Bidirectional Data Exchange: Testing Script

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Introductions

Hello everyone. I will be the main presenter today.

My name is Yiuliana Rodriguez, and I am an Interface Analyst with the Texas Immunization Registry.

Today, joining us for the question and answer portion after our main presentation is Jonathan Patterson, an interface analyst. At the bottom of the screen, you will see an option for submitting questions. Please submit your question there, and we will address and answer those questions once the presentation is complete.

Title Slide

Today we will be discussing the testing phase for bidirectional data exchange with the Texas Immunization Registry.

Terminology

We will be using abbreviations and acronyms for some of the terminologies in this presentation.

- Bi-D-X will be short for Bidirectional data exchange

- Registry will be used for the Texas Immunization Registry

- Orgs will mean any provider, healthcare entity, or other organization that participates with the Registry

- EHR will be used for Electronic Health Record Systems

- And POC refers to your organization's registered Point of Contact

Message Types

We'll be discussing a variety of message types that can be sent to the Registry:

– Affirmation Messages are message types that add a patient to the Registry with consent to store their records

– They come in two different types. HL7 or Flat Files. We discussed these in detail in a previous presentation.

– QBP messages are short for Query By Parameter, and these messages request the immunization history of a patient

– VXU messages are short for Vaccine History Update, and they add new immunizations to a patient's record in the Registry

Overview

The topics we'll cover today include:

– Preparation for Testing

– Testing Scenarios

– Troubleshooting, and

– Completion of Testing

Preparation

Purpose of Testing

The purpose of Testing

Bidirectional data exchange testing ensures that:

– Your connection to the Registry is set up and working correctly

– Your HL7 messages are formatted correctly to successfully request and/or add records

– Your EHR is working the way you expect, and

– Your workflows are ready for BiDX

Goal of BiDX Testing

The goal of bidirectional data exchange testing is to complete all testing scenarios without errors.

Requirements

To begin testing, your organization will need to identify your BiDX testing team

- Your team must consist of a mix of staff from both your organization and your EHR vendor. The EHR vendor cannot conduct all the Testing for you nor should you attempt to test without your EHR vendor's involvement. This is a joint effort.

- The team should also include subject matter experts who are familiar with your EHR and immunization documentation. Ideally, your SMEs should also be familiar with the ImmTrac2 website.

- This team must be available for at least two weeks of Testing. This includes availability to run test scenarios, troubleshoot, and attend any meetings that may be needed.

- You must also identify who on your team will need access to view records in ImmTrac2 Test. This will likely include your SMEs. The Registry will need this information to set up their testing accounts.

In addition, to identifying your testing team, you must also ensure that your EHR is fully prepared for testing BIDX functionality. All necessary updates are in place, any new hardware needed has been installed, and the interface setting is ready to be configured.

Credentials and Resources

Once your team has been identified, and you've confirmed that your EHR is ready to go the Registry will provide you with several resources for Testing.

- The testing web service credentials will be sent to your POC. This will include the web service URL for connecting to the Registry's testing environment. Your EHR vendor will need to configure your interface settings with this information.

- Individual ImmTrac2 test account information will be sent to the people you identified as needing access.

- Your entire testing team will be sent the test plan and test patient list.

Resources in Detail

The test plan contains a list of all scenarios that your organization must test. Each scenario must be completed successfully at least once.

The test patient list contains a list of specific patients you will use for Testing. QBP only organizations will be provided a full list of patients needed for Testing. VXU sites will be provided a single patient needed for testing a specific scenario. All other testing patients will be provided by the org themselves.

Test Scenarios

Now let's discuss the types of test scenarios you will encounter. On a quick note before we begin – while the Registry will provide you with a list of testing scenarios that must be completed, your organization is free to conduct any additional testing it might feel is necessary during your testing window.

Connection Testing

The first test all organizations will be asked to perform is a connection test. A connection test is a simple test where your EHR will send a single message to confirm that your EHR can connect to the Registry and the web service credentials are correct.

Affirmation Testing

The next type of Testing you may be asked to perform is affirmation testing. This type of test only applies to orgs that intend to send VXUs and vaccine updates messages.

During affirmation testing, you will be asked to send affirmation messages for each of your testing patients.

- You will need to send affirmations for a variety of different patient types, including various types of registry consent.

- These will be the same patients you will use for the rest of your BiDX Testing

After you submit each affirmation message, you will need to review the response message you receive back for any errors. You will also need to login to ImmTrac2 Test to verify that the patients appear in the Registry and everything was added correctly.

QBP Testing

The next type of test which applies to all orgs is QBP query testing. During QBP testing, you will send query messages for each of your test scenarios. You'll then review the response you received from the Registry for any errors. You'll review the records that were received in your EHR to ensure they look correct, and then you will compare those results to what is recorded in ImmTrac2 Test.

VXU Testing

The final type of test is VXU testing.

During VXU testing, you will create new records in your EHR for each test scenario. You will then send your VXU messages to the Registry. This is a good time to review how sending messages will work and fit your org's workflow. Will messages be sent automatically, or will your end-users need to trigger them somehow?

Next, you will review the response from the Registry for any errors.

You should also review how your end-users will be aware of errors. Will there be notifications? What will they do if they receive an error?

Finally, you'll compare the records you sent from your EHR to the patient's record in ImmTrac2 test.

Troubleshooting

Now let us review some troubleshooting tips to keep in mind while testing

Troubleshooting

The most useful tool at your disposal is the Data Exchange Error Guide. The guide contains a complete listing of all the Registry errors and an explanation of what each means. The guide also suggests solutions to many common errors.

Once you understand the error you are receiving, the first step you should often take is to review your documentation and doublecheck the scenario you are running to ensure there were no errors in how you performed the test.

You should also review all errors with your EHR vendor. There may be changes they can make that you do not have access to.

Finally, if you and your EHR vendor are unsure how to resolve an error, contact the Registry for assistance.

Completion

And now we'll cover how to complete Testing

Completing Testing

As you have drawn near the end of your Testing, your organization should begin planning your intended "Go-live" date. That is the day you plan to start sending real patient records to ImmTrac2 via Bi-D-X. Communicate this goal with the Registry.

Once you have successfully completed all of your test scenarios, you will contact the Registry to request a review.

Provide the Registry with a complete list of all test patients you added to the Registry

And provide a list of each test scenario for each patient. Note that you only need to list the scenarios that the Registry requested.

The Registry will then validate your test results. If the Registry is satisfied, your team will then be notified that you have successfully completed Testing!

TIPS Report

One final note about Testing. The testing activity may be reflected in your TIPS (Texas Immunization Provider Summary) report. It would be best if you disregarded the Data Exchange Activity section of your TIPS report for the month of your Testing.

Thank you

This concludes our presentation on bidirectional data exchange testing. Our next and final presentation will cover entering production with bidirectional data exchange.

Thank you