | Administered Units                                 |                   |                |
| RXA-7.1    | Identifier   |                   |                |
| RXA-7.2    | Text   |                   |                |
| RXA-7.3    | Name of Coding System                              |                   |                |
| RXA-9      | Administration Notes                               |                   |                |
| RXA-9.1    | Identifier   | 01                |                |
| RXA-9.2    | Text   | historical record |                |
| RXA-9.3    | Name of Coding System                              | NIP001            |                |
| RXA-10     | Administering Provider                             |                   |                |
| RXA-10.1   | ID Number  |                   |                |
| RXA-10.2   | Family Name  |                   |                |
| RXA-10.2.1 | Surname  |                   |                |
| RXA-10.3   | Given Name   |                   |                |
| RXA-10.4   | Second and Further Given Names or Initials Thereof |                   |                |
| RXA-10.9   | Assigning Authority                                |                   |                |
| RXA-10.9.1 | Namespace ID                                       |                   |                |
| RXA-10.9.2 | Universal ID                                       |                   |                |
| RXA-10.9.3 | Universal ID Type                                  |                   |                |
| RXA-10.10  | Name Type Code                                     |                   |                |
| RXA-10.13  | Identifier Type Code                               |                   |                |
| RXA-11     | Administered-at Location                           |                   |                |
| RXA-11.4   | Facility   |                   |                |
| RXA-11.4.1 | Namespace ID                                       |                   |                |
| RXA-11.4.2 | Universal ID                                       |                   |                |
| RXA-11.4.3 | Universal ID Type                                  |                   |                |
| RXA-17     | Substance Manufacturer Name                        |                   |                |
| RXA-17.1   | Identifier   |                   |                |
| RXA-17.2   | Text   |                   |                |
| RXA-17.3   | Name of Coding System                              |                   |                |
| RXA-18     | Substance/Treatment Refusal Reason                 |                   |                |
| RXA-18.1   | Identifier   |                   |                |
| RXA-18.2   | Text   |                   |                |
| RXA-18.3   | Name of Coding System                              |                   |                |
| RXA-20     | Completion Status                                  | СР                |                |

| Location   | Data Element  | Data                         | Categorization |
|------------|---|------------------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                            |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                            |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                              |                |
| RXA-3.1    | Time  | 20090314                     |                |
| RXA-5      | Administered Code                                     |                              |                |
| RXA-5.1    | Identifier  | 48                           |                |
| RXA-5.2    | Text  | HIB PRP-T                    |                |
| RXA-5.3    | Name of Coding System                                 | CVX                          |                |
| RXA-6      | Administered Amount                                   | 999                          |                |
| RXA-7      | Administered Units                                    |                              |                |
| RXA-7.1    | Identifier  |                              |                |
| RXA-7.2    | Text  |                              |                |
| RXA-7.3    | Name of Coding System                                 |                              |                |
| RXA-9      | Administration Notes                                  |                              |                |
| RXA-9.1    | Identifier  | 01                           |                |
| RXA-9.2    | Text  | historic immunization record |                |
| RXA-9.3    | Name of Coding System                                 | NIP001                       |                |
| RXA-10     | Administering Provider                                |                              |                |
| RXA-10.1   | ID Number   | 5111                         |                |
| RXA-10.2   | Family Name   |                              |                |
| RXA-10.2.1 | Surname   | Sticker                      |                |
| RXA-10.3   | Given Name  | Nurse                        |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                              |                |
| RXA-10.9   | Assigning Authority                                   |                              |                |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1                    |                |
| RXA-10.9.2 | Universal ID  |                              |                |
| RXA-10.9.3 | Universal ID Type                                     |                              |                |
| RXA-10.10  | Name Type Code  | L                            |                |
| RXA-10.13  | Identifier Type Code                                  | PRN                          |                |
| RXA-11     | Administered-at Location                              |                              |                |
| RXA-11.4   | Facility  |                              |                |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1                |                |
| RXA-11.4.2 | Universal ID  |                              |                |
| RXA-11.4.3 | Universal ID Type                                     |                              |                |
| RXA-17     | Substance Manufacturer Name                           |                              |                |
| RXA-17.1   | Identifier  |                              |                |
| RXA-17.2   | Text  |                              |                |
| RXA-17.3   | Name of Coding System                                 |                              |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                              |                |
| RXA-18.1   | Identifier  |                              |                |
| RXA-18.2   | Text  |                              |                |
| RXA-18.3   | Name of Coding System                                 |                              |                |
| RXA-20     | Completion Status                                     | СР                           |                |

| Location   | Data Element  | Data                         | Categorization |
|------------|---|------------------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                            |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                            |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                              |                |
| RXA-3.1    | Time  | 20091011                     |                |
| RXA-5      | Administered Code                                     |                              |                |
| RXA-5.1    | Identifier  | 110                          |                |
| RXA-5.2    | Text  | DTAP-Hep B-IPV               |                |
| RXA-5.3    | Name of Coding System                                 | CVX                          |                |
| RXA-6      | Administered Amount                                   | 999                          |                |
| RXA-7      | Administered Units                                    |                              |                |
| RXA-7.1    | Identifier  |                              |                |
| RXA-7.2    | Text  |                              |                |
| RXA-7.3    | Name of Coding System                                 |                              |                |
| RXA-9      | Administration Notes                                  |                              |                |
| RXA-9.1    | Identifier  | 01                           |                |
| RXA-9.2    | Text  | historic immunization record |                |
| RXA-9.3    | Name of Coding System                                 | NIP001                       |                |
| RXA-10     | Administering Provider                                |                              |                |
| RXA-10.1   | ID Number   |                              |                |
| RXA-10.2   | Family Name   |                              |                |
| RXA-10.2.1 | Surname   |                              |                |
| RXA-10.3   | Given Name  |                              |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                              |                |
| RXA-10.9   | Assigning Authority                                   |                              |                |
| RXA-10.9.1 | Namespace ID  |                              |                |
| RXA-10.9.2 | Universal ID  |                              |                |
| RXA-10.9.3 | Universal ID Type                                     |                              |                |
| RXA-10.10  | Name Type Code  |                              |                |
| RXA-10.13  | Identifier Type Code                                  |                              |                |
| RXA-11     | Administered-at Location                              |                              |                |
| RXA-11.4   | Facility  |                              |                |
| RXA-11.4.1 | Namespace ID  |                              |                |
| RXA-11.4.2 | Universal ID  |                              |                |
| RXA-11.4.3 | Universal ID Type                                     |                              |                |
| RXA-17     | Substance Manufacturer Name                           |                              |                |
| RXA-17.1   | Identifier  |                              |                |
| RXA-17.2   | Text  |                              |                |
| RXA-17.3   | Name of Coding System                                 |                              |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                              |                |
| RXA-18.1   | Identifier  |                              |                |
| RXA-18.2   | Text  |                              |                |
| RXA-18.3   | Name of Coding System                                 |                              |                |
| RXA-20     | Completion Status                                     | СР                           |                |

| Location   | Data Element  | Data                         | Categorization |
|------------|---|------------------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                            |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                            |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                              |                |
| RXA-3.1    | Time  | 20100411                     |                |
| RXA-5      | Administered Code                                     |                              |                |
| RXA-5.1    | Identifier  | 08                           |                |
| RXA-5.2    | Text  | Hep BPEDS                    |                |
| RXA-5.3    | Name of Coding System                                 | CVX                          |                |
| RXA-6      | Administered Amount                                   | 999                          |                |
| RXA-7      | Administered Units                                    |                              |                |
| RXA-7.1    | Identifier  |                              |                |
| RXA-7.2    | Text  |                              |                |
| RXA-7.3    | Name of Coding System                                 |                              |                |
| RXA-9      | Administration Notes                                  |                              |                |
| RXA-9.1    | Identifier  | 01                           |                |
| RXA-9.2    | Text  | historic immunization record |                |
| RXA-9.3    | Name of Coding System                                 | NIP001                       |                |
| RXA-10     | Administering Provider                                |                              |                |
| RXA-10.1   | ID Number   | 5111                         |                |
| RXA-10.2   | Family Name   |                              |                |
| RXA-10.2.1 | Surname   | Sticker                      |                |
| RXA-10.3   | Given Name  | Nurse                        |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                              |                |
| RXA-10.9   | Assigning Authority                                   |                              |                |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1                    |                |
| RXA-10.9.2 | Universal ID  |                              |                |
| RXA-10.9.3 | Universal ID Type                                     |                              |                |
| RXA-10.10  | Name Type Code  | L                            |                |
| RXA-10.13  | Identifier Type Code                                  | PRN                          |                |
| RXA-11     | Administered-at Location                              |                              |                |
| RXA-11.4   | Facility  |                              |                |
| RXA-11.4.1 | Namespace ID  |                              |                |
| RXA-11.4.2 | Universal ID  |                              |                |
| RXA-11.4.3 | Universal ID Type                                     |                              |                |
| RXA-17     | Substance Manufacturer Name                           |                              |                |
| RXA-17.1   | Identifier  |                              |                |
| RXA-17.2   | Text  |                              |                |
| RXA-17.3   | Name of Coding System                                 |                              |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                              |                |
| RXA-18.1   | Identifier  |                              |                |
| RXA-18.2   | Text  |                              |                |
| RXA-18.3   | Name of Coding System                                 |                              |                |
| RXA-20     | Completion Status                                     | СР                           |                |

| Location   | Data Element  | Data                         | Categorization |
|------------|---|------------------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                            |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                            |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                              |                |
| RXA-3.1    | Time  | 20100415                     |                |
| RXA-5      | Administered Code                                     |                              |                |
| RXA-5.1    | Identifier  | 03                           |                |
| RXA-5.2    | Text  | MMR                          |                |
| RXA-5.3    | Name of Coding System                                 | CVX                          |                |
| RXA-6      | Administered Amount                                   | 999                          |                |
| RXA-7      | Administered Units                                    |                              |                |
| RXA-7.1    | Identifier  |                              |                |
| RXA-7.2    | Text  |                              |                |
| RXA-7.3    | Name of Coding System                                 |                              |                |
| RXA-9      | Administration Notes                                  |                              |                |
| RXA-9.1    | Identifier  | 01                           |                |
| RXA-9.2    | Text  | historic immunization record |                |
| RXA-9.3    | Name of Coding System                                 | NIP001                       |                |
| RXA-10     | Administering Provider                                |                              |                |
| RXA-10.1   | ID Number   |                              |                |
| RXA-10.2   | Family Name   |                              |                |
| RXA-10.2.1 | Surname   |                              |                |
| RXA-10.3   | Given Name  |                              |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                              |                |
| RXA-10.9   | Assigning Authority                                   |                              |                |
| RXA-10.9.1 | Namespace ID  |                              |                |
| RXA-10.9.2 | Universal ID  |                              |                |
| RXA-10.9.3 | Universal ID Type                                     |                              |                |
| RXA-10.10  | Name Type Code  |                              |                |
| RXA-10.13  | Identifier Type Code                                  |                              |                |
| RXA-11     | Administered-at Location                              |                              |                |
| RXA-11.4   | Facility  |                              |                |
| RXA-11.4.1 | Namespace ID  |                              |                |
| RXA-11.4.2 | Universal ID  |                              |                |
| RXA-11.4.3 | Universal ID Type                                     |                              |                |
| RXA-17     | Substance Manufacturer Name                           |                              |                |
| RXA-17.1   | Identifier  |                              |                |
| RXA-17.2   | Text  |                              |                |
| RXA-17.3   | Name of Coding System                                 |                              |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                              |                |
| RXA-18.1   | Identifier  |                              |                |
| RXA-18.2   | Text  |                              |                |
| RXA-18.3   | Name of Coding System                                 |                              |                |
| RXA-20     | Completion Status                                     | СР                           |                |

| Location   | Data Element  | Data             | Categorization |
|------------|---|------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                |                |
| RXA-3      | Date/Time Start of Administration                     |                  |                |
| RXA-3.1    | Time  | 20091031         |                |
| RXA-5      | Administered Code                                     |                  |                |
| RXA-5.1    | Identifier  | 998              |                |
| RXA-5.2    | Text  | no vaccine admin |                |
| RXA-5.3    | Name of Coding System                                 | CVX              |                |
| RXA-6      | Administered Amount                                   | 999              |                |
| RXA-7      | Administered Units                                    |                  |                |
| RXA-7.1    | Identifier  |                  |                |
| RXA-7.2    | Text  |                  |                |
| RXA-7.3    | Name of Coding System                                 |                  |                |
| RXA-9      | Administration Notes                                  |                  |                |
| RXA-9.1    | Identifier  |                  |                |
| RXA-9.2    | Text  |                  |                |
| RXA-9.3    | Name of Coding System                                 |                  |                |
| RXA-10     | Administering Provider                                |                  |                |
| RXA-10.1   | ID Number   |                  |                |
| RXA-10.2   | Family Name   |                  |                |
| RXA-10.2.1 | Surname   |                  |                |
| RXA-10.3   | Given Name  |                  |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                  |                |
| RXA-10.9   | Assigning Authority                                   |                  |                |
| RXA-10.9.1 | Namespace ID  |                  |                |
| RXA-10.9.2 | Universal ID  |                  |                |
| RXA-10.9.3 | Universal ID Type                                     |                  |                |
| RXA-10.10  | Name Type Code  |                  |                |
| RXA-10.13  | Identifier Type Code                                  |                  |                |
| RXA-11     | Administered-at Location                              |                  |                |
| RXA-11.4   | Facility  |                  |                |
| RXA-11.4.1 | Namespace ID  |                  |                |
| RXA-11.4.2 | Universal ID  |                  |                |
| RXA-11.4.3 | Universal ID Type                                     |                  |                |
| RXA-17     | Substance Manufacturer Name                           |                  |                |
| RXA-17.1   | Identifier  |                  |                |
| RXA-17.2   | Text  |                  |                |
| RXA-17.3   | Name of Coding System                                 |                  |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                  |                |
| RXA-18.1   | Identifier  |                  |                |
| RXA-18.2   | Text  |                  |                |
| RXA-18.3   | Name of Coding System                                 |                  |                |
| RXA-20     | Completion Status                                     | NA               |                |

### — OBX[\*] —

### OBX : Observation/Result —

| Location | <b>Data Element</b>          | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 45           |                |
| OBX-5.2  | Text                         | Hep B NOS    |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| OBX : Observation/Result |                              |                            |                |
|--------------------------|------------------------------|----------------------------|----------------|
| Location                 | Data Element                 | Data                       | Categorization |
| OBX-1                    | Set ID - OBX                 | 2                          |                |
| OBX-2                    | Value Type                   | CE                         |                |
| OBX-3                    | Observation Identifier       |                            |                |
| OBX-3.1                  | Identifier                   | 59779-9                    |                |
| OBX-3.2                  | Text                         | Immunization Schedule used |                |
| OBX-3.3                  | Name of Coding System        | LN                         |                |
| OBX-4                    | Observation Sub-ID           | 1                          |                |
| OBX-5                    | Observation Value            |                            |                |
| OBX-5.1                  | Identifier                   | VXC16                      |                |
| OBX-5.2                  | Text                         | ACIP                       |                |
| OBX-5.3                  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6                    | Units                        |                            |                |
| OBX-6.1                  | Identifier                   |                            |                |
| OBX-6.2                  | Text                         |                            |                |
| OBX-6.3                  | Name of Coding System        |                            |                |
| OBX-11                   | Observation Result Status    | F                          |                |
| OBX-14                   | Date/Time of the Observation |                            |                |
| OBX-14.1                 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

### OBX : Observation/Result

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 17           |                |
| OBX-5.2  | Text                         | HIB NOS      |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 2                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

### OBX : Observation/Result -

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | N             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data           | Categorization |
|----------|------------------------------|----------------|----------------|
| OBX-1    | Set ID - OBX                 | 4              |                |
| OBX-2    | Value Type                   | ST             |                |
| OBX-3    | Observation Identifier       |                |                |
| OBX-3.1  | Identifier                   | 30982-3        |                |
| OBX-3.2  | Text                         | Reason applied |                |
| OBX-3.3  | Name of Coding System        | LN             |                |
| OBX-4    | Observation Sub-ID           | 1              |                |
| OBX-5    | Observation Value            | Too Young      |                |
| OBX-6    | Units                        |                |                |
| OBX-6.1  | Identifier                   |                |                |
| OBX-6.2  | Text                         |                |                |
| OBX-6.3  | Name of Coding System        |                |                |
| OBX-11   | Observation Result Status    | F              |                |
| OBX-14   | Date/Time of the Observation |                |                |
| OBX-14.1 | Time                         | 20151031       |                |

### OBX : Observation/Result

| Location | Data Element                 | Doto         | Catagorization |
|----------|------------------------------|--------------|----------------|
|          | Data Element                 | Data         | Categorization |
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 45           |                |
| OBX-5.2  | Text                         | Hep B NOS    |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 2                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

### OBX : Observation/Result =

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 4            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 2            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 10           |                |
| OBX-5.2  | Text                         | IPV          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

### OBX : Observation/Result =

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 5                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 2                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 6             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 2             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data         | Catagorization |
|----------|------------------------------|--------------|----------------|
|          | Data Element                 | Data         | Categorization |
| OBX-1    | Set ID - OBX                 | 7            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 3            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 20           |                |
| OBX-5.2  | Text                         | DTAP         |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 8                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 3                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 9             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 3             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 45           |                |
| OBX-5.2  | Text                         | Hep B NOS    |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 2                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 03           |                |
| OBX-5.2  | Text                         | MMR          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 2                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151031      |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 1            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 03           |                |
| OBX-5.2  | Text                         | MMR          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 2                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 3                    |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 1                    |                |
| OBX-5    | Observation Value            | 20150214             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         | 20151031             |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 4                     |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 1                     |                |
| OBX-5    | Observation Value            | 20100614              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         | 20151031              |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 5            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 2            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 10           |                |
| OBX-5.2  | Text                         | IPV          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 6                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 2                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 7                    |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 2                    |                |
| OBX-5    | Observation Value            | 20100214             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         | 20151031             |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 8            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 3            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 107          |                |
| OBX-5.2  | Text                         | DTAP         |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         | 20151031     |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 9                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 3                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         | 20151031                   |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 10                   |                |
| DBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 3                    |                |
| OBX-5    | Observation Value            | 20100214             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         | 20151031             |                |

# **Test Data Specification**

| —————Patient Information—————                                 |      |  |
|---|------|--|
| 1 aucht inioi mation  |      |  |
| Element   | Data |  |
| This information will be automatically supplied by the System |      |  |

# **Juror Document**

| Evaluated Immunization H          | Evaluated Immunization History and Immunization Forecast |  |  |
|-----------------------------------|--|--|--|
| Test Case ID                      | IZ-QR-1_Query_Child                                      |  |  |
| Juror ID                          |  |  |  |
| Juror Name                        |  |  |  |
| HIT System Tested                 |  |  |  |
| Inspection Date/Time              |  |  |  |
| Inspection Settlement (Pass/Fail) | Pass Fail  |  |  |
| Reason Failed                     |  |  |  |
| Juror Comments                    |  |  |  |

#### DISPLAY VERIFICATION

This Test Case-specific Juror Document provides a checklist for the Tester to use during certification testing for assessing the EHR technology's ability to display required core data elements from the information received in the Evaluated Immunization History and Immunization Forecast Z42 response message. Additional data from the message or from the EHR are permitted to be displayed by the EHR. Grayed-out fields in the Juror Document indicate where no data for the data element indicated were included in the Z42 message for the given Test Case.

The format of this Juror Document is for ease-of-use by the Tester and does not indicate how the EHR display must be designed.

The Evaluated Immunization History and Immunization Forecast data shown in this Juror Document are derived from the Z42 message provided with the given Test Case; equivalent data are permitted to be displayed by the EHR. The column headings are meant to convey the kind of data to be displayed; equivalent labels/column headings are permitted to be displayed by the EHR.

| Patient Information |                     |            |        |                |
|---------------------|---------------------|------------|--------|----------------|
| Patient Identifier  | Patient Name        | DOB        | Gender | Tester Comment |
| 171122              | Cameron A Fairchild | 02/14/2009 | Male   |                |

When displayed in the EHR with the Evaluated Immunization History and Immunization Forecast, these patient demographics data may be derived from either the received immunization message or the EHR patient record. When displaying demographics from the patient record, the EHR must be able to demonstrate a linkage between the demographics in the message (primarily the patient ID in PID-3.1) and the patient record used for display to ensure that the message was associated with the appropriate patient.

| Evaluated Immunization History and Immunization Forecast |                |  |
|--|----------------|--|
| Immunization Schedule Used                               | Tester Comment |  |
| ACIP   |                |  |

|               | Evaluated Immunization History |                   |            |                 |                    |                |
|---------------|--------------------------------|-------------------|------------|-----------------|--------------------|----------------|
| Vaccine Group | Vaccine Administered           | Date Administered | Valid Dose | Validity Reason | Completion Status* | Tester Comment |
| Hep B<br>NOS  | Hep B Unspec                   | 04/15/2009        | YES        |                 | Complete           |                |
| HIB NOS       | HIB PRP-T                      | 03/14/2009        | NO         | Too Young       | Complete           |                |
| Hep B<br>NOS  | DTAP-Hep B-<br>IPV             | 10/11/2009        | YES        |                 | Complete           |                |
| IPV           | DTAP-Hep B-<br>IPV             | 10/11/2009        | YES        |                 | Complete           |                |
| DTAP          | DTAP-Hep B-<br>IPV             | 10/11/2009        | YES        |                 | Complete           |                |
| Hep B<br>NOS  | Hep BPEDS                      | 04/11/2010        | YES        |                 | Complete           |                |
| MMR           | MMR                            | 04/15/2010        | YES        |                 | Complete           |                |

<sup>\* &</sup>quot;Completion Status" refers to the status of the dose of vaccine administered on the indicated date and may be interpreted as "Dose Status". A status of "Complete" means that the vaccine dose was "completely administered" as opposed to "partially administered".

| Immunization Forecast |            |                       |                     |                |  |
|-----------------------|------------|-----------------------|---------------------|----------------|--|
| Vaccine Group         | Due Date   | Earliest Date To Give | Latest Date to Give | Tester Comment |  |
| MMR                   | 02/14/2015 | 06/14/2010            |                     |                |  |
| IPV                   | 02/14/2010 |                       |                     |                |  |
| DTAP                  | 02/14/2010 |                       |                     |                |  |

# 2.2. IZ-QR-2 Query Adult

Query for an adult using the most significant query parameters. The patient is found in the IIS. A response message is returned with a signal immunization event and multiple immunization recomendations.

## **Test Story**

## **Description**

Query for an adult using the most significant query parameters. The patient is found in the IIS. A response message is returned with a single immunization event and multiple immunization recommendations.

An adult male patient, Stanley S. Clement presents to the clinic, seeking an immunization for influenza. A clinic staff member locates his medical record in the electronic health record system. The staff member sees that he has previously had an immunization against influenza. The staff member triggers a request to the IIS to request an evaluated history and forecast for the patient. The IIS performs a search for Stanley S. Clement and finds one high confidence match. The IIS generates an evaluated history and forecast for Mr. Clement and returns this to the EHR-S. The EHR-S displays the evaluated history and forecast to the staff member.

#### Comments

No Comments

#### **Pre Condition**

Person exists in the system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have existing immunization events in their EHR.

Person does have an immunization history in the IIS,

#### **Post Condition**

The clinician is able to view the evaluated history and forecast from the IIS. There is no obligation to incorporate the data into the EHR-S or maintain the displayed evaluated history and forecast.

## **Test Objectives**

Evaluates EHR-S ability to create a well formed query for an adult. Evaluates EHR-S ability to accept a response with evaluated history and forecast for that person.

#### **Evaluation Criteria**

- 1. Tester inspects patient record; confirms that the patients does not have existing immunization events.
- 2. Confirms valid query message using Message Validation Report.
- 3. Confirms valid receipt and display of response message using the Juror Document.

## **Notes for Testers**

The NIST tool is simulating a response from the IIS.

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

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# 2.2.1. IZ-QR-2.1 Query Q11 Z44

Test Step Type: SUT INITIATOR

No Description

## **Test Story**

## **Description**

An adult male patient, Stanley S. Clement presents to the clinic, seeking an immunization for influenza. A clinic staff member locates his medical record in the electronic health record system. The staff member sees that he has previously had an immunization against influenza. The staff member triggers a request to the IIS to request an evaluated history and forecast for the patient.

#### **Comments**

Most of the test data is categorized as Test Case Fixed. It is important that the data is entered into the querying system as specified to enable linking the response message to the patient record.

## Pre Condition

Person exists in the querying system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have existing immunization events in their EHR.

Person does have an immunization history in the IIS (simulated by the NIST Test Tool).

#### **Post Condition**

IIS returns a response message for the person containing a single immunization event and multiple recommendations.

## **Test Objectives**

Test the ability of the system to successfully create a query message based on the given test data.

#### **Evaluation Criteria**

Tester inspects patient record; confirms that the patients does not have existing immunization events

Confirms valid query message using Message Validation Report.

## **Notes for Testers**

If the HIT Module being tested is unable to control the Patient ID Number value that it creates (1) QPD-3.1 in the Query message can be populated with a different value than the one provided in the test data; (2) the Tester can ignore the associated error notification generated by the Tool; and (3) the Response message also must be modified accordingly.

## **Message Contents**

-MSH : Message Header -

| Location   | Data Element                          | Data                | Categorization                |
|------------|---------------------------------------|---------------------|-------------------------------|
| MSH-1      | Field Separator                       |                     | Value-Profile Fixed           |
| MSH-2      | Encoding Characters                   | ^~\&                | Value-Profile Fixed           |
| MSH-3      | Sending Application                   |                     |                               |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP          | Presence-Configuration        |
| MSH-3.2    | Universal ID                          |                     | Indifferent                   |
| MSH-3.3    | Universal ID Type                     |                     | Indifferent                   |
| MSH-4      | Sending Facility                      |                     |                               |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC          | Presence-Configuration        |
| MSH-4.2    | Universal ID                          |                     | Indifferent                   |
| MSH-4.3    | Universal ID Type                     |                     | Indifferent                   |
| MSH-5      | Receiving Application                 |                     |                               |
| MSH-5.1    | Namespace ID                          | NISTIISAPP          | Presence-Configuration        |
| MSH-5.2    | Universal ID                          |                     | Indifferent                   |
| MSH-5.3    | Universal ID Type                     |                     | Indifferent                   |
| MSH-6      | Receiving Facility                    |                     |                               |
| MSH-6.1    | Namespace ID                          | NISTIISFAC          | Presence-Configuration        |
| MSH-6.2    | Universal ID                          |                     | Indifferent                   |
| MSH-6.3    | Universal ID Type                     |                     | Indifferent                   |
| MSH-7      | Date/Time Of Message                  |                     |                               |
| MSH-7.1    | Time                                  | 20141031145233-0500 | Presence-System Generated     |
| MSH-9      | Message Type                          |                     |                               |
| MSH-9.1    | Message Code                          | QBP                 | Value-Profile Fixed           |
| MSH-9.2    | Trigger Event                         | Q11                 | Value-Profile Fixed           |
| MSH-9.3    | Message Structure                     | QBP_Q11             | Value-Profile Fixed           |
| MSH-10     | Message Control ID                    |                     | Z44 Presence-System Generated |
| MSH-11     | Processing ID                         |                     |                               |
| MSH-11.1   | Processing ID                         | P                   | Presence-Content Indifferent  |
| MSH-12     | Version ID                            |                     |                               |
| MSH-12.1   | Version ID                            | 2.5.1               | Value-Profile Fixed           |
| MSH-15     | Accept Acknowledgment Type            | ER                  | Value-Profile Fixed           |
| MSH-16     | Application Acknowledgment Type       | AL                  | Value-Profile Fixed           |
| MSH-21     | Message Profile Identifier            |                     |                               |
| MSH-21.1   | Entity Identifier                     | Z44                 | Value-Profile Fixed           |
| MSH-21.2   | Namespace ID                          | CDCPHINVS           | Value-Profile Fixed           |
| MSH-21.3   | Universal ID                          |                     | Indifferent                   |
| MSH-21.4   | Universal ID Type                     |                     | Indifferent                   |
| MSH-22     | Sending Responsible Organization      | 1                   |                               |
| MSH-22.1   | Organization Name                     | NISTEHRFAC          | Presence-Configuration        |
| MSH-22.6   | Assigning Authority                   |                     |                               |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-1           | Presence-Configuration        |
| MSH-22.6.2 | Universal ID                          |                     | Indifferent                   |
| MSH-22.6.3 | Universal ID Type                     |                     | Indifferent                   |
| MSH-22.7   | Identifier Type Code                  | XX                  | Value-Test Case Fixed         |
| MSH-22.10  | Organization Identifier               | 100-6482            | Presence-Configuration        |
| MSH-23     | Receiving Responsible<br>Organization |                     |                               |
| MSH-23.1   | Organization Name                     | NISTIISFAC          | Presence-Configuration        |
| MSH-23.6   | Assigning Authority                   |                     |                               |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-1           | Presence-Configuration        |
| MSH-23.6.2 | Universal ID                          |                     | Indifferent                   |
| MSH-23.6.3 | Universal ID Type                     |                     | Indifferent                   |
|            | Identifier Type Code                  | XX                  | Value-Test Case Fixed         |
| MSH-23.7   | I Identifier I vibe Code              | $ \Lambda\Lambda$   | value-rest Case rixed         |

QPD: Query Parameter Definition =

| Location  | Data Element  | Data                                   | Categorization             |
|-----------|---|--|----------------------------|
| QPD-1     | Message Query Name                                    |  |                            |
| QPD-1.1   | Identifier  | Z44                                    | Value-Profile Fixed        |
| QPD-1.2   | Text  | Request Evaluated History and Forecast | Value-Profile Fixed        |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                              | Value-Profile Fixed        |
| QPD-2     | Query Tag   | IZ-2.1-2015                            | Presence-System Generated  |
| QPD-3     | PatientList   | 12.1.2013                              | Tresence System Generated  |
| QPD-3.1   | ID Number   | 648286                                 | Value-Test Case Fixed      |
| QPD-3.4   | Assigning Authority                                   | 010200                                 | variate Test Case Fixed    |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                             | Value-Test Case Fixed      |
| QPD-3.4.2 | Universal ID  | NIST WITT                              | Indifferent                |
| QPD-3.4.3 | Universal ID Type                                     |  | Indifferent                |
| QPD-3.5   | Identifier Type Code                                  | MR                                     | Value-Test Case Fixed      |
|           | PatientName   | IVIK                                   | value-Test Case Fixed      |
| QPD-4     |   |  | <u> </u>                   |
| QPD-4.1   | Family Name   | la. 1                                  | TV 1 m · G · D' · 1        |
| QPD-4.1.1 | Surname   | Stanley                                | Value-Test Case Fixed      |
| QPD-4.2   | Given Name  | Clement                                | Value-Test Case Fixed      |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof | S                                      | Value-Test Case Fixed      |
| QPD-4.7   | Name Type Code  | L                                      | Value-Test Case Fixed      |
| QPD-5     | PatientMotherMaidenName                               |  |                            |
| QPD-5.1   | Family Name   |  |                            |
| QPD-5.1.1 | Surname   | Bell                                   | Value-Test Case Fixed      |
| QPD-5.7   | Name Type Code  | M                                      | Value-Profile Fixed        |
| QPD-6     | PatientDateOfBirth                                    |  |                            |
| QPD-6.1   | Time  | 19500214                               | Value-Test Case Fixed      |
| QPD-7     | Patient Sex   | M                                      | Value-Test Case Fixed      |
| QPD-8     | Patient Address                                       |  |                            |
| QPD-8.1   | Street Address  |  |                            |
| QPD-8.1.1 | Street or Mailing Address                             | 1642 Bear Run                          | Value-Test Case Fixed      |
| QPD-8.2   | Other Designation                                     |  | Indifferent                |
| QPD-8.3   | City  | Bozeman                                | Value-Test Case Fixed      |
| QPD-8.4   | State or Province                                     | MT                                     | Value-Test Case Fixed      |
| QPD-8.5   | Zip or Postal Code                                    | 59715                                  | Value-Test Case Fixed      |
| OPD-8.6   | Country   | USA                                    | Value-Test Case Fixed      |
| OPD-8.7   | Address Type  | P                                      | Value-Test Case Fixed List |
| QPD-9     | Phone   | -                                      | varde Test Case I med Elst |
| QPD-9.2   | Telecommunication Use Code                            | PRN                                    | Value-Test Case Fixed      |
|           | Telecommunication Equipment                           |  |                            |
| QPD-9.3   | Туре  | РН                                     | Value-Test Case Fixed      |
| QPD-9.4   | Email Address   |  |                            |
| QPD-9.6   | Area/City Code  | 406                                    | Value-Test Case Fixed      |
| QPD-9.7   | Local Number  | 5552020                                | Value-Test Case Fixed      |
| QPD-10    | Multiple birth indicator                              |  | Indifferent                |
| QPD-11    | Birth order   |  | Indifferent                |

| RCP : Response Control Parameter |                          |         |                           |  |
|----------------------------------|--------------------------|---------|---------------------------|--|
| Location                         | <b>Data Element</b>      | Data    | Categorization            |  |
| RCP-1                            | Query Priority           | I       | Value-Test Case Fixed     |  |
| RCP-2                            | Quantity Limited Request |         |                           |  |
| RCP-2.1                          | Quantity                 | 1       | Value-Profile Fixed       |  |
| RCP-2.2                          | Units                    |         |                           |  |
| RCP-2.2.1                        | Identifier               | RD      | Value-Profile Fixed       |  |
| RCP-2.2.2                        | Text                     | Records | Presence-Test Case Proper |  |
| RCP-2.2.3                        | Name of Coding System    | HL70126 | Value-Profile Fixed       |  |

# **Test Data Specification**

| Element              | Data                               |
|----------------------|------------------------------------|
| Patient Name         | Clement S Stanley                  |
| Mother's Maiden Name | Bell                               |
| D Number             | 648286                             |
| Date/Time of Birth   | 02/14/1950                         |
| Sex                  | Male                               |
| Patient Address      | 1642 Bear Run Bozeman MT 59715 USA |
| Patient Phone        | (406)555-2020                      |
| Birth Indicator      | No                                 |
| irth Order           |                                    |

# 2.2.2. IZ-QR-2.2 Response K11 Z42

Test Step Type: TA\_RESPONDER

return response to query for an adult with historical smallpox vaccination

## **Test Story**

#### **Description**

The IIS performs a search for Stanley S. Clement and finds one high confidence match. The IIS generates an evaluated history and forecast for Mr. Clement and returns this to the EHR-S. The EHR-S displays the evaluated history and forecast to the staff member.

#### Comments

No Comments

#### **Pre Condition**

A query is performed by the sending system. The IIS (simulated by the NIST test tool) contains an immunization events for the person.

#### **Post Condition**

The response is made available to the EHR-S for processing. The clinician is able to view the evaluated history and forecast from the IIS (even if temporal).

## **Test Objectives**

Demonstrate the capability to receive a response message containing the evaluated history and forecast; display evaluated history and forecast.

#### **Evaluation Criteria**

Confirms valid receipt and display of response message using the Juror Document.

#### **Notes for Testers**

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

**Important note regarding the MSH-10 and MSA-2:** The NIST response message is predefined and is based on the query message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the response message. The NIST response test message can be modified such that MSA-2 matches MSH-10 of the query message generated by the system-under test

## **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                                    | Categorization |
|------------|---------------------------------------|---|----------------|
| MSH-1      | Field Separator                       |   |                |
| MSH-2      | Encoding Characters                   | ^~\&                                    |                |
| MSH-3      | Sending Application                   |   |                |
| MSH-3.1    | Namespace ID                          | NISTIISAPP                              |                |
| MSH-3.2    | Universal ID                          |   |                |
| MSH-3.3    | Universal ID Type                     |   |                |
| MSH-4      | Sending Facility                      |   |                |
| MSH-4.1    | Namespace ID                          | NISTIISFAC                              |                |
| MSH-4.2    | Universal ID                          |   |                |
| MSH-4.3    | Universal ID Type                     |   |                |
| MSH-5      | Receiving Application                 |   |                |
| MSH-5.1    | Namespace ID                          | NISTEHRAPP                              |                |
| MSH-5.2    | Universal ID                          |   |                |
| MSH-5.3    | Universal ID Type                     |   |                |
| MSH-6      | Receiving Facility                    |   |                |
| MSH-6.1    | Namespace ID                          | NISTEHRFAC                              |                |
| MSH-6.2    | Universal ID                          |   |                |
| MSH-6.3    | Universal ID Type                     |   |                |
| MSH-7      | Date/Time Of Message                  |   |                |
| MSH-7.1    | Time                                  | 20141031145233-0500                     |                |
| MSH-9      | Message Type                          |   |                |
| MSH-9.1    | Message Code                          | RSP                                     |                |
| MSH-9.2    | Trigger Event                         | K11                                     |                |
| MSH-9.3    | Message Structure                     | RSP_K11                                 |                |
| MSH-10     | Message Control ID                    | NIST-IZ-QR-<br>2.2 Response K11 Z42     |                |
| MSH-11     | Processing ID                         | Z.Z_response_rerr_Z/Z                   |                |
| MSH-11.1   | Processing ID                         | P                                       |                |
| MSH-12     | Version ID                            |   |                |
| MSH-12.1   | Version ID                            | 2.5.1                                   |                |
| MSH-15     | Accept Acknowledgment Type            | NE NE                                   |                |
| MSH-16     | Application Acknowledgment Type       | NE                                      |                |
| MSH-21     | Message Profile Identifier            |   |                |
| MSH-21.1   | Entity Identifier                     | Z42                                     |                |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                               |                |
| MSH-21.3   | Universal ID                          |   |                |
| MSH-21.4   | Universal ID Type                     |   |                |
| MSH-22     | Sending Responsible Organization      |   |                |
| MSH-22.1   | Organization Name                     | NISTIISFAC                              |                |
| MSH-22.6   | Assigning Authority                   | 1-1-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2 |                |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-1                               |                |
| MSH-22.6.2 | Universal ID                          |   |                |
| MSH-22.6.3 | Universal ID Type                     |   |                |
| MSH-22.7   | Identifier Type Code                  | XX                                      |                |
| MSH-22.10  | Organization Identifier               | 100-3322                                |                |
| MSH-23     | Receiving Responsible<br>Organization |   |                |
| MSH-23.1   | Organization Name                     | NISTEHRFAC                              |                |
| MSH-23.6   | Assigning Authority                   |   |                |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-1                               |                |
| MSH-23.6.2 | Universal ID                          |   |                |
| MSH-23.6.3 | Universal ID Type                     |   |                |
| MSH-23.7   | Identifier Type Code                  | XX                                      |                |
|            | Organization Identifier               | 100-6482                                |                |
| MSH-23.10  | Organization identifier               | 100-0462                                |                |

## MSA : Message Acknowledgment -

| Location | Data Element        | Data                         | Categorization |
|----------|---------------------|------------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                           |                |
| MSA-2    | Message Control ID  | NIST-IZ-QR-2.1_Query_Q11_Z44 |                |

## QAK : Query Acknowledgment

| Location | Data Element          | Data                                   | Categorization |
|----------|-----------------------|--|----------------|
| QAK-1    | Query Tag             | IZ-2.1-2015                            |                |
| QAK-2    | Query Response Status | OK                                     |                |
| QAK-3    | Message Query Name    |  |                |
| QAK-3.1  | Identifier            | Z44                                    |                |
| QAK-3.2  | Text                  | Request Evaluated History and Forecast |                |
| QAK-3.3  | Name of Coding System | CDCPHINVS                              |                |

QPD : Query Parameter Definition =

| Location  | Data Element  | Data                                   | Categorization |
|-----------|---|--|----------------|
| QPD-1     | Message Query Name                                    |  |                |
| QPD-1.1   | Identifier  | Z44                                    |                |
| QPD-1.2   | Text  | Request Evaluated History and Forecast |                |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                              |                |
| QPD-2     | Query Tag   | IZ-2.1-2015                            |                |
| QPD-3     | PatientList   |  |                |
| QPD-3.1   | ID Number   | 648286                                 |                |
| QPD-3.4   | Assigning Authority                                   |  |                |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                             |                |
| QPD-3.4.2 | Universal ID  |  |                |
| QPD-3.4.3 | Universal ID Type                                     |  |                |
| QPD-3.5   | Identifier Type Code                                  | MR                                     |                |
| QPD-4     | PatientName   |  |                |
| QPD-4.1   | Family Name   |  |                |
| QPD-4.1.1 | Surname   | Stanley                                |                |
| QPD-4.2   | Given Name  | Clement                                |                |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof | S                                      |                |
| QPD-4.7   | Name Type Code  | L                                      |                |
| QPD-5     | PatientMotherMaidenName                               |  |                |
| QPD-5.1   | Family Name   |  |                |
| QPD-5.1.1 | Surname   | Bell                                   |                |
| QPD-5.7   | Name Type Code  | M                                      |                |
| QPD-6     | PatientDateOfBirth                                    |  |                |
| QPD-6.1   | Time  | 19500214                               |                |
| QPD-7     | Patient Sex   | M                                      |                |
| QPD-8     | Patient Address                                       |  |                |
| QPD-8.1   | Street Address  |  |                |
| QPD-8.1.1 | Street or Mailing Address                             | 1642 Bear Run                          |                |
| QPD-8.2   | Other Designation                                     |  |                |
| QPD-8.3   | City  | Bozeman                                |                |
| QPD-8.4   | State or Province                                     | MT                                     |                |
| QPD-8.5   | Zip or Postal Code                                    | 59715                                  |                |
| QPD-8.6   | Country   | USA                                    |                |
| QPD-8.7   | Address Type  | P                                      |                |
| QPD-9     | Phone   |  |                |
| QPD-9.2   | Telecommunication Use Code                            | PRN                                    |                |
| QPD-9.3   | Telecommunication Equipment Type                      | РН                                     |                |
| QPD-9.4   | Email Address   |  |                |
| QPD-9.6   | Area/City Code  | 406                                    |                |
| QPD-9.7   | Local Number  | 5552020                                |                |
| QPD-10    | Multiple birth indicator                              |  |                |
| QPD-11    | Birth order   |  |                |

## PID: Patient Identification =

| Location     | Data Element  | Data          | Categorization |
|--------------|---|---------------|----------------|
| PID-1        | Set ID - PID  | 1             |                |
| PID-3[1]     | Patient Identifier List                               |               |                |
| PID-3[1].1   | ID Number   | 648286        |                |
| PID-3[1].4   | Assigning Authority                                   |               |                |
| PID-3[1].4.1 | Namespace ID  | NIST-MPI-1    |                |
| PID-3[1].4.2 | Universal ID  |               |                |
| PID-3[1].4.3 | Universal ID Type                                     |               |                |
| PID-3[1].5   | Identifier Type Code                                  | MR            |                |
| PID-3[2]     | Patient Identifier List                               |               |                |
| PID-3[2].1   | ID Number   | 34500907      |                |
| PID-3[2].4   | Assigning Authority                                   |               |                |
| PID-3[2].4.1 | Namespace ID  | NIST-IIS-MPI  |                |
| PID-3[2].4.2 | Universal ID  |               |                |
| PID-3[2].4.3 | Universal ID Type                                     |               |                |
| PID-3[2].5   | Identifier Type Code                                  | SR            |                |
| PID-5        | Patient Name  |               |                |
| PID-5.1      | Family Name   |               |                |
| PID-5.1.1    | Surname   | Stanley       |                |
| PID-5.2      | Given Name  | Clement       |                |
| PID-5.3      | Second and Further Given<br>Names or Initials Thereof | S             |                |
| PID-5.7      | Name Type Code  | L             |                |
| PID-7        | Date/Time of Birth                                    |               |                |
| PID-7.1      | Time  | 19500214      |                |
| PID-8        | Administrative Sex                                    | M             |                |
| PID-11       | Patient Address                                       |               |                |
| PID-11.1     | Street Address  |               |                |
| PID-11.1.1   | Street or Mailing Address                             | 1642 Bear Run |                |
| PID-11.2     | Other Designation                                     |               |                |
| PID-11.3     | City  | Bozeman       |                |
| PID-11.4     | State or Province                                     | MT            |                |
| PID-11.5     | Zip or Postal Code                                    | 59715         |                |
| PID-11.6     | Country   | USA           |                |
| PID-11.7     | Address Type  | P             |                |
| PID-30       | Patient Death Indicator                               |               |                |

#### -orc[\*]-

## -ORC : Common Order -

| Location | Data Element          | Data         | Categorization |
|----------|-----------------------|--------------|----------------|
| ORC-1    | Order Control         | RE           |                |
| ORC-2    | Placer Order Number   |              |                |
| ORC-2.1  | Entity Identifier     |              |                |
| ORC-2.2  | Namespace ID          |              |                |
| ORC-2.3  | Universal ID          |              |                |
| ORC-2.4  | Universal ID Type     |              |                |
| ORC-3    | Filler Order Number   |              |                |
| ORC-3.1  | Entity Identifier     | 193337027    |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2 |                |
| ORC-3.3  | Universal ID          |              |                |
| ORC-3.4  | Universal ID Type     |              |                |
| ORC-17   | Entering Organization |              |                |
| ORC-17.1 | Identifier            |              |                |
| ORC-17.2 | Text                  |              |                |
| ORC-17.3 | Name of Coding System |              |                |

## ORC : Common Order

| Location | Data Element          | Data            | Categorization |
|----------|-----------------------|-----------------|----------------|
| ORC-1    | Order Control         | RE              |                |
| ORC-2    | Placer Order Number   |                 |                |
| ORC-2.1  | Entity Identifier     |                 |                |
| ORC-2.2  | Namespace ID          |                 |                |
| ORC-2.3  | Universal ID          |                 |                |
| ORC-2.4  | Universal ID Type     |                 |                |
| ORC-3    | Filler Order Number   |                 |                |
| ORC-3.1  | Entity Identifier     | 9999            |                |
| ORC-3.2  | Namespace ID          | NIST-AA-IZ-2    |                |
| ORC-3.3  | Universal ID          |                 |                |
| ORC-3.4  | Universal ID Type     |                 |                |
| ORC-17   | Entering Organization |                 |                |
| ORC-17.1 | Identifier            | NISTEHRFAC      |                |
| ORC-17.2 | Text                  | NISTEHRFacility |                |
| ORC-17.3 | Name of Coding System | HL70362         |                |

# RXA[\*] RXA : Pharmacy/Treatment Administration

| Location   | Data Element  | Data                    | Categorization |
|------------|---|-------------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                       |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                       |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                         |                |
| RXA-3.1    | Time  | 20151029                |                |
| RXA-5      | Administered Code                                     |                         |                |
| RXA-5.1    | Identifier  | 140                     |                |
| RXA-5.2    | Text  | seasonal flu            |                |
| RXA-5.3    | Name of Coding System                                 | CVX                     |                |
| RXA-6      | Administered Amount                                   | 0.5                     |                |
| RXA-7      | Administered Units                                    |                         |                |
| RXA-7.1    | Identifier  | mL                      |                |
| RXA-7.2    | Text  |                         |                |
| RXA-7.3    | Name of Coding System                                 | UCUM                    |                |
| RXA-9      | Administration Notes                                  |                         |                |
| RXA-9.1    | Identifier  | 00                      |                |
| RXA-9.2    | Text  | new immunization record |                |
| RXA-9.3    | Name of Coding System                                 | NIP001                  |                |
| RXA-10     | Administering Provider                                |                         |                |
| RXA-10.1   | ID Number   | 5111                    |                |
| RXA-10.2   | Family Name   |                         |                |
| RXA-10.2.1 | Surname   | Sticker                 |                |
| RXA-10.3   | Given Name  | Nurse                   |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                         |                |
| RXA-10.9   | Assigning Authority                                   |                         |                |
| RXA-10.9.1 | Namespace ID  | NIST-PI-1               |                |
| RXA-10.9.2 | Universal ID  |                         |                |
| RXA-10.9.3 | Universal ID Type                                     |                         |                |
| RXA-10.10  | Name Type Code  | L                       |                |
| RXA-10.13  | Identifier Type Code                                  | PRN                     |                |
| RXA-11     | Administered-at Location                              |                         |                |
| RXA-11.4   | Facility  |                         |                |
| RXA-11.4.1 | Namespace ID  | NIST-Clinic-1           |                |
| RXA-11.4.2 | Universal ID  |                         |                |
| RXA-11.4.3 | Universal ID Type                                     |                         |                |
| RXA-17     | Substance Manufacturer Name                           |                         |                |
| RXA-17.1   | Identifier  | CSL                     |                |
| RXA-17.2   | Text  | bioCSL                  |                |
| RXA-17.3   | Name of Coding System                                 | MVX                     |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                         |                |
| RXA-18.1   | Identifier  |                         |                |
| RXA-18.2   | Text  |                         |                |
| RXA-18.3   | Name of Coding System                                 |                         |                |
| RXA-20     | Completion Status                                     | СР                      |                |

RXA: Pharmacy/Treatment Administration =

| Location   | Data Element  | Data             | Categorization |
|------------|---|------------------|----------------|
| RXA-1      | Give Sub-ID Counter                                   | 0                |                |
| RXA-2      | Administration Sub-ID Counter                         | 1                |                |
| RXA-3      | Date/Time Start of<br>Administration                  |                  |                |
| RXA-3.1    | Time  | 20151029         |                |
| RXA-5      | Administered Code                                     |                  |                |
| RXA-5.1    | Identifier  | 998              |                |
| RXA-5.2    | Text  | no vaccine admin |                |
| RXA-5.3    | Name of Coding System                                 | CVX              |                |
| RXA-6      | Administered Amount                                   | 999              |                |
| RXA-7      | Administered Units                                    |                  |                |
| RXA-7.1    | Identifier  |                  |                |
| RXA-7.2    | Text  |                  |                |
| RXA-7.3    | Name of Coding System                                 |                  |                |
| RXA-9      | Administration Notes                                  |                  |                |
| RXA-9.1    | Identifier  |                  |                |
| RXA-9.2    | Text  |                  |                |
| RXA-9.3    | Name of Coding System                                 |                  |                |
| RXA-10     | Administering Provider                                |                  |                |
| RXA-10.1   | ID Number   |                  |                |
| RXA-10.2   | Family Name   |                  |                |
| RXA-10.2.1 | Surname   |                  |                |
| RXA-10.3   | Given Name  |                  |                |
| RXA-10.4   | Second and Further Given<br>Names or Initials Thereof |                  |                |
| RXA-10.9   | Assigning Authority                                   |                  |                |
| RXA-10.9.1 | Namespace ID  |                  |                |
| RXA-10.9.2 | Universal ID  |                  |                |
| RXA-10.9.3 | Universal ID Type                                     |                  |                |
| RXA-10.10  | Name Type Code  |                  |                |
| RXA-10.13  | Identifier Type Code                                  |                  |                |
| RXA-11     | Administered-at Location                              |                  |                |
| RXA-11.4   | Facility  |                  |                |
| RXA-11.4.1 | Namespace ID  |                  |                |
| RXA-11.4.2 | Universal ID  |                  |                |
| RXA-11.4.3 | Universal ID Type                                     |                  |                |
| RXA-17     | Substance Manufacturer Name                           |                  |                |
| RXA-17.1   | Identifier  |                  |                |
| RXA-17.2   | Text  |                  |                |
| RXA-17.3   | Name of Coding System                                 |                  |                |
| RXA-18     | Substance/Treatment Refusal<br>Reason                 |                  |                |
| RXA-18.1   | Identifier  |                  |                |
| RXA-18.2   | Text  |                  |                |
| RXA-18.3   | Name of Coding System                                 |                  |                |
| RXA-20     | Completion Status                                     | NA               |                |

RXR : Pharmacy/Treatment Route =

| Location | Data Element          | Data   | Categorization |
|----------|-----------------------|--------|----------------|
| RXR-1    | Route                 |        |                |
| RXR-1.1  | Identifier            | C28161 |                |
| RXR-1.2  | Text                  | IM     |                |
| RXR-1.3  | Name of Coding System | NCIT   |                |
| RXR-2    | Administration Site   |        |                |
| RXR-2.1  | Identifier            |        |                |
| RXR-2.2  | Text                  |        |                |
| RXR-2.3  | Name of Coding System |        |                |

## OBX[\*] -

## OBX : Observation/Result =

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 1             |                |
| OBX-2    | Value Type                   | CE            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 30956-7       |                |
| OBX-3.2  | Text                         | vaccine type  |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            |               |                |
| OBX-5.1  | Identifier                   | 88            |                |
| OBX-5.2  | Text                         | influenza NOS |                |
| OBX-5.3  | Name of Coding System        | CVX           |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         |               |                |

| ODA: Observation/Result |                              |                            |                |
|-------------------------|------------------------------|----------------------------|----------------|
| Location                | Data Element                 | Data                       | Categorization |
| OBX-1                   | Set ID - OBX                 | 2                          |                |
| OBX-2                   | Value Type                   | CE                         |                |
| OBX-3                   | Observation Identifier       |                            |                |
| OBX-3.1                 | Identifier                   | 59779-9                    |                |
| OBX-3.2                 | Text                         | Immunization Schedule used |                |
| OBX-3.3                 | Name of Coding System        | LN                         |                |
| OBX-4                   | Observation Sub-ID           | 1                          |                |
| OBX-5                   | Observation Value            |                            |                |
| OBX-5.1                 | Identifier                   | VXC16                      |                |
| OBX-5.2                 | Text                         | ACIP                       |                |
| OBX-5.3                 | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6                   | Units                        |                            |                |
| OBX-6.1                 | Identifier                   |                            |                |
| OBX-6.2                 | Text                         |                            |                |
| OBX-6.3                 | Name of Coding System        |                            |                |
| OBX-11                  | Observation Result Status    | F                          |                |
| OBX-14                  | Date/Time of the Observation |                            |                |
| OBX-14.1                | Time                         | 20151029                   |                |

| OBX : | Obser | vation/ | Result |
|-------|-------|---------|--------|
|       |       |         |        |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 3             |                |
| OBX-2    | Value Type                   | ID            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 59781-5       |                |
| OBX-3.2  | Text                         | dose validity |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 1             |                |
| OBX-5    | Observation Value            | Y             |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         | 20151029      |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 4            |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 1            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 152          |                |
| OBX-5.2  | Text                         | pcv NOS      |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 5                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 1                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 6                    |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 1                    |                |
| OBX-5    | Observation Value            | 20600101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 7                     |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 1                     |                |
| OBX-5    | Observation Value            | 20600101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

| Location | Data Element                 | Data          | Categorization |
|----------|------------------------------|---------------|----------------|
| OBX-1    | Set ID - OBX                 | 8             |                |
| OBX-2    | Value Type                   | CE            |                |
| OBX-3    | Observation Identifier       |               |                |
| OBX-3.1  | Identifier                   | 30956-7       |                |
| OBX-3.2  | Text                         | vaccine type  |                |
| OBX-3.3  | Name of Coding System        | LN            |                |
| OBX-4    | Observation Sub-ID           | 2             |                |
| OBX-5    | Observation Value            |               |                |
| OBX-5.1  | Identifier                   | 88            |                |
| OBX-5.2  | Text                         | influenza NOS |                |
| OBX-5.3  | Name of Coding System        | CVX           |                |
| OBX-6    | Units                        |               |                |
| OBX-6.1  | Identifier                   |               |                |
| OBX-6.2  | Text                         |               |                |
| OBX-6.3  | Name of Coding System        |               |                |
| OBX-11   | Observation Result Status    | F             |                |
| OBX-14   | Date/Time of the Observation |               |                |
| OBX-14.1 | Time                         |               |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 9                          |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 2                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 10                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 2                    |                |
| OBX-5    | Observation Value            | 20160901             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 11                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 2                     |                |
| OBX-5    | Observation Value            | 20160901              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 12           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 3            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 03           |                |
| OBX-5.2  | Text                         | MMR          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 13                         |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 3                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 14                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 3                    |                |
| OBX-5    | Observation Value            | 19960101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 15                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 3                     |                |
| OBX-5    | Observation Value            | 19960101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 16           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 4            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 85           |                |
| OBX-5.2  | Text                         | Hep A        |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 17                         |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 4                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 18                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 4                    |                |
| OBX-5    | Observation Value            | 19960101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 19                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 4                     |                |
| OBX-5    | Observation Value            | 19960101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 20           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 5            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 45           |                |
| OBX-5.2  | Text                         | Нер В        |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 21                         |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 5                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

# OBX : Observation/Result -

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 22                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 5                    |                |
| OBX-5    | Observation Value            | 19950101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 23                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 5                     |                |
| OBX-5    | Observation Value            | 19950101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

# OBX : Observation/Result

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 24           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 6            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 108          |                |
| OBX-5.2  | Text                         | MCV          |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 25                         |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 6                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

# OBX : Observation/Result =

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 26                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 6                    |                |
| OBX-5    | Observation Value            | 20110101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 27                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 6                     |                |
| OBX-5    | Observation Value            | 20110101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

# OBX : Observation/Result

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 28           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 7            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 21           |                |
| OBX-5.2  | Text                         | varicella    |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 29                         |                |
| OBX-2    | Value Type                   | СЕ                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 7                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

# OBX : Observation/Result -

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 30                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 7                    |                |
| OBX-5    | Observation Value            | 19960101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 31                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 7                     |                |
| OBX-5    | Observation Value            | 19960101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

# OBX : Observation/Result

| Location | Data Element                 | Data         | Categorization |
|----------|------------------------------|--------------|----------------|
| OBX-1    | Set ID - OBX                 | 32           |                |
| OBX-2    | Value Type                   | CE           |                |
| OBX-3    | Observation Identifier       |              |                |
| OBX-3.1  | Identifier                   | 30956-7      |                |
| OBX-3.2  | Text                         | vaccine type |                |
| OBX-3.3  | Name of Coding System        | LN           |                |
| OBX-4    | Observation Sub-ID           | 8            |                |
| OBX-5    | Observation Value            |              |                |
| OBX-5.1  | Identifier                   | 115          |                |
| OBX-5.2  | Text                         | TDAP         |                |
| OBX-5.3  | Name of Coding System        | CVX          |                |
| OBX-6    | Units                        |              |                |
| OBX-6.1  | Identifier                   |              |                |
| OBX-6.2  | Text                         |              |                |
| OBX-6.3  | Name of Coding System        |              |                |
| OBX-11   | Observation Result Status    | F            |                |
| OBX-14   | Date/Time of the Observation |              |                |
| OBX-14.1 | Time                         |              |                |

| Location | Data Element                 | Data                       | Categorization |
|----------|------------------------------|----------------------------|----------------|
| OBX-1    | Set ID - OBX                 | 33                         |                |
| OBX-2    | Value Type                   | CE                         |                |
| OBX-3    | Observation Identifier       |                            |                |
| OBX-3.1  | Identifier                   | 59779-9                    |                |
| OBX-3.2  | Text                         | Immunization Schedule used |                |
| OBX-3.3  | Name of Coding System        | LN                         |                |
| OBX-4    | Observation Sub-ID           | 8                          |                |
| OBX-5    | Observation Value            |                            |                |
| OBX-5.1  | Identifier                   | VXC16                      |                |
| OBX-5.2  | Text                         | ACIP                       |                |
| OBX-5.3  | Name of Coding System        | CDCPHINVS                  |                |
| OBX-6    | Units                        |                            |                |
| OBX-6.1  | Identifier                   |                            |                |
| OBX-6.2  | Text                         |                            |                |
| OBX-6.3  | Name of Coding System        |                            |                |
| OBX-11   | Observation Result Status    | F                          |                |
| OBX-14   | Date/Time of the Observation |                            |                |
| OBX-14.1 | Time                         |                            |                |

# OBX : Observation/Result =

| Location | Data Element                 | Data                 | Categorization |
|----------|------------------------------|----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 34                   |                |
| OBX-2    | Value Type                   | DT                   |                |
| OBX-3    | Observation Identifier       |                      |                |
| OBX-3.1  | Identifier                   | 30980-7              |                |
| OBX-3.2  | Text                         | Date vaccination due |                |
| OBX-3.3  | Name of Coding System        | LN                   |                |
| OBX-4    | Observation Sub-ID           | 8                    |                |
| OBX-5    | Observation Value            | 20020101             |                |
| OBX-6    | Units                        |                      |                |
| OBX-6.1  | Identifier                   |                      |                |
| OBX-6.2  | Text                         |                      |                |
| OBX-6.3  | Name of Coding System        |                      |                |
| OBX-11   | Observation Result Status    | F                    |                |
| OBX-14   | Date/Time of the Observation |                      |                |
| OBX-14.1 | Time                         |                      |                |

| Location | Data Element                 | Data                  | Categorization |
|----------|------------------------------|-----------------------|----------------|
| OBX-1    | Set ID - OBX                 | 35                    |                |
| OBX-2    | Value Type                   | DT                    |                |
| OBX-3    | Observation Identifier       |                       |                |
| OBX-3.1  | Identifier                   | 30981-5               |                |
| OBX-3.2  | Text                         | Earliest Date to give |                |
| OBX-3.3  | Name of Coding System        | LN                    |                |
| OBX-4    | Observation Sub-ID           | 8                     |                |
| OBX-5    | Observation Value            | 20020101              |                |
| OBX-6    | Units                        |                       |                |
| OBX-6.1  | Identifier                   |                       |                |
| OBX-6.2  | Text                         |                       |                |
| OBX-6.3  | Name of Coding System        |                       |                |
| OBX-11   | Observation Result Status    | F                     |                |
| OBX-14   | Date/Time of the Observation |                       |                |
| OBX-14.1 | Time                         |                       |                |

# **Test Data Specification**

| Patient Information————————————————————————————————————       |  |  |  |  |  |
|---|--|--|--|--|--|
| Element Data  |  |  |  |  |  |
| This information will be automatically supplied by the System |  |  |  |  |  |
|   |  |  |  |  |  |
|   |  |  |  |  |  |

# **Juror Document**

| Evaluated Immunization History and Immunization Forecast |                     |  |  |  |  |
|--|---------------------|--|--|--|--|
| Test Case ID   | IZ-QR-2_Query_Adult |  |  |  |  |
| Juror ID   |                     |  |  |  |  |
| Juror Name   |                     |  |  |  |  |
| HIT System Tested  |                     |  |  |  |  |
| Inspection Date/Time                                     |                     |  |  |  |  |
| Inspection Settlement (Pass/Fail)                        | Pass Fail           |  |  |  |  |
| Reason Failed  |                     |  |  |  |  |
| Juror Comments   |                     |  |  |  |  |

#### DISPLAY VERIFICATION

This Test Case-specific Juror Document provides a checklist for the Tester to use during certification testing for assessing the EHR technology's ability to display required core data elements from the information received in the Evaluated Immunization History and Immunization Forecast Z42 response message. Additional data from the message or from the EHR are permitted to be displayed by the EHR. Grayed-out fields in the Juror Document indicate where no data for the data element indicated were included in the Z42 message for the given Test Case.

The format of this Juror Document is for ease-of-use by the Tester and does not indicate how the EHR display must be designed.

The Evaluated Immunization History and Immunization Forecast data shown in this Juror Document are derived from the Z42 message provided with the given Test Case; equivalent data are permitted to be displayed by the EHR. The column headings are meant to convey the kind of data to be displayed; equivalent labels/column headings are permitted to be displayed by the EHR.

| Patient Information |                   |            |        |                |  |
|---------------------|-------------------|------------|--------|----------------|--|
| Patient Identifier  | Patient Name      | DOB        | Gender | Tester Comment |  |
| 648286              | Clement S Stanley | 02/14/1950 | Male   |                |  |

When displayed in the EHR with the Evaluated Immunization History and Immunization Forecast, these patient demographics data may be derived from either the received immunization message or the EHR patient record. When displaying demographics from the patient record, the EHR must be able to demonstrate a linkage between the demographics in the message (primarily the patient ID in PID-3.1) and the patient record used for display to ensure that the message was associated with the appropriate patient.

| Evaluated Immunization History and Immunization Forecast |  |  |  |  |
|--|--|--|--|--|
| Immunization Schedule Used Tester Comment                |  |  |  |  |
| ACIP   |  |  |  |  |

| Evaluated Immunization History |                      |                   |            |                 |                           |                |
|--------------------------------|----------------------|-------------------|------------|-----------------|---------------------------|----------------|
| Vaccine Group                  | Vaccine Administered | Date Administered | Valid Dose | Validity Reason | <b>Completion Status*</b> | Tester Comment |
| influenza NOS                  | seasonal flu         | 10/29/2015        | YES        |                 | Complete                  |                |

\* "Completion Status" refers to the status of the dose of vaccine administered on the indicated date and may be interpreted as "Dose Status". A status of "Complete" means that the vaccine dose was "completely administered" as opposed to "partially administered".

|               | Immunization Forecast |                       |                     |                |  |  |  |
|---------------|-----------------------|-----------------------|---------------------|----------------|--|--|--|
| Vaccine Group | Due Date              | Earliest Date To Give | Latest Date to Give | Tester Comment |  |  |  |
| pcv NOS       | 01/01/2060            | 01/01/2060            |                     |                |  |  |  |
| influenza NOS | 09/01/2016            | 09/01/2016            |                     |                |  |  |  |
| MMR           | 01/01/1996            | 01/01/1996            |                     |                |  |  |  |
| Нер А         | 01/01/1996            | 01/01/1996            |                     |                |  |  |  |
| Нер В         | 01/01/1995            | 01/01/1995            |                     |                |  |  |  |
| MCV           | 01/01/2011            | 01/01/2011            |                     |                |  |  |  |
| varicella     | 01/01/1996            | 01/01/1996            |                     |                |  |  |  |
| TDAP          | 01/01/2002            | 01/01/2002            |                     |                |  |  |  |

# 2.3. IZ-QR-3 Query No Patients

Tests ability to send a query and receive a response where no patients are found.

# **Test Story**

### Description

A female toddler, Donna Victoria Bee, is brought to the local clinic to determine what immunizations have been given and what immunizations are needed. A clinic staff member collects basic patient demographic information including name, date of birth, sex, and birth order (Donna was born 3rd in a triplet). A clinic provider uses this information to locate the patient's medical record. The staff member then uses the medical record and system capabilities to query the IIS to request an evaluated history and forecast for the patient.

The IIS performs a search for Donna Victoria Bee and does not find a high-confidence match. The IIS returns a response message indicating no person found to the querying system. It is expected that the requesting system (e.g., EHR-S) process the response message and display some indication to the end user that no matches were found.

### Comments

No Comments

#### Pre Condition

Person exists in the system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have a record in the IIS, even though complete demographics are used in the query.

#### **Post Condition**

The clinician is provided some indication that no matches were found.

# **Test Objectives**

Tests for a maximally valued query message, including use of OIDs, mother's maiden name, fully valued address, birth indicator and birth order. Test the capability of the EHR-S to process a response message that returns no persons found and to provide an indication to the end user.

### **Evaluation Criteria**

Query Message: Message Validation Report

Response Message: Juror Document. The EHR-S receives the response and alerts the clinician that no matches were found.

### **Notes for Testers**

The NIST tool is simulating a response from the IIS.

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

# 2.3.1. IZ-QR-3.1 Query Q11 Z44

Test Step Type: SUT INITIATOR

This query should return a response where no matches are found.

# **Test Story**

### **Description**

A female toddler, Donna Victoria Bee, is brought to the local clinic to determine what immunizations have been given and what immunizations are needed. A clinic staff member collects basic patient demographic information including name, date of birth, sex, and birth order (Donna was born 3rd in a triplet). A clinic provider uses this information to locate the patient's medical record. The staff member then uses the medical record and system capabilities to query the IIS to request an evaluated history and forecast for the patient.

#### **Comments**

Most of the test data is categorized as Test Case Fixed. It is important that the data is entered into the querying system as specified to enable linking the response message to the patient record. The sending (querying) system will need to accept a response indicating that no matches were found.

#### **Pre Condition**

Person exists in the system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person does not have a record in the IIS, even though complete demographics are used in the query.

### **Post Condition**

A response message is returned in which no person record is found.

### **Test Objectives**

Tests for a maximally valued query message, including use of OIDs, mother's maiden name, fully valued address, birth indicator and birth order.

### **Evaluation Criteria**

Message Validation Report

#### **Notes for Testers**

If the HIT Module being tested is unable to control the Patient ID Number value that it creates (1) QPD-3.1 in the Query message can be populated with a different value than the one provided in the test data; (2) the Tester can ignore the associated error notification generated by the Tool; and (3) the Response message also must be modified accordingly.

# **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                          | Categorization               |
|------------|---------------------------------------|-------------------------------|------------------------------|
| MSH-1      | Field Separator                       |                               | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                          | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                               |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                    | Presence-Configuration       |
| MSH-3.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.1 | Indifferent                  |
| MSH-3.3    | Universal ID Type                     | ISO                           | Indifferent                  |
| MSH-4      | Sending Facility                      |                               |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                    | Presence-Configuration       |
| MSH-4.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.2 | Indifferent                  |
| MSH-4.3    | Universal ID Type                     | ISO                           | Indifferent                  |
| MSH-5      | Receiving Application                 |                               |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                    | Presence-Configuration       |
| MSH-5.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.3 | Indifferent                  |
| MSH-5.3    | Universal ID Type                     | ISO                           | Indifferent                  |
| MSH-6      | Receiving Facility                    | 1                             |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                    | Presence-Configuration       |
| MSH-6.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.4 | Indifferent                  |
| MSH-6.3    | Universal ID Type                     | ISO                           | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                               | manterent                    |
| MSH-7.1    | Time                                  | 20150531145156-0500           | Presence-System Generated    |
| MSH-9      | Message Type                          | 20130331143130-0300           | r resence-system Generated   |
| MSH-9.1    | Message Code                          | QBP                           | Value-Profile Fixed          |
|            |                                       |                               | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | Q11                           |                              |
| MSH-9.3    | Message Structure                     | QBP_Q11                       | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-QR-3.1_Query_Q11_Z4   | 4 Presence-System Generated  |
| MSH-11     | Processing ID                         | n                             | D C + 1 1'00 +               |
| MSH-11.1   | Processing ID                         | P                             | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                               | Train Digital Inc.           |
| MSH-12.1   | Version ID                            | 2.5.1                         | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                            | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                            | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                               |                              |
| MSH-21.1   | Entity Identifier                     | Z44                           | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                     | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                               | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                               | Indifferent                  |
| MSH-22     | Sending Responsible Organization      |                               |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                    | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                               |                              |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-IZ-1                  | Presence-Configuration       |
| MSH-22.6.2 | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9 | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     | ISO                           | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  | XX                            | Value-Test Case Fixed        |
| MSH-22.10  | Organization Identifier               | 100-6482                      | Presence-Configuration       |
| MSH-23     | Receiving Responsible<br>Organization |                               |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                    | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                               |                              |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-IZ-1                  | Presence-Configuration       |
| MSH-23.6.2 | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9 | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     | ISO                           | Indifferent                  |
|            | omitoioni in Type                     | 1                             |                              |
| MSH-23.7   | Identifier Type Code                  | XX                            | Value-Test Case Fixed        |

QPD: Query Parameter Definition =

| Location  | Data Element  | Data  | Categorization             |  |
|-----------|---|---|----------------------------|--|
| QPD-1     | Message Query Name                                    |   |                            |  |
| QPD-1.1   | Identifier  | Z44   | Value-Profile Fixed        |  |
| QPD-1.2   | Text  | Text Request Evaluated History and Forecast |                            |  |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                                   | Value-Profile Fixed        |  |
| QPD-2     | Query Tag   | IZ-3.1-2015                                 | Presence-System Generated  |  |
| QPD-3     | PatientList   |   |                            |  |
| QPD-3.1   | ID Number   | 177993                                      | Value-Test Case Fixed      |  |
| QPD-3.4   | Assigning Authority                                   |   |                            |  |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                                  | Value-Test Case Fixed      |  |
| QPD-3.4.2 | Universal ID  | 2.16.840.1.113883.3.72.5.40.5               | Indifferent                |  |
| QPD-3.4.3 | Universal ID Type                                     | ISO   | Indifferent                |  |
| QPD-3.5   | Identifier Type Code                                  | MR  | Value-Test Case Fixed      |  |
| QPD-4     | PatientName   |   |                            |  |
| QPD-4.1   | Family Name   |   |                            |  |
| QPD-4.1.1 | Surname   | Bee   | Value-Test Case Fixed      |  |
| QPD-4.2   | Given Name  | Donna                                       | Value-Test Case Fixed      |  |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof | Victoria                                    | Value-Test Case Fixed      |  |
| QPD-4.7   | Name Type Code  | L   | Value-Test Case Fixed      |  |
| QPD-5     | PatientMotherMaidenName                               |   |                            |  |
| QPD-5.1   | Family Name   |   |                            |  |
| QPD-5.1.1 | Surname   | Goluchio                                    | Value-Test Case Fixed      |  |
| QPD-5.7   | Name Type Code  | M   | Value-Profile Fixed        |  |
| QPD-6     | PatientDateOfBirth                                    |   |                            |  |
| QPD-6.1   | Time  | 20120507                                    | Value-Test Case Fixed      |  |
| QPD-7     | Patient Sex   | F   | Value-Test Case Fixed      |  |
| QPD-8     | Patient Address                                       |   |                            |  |
| QPD-8.1   | Street Address  |   |                            |  |
| QPD-8.1.1 | Street or Mailing Address                             | 737 Everygreen Road                         | Value-Test Case Fixed      |  |
| QPD-8.2   | Other Designation                                     | Suite 511                                   | Indifferent                |  |
| QPD-8.3   | City  | Livingston                                  | Value-Test Case Fixed      |  |
| QPD-8.4   | State or Province                                     | MT  | Value-Test Case Fixed      |  |
| QPD-8.5   | Zip or Postal Code                                    | 59047                                       | Value-Test Case Fixed      |  |
| QPD-8.6   | Country   | USA   | Value-Test Case Fixed      |  |
| QPD-8.7   | Address Type  | P   | Value-Test Case Fixed List |  |
| QPD-9     | Phone   |   |                            |  |
| QPD-9.2   | Telecommunication Use Code                            | PRN   | Value-Test Case Fixed      |  |
| QPD-9.3   | Telecommunication Equipment Type                      | РН  | Value-Test Case Fixed      |  |
| QPD-9.4   | Email Address   |   |                            |  |
| QPD-9.6   | Area/City Code  | 406   | Value-Test Case Fixed      |  |
| QPD-9.7   | Local Number  | 5553758                                     | Value-Test Case Fixed      |  |
| QPD-10    | Multiple birth indicator                              | Y   | Value-Test Case Fixed      |  |
| QPD-11    | Birth order   | 3   | Value-Test Case Fixed      |  |

| RCP : Response Control Parameter |                          |         |                           |  |
|----------------------------------|--------------------------|---------|---------------------------|--|
| Location                         | Data Element             | Data    | Categorization            |  |
| RCP-1                            | Query Priority           | I       | Value-Test Case Fixed     |  |
| RCP-2                            | Quantity Limited Request |         |                           |  |
| RCP-2.1                          | Quantity                 | 1       | Value-Profile Fixed       |  |
| RCP-2.2                          | Units                    |         |                           |  |
| RCP-2.2.1                        | Identifier               | RD      | Value-Profile Fixed       |  |
| RCP-2.2.2                        | Text                     | Records | Presence-Test Case Proper |  |
| RCP-2.2.3                        | Name of Coding System    | HL70126 | Value-Profile Fixed       |  |

# **Test Data Specification**

| Element              | Data  |  |
|----------------------|---|--|
| Patient Name         | Donna Victoria Bee                          |  |
| Mother's Maiden Name | Goluchio                                    |  |
| ID Number            | 177993                                      |  |
| Date/Time of Birth   | 05/07/2012                                  |  |
| Sex                  | Female                                      |  |
| Patient Address      | 737 Everygreen Road Livingston MT 59047 USA |  |
| Patient Phone        | (406)555-3758                               |  |
| Birth Indicator      | Yes   |  |
| Birth Order          | 3   |  |

# 2.3.2. IZ-QR-3.2\_Response\_NF\_K11\_Z33

Test Step Type: TA\_RESPONDER Response with no matches found

# **Test Story**

### **Description**

The IIS performs a search for Donna Victoria Bee and does not find a high-confidence match. The IIS returns a response message indicating no person found to the querying system.

### **Comments**

No Comments

### **Pre Condition**

The patient Donna Victoria Bee exists in the querying system (e.g., EHR-S) and a query was performed. The IIS (simulated by the NIST test tool) does not find a match for the person.

### **Post Condition**

The response message is processed and the clinician is alerted to fact of no matches.

### **Test Objectives**

Test the capability of the EHR-S to process a response message that returns no persons found and to provide an indication to the end user.

#### **Evaluation Criteria**

Juror Document, Clinician is notified of no match.

### **Notes for Testers**

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

**Important note regarding the MSH-10 and MSA-2:** The NIST response message is predefined and is based on the query message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the response message. The NIST response test message can be modified such that MSA-2 matches MSH-10 of the query message generated by the system-under test

# **Message Contents**

MSH : Message Header

| Location   | Data Element                          | Data                                   | Categorization |
|------------|---------------------------------------|--|----------------|
| MSH-1      | Field Separator                       |  |                |
| MSH-2      | Encoding Characters                   | ^~\&                                   |                |
| MSH-3      | Sending Application                   |  |                |
| MSH-3.1    | Namespace ID                          | NISTIISAPP                             |                |
| MSH-3.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.3          |                |
| MSH-3.3    | Universal ID Type                     | ISO                                    |                |
| MSH-4      | Sending Facility                      |  |                |
| MSH-4.1    | Namespace ID                          | NISTIISFAC                             |                |
| MSH-4.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.4          |                |
| MSH-4.3    | Universal ID Type                     | ISO                                    |                |
| MSH-5      | Receiving Application                 |  |                |
| MSH-5.1    | Namespace ID                          | NISTEHRAPP                             |                |
| MSH-5.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.1          |                |
| MSH-5.3    | Universal ID Type                     | ISO                                    |                |
| MSH-6      | Receiving Facility                    |  |                |
| MSH-6.1    | Namespace ID                          | NISTEHRFAC                             |                |
| MSH-6.2    | Universal ID                          | 2.16.840.1.113883.3.72.5.40.2          |                |
| MSH-6.3    | Universal ID Type                     | ISO                                    |                |
| MSH-7      | Date/Time Of Message                  |  |                |
| MSH-7.1    | Time                                  | 20151031145233-0500                    |                |
| MSH-9      | Message Type                          |  |                |
| MSH-9.1    | Message Code                          | RSP                                    |                |
| MSH-9.2    | Trigger Event                         | K11                                    |                |
| MSH-9.3    | Message Structure                     | RSP K11                                |                |
| MSH-10     | Message Control ID                    | NIST-IZ-QR-<br>3.2 Response NF K11 Z33 |                |
| MSH-11     | Processing ID                         |  |                |
| MSH-11.1   | Processing ID                         | P                                      |                |
| MSH-12     | Version ID                            |  |                |
| MSH-12.1   | Version ID                            | 2.5.1                                  |                |
| MSH-15     | Accept Acknowledgment Type            | NE                                     |                |
| MSH-16     | Application Acknowledgment Type       | NE                                     |                |
| MSH-21     | Message Profile Identifier            |  |                |
| MSH-21.1   | Entity Identifier                     | Z33                                    |                |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                              |                |
| MSH-21.3   | Universal ID                          |  |                |
| MSH-21.4   | Universal ID Type                     |  |                |
| MSH-22     | Sending Responsible Organization      |  |                |
| MSH-22.1   | Organization Name                     | NISTIISFAC                             |                |
| MSH-22.6   | Assigning Authority                   |  |                |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-IZ-1                           |                |
| MSH-22.6.2 | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9          |                |
| MSH-22.6.3 | Universal ID Type                     | ISO                                    |                |
| MSH-22.7   | Identifier Type Code                  | XX                                     |                |
| MSH-22.10  | Organization Identifier               | 100-3322                               |                |
| MSH-23     | Receiving Responsible<br>Organization |  |                |
| MSH-23.1   | Organization Name                     | NISTEHRFAC                             |                |
| MSH-23.6   | Assigning Authority                   |  |                |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-IZ-1                           |                |
| MSH-23.6.2 | Universal ID                          | 2.16.840.1.113883.3.72.5.40.9          |                |
| MSH-23.6.3 | Universal ID Type                     | ISO                                    |                |
| MSH-23.7   | Identifier Type Code                  | XX                                     |                |
|            | Organization Identifier               | 100-6482                               |                |
| MSH-23.10  | Organization identifier               | 100-0402                               |                |

# MSA : Message Acknowledgment -

| Location | Data Element        | Data                         | Categorization |
|----------|---------------------|------------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                           |                |
| MSA-2    | Message Control ID  | NIST-IZ-QR-3.1_Query_Q11_Z44 |                |

# QAK : Query Acknowledgment

| Location | Data Element          | Data                                   | Categorization |
|----------|-----------------------|--|----------------|
| QAK-1    | Query Tag             | IZ-3.1-2015                            |                |
| QAK-2    | Query Response Status | NF                                     |                |
| QAK-3    | Message Query Name    |  |                |
| QAK-3.1  | Identifier            | Z44                                    |                |
| QAK-3.2  | Text                  | Request Evaluated History and Forecast |                |
| QAK-3.3  | Name of Coding System | CDCPHINVS                              |                |

| Location  | <b>Data Element</b>                                   | Data                                   | Categorization |
|-----------|---|--|----------------|
| QPD-1     | Message Query Name                                    |  |                |
| QPD-1.1   | Identifier  | Z44                                    |                |
| QPD-1.2   | Text  | Request Evaluated History and Forecast |                |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                              |                |
| QPD-2     | Query Tag   | IZ-3.1-2015                            |                |
| QPD-3     | PatientList   |  |                |
| QPD-3.1   | ID Number   | 177993                                 |                |
| QPD-3.4   | Assigning Authority                                   |  |                |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                             |                |
| QPD-3.4.2 | Universal ID  | 2.16.840.1.113883.3.72.5.40.5          |                |
| QPD-3.4.3 | Universal ID Type                                     | ISO                                    |                |
| QPD-3.5   | Identifier Type Code                                  | MR                                     |                |
| QPD-4     | PatientName   |  |                |
| QPD-4.1   | Family Name   |  |                |
| QPD-4.1.1 | Surname   | Bee                                    |                |
| QPD-4.2   | Given Name  | Donna                                  |                |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof | Victoria                               |                |
| QPD-4.7   | Name Type Code  | L                                      |                |
| QPD-5     | PatientMotherMaidenName                               |  |                |
| QPD-5.1   | Family Name   |  |                |
| QPD-5.1.1 | Surname   | Goluchio                               |                |
| QPD-5.7   | Name Type Code  | M                                      |                |
| QPD-6     | PatientDateOfBirth                                    |  |                |
| QPD-6.1   | Time  | 20120507                               |                |
| QPD-7     | Patient Sex   | F                                      |                |
| QPD-8     | Patient Address                                       |  |                |
| QPD-8.1   | Street Address  |  |                |
| QPD-8.1.1 | Street or Mailing Address                             | 737 Everygreen Road                    |                |
| QPD-8.2   | Other Designation                                     | Suite 511                              |                |
| QPD-8.3   | City  | Livingston                             |                |
| QPD-8.4   | State or Province                                     | MT                                     |                |
| QPD-8.5   | Zip or Postal Code                                    | 59047                                  |                |
| QPD-8.6   | Country   | USA                                    |                |
| QPD-8.7   | Address Type  | P                                      |                |
| QPD-9     | Phone   |  |                |
| QPD-9.2   | Telecommunication Use Code                            | PRN                                    |                |
| QPD-9.3   | Telecommunication Equipment<br>Type                   | РН                                     |                |
| QPD-9.4   | Email Address   |  |                |
| QPD-9.6   | Area/City Code  | 406                                    |                |
| QPD-9.7   | Local Number  | 5553758                                |                |
| QPD-10    | Multiple birth indicator                              | Y                                      |                |
| QPD-11    | Birth order   | 3                                      |                |
| Q1 D-11   | Diffii Oluci  | 3                                      |                |

# **Test Data Specification**

# Patient Information

| Element   | Data     |
|---|----------|
| This information will be automatically supplied by th | e System |

# 2.4. IZ-QR-4\_Query\_Too\_Many

Query finds too many matches

# **Test Story**

### **Description**

A child, James Smith, is brought to the local clinic to determine what immunizations have been given and what immunizations are needed. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider uses this information to locate the patient's medical record. The staff member then uses the medical record and system capabilities to query the IIS to request an evaluated history and forecast for the patient.

The IIS performs a search for James Smith and finds too many matches. The IIS returns a response message indicating no person found (too many matches) to the querying system. It is expected that the requesting system (e.g., EHR-S) process the response message and display some indication to the end user that the person was not found (too many matches).

#### **Comments**

#### **Pre Condition**

Person exists in the system with the complete demographics as provided in the Test Data Specification.

Person has Medical Record Number (MR).

Person may have a record in the IIS, however the IIS is unable narrow the search results to a single match (multiple matches exist).

#### **Post Condition**

The clinician is provided some indication that too many matches were found.

# **Test Objectives**

Tests for a typically valued query message. Test the capability of the EHR-S to process a response message that returns no persons found (too many matches) and to provide an indication to the end user.

### **Evaluation Criteria**

Query Message: Message Validation Report

Response Message: Juror Document. The EHR-S receives the response and alerts the clinician that too many matches were found.

### **Notes for Testers**

The NIST tool is simulating a response from the IIS.

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

# 2.4.1. IZ-QR-4.1\_Query\_Q11\_Z44

Test Step Type: SUT\_INITIATOR Query will find too many matches

# **Test Story**

### **Description**

A child, James Smith, is brought to the local clinic to determine what immunizations have been given and what immunizations are needed. A clinic staff member collects basic patient demographic information including name, date of birth and sex. A clinic provider uses this information to locate the patient's medical record. The staff member then uses the medical record and system capabilities to query the IIS to request an evaluated history and forecast for the patient.

### Comments

Most of the test data is categorized as Test Case Fixed. It is important that the data is entered into the querying system as specified to enable linking the response message to the patient record.

The sending (querying) system will need to accept a response indicating that too many matches were found.

### **Pre Condition**

More than one person in the IIS matching the parameters in the query exists.

### **Post Condition**

Response indicates that there are more than one match (too many) and the clinician is informed.

### **Test Objectives**

Tests for a typically valued query message.

### **Evaluation Criteria**

Message Validation Report

### **Notes for Testers**

If the HIT Module being tested is unable to control the Patient ID Number value that it creates (1) QPD-3.1 in the Query message can be populated with a different value than the one provided in the test data; (2) the Tester can ignore the associated error notification generated by the Tool; and (3) the Response message also must be modified accordingly.

# **Message Contents**

-MSH : Message Header -

| Location   | Data Element                          | Data                         | Categorization               |
|------------|---------------------------------------|------------------------------|------------------------------|
| MSH-1      | Field Separator                       |                              | Value-Profile Fixed          |
| MSH-2      | Encoding Characters                   | ^~\&                         | Value-Profile Fixed          |
| MSH-3      | Sending Application                   |                              |                              |
| MSH-3.1    | Namespace ID                          | NISTEHRAPP                   | Presence-Configuration       |
| MSH-3.2    | Universal ID                          |                              | Indifferent                  |
| MSH-3.3    | Universal ID Type                     |                              | Indifferent                  |
| MSH-4      | Sending Facility                      |                              |                              |
| MSH-4.1    | Namespace ID                          | NISTEHRFAC                   | Presence-Configuration       |
| MSH-4.2    | Universal ID                          |                              | Indifferent                  |
| MSH-4.3    | Universal ID Type                     |                              | Indifferent                  |
| MSH-5      | Receiving Application                 |                              |                              |
| MSH-5.1    | Namespace ID                          | NISTIISAPP                   | Presence-Configuration       |
| MSH-5.2    | Universal ID                          |                              | Indifferent                  |
| MSH-5.3    | Universal ID Type                     |                              | Indifferent                  |
| MSH-6      | Receiving Facility                    |                              |                              |
| MSH-6.1    | Namespace ID                          | NISTIISFAC                   | Presence-Configuration       |
| MSH-6.2    | Universal ID                          |                              | Indifferent                  |
| MSH-6.3    | Universal ID Type                     |                              | Indifferent                  |
| MSH-7      | Date/Time Of Message                  |                              |                              |
| MSH-7.1    | Time                                  | 20150531145156-0500          | Presence-System Generated    |
| MSH-9      | Message Type                          |                              |                              |
| MSH-9.1    | Message Code                          | QBP                          | Value-Profile Fixed          |
| MSH-9.2    | Trigger Event                         | Q11                          | Value-Profile Fixed          |
| MSH-9.3    | Message Structure                     | QBP_Q11                      | Value-Profile Fixed          |
| MSH-10     | Message Control ID                    | NIST-IZ-QR-4.1 Query Q11 Z44 | Presence-System Generated    |
| MSH-11     | Processing ID                         |                              | -                            |
| MSH-11.1   | Processing ID                         | P                            | Presence-Content Indifferent |
| MSH-12     | Version ID                            |                              |                              |
| MSH-12.1   | Version ID                            | 2.5.1                        | Value-Profile Fixed          |
| MSH-15     | Accept Acknowledgment Type            | ER                           | Value-Profile Fixed          |
| MSH-16     | Application Acknowledgment Type       | AL                           | Value-Profile Fixed          |
| MSH-21     | Message Profile Identifier            |                              |                              |
| MSH-21.1   | Entity Identifier                     | Z44                          | Value-Profile Fixed          |
| MSH-21.2   | Namespace ID                          | CDCPHINVS                    | Value-Profile Fixed          |
| MSH-21.3   | Universal ID                          |                              | Indifferent                  |
| MSH-21.4   | Universal ID Type                     |                              | Indifferent                  |
| MSH-22     | Sending Responsible Organization      | 1                            |                              |
| MSH-22.1   | Organization Name                     | NISTEHRFAC                   | Presence-Configuration       |
| MSH-22.6   | Assigning Authority                   |                              |                              |
| MSH-22.6.1 | Namespace ID                          | NIST-AA-1                    | Presence-Configuration       |
| MSH-22.6.2 | Universal ID                          |                              | Indifferent                  |
| MSH-22.6.3 | Universal ID Type                     |                              | Indifferent                  |
| MSH-22.7   | Identifier Type Code                  | XX                           | Value-Test Case Fixed        |
| MSH-22.10  | Organization Identifier               | 100-6482                     | Presence-Configuration       |
| MSH-23     | Receiving Responsible<br>Organization |                              |                              |
| MSH-23.1   | Organization Name                     | NISTIISFAC                   | Presence-Configuration       |
| MSH-23.6   | Assigning Authority                   |                              |                              |
| MSH-23.6.1 | Namespace ID                          | NIST-AA-1                    | Presence-Configuration       |
| MSH-23.6.2 | Universal ID                          |                              | Indifferent                  |
| MSH-23.6.3 | Universal ID Type                     |                              | Indifferent                  |
| MSH-23.7   | Identifier Type Code                  | XX                           | Value-Test Case Fixed        |
| 4.44       | . Jr                                  | I .                          | 1                            |

QPD: Query Parameter Definition =

| Location        | Data Element  | Data                                   | Categorization             |
|-----------------|---|--|----------------------------|
| QPD-1           | Message Query Name                                    |  |                            |
| QPD-1.1         | Identifier  | Z44                                    | Value-Profile Fixed        |
| QPD-1.2         | Text  | Request Evaluated History and Forecast | Value-Profile Fixed        |
| QPD-1.3         | Name of Coding System                                 | CDCPHINVS                              | Value-Profile Fixed        |
| QPD-2           | Query Tag   | IZ-4.1-2015                            | Presence-System Generated  |
| QPD-3           | PatientList   | 12 1.1 2013                            | Tresence Bystem Generated  |
| QPD-3.1         | ID Number   | 412299                                 | Value-Test Case Fixed      |
| QPD-3.4         | Assigning Authority                                   | 1122))                                 | variet Test Case Fixed     |
| QPD-3.4.1       | Namespace ID  | NIST-MPI-1                             | Value-Test Case Fixed      |
| QPD-3.4.2       | Universal ID  | NIST WITT                              | Indifferent                |
| QPD-3.4.3       | Universal ID Type                                     |  | Indifferent                |
| QPD-3.5         | Identifier Type Code                                  | MR                                     | Value-Test Case Fixed      |
| QPD-4           | PatientName   | IVIX                                   | value-Test Case Fixed      |
| QPD-4.1         |   |  |                            |
|                 | Family Name Surname                                   | Smith                                  | Value-Test Case Fixed      |
| QPD-4.1.1       |   | 1                                      | -                          |
| QPD-4.2         | Given Name  | James                                  | Value-Test Case Fixed      |
| QPD-4.3         | Second and Further Given<br>Names or Initials Thereof |  | Indifferent                |
| QPD-4.7         | Name Type Code  | L                                      | Value-Test Case Fixed      |
| QPD-5           | PatientMotherMaidenName                               |  |                            |
| QPD-5.1         | Family Name   |  |                            |
| QPD-5.1.1       | Surname   |  | Indifferent                |
| QPD-5.7         | Name Type Code  |  | Indifferent                |
| QPD-6           | PatientDateOfBirth                                    |  |                            |
| QPD-6.1         | Time  | 20110905                               | Value-Test Case Fixed      |
| QPD-7           | Patient Sex   | M                                      | Value-Test Case Fixed      |
| QPD-8           | Patient Address                                       |  |                            |
| QPD-8.1         | Street Address  |  |                            |
| QPD-8.1.1       | Street or Mailing Address                             | 22 East Branch Way                     | Value-Test Case Fixed      |
| QPD-8.2         | Other Designation                                     |  | Indifferent                |
| QPD-8.3         | City  | Livingston                             | Value-Test Case Fixed      |
| QPD-8.4         | State or Province                                     | MT                                     | Value-Test Case Fixed      |
| QPD-8.5         | Zip or Postal Code                                    | 59047                                  | Value-Test Case Fixed      |
| QPD-8.6         | Country   |  | Indifferent                |
| QPD-8.7         | Address Type  | P                                      | Value-Test Case Fixed List |
| QPD-9           | Phone   |  |                            |
| QPD-9.2         | Telecommunication Use Code                            | PRN                                    | Value-Test Case Fixed      |
| QPD-9.3         | Telecommunication Equipment Type                      | РН                                     | Value-Test Case Fixed      |
| QPD-9.4         | Email Address   |  |                            |
| QPD-9.6         | Area/City Code  | 406                                    | Value-Test Case Fixed      |
| QPD-9.7         | Local Number  | 5556285                                | Value-Test Case Fixed      |
| QPD-10          | Multiple birth indicator                              |  | Indifferent                |
| QPD-11          | Birth order   |  | Indifferent                |
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| RCP : Response Control Parameter |                          |         |                           |
|----------------------------------|--------------------------|---------|---------------------------|
| Location                         | Data Element             | Data    | Categorization            |
| RCP-1                            | Query Priority           | I       | Value-Test Case Fixed     |
| RCP-2                            | Quantity Limited Request |         |                           |
| RCP-2.1                          | Quantity                 | 1       | Value-Profile Fixed       |
| RCP-2.2                          | Units                    |         |                           |
| RCP-2.2.1                        | Identifier               | RD      | Value-Profile Fixed       |
| RCP-2.2.2                        | Text                     | Records | Presence-Test Case Proper |
| RCP-2.2.3                        | Name of Coding System    | HL70126 | Value-Profile Fixed       |

# **Test Data Specification**

| Element              | Data                                   |
|----------------------|--|
| Patient Name         | James Smith                            |
| Mother's Maiden Name |  |
| ID Number            | 412299                                 |
| Date/Time of Birth   | 09/05/2011                             |
| Sex                  | Male                                   |
| Patient Address      | 22 East Branch Way Livingston MT 59047 |
| Patient Phone        | (406)555-6285                          |
| Birth Indicator      | No                                     |
| Birth Order          |  |

# 2.4.2. IZ-QR-4.2 Response TM K11 Z33

Test Step Type: TA RESPONDER

Response message indicating that too matches were found.

# **Test Story**

### **Description**

The IIS performs a search for James Smith and finds too many matches based on the sending system's query (e.g., EHR-S). The IIS returns a response message indicating no person found (too many matches) to the querying system. It is expected that the requesting system (e.g., EHR-S) process the response message and display some indication to the end user that the person was not found (too many matches).

### Comments

No Comments

### **Pre Condition**

A query is made to the IIS. Person may have a record in the IIS, however the IIS is unable narrow the search results to a single match (multiple matches exist).

### **Post Condition**

The clinician is provided some indication that too many matches were found.

# **Test Objectives**

Test the capability of the EHR-S to process a response message that returns no persons found (too many matches) and to provide an indication to the end user.

### **Evaluation Criteria**

Juror Document. Clinician is notified that too many matches were found.

# **Notes for Testers**

Important note regarding the Query Tag (QPD-2): The NIST response message is predefined and is based on the query message. Most systems will automatically create the query tag (Identifier) and will require it for importing, linking, and processing the response message. The NIST test message can be modified such that the query tag matches that query tag generated by the system-under test.

**Important note regarding the MSH-10 and MSA-2:** The NIST response message is predefined and is based on the query message. Most systems will automatically create the message control Identifier and may require it for importing, linking, and processing the response message. The NIST response test message can be modified such that MSA-2 matches MSH-10 of the query message generated by the system-under test

# **Message Contents**

MSH : Message Header

| Location                             | Data Element                          | Data                                   | Categorization |
|--------------------------------------|---------------------------------------|--|----------------|
| MSH-1                                | Field Separator                       |  |                |
| MSH-2                                | Encoding Characters                   | \^~\&                                  |                |
| MSH-3                                | Sending Application                   |  |                |
| MSH-3.1                              | Namespace ID                          | NISTIISAPP                             |                |
| MSH-3.2                              | Universal ID                          |  |                |
| MSH-3.3                              | Universal ID Type                     |  |                |
| MSH-4                                | Sending Facility                      |  |                |
| MSH-4.1                              | Namespace ID                          | NISTIISFAC                             |                |
| MSH-4.2                              | Universal ID                          |  |                |
| MSH-4.3                              | Universal ID Type                     |  |                |
| MSH-5                                | Receiving Application                 |  |                |
| MSH-5.1                              | Namespace ID                          | NISTEHRAPP                             |                |
| MSH-5.2                              | Universal ID                          |  |                |
| MSH-5.3                              | Universal ID Type                     |  |                |
| MSH-6                                | Receiving Facility                    |  |                |
| MSH-6.1                              | Namespace ID                          | NISTEHRFAC                             |                |
| MSH-6.2                              | Universal ID                          |  |                |
| MSH-6.3                              | Universal ID Type                     |  |                |
| MSH-7                                | Date/Time Of Message                  |  |                |
| MSH-7.1                              | Time                                  | 20141031145233-0500                    |                |
| MSH-9                                | Message Type                          |  |                |
| MSH-9.1                              | Message Code                          | RSP                                    |                |
| MSH-9.2                              | Trigger Event                         | K11                                    |                |
| MSH-9.3                              | Message Structure                     | RSP_K11                                |                |
| MSH-10                               | Message Control ID                    | NIST-IZ-QR-<br>4.2 Response TM K11 Z33 |                |
| MSH-11                               | Processing ID                         |  |                |
| MSH-11.1                             | Processing ID                         | P                                      |                |
| MSH-12                               | Version ID                            |  |                |
| MSH-12.1                             | Version ID                            | 2.5.1                                  |                |
| MSH-15                               | Accept Acknowledgment Type            | NE                                     |                |
| MSH-16                               | Application Acknowledgment Type       | NE                                     |                |
| MSH-21                               | Message Profile Identifier            |  |                |
| MSH-21.1                             | Entity Identifier                     | Z33                                    |                |
| MSH-21.2                             | Namespace ID                          | CDCPHINVS                              |                |
| MSH-21.3                             | Universal ID                          |  |                |
| MSH-21.4                             | Universal ID Type                     |  |                |
| MSH-22                               | Sending Responsible Organization      |  |                |
| MSH-22.1                             | Organization Name                     | NISTIISFAC                             |                |
| MSH-22.6                             | Assigning Authority                   |  |                |
| MSH-22.6.1                           | Namespace ID                          | NIST-AA-1                              |                |
| MSH-22.6.2                           | Universal ID                          |  |                |
| MSH-22.6.3                           | Universal ID Type                     |  |                |
| MSH-22.7                             | Identifier Type Code                  | XX                                     |                |
| MSH-22.10                            | Organization Identifier               | 100-3322                               |                |
| MSH-23                               | Receiving Responsible<br>Organization |  |                |
| MSH-23.1                             | Organization Name                     | NISTEHRFAC                             |                |
| MSH-23.6                             | Assigning Authority                   |  |                |
| MSH-23.6.1                           | Namespace ID                          | NIST-AA-1                              |                |
|                                      | 1 talliespace 1B                      | I.                                     |                |
| MSH-23.6.2                           | Universal ID                          |  |                |
|                                      | Universal ID                          |  |                |
| MSH-23.6.2<br>MSH-23.6.3<br>MSH-23.7 | -                                     | <br> XX                                |                |

# MSA : Message Acknowledgment

| Location | Data Element        | Data                         | Categorization |
|----------|---------------------|------------------------------|----------------|
| MSA-1    | Acknowledgment Code | AA                           |                |
| MSA-2    | Message Control ID  | NIST-IZ-QR-4.1_Query_Q11_Z44 |                |

# QAK: Query Acknowledgment

| Location | Data Element          | Data                                   | Categorization |
|----------|-----------------------|--|----------------|
| QAK-1    | Query Tag             | IZ-4.1-2015                            |                |
| QAK-2    | Query Response Status | TM                                     |                |
| QAK-3    | Message Query Name    |  |                |
| QAK-3.1  | Identifier            | Z44                                    |                |
| QAK-3.2  | Text                  | Request Evaluated History and Forecast |                |
| QAK-3.3  | Name of Coding System | CDCPHINVS                              |                |

| Location  | Data Element  | Data                                   | Categorization |
|-----------|---|--|----------------|
| OPD-1     | Message Query Name                                    |  |                |
| QPD-1.1   | Identifier  | 7.44                                   |                |
| QPD-1.2   | Text  | Request Evaluated History and Forecast |                |
| QPD-1.3   | Name of Coding System                                 | CDCPHINVS                              |                |
| QPD-2     | Query Tag   | IZ-4.1-2015                            |                |
| QPD-3     | PatientList   |  |                |
| QPD-3.1   | ID Number   | 412299                                 |                |
| QPD-3.4   | Assigning Authority                                   |  |                |
| QPD-3.4.1 | Namespace ID  | NIST-MPI-1                             |                |
| QPD-3.4.2 | Universal ID  |  |                |
| QPD-3.4.3 | Universal ID Type                                     |  |                |
| QPD-3.5   | Identifier Type Code                                  | MR                                     |                |
| QPD-4     | PatientName   |  |                |
| QPD-4.1   | Family Name   |  |                |
| QPD-4.1.1 | Surname   | Smith                                  |                |
| QPD-4.2   | Given Name  | James                                  |                |
| QPD-4.3   | Second and Further Given<br>Names or Initials Thereof |  |                |
| QPD-4.7   | Name Type Code  | L                                      |                |
| QPD-5     | PatientMotherMaidenName                               |  |                |
| QPD-5.1   | Family Name   |  |                |
| QPD-5.1.1 | Surname   |  |                |
| QPD-5.7   | Name Type Code  |  |                |
| QPD-6     | PatientDateOfBirth                                    |  |                |
| QPD-6.1   | Time  | 20110905                               |                |
| QPD-7     | Patient Sex   | M                                      |                |
| QPD-8     | Patient Address                                       |  |                |
| QPD-8.1   | Street Address  |  |                |
| QPD-8.1.1 | Street or Mailing Address                             | 22 East Branch Way                     |                |
| QPD-8.2   | Other Designation                                     |  |                |
| QPD-8.3   | City  | Livingston                             |                |
| QPD-8.4   | State or Province                                     | MT                                     |                |
| QPD-8.5   | Zip or Postal Code                                    | 59047                                  |                |
| QPD-8.6   | Country   |  |                |
| QPD-8.7   | Address Type  | P                                      |                |
| QPD-9     | Phone   |  |                |
| QPD-9.2   | Telecommunication Use Code                            | PRN                                    |                |
| QPD-9.3   | Telecommunication Equipment<br>Type                   | РН                                     |                |
| QPD-9.4   | Email Address   |  |                |
| QPD-9.6   | Area/City Code  | 406                                    |                |
| QPD-9.7   | Local Number  | 5556285                                |                |
| QPD-10    | Multiple birth indicator                              |  |                |
| QPD-11    | Birth order   |  |                |
|           |   |  |                |

# **Test Data Specification**

# Patient Information

| Element   | Data |  |
|---|------|--|
| This information will be automatically supplied by the System |      |  |