Pennsylvania Immunization Electronic Registry System (PIERS) Implementation:

HL7 Testing Guide

Table of Contents

Table of Contents

Document Purpose

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The Pennsylvania Immunization Registry is excited to announce our upcoming transition to a new Immunization Information System (IIS), named Pennsylvania Immunization Electronic Registry System (PIERS). We are on target for implementation in January 2024.

PIERS will utilize WebIZ™ which is a web-based, database-driven immunization registry developed by Envision Technology Partners, a trusted company with over 20 years of experience in public health and technology. The platform is recognized as a leading IIS. WebIZ™ is currently utilized by 19 jurisdictions in the United States, including PhilaVax, the Philadelphia Department of Public Health's IIS. It was designed to meet the national standards for effective tracking and administration of immunizations in the public health setting.

Testing the new system and HL7 connection is critical to ensure that all providers transition to the new system seamlessly. We are excited to welcome you to the HL7 testing phase prior to onboarding in production in January 2024.

The HL7 Testing Guide provides the necessary information for providers to send HL7 messages in the QA/Beta environment as part of onboarding to PIERS.

Glossary and Acronyms

Glossary

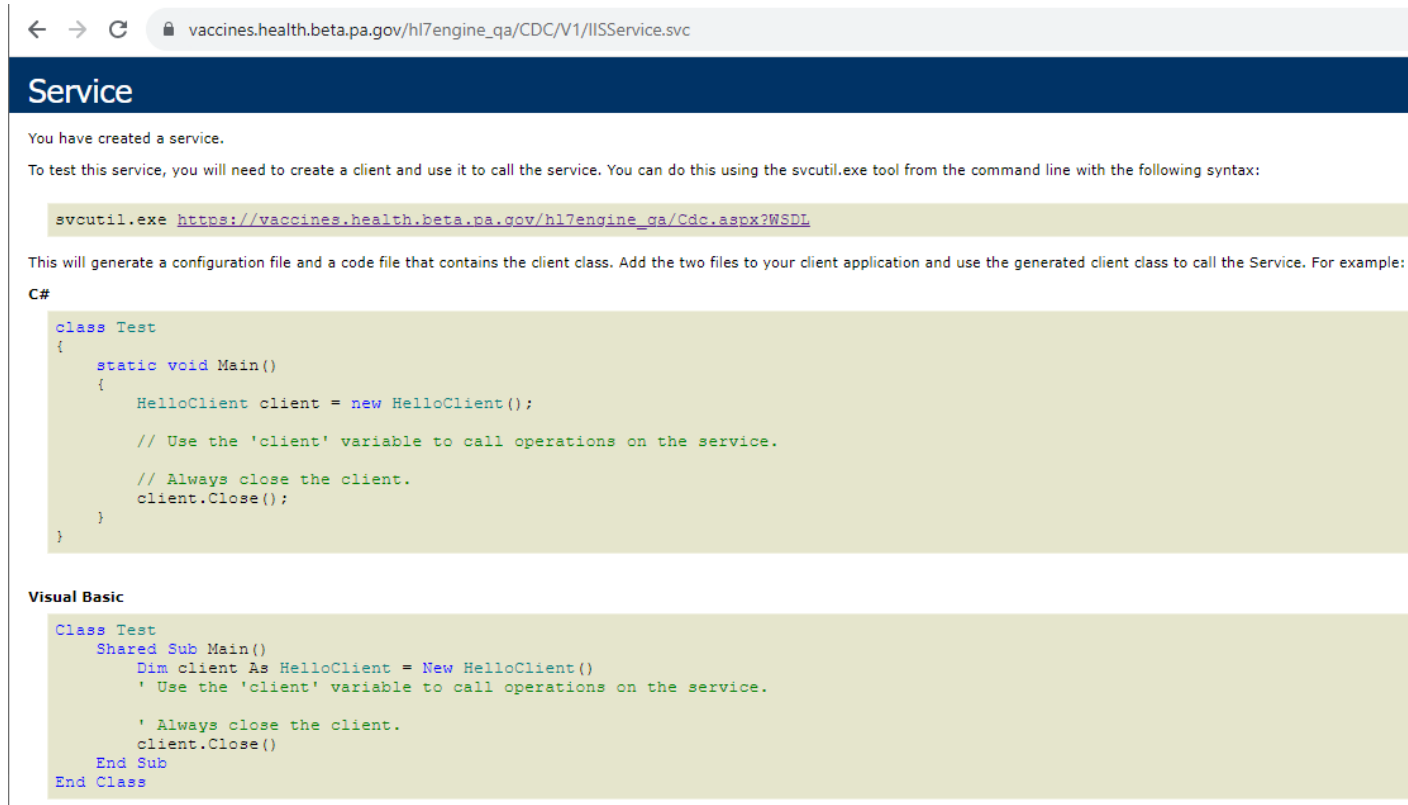| Term/Acronym	Definition
EHR	Electronic Health Record
EMR	Electronic Medical Record
Envision	PIERS Vendor
Facility	Any provider, healthcare entity, or other organization that participates with the Registry
PIERS	Pennsylvania Immunization Electronic Registry System
PII	Personally Identifiable Information
WebIZ	PIERS IIS Application
QBP	Query By Parameter
VXU	Unsolicited Vaccination Record Update

Known Changes to HL7 Messages

Known Changes to HL7 Messages Table

Field	Change	Current Value/Format	Expected Value/Format
MSH-4 Sending Facility	Format and value change	|Clinic Name^Clinic ID| Example: |ABC Hospital^1234|	|Facility Code| Example: |PA001234|
MSH-5 Receiving Application	Value change	|PA-SIIS|	|PIERS|
MSH-6	No Change	PADOH	PADOH
MSH-9	Business Rule Enforcement		must reflect the following constants: o VXU^V04^VXU_V04 for VXU messages or o QBP^Q11^QBP_Q11 for QBP messages
MSH-11	Business Rule Enforcement		T for test environment and P for production environment
MSH-12	Business Rule Enforcement		HL7 version 2.5.1 all other versions will be rejected
RXA-7 Administered Units	Value change	Empty	Required if RXA-6 is anything other than 999
RXA-11.4 Administered-at Location	Format and value change	|Clinic Name^Clinic ID| Example: |ABC Hospital^1234|	|Facility Code| Example: |PA001234|

PIERS QA Endpoint

PIERS QA Endpoint

https://vaccines.health.beta.pa.gov/hl7engine_qa/CDC/V1/IISService.svc

← → C 🔒 vaccines.health.beta.pa.gov/hl7engine_qa/CDC/V1/IISService.svc

Service

You have created a service.

To test this service, you will need to create a client and use it to call the service. You can do this using the svcutil.exe tool from the command line with the following syntax:

```
svcutil.exe https://vaccines.health.beta.pa.gov/hl7engine_qa/Cdc.aspx?WSDL
```

This will generate a configuration file and a code file that contains the client class. Add the two files to your client application and use the generated client class to call the Service. For example:

C#

```csharp
class Test
{
    static void Main()
    {
        HelloClient client = new HelloClient();

        // Use the 'client' variable to call operations on the service.

        // Always close the client.
        client.Close();
    }
}
```

Visual Basic

```vb
Class Test
    Shared Sub Main()
        Dim client As HelloClient = New HelloClient()
        ' Use the 'client' variable to call operations on the service.

        ' Always close the client.
        client.Close()
    End Sub
End Class
```

Instructions for HL7 Testing

Instructions

DO NOT SUBMIT PII TO THE QA ENVIRONMENT

1. You will be provided with your username, password, and facility code required to submit HL7 test messages.

2. Removing all PII, please send a message to PIERS that you are currently sending to PASIIS. A PIERS team member will review the message and once approved, you can proceed with the PIERS test scripts.

3. Utilizing the test scripts, begin sending additional messages to PIERS starting with the VXU test scripts. There is a total of 4 VXU test scripts including:

   a. New Immunization Single Administration

   b. New Immunization Combination Administration

   c. Historical Administration

   d. Delete Immunization

4. All 4 VXU test messages can be sent at the same time. A PIERS team member will review the messages and once approved, you can proceed with the 2 QBP test scripts. There is a total of 2 QBP test scripts including:

   a. QBP Scenario 1

   b. QBP Scenario 2 (two steps)

5. All 2 QBP test messages can be sent at the same time. A PIERS team member will review the messages and once approved, you can proceed with the Evaluated History and Forecasting test script, if applicable.

6. A PIERS team member will review the message and once approved, your facility has completed HL7 QA testing.

VXU Test Scripts

NOTE: Use HL7 Version 2.5.1 specifications for VXU messaging. MSH-12 must contain 2.5.1. All other values will cause the message to be rejected.

Your PIERS account number will be your current PASIIS account number prefixed with PA and enough leading zeros to result in a total length of eight (8) characters. For example, if your current PASIIS account is 1234 then the new account would be PA001234.

VXU- New Immunization Single Administration

Goal:
To send a new immunization entry for an individual patient from one system to PIERS.

Instructions:
Create a new patient and send a VXU message with the following demographics:

First Name: William

Last Name: Facility Name Abbreviation (Example: UPMC, PSHMC, AHN…)

DOB: 01/01/2000

Address: Please use the address of the testing facility for the test patient address.

Vaccine information: Please send us a new single antigen immunization administration.

Sample Message:
MSH|^~\&|TestApplication|PA004120|WebIZ|PADOH|202308170700||VXU^V04^VXU_V04|123456789|T|2.5.1|||ER|AL|||||Z22^CDCPHINVS
PID|1||0021823956^^^^MR||Test^Sophia^M^^^^L||20230716|F||2106-3^WHITE^CDCREC|1 Test Street^^York Haven^PA^17370^^M||||||||||2186-5^Not Hispanic or Latino^CDCREC|
NK1|1|Test^Stacey^^^^^L|MTH^Mother^HL70063|1 Test Street^^York Haven^PA^17370^USA^H^^|^PRN^^^^412^9999999|||||||||||
ORC|RE||9999^PADOH
RXA|0|1|20230817||08^Hep B, ped/adol^CVX^58160-0820-11^ENGERIX-B^NDC|0.5|mL^^UCUM||00^New admin^NIP001|^Schroder^Nurse^^^^^^^^^^^^^^^RN|^^^PA004120||||92A45|20230817|SKB^GlaxoSmithKline^MVX|||CP|A
RXR|C28161^Intramuscular^NCIT^IM^Intramuscular^HL70162|RT^Right Thigh^HL70163
OBX|1|CE|64994-7^Eligibility Status^LN|1|V03^VFC Eligible^HL70064||||||F|||20230817|||VXC40^vaccine level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine funding source^LN|2|VXC51^Public VFC^NIP008||||||F|||20230817
OBX|3|CE|30956-7^vaccine type^LN|3|45^Hep B, UF^CVX||||||F|||20230817
OBX|4|TS|29768-9^VIS Publication Date^LN|3|19970101||||||F|||20230817
OBX|5|TS|29769-7^VIS Presentation Date^LN|3|19990101||||||F|||20230817

Sample Acknowledgement Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230817083352.720-
0400||ACK^V04^ACK|PADOH20230817335272|T|2.5.1|||NE|NE|||||Z23^CDCPHINVS
MSA|AA|123456789
ZSA|AA^Application Accept - Good message with no
problems^ENV0008|139^^^PADOH^HL7LogIdIncomming~159^^^PADOH^WebServiceLogIdIncommi
ng~PA08162023^^^PA004120^MessageControlId|18^^^PADOH^SR

Expected Results:
A new patient record will be created. The vaccine you chose for the immunization will appear in the
patient's immunization record. The sending clinic will receive an acknowledgement message.

VXU- New Immunization Combination Administration

Goal:
To send a new immunization entry for an individual patient from one system to PIERS.

Instructions:
Create a new patient and send a VXU message with the following demographics:

First Name: Jane

Last Name: Facility Name Abbreviation (Example: UPMC, PSHMC, AHN…)

DOB: 01/01/1999

Address: Please use the address of the testing facility for the test patient address.

Vaccine information: Please send us a new immunization administration for a combination vaccine.
(Example- DTaP-HepB-IPV)

Sample Message:
MSH|^~\&|TestApplication|PA004120|PIERS|PADOH|202308170700||VXU^V04^VXU_V04|12345678
9|T|2.5.1|||ER|AL|||||Z22^CDCPHINVS
PID|1||0021824541^^^^MR||Test^Sydney^N^^^^L||20230716|F||2106-3^WHITE^CDCREC|1 Test
Street^^York Haven^PA^17370^^M|||||||||||2186-5^Not Hispanic or Latino^CDCREC|
ORC|RE||9999^PADOH
RXA|0|1|20230817|20230817|110^DTaP-HepB-IPV^CVX|0.5|mL^^UCUM||00^New
admin^NIP001|^Schroder^Nurse^^^^^^^^^^^^^^^^RN|^^^PA004120||||92A45|20230817|SKB^GlaxoS
mithKline^MVX|||CP|A
RXR|C28161^Intramuscular^NCIT^IM^Intramuscular^HL70162|RT^Right Thigh^HL70163
OBX|1|CE|64994-7^Eligibility Status^LN|1|V02^Medicaid^HL70064||||||F|||20230817|||VXC40^vaccine
level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine funding source^LN|2|VXC51^Public VFC^NIP008||||||F|||20230817
OBX|3|CE|30956-7^Vaccine Type^LN|1|107^DTaP, UF^CVX||||||F
OBX|4|DT|29768-9^Date Vaccine Information Statement Published^LN|1|20070517||||||F
OBX|5|DT|29769-7^Date Vaccine Information Statement Presented^LN|1|20230817||||||F

OBX|6|CE|30956-7^Vaccine Type^LN|2|45^Hep B, UF^CVX||||||F
OBX|7|DT|29768-9^Date Vaccine Information Statement Published^LN|2|20120202||||||F
OBX|8|DT|29769-7^Date Vaccine Information Statement Presented^LN|2|20230817||||||F
OBX|9|CE|30956-7^Vaccine Type^LN|3|89^Polio, UF^CVX||||||F
OBX|10|DT|29768-9^Date Vaccine Information Statement Published^LN|3|20111108||||||F
OBX|11|DT|29769-7^Date Vaccine Information Statement Presented^LN|3|20230817||||||F

Sample Acknowledgement Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230817150117.599-
0400||ACK^V04^ACK|PADOH20230817011759|T|2.5.1|||NE|NE|||||Z23^CDCPHINVS
MSA|AA|123456789
ZSA|AA^Application Accept - Good message with no
problems^ENV0008|245^^^PADOH^HL7LogIdIncomming~265^^^PADOH^WebServiceLogIdIncommi
ng~PA08172023^^^PA004120^MessageControlId|20^^^PADOH^SR

Expected Results:
A new patient record will be created. The combination vaccine will appear in the patient's immunization
record. The sending clinic will receive an acknowledgement message.

VXU- Historical Immunization

Goal:
To send an immunization history for an individual patient from one system to PIERS.

Instructions:
Create a new patient and send a VXU message with the following demographics:

First Name: John

Last Name: Facility Name Abbreviation (Example: UPMC, PSHMC, AHN…)

DOB: 01/01/1999

Address: Please use the address of the testing facility for the test patient address.

Vaccine information: Please send us a historical immunization administration for an influenza vaccine
and rabies vaccine.

Sample Message:
MSH|^~\&|TestApplication|PA004120|PIERS|PADOH|20230817100000||VXU^V04^VXU_V04|123456
789 |T|2.5.1|||NE|AL|
PID|||123456789^^^XX9999^SS||SIMPSON^BART^^^^^L||20140101
ORC|RE||12345^XX9999
RXA|0|1|20140301|20140301|110^DTaP-HepB-IPV (Pedia^CVX|999|||01^Historical information- source
unspecified^NIP001||PR^^^PR|||||||||CP|A|20141203

Sample Acknowledgement Message:

MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230817114720.299-0400||ACK^V04^ACK|PADOH20230817472029|T|2.5.1|||NE|NE|||||Z23^CDCPHINVS
MSA|AA|123456789
ZSA|AA^Application Accept - Good message with no problems^ENV0008|205^^^PADOH^HL7LogIdIncomming~225^^^PADOH^WebServiceLogIdIncomming~XX99993885400000023^^^PA004120^MessageControlId|19^^^PADOH^SR

Expected Results:
A new patient record will be created. The influenza and rabies vaccine will appear in the patient's immunization record as a historical entry. The sending clinic will receive an acknowledgement message.

VXU- Delete Immunization

Goal:
The goal of this test scenario is to delete an immunization entry from PIERS.

Instructions:
Please choose one of the patients above (William, Jane or John) and send a VXU message to delete the vaccine that you had submitted for them.

Sample Message:
MSH|^~\&|TestApplication|PA004120|PIERS|PADOH|202308170700||VXU^V04^VXU_V04|123456789|T|2.5.1|||ER|AL|||||Z22^CDCPHINVS
PID|1||510021823^^^^MR||Test^Rockie^M^^^^L||20230721|M||2106-3^WHITE^CDCREC|1 Test Street^^York Haven^PA^17370^^M|||||||||||2186-5^Not Hispanic or Latino^CDCREC|
ORC|RE||9999^PADOH
RXA|0|1|20230817||08^Hep B, ped/adol^CVX^58160-0820-11^ENGERIX-B^NDC|0.5|mL^^UCUM||00^New admin^NIP001|^Schroder^Nurse^^^^^^^^^^^^^RN|^^^PA004120||||92A45|20230817|SKB^GlaxoSmithKline^MVX|||CP|D

Sample Acknowledgement Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230821080230.615-0400||ACK^V04^ACK|PADOH20230821023061|T|2.5.1|||NE|NE|||||Z23^CDCPHINVS
MSA|AA|123456789
ZSA|AA^Application Accept - Good message with no problems^ENV0008|331^^^PADOH^HL7LogIdIncomming~351^^^PADOH^WebServiceLogIdIncomming~PA08172023^^^PA004120^MessageControlId|34^^^PADOH^SR

Expected Results:
The deleted vaccine will no longer be in the patient's immunization record. The sending clinic will receive an acknowledgement message.

QBP Test Scripts

QBP Scenario 1

Goal:
The goal of this test scenario is to request and receive a patient's complete immunization history from PIERS.

Scenario 1:
A basic child record/End user validation process. Scenario 1 shows a basic record for a child and the need for you to validate patient demographics. In your EHR, please validate that the patient demographics and immunizations are present. Once there has been a successful submission of a QBP and the data returned in the response has been validated, please continue to the next scenario.

Instructions:
Send a QBP message for the test patient with the following demographic information:

Last Name: Doe

First Name: Jane

DOB: 01/01/2020

Address: 625 Forster Street, Harrisburg, PA 17120.

Vaccine Information: This patient will have 28 of the following vaccines: HepB (3), Rota (3), DTap (4), Hib (4), PCV (4), IPV (3), Influenza (3), MMR (1), Varicella (1), HepA (2).

Sample Message:
MSH|^~\&|TestApplication|PA004120|PIERS|PADOH|202308181335||QBP^Q11^QBP_Q11|123456789|T|2.5.1|||ER|AL|||||Z34^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|querytag||Test^Rick^^^^^L||20230418|M|
RCP|I|5RD&records&HL70126|R^real-time^HL70394

Sample Response Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230818134921.006-0400||RSP^K11^RSP_K11|PADOH20230818492100|T|2.5.1|||NE|NE|||||Z32^CDCPHINVS
MSA|AA|123456789
QAK|querytag|OK|Z34^Request Immunization History^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|querytag||Test^Rick^^^^^L||20230418|M
PID|1||29^^^PADOH^SR||TEST^RICK^^^^^L||20230418|M||2106-3^White^CDCREC|1 TEST ST^^Pittsburgh^PA^15213^USA^M^^42003~1 TEST ST^^Pittsburgh^PA^15213^USA^P^^42003|||||||||||2186-5^Not Hispanic or Latino^CDCREC||N||||||||20230818
PD1||||||||||||||||A|20230818

ORC|RE||43^PADOH
RXA|0|1|20230618|20230618|110^DTaP-HepB-IPV (Pediarix)^CVX|999|||01^Historical Information - Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||44^PADOH
RXA|0|1|20230618|20230618|133^PCV13^CVX|999|||01^Historical Information - Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||45^PADOH
RXA|0|1|20230618|20230618|119^Rotavirus (Rotarix)^CVX|999|||01^Historical Information - Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||46^PADOH
RXA|0|1|20230618|20230618|48^Hib (PRP-T)^CVX|999|||01^Historical Information - Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||47^PADOH
RXA|0|1|20230818|20230818|133^PCV13^CVX^00005-1971-02^PCV13^NDC|0.50|mL^MilliLiter^UCUM||01^Historical Information - Source Unspecified^NIP001|RN123456L^NURSE^SCHRODER^^^^^^MD^L^^^MD|SCHRODERGBG^^^PA0
04120^^^SCHRODER FAMILY PRACTICE-GREENSBURG CLINIC^^559 NEWPORT DR^^Greensburg^PA^15601||||C12431|20240717|PFR^Pfizer, Inc.^MVX|||CP|A|20230818
RXR|C28161^Intramuscular^NCIT^IM^Intramuscular^HL70162|LD^Left Deltoid^HL70163
OBX|1|CE|64994-7^Vaccine funding program eligibility category^LN|1|V03^VFC Eligible - Uninsured^HL70064||||||F|||20230818|||VXC40^Vaccine Level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine Purchased With^LN|2|VXC1^VFC^CDCPHINVS||||||F|||20230818
OBX|3|CE|69764-9^Vaccine Information Statement Document Type^LN|3|253088698300049311220204^PCV13^cdcgs1vis||||||F|||20230818
OBX|4|DT|29769-7^Date Vaccine Information Statement Presented^LN|3|20230818||||||F|||20230818
ORC|RE||48^PADOH
RXA|0|1|20230818|20230818|119^Rotavirus (Rotarix)^CVX^58160-0854-52^Rotavirus (Rotarix)^NDC|1.00|mL^MilliLiter^UCUM||01^Historical Information - Source Unspecified^NIP001|RN123456L^NURSE^SCHRODER^^^^^^MD^L^^^MD|SCHRODERGBG^^^PA0
04120^^^SCHRODER FAMILY PRACTICE-GREENSBURG CLINIC^^559 NEWPORT DR^^Greensburg^PA^15601||||12345|20240816|SKB^GlaxoSmithKline^MVX|||CP|A|20230818
RXR|C38288^Oral^NCIT^PO^Oral^HL70162
OBX|1|CE|64994-7^Vaccine funding program eligibility category^LN|1|V03^VFC Eligible - Uninsured^HL70064||||||F|||20230818|||VXC40^Vaccine Level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine Purchased With^LN|2|VXC1^VFC^CDCPHINVS||||||F|||20230818
ORC|RE||49^PADOH
RXA|0|1|20230818|20230818|110^DTaP-HepB-IPV (Pediarix)^CVX^58160-0811-52^DTaP-HepB-IPV (Pediarix)^NDC|0.50|mL^MilliLiter^UCUM||01^Historical Information - Source Unspecified^NIP001|RN123456L^NURSE^SCHRODER^^^^^^MD^L^^^MD|SCHRODERGBG^^^PA0
04120^^^SCHRODER FAMILY PRACTICE-GREENSBURG CLINIC^^559 NEWPORT DR^^Greensburg^PA^15601||||312432|20240816|SKB^GlaxoSmithKline^MVX|||CP|A|20230818
RXR|C28161^Intramuscular^NCIT^IM^Intramuscular^HL70162|LD^Left Deltoid^HL70163
OBX|1|CE|64994-7^Vaccine funding program eligibility category^LN|1|V03^VFC Eligible - Uninsured^HL70064||||||F|||20230818|||VXC40^Vaccine Level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine Purchased With^LN|2|VXC1^VFC^CDCPHINVS||||||F|||20230818
ORC|RE||50^PADOH
RXA|0|1|20230818|20230818|48^Hib (PRP-T)^CVX^49281-0545-03^Hib (PRP-T)^NDC|0.50|mL^MilliLiter^UCUM||01^Historical Information - Source Unspecified^NIP001|RN123456L^NURSE^SCHRODER^^^^^^MD^L^^^MD|SCHRODERGBG^^^PA0

04120^^^SCHRODER FAMILY PRACTICE-GREENSBURG CLINIC^^559 NEWPORT
DR^^Greensburg^PA^15601||||12311V|20240604|PMC^Sanofi Pasteur^MVX|||CP|A|20230818
RXR|C28161^Intramuscular^NCIT^IM^Intramuscular^HL70162|LD^Left Deltoid^HL70163
OBX|1|CE|64994-7^Vaccine funding program eligibility category^LN|1|V03^VFC Eligible -
Uninsured^HL70064||||||F|||20230818|||VXC40^Vaccine Level^CDCPHINVS
OBX|2|CE|30963-3^Vaccine Purchased With^LN|2|VXC1^VFC^CDCPHINVS||||||F|||20230818
OBX|3|CE|69764-9^Vaccine Information Statement Document
Type^LN|3|253088698300006611191030^Hib (PRP-T)^cdcgs1vis||||||F|||20230818
OBX|4|DT|29769-7^Date Vaccine Information Statement Presented^LN|3|20230818||||||F|||20230818
ZSA|AA^Application Accept - Good message with no
problems^ENV0008|311^^^PADOH^HL7LogIdIncomming~331^^^PADOH^WebServiceLogIdIncommi
ng~PA^^^PA004120^MessageControlId|29^^^PADOH^SR

Expected Results:
The querying clinic will receive a response containing the patient's comprehensive immunization record containing the vaccines mentioned above.

QBP Scenario 2 (two steps)

Goal:
The goal of this test scenario is to request and receive a complete immunization history for two patients from PIERS.

Scenario 3:
Multi-patient/potential returns: Scenario 3 has two steps and is designed to teach you how to distinguish between two patients with the same DOB & first/last names but different middle names/other demographics. Once two QBP's have been successfully submitted for the same patient, with the second including the correct SR (State Record ID) obtained from the initial response, please validate in your EHR that the patient demographics & immunizations are present.

Instructions:
Send a QBP message for the two test patients with the following demographic information:

Patient 1-
Last Name: Doe

Middle Name: Michelle

First Name: Sally

DOB: 01/01/1995

Address: 606 Forster Street, Harrisburg, PA 17120.

Vaccine Information: This patient will have 10 of the following vaccines: Influenza (3), Rabies (3), MMR(2) and COVID-19 (2).

Patient 2-

Last Name: Doe

Middle Name: Sara

First Name: Sally

DOB: 01/01/1995

Address: 607 Forster Street, Harrisburg, PA 17120.

Vaccine Information: This patient will have 9 of the following vaccines: Influenza (3), MMR (3) and COVID-19 (3).

Sample Message:
MSH|^~\&|TestApplication|PA004120|WebIZ|PADOH|20230202151001-
0500||QBP^Q11^QBP_Q11|20230202151001363003|P|2.5.1|||ER|AL|||||Z34^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|XDOC-4805400||Doe^Sally^^^^^L||19950101
RCP|I|10RD&Records&HL70126|R^real-time^HL70394

Sample Response Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230818095038.660-
0400||RSP^K11^RSP_K11|PADOH20230818503866|T|2.5.1|||NE|NE|||||Z31^CDCPHINVS
MSA|AA|20230202151001363003
QAK|XDOC-4805400|OK|Z34^Request Immunization History^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|XDOC-4805400||Doe^Sally^^^^^L||19950101
PID|1||22^^^PADOH^SR||DOE^SALLY^SARA^^^^L||19950101|F||2106-3^White^CDCREC|607
FORSTER ST^^Harrisburg^PA^17120^USA^M^^42043~607 FORSTER
ST^^Harrisburg^PA^17120^USA^P^^42043|||||||||||2186-5^Not Hispanic or
Latino^CDCREC||N|||||||||20230818
PD1|||||||||||||||A|20230818
PID|2||24^^^PADOH^SR||DOE^SALLY^MICHELLE^^^^L||19950101|F||2054-5^Black or African-
American^CDCREC|606 CAPITOL COMPLEX^^Harrisburg^PA^17120^USA^M^^42043~606
CAPITOL COMPLEX^^Harrisburg^PA^17120^USA^P^^42043|||||||||||2186-5^Not Hispanic or
Latino^CDCREC||N|||||||||20230818
PD1|||||||||||||||A|20230818
ZSA|AA^Application Accept - Good message with no
problems^ENV0008|281^^^PADOH^HL7LogIdIncomming~301^^^PADOH^WebServiceLogIdIncommi
ng~20230202151001363003^^^PA004120^MessageControlId

NOTE: Notice the segment highlighted in GREEN.

Sample Message 2:
MSH|^~\&|TestApplication|PA004120|WebIZ|PADOH|20230202151001-
0500||QBP^Q11^QBP_Q11|20230202151001363003|P|2.5.1|||ER|AL|||||Z34^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|XDOC-480540022^^^PADOH^SR
|Doe^Sally^^^^^L||19950101
RCP|I|10RD&Records&HL70126|R^real-time^HL70394

NOTE: Notice the segment highlighted in GREEN.

Sample Response Message:

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MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230818095707.917-
0400||RSP^K11^RSP_K11|PADOH20230818570791|T|2.5.1|||NE|NE|||||Z32^CDCPHINVS
MSA|AA|20230202151001363003
QAK|XDOC-4805400|OK|Z34^Request Immunization History^CDCPHINVS
QPD|Z34^Request Immunization History^CDCPHINVS|XDOC-
4805400|22^^^PADOH^SR|Doe^Sally^^^^^L||19950101
PID|1||22^^^PADOH^SR||DOE^SALLY^SARA^^^^L||19950101|F||2106-3^White^CDCREC|607
FORSTER ST^^Harrisburg^PA^17120^USA^M^^42043~607 FORSTER
ST^^Harrisburg^PA^17120^USA^P^^42043|||||||||||2186-5^Not Hispanic or
Latino^CDCREC||N|||||||||20230818
PD1||||||||||||||||A|20230818
ORC|RE||24^PADOH
RXA|0|1|19950218|19950218|03^MMR^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||25^PADOH
RXA|0|1|20030818|20030818|03^MMR^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||26^PADOH
RXA|0|1|20050320|20050320|03^MMR^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||23^PADOH
RXA|0|1|20210805|20210805|141^Influenza, Seasonal^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||18^PADOH
RXA|0|1|20210823|20210823|207^COVID-19 mRNA (MOD)^CVX|999|||01^Historical Information -
Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||19^PADOH
RXA|0|1|20210918|20210918|207^COVID-19 mRNA (MOD)^CVX|999|||01^Historical Information -
Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||22^PADOH
RXA|0|1|20220808|20220808|141^Influenza, Seasonal^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||20^PADOH
RXA|0|1|20230718|20230718|207^COVID-19 mRNA (MOD)^CVX|999|||01^Historical Information -
Source Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ORC|RE||21^PADOH
RXA|0|1|20230818|20230818|141^Influenza, Seasonal^CVX|999|||01^Historical Information - Source
Unspecified^NIP001||PATIENT_REC^^^PR^^^PATIENT RECORD|||||||||CP|A|20230818
ZSA|AA^Application Accept - Good message with no
problems^ENV0008|283^^^PADOH^HL7LogIdIncomming~303^^^PADOH^WebServiceLogIdIncommi
ng~20230202151001363003^^^PA004120^MessageControlId|22^^^PADOH^SR
```

Expected Results:

The querying clinic will receive a response containing the patient's comprehensive immunization record containing the vaccines mentioned above.

Request Evaluated History and Forecast*

<p style="text-align:center;color:red;">*OPTIONAL*
Please test this scenario if it is a function that is used by your facility.</p>

Forecast Patient 1

Goal:
The goal of this test scenario is to request and receive a complete immunization history evaluation and forecast for a patient from PIERS.

Instructions:
Send a QBP message for the test patient with the following demographic information:

Last Name: Doe

First Name: Jane

DOB: 01/01/2020

Sample Message:
MSH|^~\&|TestApplication|PA004120|PIERS|PADOH|202308182023||QBP^Q11^QBP_Q11|123456789|T|2.5.1|||ER|AL|||||Z44^CDCPHINVS
QPD|Z44^Request Evaluated History and Forecast^CDCPHINVS|querytag||Test^Robbie^^^^^L||19350101||
RCP|I|5^RD&records&HL70126|R^real-time^HL70394

Sample Response Message:
MSH|^~\&|WebIZ.23.7.0.0|PADOH|TestApplication|PA004120|20230818144020.681-0400||RSP^K11^RSP_K11|PADOH20230818402068|T|2.5.1|||NE|NE|||||Z42^CDCPHINVS
MSA|AA|123456789
QAK|querytag|OK|Z44^Request Evaluated History and Forecast^CDCPHINVS
QPD|Z44^Request Evaluated History and Forecast^CDCPHINVS|querytag||Test^Robbie^^^^^L||19350101
PID|1||32^^^PADOH^SR||TEST^ROBBIE^^^^^L||19350101|M||2106-3^White^CDCREC|1 TEST SQ^^Pittsburgh^PA^15213^USA^M^^42003~1 TEST SQ^^Pittsburgh^PA^15213^USA^P^^42003|||||||||||2186-5^Not Hispanic or Latino^CDCREC||N|||||||||20230818
ORC|RE||9999^PADOH
RXA|0|1|20230818|20230818|998^No Vaccine Administered^CVX|999|||||||||||||||NA
OBX|1|CE|30956-7^Vaccine Type^LN|1|43^Hep B, adult^CVX||||||F|||20230818
OBX|2|DT|30981-5^Earliest date dose should be given^LN|1|19350101||||||F|||20230818
OBX|3|DT|30980-7^Date Vaccine Due^LN|1|19350101||||||F|||20230818
OBX|4|DT|59778-1^Date dose is overdue^LN|1|19350128||||||F|||20230818
OBX|5|CE|59783-1^Series Status^LN|1|LA13423-1^Overdue^LN||||||F|||20230818

OBX|6|CE|59779-9^Immunization Schedule Used^LN|1|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|7|CE|30956-7^Vaccine Type^LN|2|302^COVID Biv (PFR 6m<5y)^CVX||||||F|||20230818
OBX|8|DT|30981-5^Earliest date dose should be given^LN|2|19350701||||||F|||20230818
OBX|9|DT|30980-7^Date Vaccine Due^LN|2|19350701||||||F|||20230818
OBX|10|CE|59783-1^Series Status^LN|2|LA13422-3^On Schedule^LN||||||F|||20230818
OBX|11|CE|59779-9^Immunization Schedule Used^LN|2|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|12|CE|30956-7^Vaccine Type^LN|3|21^Varicella^CVX||||||F|||20230818
OBX|13|DT|30981-5^Earliest date dose should be given^LN|3|19360101||||||F|||20230818
OBX|14|DT|30980-7^Date Vaccine Due^LN|3|19360101||||||F|||20230818
OBX|15|DT|59778-1^Date dose is overdue^LN|3|19360528||||||F|||20230818
OBX|16|CE|59783-1^Series Status^LN|3|LA13423-1^Overdue^LN||||||F|||20230818
OBX|17|CE|59779-9^Immunization Schedule Used^LN|3|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|18|CE|30956-7^Vaccine Type^LN|4|115^Tdap, Adsorbed^CVX||||||F|||20230818
OBX|19|DT|30981-5^Earliest date dose should be given^LN|4|19420101||||||F|||20230818
OBX|20|DT|30980-7^Date Vaccine Due^LN|4|19420101||||||F|||20230818
OBX|21|DT|59778-1^Date dose is overdue^LN|4|19420101||||||F|||20230818
OBX|22|CE|59783-1^Series Status^LN|4|LA13423-1^Overdue^LN||||||F|||20230818
OBX|23|CE|59779-9^Immunization Schedule Used^LN|4|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|24|CE|30956-7^Vaccine Type^LN|5|187^Recombinant Zoster^CVX||||||F|||20230818
OBX|25|DT|30981-5^Earliest date dose should be given^LN|5|19850101||||||F|||20230818
OBX|26|DT|30980-7^Date Vaccine Due^LN|5|19850101||||||F|||20230818
OBX|27|CE|59783-1^Series Status^LN|5|LA13422-3^On Schedule^LN||||||F|||20230818
OBX|28|CE|59779-9^Immunization Schedule Used^LN|5|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|29|CE|30956-7^Vaccine Type^LN|6|215^PCV15^CVX||||||F|||20230818
OBX|30|DT|30981-5^Earliest date dose should be given^LN|6|20000101||||||F|||20230818
OBX|31|DT|30980-7^Date Vaccine Due^LN|6|20000101||||||F|||20230818
OBX|32|CE|59783-1^Series Status^LN|6|LA13422-3^On Schedule^LN||||||F|||20230818
OBX|33|CE|59779-9^Immunization Schedule Used^LN|6|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|34|CE|30956-7^Vaccine Type^LN|7|150^Influenza Quad Inj P^CVX||||||F|||20230818
OBX|35|DT|30981-5^Earliest date dose should be given^LN|7|20230701||||||F|||20230818
OBX|36|DT|30980-7^Date Vaccine Due^LN|7|20230701||||||F|||20230818
OBX|37|CE|59783-1^Series Status^LN|7|LA13422-3^On Schedule^LN||||||F|||20230818
OBX|38|CE|59779-9^Immunization Schedule Used^LN|7|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|39|CE|30956-7^Vaccine Type^LN|8|89^Polio, UF^CVX||||||F|||20230818
OBX|40|CE|59783-1^Series Status^LN|8|LA13424-9^Too Old^LN||||||F|||20230818
OBX|41|ST|30982-3^Reason Code^LN|8|Patient has exceeded the maximum age||||||F|||20230818
OBX|42|CE|59779-9^Immunization Schedule Used^LN|8|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|43|CE|30956-7^Vaccine Type^LN|9|17^Hib, UF^CVX||||||F|||20230818
OBX|44|CE|59783-1^Series Status^LN|9|LA13424-9^Too Old^LN||||||F|||20230818
OBX|45|ST|30982-3^Reason Code^LN|9|Patient has exceeded the maximum age||||||F|||20230818
OBX|46|CE|59779-9^Immunization Schedule Used^LN|9|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|47|CE|30956-7^Vaccine Type^LN|10|122^Rotavirus, UF^CVX||||||F|||20230818
OBX|48|CE|59783-1^Series Status^LN|10|LA13424-9^Too Old^LN||||||F|||20230818
OBX|49|ST|30982-3^Reason Code^LN|10|Patient has exceeded the maximum age||||||F|||20230818
OBX|50|CE|59779-9^Immunization Schedule Used^LN|10|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|51|CE|30956-7^Vaccine Type^LN|11|85^Hep A, UF^CVX||||||F|||20230818
OBX|52|CE|59783-1^Series Status^LN|11|LA13424-9^Too Old^LN||||||F|||20230818
OBX|53|ST|30982-3^Reason Code^LN|11|Patient has exceeded the maximum age||||||F|||20230818
OBX|54|CE|59779-9^Immunization Schedule Used^LN|11|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|55|CE|30956-7^Vaccine Type^LN|12|03^MMR^CVX||||||F|||20230818

OBX|56|CE|59783-1^Series Status^LN|12|LA27183-5^Immune^LN||||||F|||20230818
OBX|57|ST|30982-3^Reason Code^LN|12|Patient has evidence of immunity||||||F|||20230818
OBX|58|CE|59779-9^Immunization Schedule Used^LN|12|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|59|CE|30956-7^Vaccine Type^LN|13|108^Meningococcal, UF^CVX||||||F|||20230818
OBX|60|CE|59783-1^Series Status^LN|13|LA13424-9^Too Old^LN||||||F|||20230818
OBX|61|ST|30982-3^Reason Code^LN|13|Patient has exceeded the maximum age||||||F|||20230818
OBX|62|CE|59779-9^Immunization Schedule Used^LN|13|VXC16^ACIP^CDCPHINVS||||||F|||20230818
OBX|63|CE|30956-7^Vaccine Type^LN|14|137^HPV, UF^CVX||||||F|||20230818
OBX|64|CE|59783-1^Series Status^LN|14|LA13424-9^Too Old^LN||||||F|||20230818
OBX|65|ST|30982-3^Reason Code^LN|14|Patient has exceeded the maximum age||||||F|||20230818
OBX|66|CE|59779-9^Immunization Schedule Used^LN|14|VXC16^ACIP^CDCPHINVS||||||F|||20230818
ZSA|AA^Application Accept - Good message with no problems^ENV0008|319^^^PADOH^HL7LogIdIncomming~339^^^PADOH^WebServiceLogIdIncomming~PA08182023^^^PA004120^MessageControlId|32^^^PADOH^SR

Expected Results:
The querying clinic will receive a response containing a recommended immunization forecast for the patient based on their evaluated immunization history.