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# HL7 Data Exchange On-Boarding for Health Plans

Texas Immunization Registry

Interoperability Team : 1-800-348-9158 Option 3

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# Introductions

- Yiuliana Rodriguez – Interface Analyst

# Overview

- HL7 vs IHQ
- HL7 Onboarding Process
  - The Bidirectional Readiness Checklist
  - Bidirectional ROI
  - Testing
  - Production
- Resources

# Terminology

Terminology we will use in this presentation:

- BiDX = Bidirectional data exchange
- Registry = Texas Immunization Registry
- Orgs = Providers, healthcare entities, organizations
- EHR = Electronic Health Records systems
- POC = Your Org's registered Point of Contact

# HL7 vs IHQ



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# IHQ Process

- Plain text file sent via FTP
- Requests sent in batches quarterly or annually
- Long resource intensive processing time
- IHR returned containing immunization records
- IHQ standard no longer maintained





# HL7 Process

- Message formatted using the CDC HL7 specifications
- HL7 is a set of standards for sending clinical data between software applications
- Records requested one at a time
- Requests sent monthly or quarterly
- Records returned from ImmTrac2 in real-time



# Bidirectional Readiness



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# The Bidirectional Readiness Checklist

- The Bidirectional Readiness Checklist:
  - Contains a list of requirements to participate in BiDX
  - Can be found on Forms & Documents Webpage
  - Must be reviewed before contacting the registry
  - Requirements met prior to Registration of Intent (ROI)
  - The Bidirectional Readiness Checklist ensures that your organization is in a good position to begin BiDX



# Requirements (1 of 2)

- Org's EHR must be able to meet each of the below requirements:
  - Have bidirectional messaging capabilities
  - Send messages using HL7 version 2.5.1 Release 1.5
    - HL7 is an electronic health records messaging standard
  - Be up-to-date with all relevant system upgrades
    - Testing cannot stop for a system upgrade. Removal from testing.
- Orgs must speak with EHR vendor for information



# Requirements (2 of 2)

- All sites must be registered with ImmTrac2
- All sites must have up-to-date site agreements
- Parent-child relationships must be correct



# Additional Preparation (1 of 2)

- BiDX testing is time-limited
- All necessary resources should be planned for in advance
- Designate a Subject Matter Expert (SME) to oversee testing
- Testing participants have been identified
  - Able to devote one week to testing
- EHR vendor has technical resources ready and available



# Additional Preparation (2 of 2)

- Workflows have been analyzed and future state planned
- Monitoring and error management plan prepared
- Organization wide training plans prepared



# Bidirectional ROI



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

- Allows organizations to inform the registry of their readiness to begin bidirectional data exchange.
- Captures key information about your organization and EHR vendor.
- Identifies which bidirectional features your organization will use
- Provides your agreement to follow registry policies



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

- The bidirectional ROI is a new registration
  - If your organization **previously** submitted a unidirectional (batch file) ROI, you will need to submit a new ROI for BiDX
- The ROI must be completed by an authorized representative of your organization's parent/stand-alone site



# Completing the BiDX ROI



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# Completing the ROI

- The Bidirectional ROI contains six sections that must be completed:
  - Organization information
  - Primary Contact Person
  - Secondary Contact Person
  - Bidirectional Exchange Readiness
  - Query and Reporting Immunizations
  - Electronic Signature

# Completing the ROI: Organization Information

- Enter the name and address of your organization's parent/stand-alone site
  - You will also need your parent TXIIS ID
  - Contact the registry for assistance identifying your parent site or TXIIS ID
- Will you report for multiple facilities?
  - If you are a stand-alone org, the answer should be *No*
  - If you have a parent/child structure the answer should be *Yes*



# Completing the ROI: Primary Contact Person

- Identify and provide contact information for the individual who will take lead of your BiDX setup
- This individual must:
  - Be an employee of your organization
  - NOT an EHR vendor employee
  - Participate in all BiDX setup activity
- Should be the registered Point of Contact



# Completing the ROI: Secondary Contact Person

- This individual will act as a back-up to the Primary Contact Person
- This person must:
  - be an employee of your organization
  - participate in all BiDX setup activities
  - Be prepared and capable of taking lead if needed
- Consider selecting your Primary Registry Contact



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

- This section identifies your capabilities and readiness for BiDX
  - Speak with your EHR vendor before completing this section
- Are you currently sending HL7 files to the registry?
  - If you are participating batch file data exchange, answer *Yes*
  - Otherwise, answer *No*





# Completing the ROI: Bidirectional Exchange Readiness (2 of 3)

- Is your facility and EHR ready to participate in BiDX?
  - Only answer *Yes* if:
    - your organization has all necessary technical capabilities in place
    - Your EHR has all necessary updates installed
    - Can send and receive SOAP messages
  - If your answer is *No*, do not submit your ROI



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

- Which Method of BiDX will your organization use?
  - This question identifies which BiDX feature you will use
  - Query Only
  - Query and Reporting



# Bidirectional Exchange Readiness: Query Only

- Real-time record requests and forecasting
- NOT able to report new or historical immunization records
- Should only be chosen by organizations that do not administer immunizations



# Completing the ROI: Electronic Signature

- The ROI can be:
  - Signed electronically
  - Printed, signed, and scanned as a PDF
- The ROI should be signed by the Primary Contact Person or an individual authorized by the organization
- The signed ROI should be emailed to [ImmTracMU@dshs.texas.gov](mailto:ImmTracMU@dshs.texas.gov)



# ROI Processing

- Once received by the registry, ROIs are processed within 3-4 business days.
- The registry may contact the Primary Contact Person with follow-up questions
- Once processed, the registry will provide the Primary Contact Person with next steps and timeframes.



# Testing Preparation



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# Purpose of Testing

- BiDX Testing ensures:
  - Connection is set up correctly
  - HL7 messages are formatted correctly
  - EHR functions as expected
  - Workflow analyzed and prepared



# Goal of BiDX Testing

- The goal of Bidirectional Data Exchange Testing is to:  
**Complete all testing scenarios without errors**



# Requirements

- Testing team identified:
  - Org staff and EHR support
  - Org Subject Matter Experts (SME)
  - Available for 1 week of testing
  - Who will need ImmTrac2 test access?
- EHR BiDX functionality ready



# Credentials & Resources

- Webservice credentials sent to POC
  - Includes Webservices URL
- ImmTrac2 test access sent to individuals
- Resources sent to testing team
  - Test Plan
  - Test Patient List



# Resources in Detail

- Test Plan
  - List of scenarios that must be tested
  - All scenarios must be successful
- Test Patient List
  - QBP Only Orgs: Full list of patients to test with



# Test Scenarios



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# Connection Testing

- Simple test to confirm:
  - EHR can connect to the registry
  - Webservice credentials are correct



# QBP Testing

- Send QBP messages for each test scenario
- Was a response received without error?
- Review the returned records in the EHR
- Compare results to the record in ImmTrac2 test



# Troubleshooting

- The Data Exchange Error Guide
  - Explains all errors returned by the registry
  - Offers solutions to many errors
- Review your documentation and the scenario
- Collaborate with your EHR Vendor
- Contact the registry if your team cannot resolve the error



# Completing Testing



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# Finishing Testing

- Plan “Go-Live Date”
  - Discuss anticipated records request volume
- Once all Test Scenarios are successful
  - Contact the registry for review
  - List of each scenario tested for each patient
- The registry will validate test results
- Your team will be notified of successful completion



# Production



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# What is BiDX Production?

- Production is live BiDX
- Real records exchanged with the Registry
  - No more test records
- Ongoing live connection



# Credentials

- Credentials sent to POC
  - Includes production webservice URL
- Testing credentials disabled
  - ImmTrac2 Test access disabled



# Sending Production Files

- Confirm “Go-Live” date
- Query Request
  - Send first “batch load” record request
  - Send on-going history requests as needed
  - Response from registry sent in real time



# Monitoring & Maintenance

- Develop monitoring and maintenance workflows
- Regularly monitor BiDX activity
  - Messages sent and received successfully
  - Review errors returned
- Contact the registry if assistance is needed



# Resources

Identify tools available to assist you.



# Registry Websites

- ImmTrac2 Website

- <https://immtrac.dshs.texas.gov/TXPRD/portalHeader.do>

- DSHS Website

- <https://dshs.texas.gov/immunize/ImmTrac/>



# Resource Guides

- *Informational Guide on Bidirectional Data Exchange, #11-15957*
- *Bidirectional Readiness Checklist , #11-15235*
- *HL7 2.5.1 Implementation Guide, #11-14872*
- *Texas Immunization Registry HL7 2.5.1 Error Guide, #11-15703*
- [www.dshs.texas.gov/immunize/immtrac/forms.shtm](http://www.dshs.texas.gov/immunize/immtrac/forms.shtm)

# Email

- [ImmTrac2@dshs.texas.gov](mailto:ImmTrac2@dshs.texas.gov)

Access, site registrations or renewals, ImmTrac2 user changes, registry trainings or publications

- [ImmTracMU@dshs.texas.gov](mailto:ImmTracMU@dshs.texas.gov)

Data exchange questions, promoting interoperability, data quality reports

# Thank you!

Texas Immunization Registry

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# Q & A

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Access, site registrations or renewals, etc.

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Data exchange and promoting interoperability