HL7 Data Exchange
On-Boarding for Health Plans Script

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https://tcc.1capapp.com/event/dshs/

The link will also be provided in the chat.

Title Slide

Today, we will be discussing HL7 Data Exchange On-Boarding for Health Plans with the Texas Immunization Registry.

Introductions

Hello everyone. My name is Yiuliana Rodriguez. I'll be the main presenter today. I am an Interface Analyst with the Texas Immunization Registry.

We'll be hosting a brief question and answer session after the main presentation. At the bottom of the screen, you see an option for submitting questions. Please submit your questions there, so we can address and answer those questions once the presentation is complete.

Overview

This presentation will cover requirements and processes for onboarding with HL7 data exchange with the Texas Immunization Registry.

Next week we'll be hosting a presentation by Blue Cross/Blue Shield where they will review the onboarding process from the perspective of a health plan that has successfully on-board for HL7 data exchange with the registry.

The topics we'll be covering in today include:

- The differences with HL7 data exchange versus the current IHQ process.
- The on-boarding process including the Bidirectional Readiness Checklist, the Bidirectional ROI, Testing, and Production.
- And we'll review some of the resources that are available to you right now.

Terminology

We use abbreviations and acronyms for some of the terminology in this presentation, so let's review what these mean.

- B-I-D-X, or bidex, is the short term for Bidirectional Data Exchange. This phase is synonymous with HL7 data exchange for Health Plans,

- Registry is the short term for the Texas Immunization Registry,

- Orgs refers to any provider, healthcare entity, or other organization that participates with the registry,

- EHR stands for Electronic Health Records systems and will be used interchangeable for any records program you use to request and store immunization records, and,

- POC will mean your organization's Point of Contact registered with ImmTrac2.

And with that out of the way, let's begin.

HL7 vs IHQ

Let's begin by reviewing the differences between your current IHQ process and the HL7 data exchange process.

IHQ Process

Currently, you send IHQ files to the registry.

- IHQ files are plain text files that use precise spacing to format their record requests. These files are sent to the registry via an FTP connection.

- IHQ files are sent in batches containing hundreds or even thousands of record requests each. Typically these files are sent quarterly or annually.

- IHQ files undergo a long and resource intensive processing time at the registry. It usually takes weeks or sometimes even months for an IHQ file to be processed.

- Once the IHQ file finishes processing, an IHR response file containing the requested immunization records is returned via your FTP connection.

- One last thing to note about IHQ files is that they use a format that is no longer being actively updated and is already becoming outdated.

HL7 Process

- With the HL7 data exchange process, you'll send record requests in message that use CDC's HL7 specification.

- HL7 is a set of international standards, curated by the CDC for use in America, for the transfer of clinical and administrative data between software applications.

- You'll send record requests one at a time and those requests will usually be done once a month or quarterly.

- The requested records will be sent back to your system in real-time. No need to wait for an uncertain and long processing delay.

Bidirectional Readiness

Now that we've reviewed what's new with HL7 data exchange, let's go over the on-boarding process.

The first step in HL7 onboarding is reviewing the Bidirectional Readiness Checklist.

The Bidirectional Readiness Checklist

- The Bidirectional Readiness Checklist contains all the requirements that must be met by Orgs and their EHR vendor to participate in HL7 data exchange with the registry.

- The document is available on the registry's Department of State Health Services (DSHS) website, www.immtrac.com, under the Forms and Documents information.

- Orgs must review the checklist with their EHR vendor to ensure all requirements are met before contacting the registry about bidirectional data exchange.

- All requirements must be met before your organization is provided with the Registration of Intent for Bi-D-X.

- The checklist assists you to make sure your organization is in a good position to begin and streamlines the onboarding for Bi-D-X with the registry.

Requirements (1 of 2)

Now let's discuss the requirements included in the checklist, beginning with requirements that apply to all organizations:

- You must have an EHR or similar records software that meets these requirements:
  - It must send bidirectional messages using a webservices connection which allow exchange of patient and immunization data between your systems and the registry in real-time.
  - It must send messages using HL7 version two-point-five-point-one release one-point-five.
    - HL7 is the gold standard for electronic health records messaging and is overseen by the Centers for Disease Control and Prevention (CDC).
- Your EHR must be up-to-date with all relevant system and hardware upgrades.
  - This is particularly important because Bi-D-X testing is time sensitive and all upgrades must be in place before approved for onboarding for Bi-D-X. If your EHR is not ready during the Bi-D-X testing you may be removed from onboarding with the registry and must wait for a later opportunity to onboard.
- Do note, the registry staff do ask the org if all these items are met prior to approving an Org for onboarding to mitigate/identify any barriers. Because these requirements all depend on the status of your EHR, you must speak with your EHR vendor or similar IT support to make sure you meet each requirement.

Requirements (2 of 2)

Finishing up the requirements that apply to all organizations:

- Your organization must be registered with ImmTrac2. If you have multiple sites, each site must be registered separately.

- All your sites must also have up-to-date site agreements. Remember that site agreements must be renewed at least once every two years. The site agreements allow your organization to maintain access to its data exchange account.

- If you have multiple sites, your parent/child (or headquarters/sub-site) relationships must all be up to date and accurate in ImmTrac2.

If you have any questions about registrations or renewals, we offer comprehensive guides for both on our DSHS website.

Additional Preparation (1 of 2)

- Please be aware that once approved for onboarding for Bi-D-X, the Bi-D-X testing is time-limited.
- For this reason, you should begin planning for and preparing as many of your resources in advance as possible.
- Designate a Subject Matter Expert who will oversee the Bi-D-X project for your organization now.
- Begin identifying any additional testing participants you need.
- Testing participants must be able to dedicate at least one full week to the testing.
- Be sure your EHR (or similar software) has technical resources identified and available.

Again, the idea behind the checklist and the prerequisites is to streamline your organization's onboarding.

Additional Preparation (2 of 2)

You should begin to analyze your organization's workflows and plan for how things will change from your current operations.

Internally and with your EHR Vendor, ask:

- How will we monitor the Bi-D-X connection and address any data quality errors?
- How will we train and prepare staff for the change?

Bidirectional ROI

Once you've been approved for Hl7 onboarding, you'll be sent the Bidirectional Registration of Intent, or ROI.

So, what is the Bidirectional Registration of Intent?

What is the Registration of Intent? (1 of 2)

- The ROI is a form that allow organizations like yours to inform the registry that they are ready to begin participating in real time bidirectional data exchange.

- It captures key information about your organization and EHR vendor, such as the names of individuals that will participate in testing your new interface.

- It also allows you to identify which bidirectional features your organization will use.

- Importantly, the ROI also provides for your organization's agreement to follow all registry policies for data exchange.

What is the Registration of Intent? (2 of 2)

- The bidirectional ROI is an entirely new form.

  o If you previously participated in unidirectional (also known as batch file) data exchange, the ROI you submitted back then does not apply to bidirectional data exchange. You will need to submit a new ROI.

- The bidirectional ROI must be completed and signed by an authorized representative of you organization's parent or stand-alone site. It is entirely up to your organization to decide who that individual is for you, but it should be someone who will also participate in setting up and testing your new interface.

Completing the BiDX ROI

Now let's review how your organization needs to complete the BiDX ROI.

Completing the ROI

The bidirectional ROI has six sections that must each be completed:

- Organization information,

- Primary Contact Person,

- Secondary Contact Person,

- Bidirectional Exchange Readiness,

- Query and Reporting Immunizations, and

- The Electronic Signature

Completing the ROI: Organization Information

Organization Information.

In this section, you'll be identifying and describing your organization:

- You'll begin by providing the name and address of your organization. If your organization has multiple sites, this will be the name and address of your parent site or headquarters.
  - One of the pieces of information you will need to provide is the site's TXIIS ID number.
  - If you are unsure what the TXIIS ID number is or which site is your parent site, contact the registry for support and we can provide you with that information.
- Next, you'll say if you plan to report for multiple facilities. This is a simple Yes or No question.
  - If your organization is stand-alone and doesn't have any other sites, then your answer should be No.
  - If, however, you do have multiple sites that are linked to each other in ImmTrac2, then your answer should be Yes.

Completing the ROI: Primary Contact Person

The next section of the ROI is the Primary Contact Person.

- You'll need to provide the name and contact information for the main person from your organization that will be leading your Bi-D-X setup.
- This person must:
  - Be an employee of your organization,
  - Meaning that they do not work for your EHR vendor or any other third party IT support,
  - And they must actively participate in all Bi-D-X setup activity with the registry.
- Ideally, this person should be the registered Point of Contact that was identified on your last ImmTrac2 site agreement.

Completing the ROI: Secondary Contact Person

Next, you'll identify the Secondary Contact Person.

- This is the individual who will act as a backup for the Primary Contact Person
- This person must:
    - o Be an employee of your organization,
    - o Participate in all Bi-D-X setup,
    - o And be ready to take lead of the project if your primary contact person becomes unavailable for any reason.
- A good choice for this role might be the individual that was identified as your Primary Registry Contact in your last ImmTrac2 Site Agreement. If this is the same person as the POC, then consider who else within your organization would be a good choice for this role.

Completing the ROI: Bidirectional Exchange Readiness (1 of 3)

The next two sections cover your readiness for bidirectional data exchange and which features you plan to use:

- The readiness section asks a number of questions about your technical capabilities.
    - o You will likely want to review with your EHR vendor before answering them.
- The first question is, "Are you currently sending HL7 files to the registry?"
    - o If you are participating in unidirectional batch file data exchange, then your answer to this question should likely be "Yes".
    - o Otherwise, answer "No".

Completing the ROI: Bidirectional Exchange Readiness (2 of 3)
- Is your facility and EHR ready to participate in Bi-D-X?
- You should only Yes if,
    - o You have all the necessary technical capabilities for Bi-D-X in place,
    - o Your EHR has all of the necessary updates installed, and
    - o You are able to send and receive SOAP messages.
- If, for any reason, your answer would be NO, hold off on submitting your ROI until you can truthfully answer Yes.

Completing the ROI: Bidirectional Exchange Readiness (3 of 3)

- Which method of Bi-D-X will your organization use?
  - This is the question where you identify which Bi-D-X features you will use. Your options are:
  - Query Only, or
  - Query and Reporting

  You'll choose Query Only.

Bidirectional Exchange Readiness: Query Only

- Query Only allows your organization to request records and forecasts from the registry in real-time.
- Your organization would NOT be able to report new or historical immunization records to the registry.
- Query Only should only be chosen by organizations that do not administer immunizations, like some schools or health plans.

Completing the ROI: Electronic Signature

The final section of the bidirectional ROI is the Electronic Signature.

- The ROI may be:
  - Signed electronically, or
  - Printed, signed, and then scanned as a PDF.
- The ROI should be signed by the Primary Contact Person or another individual authorized to do so by your organization. This signature secures your confirmation that the information provided is accurate and your organization's agreement to follow all registry policies for data exchange.
- The finalized and signed ROI must be emailed to ImmTracMU@dshs.texas.gov.

ROI Processing

- Once received, the registry will begin processing your signed ROI. Processing is typically completed within 3-4 business days.
- The registry may reach out to your Primary Contact Person with follow-up questions, so they should be prepared for communication.
- Once the ROI has been processed, the registry will reach out the Primary Contact Person to provide them with instructions on next-steps and timeframes for testing.

Testing Preparation

Once you've received the ROI, it'll also be time to start preparing for testing.

Purpose of Testing

- Bidirectional data exchange testing ensures that:
  - o Your connection to the registry is set up and working correctly,
  - o Your HL7 messages are formatted correctly to successfully request records,
  - o Your EHR is working the way you expect, and
  - o Your workflows are ready for BiDX.

Goal of BiDX Testing

Your goal during bidirectional data exchange testing is to:

- Complete all testing scenarios without errors.

Requirements

- In order to begin testing, your organization will need to identify your BiDX testing team:

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

  - o Your team should include subject matter experts, often called S-M-E's or smees, who are familiar with your EHR and immunization documentation.

  - o This team must be available for at least 1 week of testing. This includes availability to run test scenarios, troubleshoot, and attend any meetings that may be needed.

  - o You must also identify who on your team will need access to view records in ImmTrac2 Test. This will likely include your SMEs. You will need to share this information with the registry so that their testing accounts can be set up.

  - o 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 settings are ready to be configured.

Credentials & Resources

Once your team has been identified and you've confirmed that your EHR is ready to go, the registry will provide you with a number of resources for testing:

- Your webservice credentials for testing will be sent to your POC.

  - This includes the webservice 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
  - The Test Patient list.

Resources in Detail

- The Test Plan contains:

  - A list of all scenarios that must be tested by your org.

  - 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.

Test Scenarios

Now let's discuss the types of test scenarios you will encounter.

And one 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 you feel is necessary during your testing window.

Connection Testing

The first test all orgs will be asked to perform is a connection test.

- A connection test is a simple test where your ERH will send a single message to confirm that:
    - o Your EHR is able to connect to the registry, and
    - o Your webservice credentials are correct.

QBP Testing

Next, you'll begin QBP, or 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.

Troubleshooting

- For troubleshooting, the most useful tool at your disposal is the Data Exchange Error Guide.
    - o The guide contains a complete listing of all errors returned by the registry and an explanation of what each means.
    - o 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 make sure there were no errors how you performed the test.
- You should also review all errors with your EHR vendor. There my 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.

Completing Testing

And now well cover how to complete testing.

Finishing Testing

- As you draw near the end of your testing, your organization should begin planning your intended "Go-live" date. That is the day you plan to begin requesting real patient records from ImmTrac2 via Bi-D-X. Communicate this goal with the registry.

  - The registry will need to know how many records you plan to request when you first go live and how many records you will request on average after that. The registry will need this information before approving your go-live date.

- Once you have successfully completed all of your test scenarios you will:

  - Contact the registry to request review

  - And provide a complete list of your testing results for each scenario.

- 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!

Production

Once you've finished testing and agreed to a go-live date you'll be ready to go into production!

What is BiDX Production?

So, what is Bi-D-X Production?

- Production is the final stage of bidirectional data exchange. When you are in production, your Bi-D-X connection with the registry is live.

- You will be requesting real records from the registry in real-time.

  - There will be no more need for any test records.

- You will have a continuous, live connection to request records whenever needed.

Credentials

In order to set up your live connection for production, you will need a new set of production webservice credentials:

- Your production credentials will be securely emailed to your registered Point of Contact.
    - This email will also include the production webservices URL for your interface team.
- At the same time, all of your testing credentials will be disabled.
    - This includes any individual ImmTrac2 testing accounts.

Sending Production Files

- Confirm your "go-live" date with the registry and communicate if the date changes for any reason.
- When you go live you will:
    - Begin your first "batch load" record request on your go-live date. This will be a full request for all of your members.
    - Begin sending ongoing record requests as needed. The registry typically requests that you break up you requests month or quarterly instead of annually to even out the impact of your record requests.
    - From this point on, the registry will send you back the records you request in real time.

Monitoring & Maintenance

- Your organization will be responsible for regularly monitoring and maintaining your Bi-D-X connection and messages.
- Regularly monitor your Bi-D-X activity.
    - Make sure messages are being successfully sent and received by your EHR.
    - Have a process for reviewing and addressing any errors returned from the registry.
- If you ever need any assistance addressing errors, please reach out to the registry for help.

Resources

Now lets finish by reviewing some of the resources that are available to you from the registry.

Registry Websites

The ImmTrac2 website is where you can submit and check the status of your site registrations and renewals.

The DSHS website is where you can find all our latest announcements, our contact information, and a wide variety of documents and training materials to assist you with using our system.

Resource Guides

Related resource guides include:

- The Informational Guide on Bidirectional Data Exchange, stock number #11-15957, describes the process of establishing and maintaining a bidirectional data exchange connection with the registry.

- The Bidirectional Readiness Checklist , stock number 11-15235, is the documents we reviewed earlier in this presentation. It lists all of the requirements you'll need to meet to begin HL7 data exchange with the registry.

- The Texas Immunization Registry HL7 2.5.1 Implementation Guide, stock number 11-14872, contains detailed descriptions of the HL7 customizations need to transmit HL7 records to the registry. This document is intended to be used as a companion to the CDC's standard HL7 2.5.1 implementation guide.

- The HL7 2.5.1 Error Guide, stock number 11-15703, which provides guidance on all the data quality errors our system produces and detailed instructions on how to resolve the errors. This resource should be one of the primary go-to tools in your data exchange tool box. These guides and more can be found on the DSHS Texas Immunization Registry website.

- All of these documents and more can be found on our forms page at www.dshs.texas.gov/immunize/immtrac/forms.shtm

Email

You can request support by emailing the Texas Immunization Registry. The registry has two email addresses:

- Email us at ImmTrac2@dshs.texas.gov for questions about ImmTrac2 access, site registrations or renewals, adding or removing users, training, or publications.

- Email us at ImmTracMU@dshs.texas.gov for questions on data exchange, promoting interoperability, or data quality reports.

Thank you!

This concludes our presentation on HL7 data exchange.

Thank you, from the Texas Immunization Registry.

As mentioned earlier, next week we'll be hosting a presentation by Blue Cross/Blue Shield where they'll review the onboarding process from the perspective of a health plan that has successfully on-board for HL7 data exchange with the registry. If you haven't already, be sure to register for that presentation.

Q & A

With the remaining time, we'll begin answering some of the questions you submitted during the presentation.