

Use Case Title: Moving the Needle: Sharing Immunization records

Short Description: Sam, a retired veteran, visits his primary care physician at the VA clinic. He is vaccinated with his first dose of COVID-19 (Moderna). Sam spends his winter months at his second residence in New Mexico and will be there when he is due for his second COVID-19 dose to complete his primary series. He visits a private sector provider where he receives his second dose (four weeks after the first). After he returns to Washington, he is notified that he is eligible to receive a bivalent mRNA COVID-19 booster, and identifies a nearby clinic. All of these vaccinations are available to Sam through consumer access tools, and both registries have a complete record of Sam's vaccine history. The Washington Department of Health is able to offer Sam a smartcard with his vaccine history which he is able to share with his providers and offer as proof of vaccination when needed.

Value Statement: The IZ Gateway oversees state-to-state immunization information exchange to support record-informed, clinical recommendations and empower patient-mediated record keeping of their immunization history.

Scheduled Times: 45 min

Participating Organizations: CDC, Epic, Oracle Health, docket, Envision Technology, STChealth, University of Washington, VAXSYS, WA DOH (Washington State Dept of Health), VHA (Veterans Affairs)

Demographics:

Patient Address: 111 Israel Rd SE, Tumwater, WA 98501, 7525 Zuni Rd SE B, Albuquerque, NM 87108

DOB: Jun 15, 1968 ,

AGE: 55

Name: Sam Green,

Race/Ethnicity: 2054-5 Black or African-American

Legal Sex: Male

State 1 IIS: STC/WA

State 2 IIS: Envision/NM

Occupation: Retired Veteran

Industry: Employer: N/A

Email: info@dockethealth.com

Phone number: 206-833-3060

Scenario	Vendor	Products	Standards
<p>1 - PCP – Veterans’ Health Clinic</p> <p>Sam, a retired veteran, visits his primary care provider at the VHA clinic for his annual check-up. Since Sam has underlying risk factors (hypertension, diabetes), the provider recommends a SARS Co-V2 vaccine and influenza. He has not yet received a COVID-19 vaccination, and after discussing the risks with his physician, agrees to be vaccinated with his first dose. The dose is administered and the record is submitted to the WA Immunization registry through the IZ Gateway, which the VHA uses to connect their EMRs across the nation. A pre-fetch of his vaccine history from the immunization registry confirms pneumonia vaccination in 2010, DPT in 2015, MMR in 1998, and annual influenza vaccine since 2010.</p> <ul style="list-style-type: none">• The patient address submitted is in New Mexico as the patient will be spending the upcoming months• Since there is an address in New Mexico, the Washington Registry forwards the vaccination record to the New Mexico Immunization Registry.	Cerner/Oracle	Federal EHR	HL7: v2.5.1 Immunization Guide VXU/ACK, QBP/RSP CCDA? XDS? XDR? Other? Z32, Z34, Z22, Z23, HL7 v2.5.1
<p>2 – Private clinic in New Mexico</p> <p>Sam spends the winter months in New Mexico. He is due for his second dose and visits a private sector provider. The provider administers the booster and reports the vaccination to the NM registry. The provider in this state is connected directly to the immunization registry.</p>	Epic	NA	HL7: v2.5.1 Immunization Guide VXU/ACK QBP/RSP

<ul style="list-style-type: none"> • The vaccine history is available to the provider through their direct connection to the New Mexico registry. • The vaccination is submitted to the New Mexico registry reflecting the patient's home address in Washington. 			
<p>3 - New Mexico Immunization Registry (State 2) The New Mexico Immunization registry receives the vaccination record for Sam and since the address on the record is located in Washington State, New Mexico leverages the Immunization Gateway to route the new vaccination to the patient's home state's immunization registry to complete the record. The registry also queries WA for this patient's immunization history to complete the record in this jurisdiction in the event that this patient continues to receive care in New Mexico.</p>	Envision	NA	HL7: v2.5.1 Immunization Guide VXU/ACK, QBP/RSP IIS-IIS IZ Gateway Exchange
<p>4 - Washington Immunization Registry (State 1) The WA Immunization registry has received the vaccination records from the VHA, along with those vaccinations received from the private sector providers in the state. In addition, by way of the Immunization Gateway, the Immunization Registry receives the vaccines administered to Sam from New Mexico, completing his vaccination records.</p>	STC	ImmsLINK	HL7: v2.5.1 Immunization Guide VXU/ACK, QBP/RSP IIS-IIS IZ Gateway Exchange
<p>5 – CDC Vaccine administration data from a multi-jurisdictional providers, and from other IISs is routed through the IZ Gateway, which is establishing connections between these parties across the nation.</p> <p>The IZ Gateway supports the onboarding of these IIS and providers to the gateway to enable this exchange, and monitors the continuity of the exchanges.</p>	CDC	IZ Gateway	HL7: v2.5.1 Immunization Guide IZ Gateway IIS-IIS IZ Gateway Provider-IIS IZ Gateway Consumer Access

In addition to these two use cases, the IZ Gateway will support consumer access as will be demonstrated by Docket.			
<p>6 - Consumer Acces</p> <p>Sam is able to access his complete immunization record using an app on his phone. This will enable him to share his immunization history with his providers and to be notified when vaccinations are due.</p> <p>After he returns to Washington, He receives a Docket notification that he is due for his is eligible to receive a bivalent mRNA COVID-19 booster.</p>	Docket Health	Docket	HL7: v2.5.1 Immunization Guide IZ Gateway Consumer Access
<p>7 – Vaccination Clinic</p> <p>Sam’s complete vaccination history is available to the provider. The dose is administered and the record is submitted to the WA Immunization registry.</p>	Cerner/Oracle		
<p>8 - Durable SMART Health Card Provision</p> <p>Sam will be traveling out of the country and will be needing another vaccine. He visits a local travel clinic where, using their Epic environment and VaxSys Technologies’ and Barcode, Inc printers provide him a durable card with a QR code of his record. The dose is administered and the record is submitted to the WA Immunization registry.</p>	VaxSys Barcode, Inc Epic		
<p>9 - WA DOH</p> <p>Sam visits WA Verify to request, access and save his verifiable QR code record digitally. WA Verify and another free, state COVID-19 resource, Vaccine Locator, each automatically detect preferred language to offer a combined total of over 43 languages. The QR Code is available for download to retrieve the immunization record if the physical media is not available. If anyone wants to verify Sam’s record, the free SMART Health Card Verifier application can be used</p>	WA DOH	WA Verify, Vaccine Locator	HL7: v2.5.1 Immunization Guide

to verify and display the health record. If Sam needs another dose, he can use the Vaccine Locator to find the closest location.

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Data exchange standards:

Vendor	Product	Category	Protocol	Interop Body	Interop Profile	Interop Actor	Interop Message	Send or Receive	Transaction Description
CDC	Immunization Gateway	Infrastructure	SOAP	W3C	IZ Gateway WSDL	Receiver	N/A	N/A	Web services used for IZ Gateway exchanges with information sources
			SOAP	W3C	CDC WSDL	Sender	N/A	N/A	Web services used to exchange with the IIS information recipients
STChealthS TC	IWeb	Immunization Registry	HL7 v2.5.1	HL7	Z22	Receiver	VXU	Receive	2.5.1 Messaging Guide for Immunization Return and Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z34	Receiver	QBP	Receive	2.5.1 Messaging Guide for Immunization Query for Request Immunization History
			HL7 v2.5.1	HL7	Z32	Sender	RSP	Send	2.5.1 Messaging Guide for Immunization

									Request Immunization History
			HL7 v2.5.1	HL7	Z44	Receiver	QBP	Receive	2.5.1 Messaging Guide for Immunization Query for Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z42	Sender	RSP	Send	2.5.1 Messaging Guide for Immunization Return an Evaluated History and Forecast Recommendations for pregnancy
			SOAP	W3C	IZ Gateway WSDL	Sender	N/A	N/A	Web services used to send to IZ Gateway for IIS-IIS exchanges
			SOAP	W3C	CDC WSDL	Receiver	N/A	N/A	Web services used to receive messages via the IZ Gateway
Epic			HL7 v2.5.1	HL7	Z22	Sender	VXU	Send	2.5.1 Messaging Guide for Immunization Return and Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z44	Sender	QBP	Send	2.5.1 Messaging Guide for Immunization Query for Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z42	Receiver	RSP	Receive	2.5.1 Messaging Guide for Immunization Return an Evaluated History and Forecast

			SOAP	W3C	CDC WSDL	Sender	N/A	N/A	Web services used to communicate with the IIS
Cerner		Ambulatory Provider	HL7 v2.5.1	HL7	Z22	Sender	VXU	Send	2.5.1 Messaging Guide for Immunization Return and Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z44	Sender	QBP	Send	2.5.1 Messaging Guide for Immunization Query for Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z42	Receiver	RSP	Receive	2.5.1 Messaging Guide for Immunization Return an Evaluated History and Forecast
			SOAP	W3C	IZ Gateway WSDL	Sender	N/A	N/A	Web services used to send to IZ Gateway for IIS-IIS exchanges
Envision		Immunization Registry	HL7 v2.5.1	HL7	Z22	Receiver	VXU	Receive	2.5.1 Messaging Guide for Immunization Return and Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z44	Receiver	QBP	Receive	2.5.1 Messaging Guide for Immunization Query for Evaluated History and Forecast
			HL7 v2.5.1	HL7	Z42	Sender	RSP	Send	2.5.1 Messaging Guide for Immunization Return an Evaluated History and Forecast

									Recommendations for pregnancy
			SOAP	W3C	IZ Gateway WSDL	Sender	N/A	N/A	Web services used to send to IZ Gateway for IIS-IIS exchanges
			SOAP	W3C	CDC WSDL	Receiver	N/A	N/A	Web services used to receive messages via the IZ Gateway and from providers directly connected to the IIS
Docket Health	Docket	Consumer access app	HL7 v2.5.1	HL7	Z34	Sender	QBP	Send	2.5.1 Messaging Guide... Used to get the list of patients that may match basic demographic info (first name/last name/DOB/legal sex)
			HL7 v2.5.1	HL7	Z32	Receiver	RSP	Receive	2.5.1 Messaging Guide... Used to extract contact information for patients based on basic demographic information and confirm phone/email. Part of the authentication workflow.

			HL7 v2.5.1	HL7	Z44	Sender	QBP	Send	2.5.1 Messaging Guide... Used to request complete immunization history for single patient with forecast.
			HL7 v2.5.1	HL7	Z42	Receiver	RSP	Receive	2.5.1 Messaging Guide... Used to pull vaccination history and forecast. Also used to generate a PDF of the record. Administration dates of vaccinations will be shown in the app, along with the "Date vaccination due" OR "Latest date next dose should be given" depending on the current date.
			SOAP	W3C	IZ Gateway WSDL	Sender	N/A	N/A	Web services used to send to IZ Gateway for Consumer access to Immunizations

Endpoints:

IZ Gateway: demo.izgateway.org/IISHubService?wsdl

STC:

URL: <https://stcsm1web.stchealthops.com/phchub/HL7server>

Facility ID: Null

Destination ID: wa

MSH-3: Sending Application / entity ID – STC-IWeb

MSH-4: Sending Facility / Application ID - STC-IWeb

MSH-5: Receiving Application / Interface ID – IZGateway

MSH-6: Receiving Facility / Provider ID- IZGateway

Envision: <https://nmsiitest.health.state.nm.us/HL7EngineAuthentication/cdc/v1/iisservice.svc>

Facility ID: Null

Destination ID: nm

MSH information same as for IZG NM

IP Addresses:

Cerner Oracle:

Envision:

STC:

Docket:

- 1.STC MSH Values and Soap facilityID for Docket and Cerner
- 2.Envision needs to provide MSH values to Epic

Docket Query Configuration:

Patient: First/last/dob/legal sex/phone/e-mail (info@dockethealth.com)

Configuration for connecting to WA/STC

Facility ID: Sent to the IZ gateway outside of the HL7 payload

Destination ID: wa

MSH-3: Sending Application / entity ID (e.g. 224, "MIIC")

MSH-4: Sending Facility / Application ID (e.g. 22105, "IZGATE")

MSH-5: Receiving Application / Interface ID

MSH-6: Receiving Facility / Provider ID

Configuration for connecting to NM/Envision

URL: <https://nmsiitest.health.state.nm.us/HL7EngineAuthentication/cdc/v1/iisservice.svc>

Facility ID: Sent to the IZ gateway outside of the HL7 payload

Destination ID: nm

MSH-3: Sending Application / entity ID (e.g. 224, "MIIC")

MSH-4: Sending Facility / Application ID (e.g. 22105, "IZGATE")

MSH-5: Receiving Application / Interface ID

MSH-6: Receiving Facility / Provider ID

Graphics

- Wall 1 - back wall
- Wall 2 - side wall

Monitor

- 2 Large Monitor

Content

- Vaccination History:
 - Hep A, Hep B, Shingles, Influenza (several years past), Tdap, Zoster (Shingrix) - dates, Lot, Expiration pending
 - Due for COVID-19 at first visit that will query from STC via IZG

Vaccination	Date(s) administered						
Influenza (quadrivalent)	11/7/2022	10/30/2021	10/27/2020	11/3/2019	10/26/2018	10/29/2017	11/4/2016
MMR	7/12/1998						
Tdap	4/22/2017	3/4/2007					
Zoster (Shingrix)	10/28/2018	7/10/2018					
Hepatitis A/Hep B (Twinrix)	10/17/2003	5/12/2003	4/7/2003				