

Texas Department of State Health Services

Texas Immunization Registry Bidirectional Onboarding

Texas Immunization Registry



- Overview
- Registration
- Preparation
- Testing
- Go Live
- Data Exchange Resources



Definitions

Syntropi - Texas DSHS Immunization Program Portal

BiDX – Bidirectional data exchange via web services

Orgs – Organizations, specifically parent or standalone sites in ImmTrac2

Org POC – Organization point of contact as listed in ImmTrac2



Texas Department of State Health Services **Org PRC** – Organizations primary registry contact list in ImmTrac2

VXU – Unsolicited Vaccine Update Message

QBP – Query by Parameter Message



- Navigate to the "DX" Bidirectional data exchange module in Syntropi
- Complete and submit an electronic Bidirectional registration of intent
- Perform pre-testing
- Establish a Bidirectional interface with the training ImmTrac2 environment



- Pass testing with a > 90% success rate
- Promote Bidirectional data exchange in the production ImmTrac2 environment





Benefits of BiDX Onboarding

Allows parent or standalone orgs to:

- Onboard using streamlined process
- Use existing Syntropi registration to indicate interest in BiDX onboarding
- Submit registration of intent electronically
- Submit test messages for HL7 message validation
- Download test and production WSDL to connect with the registry
- Receive auto-generated data quality metrics and reports

Electronic health records (EHR) vendors able to track providers' status



Accessing BiDX Onboarding

Only accessible once registration is approved by DSHS Login to HHS Enterprise Portal. Select the Syntropi – CRC option under Applications Identify the BiDX widget on menu If not listed, may be an issue with user association or BiDX registration, reach out to ImmTracMU@dshs.texas.gov for

questions





Steps for BiDX Onboarding

Registration
 Preparation, Message Pre-Testing
 Preparation, Connectivity & Transport
 Pre-Production Testing, Message Validation
 Pre-Production Testing, Data Quality Review
 Go-Live, Connectivity & Transport



Step 1: Registration





Site Agreement (1 of 3)

Required items to be completed in Step 1 :

- Fill out and sign the Registration of Intent (ROI) for BiDX.
- Indicate whether your org will be a parent site with associated child sites, or a standalone site
- Review your orgs point of contact.
- Indicate how your org will submit registry consent.



Site Agreement (2 of 3)

Organization Relationship Status

Will your organization report or submit for multiple locations/facilities?

● Yes ○ No

Contacts

• Review your organization's Point of Contact.

Organization Point of Contact

When the Registration of Intent is received by the Texas Immunization Registry, the person listed below will receive an email with instructions on how to complete the onboarding process for bidirectional data exchange.

Note: The person listed must be an employee of the facility indicated above.

First Name	Last Name	Title	Phone Number	Email
Fred	Sproutz	Manager	(123) 123-1234	FredS@sproutcare.com



Site Agreement (3 of 3)

Contact Information

- 1. Primary Data Exchange Contact
- 2. Secondary Data Exchange Contact
- Information Technology Contact
 Note: Contacts must be different people with unique email addresses



Registration of Intent (1 of 7)

Readiness

- Confirm whether your org is currently submitting data to ImmTrac2
- Confirm whether your org and associated EHR is capable of bidirectional data exchange

*Is your facility currently exchanging HL7 data with the registry?	O Yes	O No
*Are your facility and EHR vendor ready and able to perform bidirectional data exchange?	O Yes	O No



Registration

Registration of Intent (2 of 7)

EHR Vendor

 Fill in details for your EHR solution, including whether they can send HL7 2.5.1 formatted data

Electronic Health Re	cord Vendor		
Review the current info	ormation for your EHR and mak	e updates as needed.	
*Select the company	name of your EHR Vendor.	Allscripts	~
If your EHR Vendor is	not listed, please select OTHER	from the list.	
*Select the EHR Prod	uct used in this location.	Allscripts ED Version- 7	•
*Can the EHR send H	L7 2.5.1 formatted data?	● Yes ○ No	
If γour EHR vendor ca contact ImmTracMU@	nnot support HL7 2.5.1, your o @dshs.texas.gov for assistance v	rganization cannot proceed with bidire vith unidirectional data exchange onbo	ectional data exchange onboarding. Pleas oarding.
*Select/Add your Elect from the company se	ctronic Health Record Contact lected above.	V Add Ne	ew [-]
EHR Contact Name (M	Not in the list above)		
First Name	Last Name	Phone Number*	Email Address*
Solomon	Alscrip	565 444 8798 x	solomon@allscripts.com
While entering other	contact name for EHR, please e	enter at least phone number or email a	address.



Registration of Intent (3 of 7)

Authorization to Release Credentials

Authorize the registry (ImmTrac2) to release your credentials to your EHR vendor.

*Please select one of the following:



Yes I authorize the registry to release the BIDX credentials to the EHR Vendor.

⁾ No I DO NOT authorize the registry to release the BIDX credentials to the EHR Vendor.



Registration

Registration of Intent (4 of 7)

3rd Party Data Aggregation

Will your organization connect to ImmTrac2 via a 3rd party aggregation bridge?

Integrated Delivery Service Network (IDNS)

Health Information Exchange (HIE)

Note: A data aggregation bridge acts as a connection to ImmTrac2 where data is sent from your organization's EHR solution to the data bridge and forwarded to ImmTrac2.

Examples: CDC Immunization Gateway (IZ Gateway), Iron Bridge, or Health Information Exchange (HIE).



Registration of Intent (5 of 7)

Data Exchange Method

- Update Only (only sending immunization date)
- Query Only (look up/search immunization data) or
- Update and Query (both send and receive immunization data)

*Which method will your facility (through your EHR Vendor) use for bidirectional data exchange? Update and Query

 Note: Your organization must be able to perform bidirectional exchange formatted in HL7 2.5.1 to proceed with onboarding. Contact <u>ImmTracMU@dshs.texas.gov</u> for assistance with unidirectional data exchange onboarding.



Registration of Intent (6 of 7)

- Review your information
- Check the box to verify that you are authorized to sign for your organization
- Click the **Edit** button to return and revise it, or **Sign & Submit** to proceed.
- On the next screen check the box to sign electronically, click the Submit button





Registration of Intent (7 of 7)

- After submitting your registration of intent, you will receive a confirmation message
- Select "Continue"





Registration

Registration Status

This screen reviews the registration status

Registration

At this point the ImmTrac2 Confidentiality Agreement has been submitted and the Data Exchange profile completed. Click Continue below to read about Texas' consent requirements and tell how this organization intends to submit it.

Submit the ImmTrac2 Confidentiality Agreement



Consent Mode: Flat File or HL7 Submission or Manually

TEXAS Health and Human Services

Texas Department of State Health Services Continue

Registration

Consent Mode (1 of 3)

Indicate how your organization will submit registry consent:

- Flat File
- HL7 Submission
- Manually

O Flat File Selecting this option in	dicates patient consent will be sent in a flat file, which is separate from HL7 submissions to ImmTrac2
O HL7 Submission	disatas that national segment will be included in undetes from your electronic health researche HLZ submissio
to ImmTrac2	dicates that patient consent will be included in opdates non your electronic hearth ecord's HE7 submissio
to ImmTrac2 O Manually Selecting this option in	dicates patient consent will be manually entered into the ImmTrac2 by a staff member from this organizatio



Texas Department of State Health Services

Note: Flat File and Manually reporting methods are not recommend for BiDX onboarding.

Consent Mode (2 of 3)

A patient's written consent (minor and adult) using an official DSHS registry consent form is required for inclusion of all data in the registry, except in the event of a publicly declared disaster. Written consent must be given by a parent or legal custodian if a patient is younger than 18 years of age. Official ImmTrac2 Consent Forms are available on our <u>Department of State Health Services (DSHS)</u> website:



Texas Department of State Health Services **TXY** = ImmTrac2 Minor Consent (Age 0-18)

TXA = ImmTrac2 Adult Consent (Age 18+)

TXD = ImmTrac2 Disaster Retention Information Consent (All Ages)

Consent Mode (3 of 3)

- The signed registry consent form must be archived with the provider's office and in the patients' medical records after your organization has reported the registry consent to ImmTrac2 via one of the below methods.
 - Do **NOT** send (by fax, mail, or email) the signed registry consent forms to the registry for storage or processing.
- Please review the Texas Immunization <u>Registry –</u> <u>Consent Overview</u> to understand Texas' unique registry consent legislation and requirements.



Step 2: Preparation, Message Pre-Testing





Pre-Testing Overview (1 of 2)

Allows orgs to manually upload test HL7 messages for validation:

- HL7 2.5.1 required
- Validates check for compliance to TX and CDC HL7 standards
- Data is not submitted to ImmTrac2



Pre-Testing Overview (2 of 2)

To pass, orgs must submit 1 error free of the following:

- Historical VXU
- New VXU
- QBP
 - Click the **Begin** button to start HL7 message pre-testing.

Preparation Message Pre-Testing This phase of the onboar	ding process checks to see if the HL7 messages generated by the EHR comp	ply with state and
rederal messaging require	ements. Click Begin to complete the tasks listed below.	
HL7 Message Pre-Testi	ng. The requirements and status are displayed below:	
VXU MSG Validation:	0 of 1 Valid Historical MSGs AND 0 of 1 Current MSGS have passed validation.	
O QBP MSG Validation:	0 of 1 Valid Query MSGs have passed validation.	
		·
		Begin



Message Pre-Testing (1 of 10)

To pass pre-testing for VXU messages, your org must submit a valid **historical** immunization and a valid **new** immunization.

Generate a sample HL7 VXU and QBP message from the Electronic Health Record Solution.

VXU- validation Status					
Description	V	alid Historical Immu	inization V	alid Current Im	munization
Total valid messages must be received	1:	1		1	
Total valid messages uploaded so far:		0		0	
Instructions:					
 The uploaded file will display Click Run Validation. 	at the top of the lis	st of the Validation His	itory below.	and the types of e	
5. The Status column will updat 6. Click View to see detailed vali File Validation History	e with <u>—</u> for a mi	essage that passes or '	Tor a failed mess	Upl	oad New File
5. The Status column will update 6. Click View to see detailed value File Validation History # EHR Product/Version	File Type	essage that passes or he file.	Evaluation Date	Upl Status	oad New File



Message Pre-Testing (2 of 10)

Once uploaded, the files are validated and identified with an overall PASS or FAIL

The file is further broken down to display which areas of the HL7 message need to be corrected





Message Pre-Testing (3 of 10)

• The Status column will update with the message results

Failed

#	EHR Product/Version	IR Product/Version File Type File Name		Evaluation Date	Status	View Detail
1	Allscripts ED Version- 7	VXU	TxPerfCurrent072222.hl7	01 13 2023 14:14	0	View

Passed

#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
1	Allscripts ED Version- 7	VXU	TxPerfCurrent072222.hl7	01 13 2023 14:14	⊻.	View



Message Pre-Testing (4 of 10)

Select "View" to review detailed validation results for the file

#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail	
1	Allscripts ED Version- 7	VXU	TxPerfCurrent072222.hl7	01 13 2023 14:14	0	View	

On the following screen, you can select to view the detailed view or the summary view





Message Pre-Testing (5 of 10)

The detailed view allows you to see which segments passed validation, and to see the specific value entered for that field.

6.	мзн	3	Sending Application	Sending Application, MSH-3, is the instance name of the EHR product where the data originated. Reference HL7 Table 0361	See V	alue	~			
7.	MSH	4	Sending Facility	MSH-4:Use the TX-IIS ID of the specific (stand-alone, parent, or child) submitting organization must be populated. For multi-site organizations, this is the numeric TX-IIS ID for organization responsible for sending data to ImmTrac2 for all associated administering locations. If the TX IIS ID is not known, contact the Texas Immunization Registry. TX-IIS ID of the parent organization MUST BE numeric ,	St Vie Val	Synt :ro w Va ue is:	piTX alue 10	- IDx Management Sy —	C xt.asp?ID=1	× 241
8.	МSH	4	Sending Facility	MSH-4: Use the TX-IIS ID of the specific (stand-alone, parent, or child) submitting organization must be populated. For multi-site organizations, this is the numeric TX-IIS ID for organization responsible for sending data to ImmTrac2 for all associated administering locations. If the TX IIS ID is not known, contact the Texas Immunization Registry.	Seev	av	~	Close		*
9.	MSH	4	TX IIS ID	MSH-4 MUST be populated with an existing valid TX IIS ID of 9 digits. Marks the field as an error if it does not match the organization TX-IIS ID.	See V	alue	0			



Message Pre-Testing (6 of 10)

Click the **Export Data** button to download an annotated copy of the message.

#	Message	Status	View Detail	View Summary
1.	MSH ^~\& EZEMRX 1122609000 TXImmTrac TxDSHS 202008	0	View	View
			_	



Message Pre-Testing (7 of 10)

The summary view gives a high-level view of the message's status broken down into errors and warnings. Passing segments are not



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Select "Close" to return and upload more messages.

Errors Segment Field Name Validation Status 0 OBX 5.1 Observation Value Content validated for the correctness of the HL7 Code set. Value Sent: 108 Administered At 0 RXA 11.4 RXA-11.4 MUST EQUAL MSH-22 Location - Facility ID Value Sent: 10 MSH-4 MUST be populated with an existing valid TX IIS ID of 9 digits. TX IIS ID Ø MSH | 4 Marks the field as an error if it does not match the organization TX-IIS ID. Value Sent: 10 Warnings Segment Field Name Validation Status PID-24 Multiple Birth Indicator is option, but every effort should be taken Multiple Birth 24 PID to populated for the patient. Indicator Value Sent: Close

Message Pre-Testing (8 of 10)

To pass pre-testing for QBP messages, your org must submit a valid query message

File Validation History						New File
#	EHR Product/Version	File Type	File Name	Evaluation Date	Status	View Detail
1	Allscripts ED Version- 7	VXU	TxPerfCurrent072222.hl7	01 13 2023 14:14	0	View



Message Pre-Testing (9 of 10)

Change the message type from **VXU** to **QBP**

Select "Choose File" and upload the QBP message to test

Note: The options to view detailed or summary information about the validation work the same way as for VXU messages.

HL7 Message Type* VXU- Unsolicited vaccination record update VXU- Unsolicited vaccination record update QBP- Requesting Information Immunization History HL7 2.5.1 Allscripts- Allscripts ED Version- 7 File is for Provider Site* Sprout Care Pediatrics Browse/Choose the file to upload* Choose File No file chosen UPLOAD FILE



Message Pre-Testing (10 of 10)

Once both message type requirements are passed, proceed to the next onboarding step.

VXU MSG Validation: 0 of 1 Vali QBP MSG Validation: 0 of 1 Vali	Historical MSGs AND 0 of 1 Cur	rrent MSGS have passed validation.	
QBP MSG Validation: 0 of 1 Vali	Ouery MSCs have eased valid		
	Query Misos have passed valida	ation.	
			omole
			hie



Step 3: Preparation, Connectivity & Transport





Preparation, Connectivity & Transport

Prep Connectivity & Transport (1 of 3)

• Select "Begin" button to start





Preparation, Connectivity & Transport

Prep Connectivity & Transport (2 of 3)

Select the link to download the Test WSDL file to set up your test connection to the ImmTrac2 Test environment.

Step 1: Download the WSDL to establish the interface with ImmTrac2 Test.

- Instructions:
 - 1. Click the link below to download the WSDL. It is pre-populated with the username and password to
 - authenticate with ImmTrac2 Test. Download Test WSDL
 - 2. Configure your Electronic Health Record server with the downloaded Test WSDL.
- This step will be marked passed upon download of the WSDL.



Preparation, Connectivity & Transport

Prep Connectivity & Transport (3 of 3)

To establish a test interface, configure your EHR with the WSDL settings, then begin submitting HL7 test messages

Credentials include:

- Username (Import Code)
- Facility ID (Org Code)
- Password



Step 4: Pre-Production Testing, Message Validation





Pre-Prod Test, Message Validation

Pre-Production Testing (1 of 2)

Pre-Production Testing

Download the VXU Test Cases document

Complete the Test Cases form

Once completed select **Choose File** then the **Upload** option to submit the document

VXU MSG Validation:	Successful VXU Message Count (AA Acknowledgements): Rate: %
There are two (2) steps to com 1. Achieve a 90% success The rate is calculated to be corrected to m 2. Complete the VXU Test	plete for VXU message validation. s rate for VXU messages received by ImmTrac2 Test. d automatically and will provide detailed message analysis to determine what need neet the 90% pass rate requirement. t Cases for submitting updates to ImmTrac2.
 Download VXL 	U Test Cases. Download VXU Test Cases
	Review Needed Correction
O QBP MSG Validation:	Use the test cases files below to query Immtrac2 Test
QBP MSG Validation: To validate Query/Response	Use the test cases files below to query Immtrac2 Test Messaging correct your QPB query messaging based on the RSP received compared
QBP MSG Validation: To validate Query/Response to what is in expected in the 1. Complete the QBP Test	Use the test cases files below to query Immtrac2 Test Messaging correct your QPB query messaging based on the RSP received compared e case. It Cases for submitting updates to ImmTrac2.



Pre-Prod Test, Message Validation

Pre-Production Testing (2 of 2)

- Identify if test messages PASS or FAIL based on ACK response
- Org must meet a 90% success rate to PASS
- Review ACK response in EHR interface.

Pre-Production: Message Validation

Step 1: Submit HL7 Messages to Immtrac2 Test environment

- Instructions:
 - 1. Continue submitting HL7 Test Messages to Immtrac2 Test.
 - Monitor ACK messages recieved from Immtrac2 Test and correct any issues to increase your pass rate until it meets the required % pass rate.
 - Test your Query Messaging. Click the link to download Immtrac2 Test cases for query/response (QBP/RSP) messaging. Download Query Test Cases.
 - If your testing Query/Response Messaging correct your QBP query messaging based on the RSP received compared to what is expected in the test case.
- The system will monitor messages received and calculate the message pass rate for Updates (VXU messages) sent to Immtrac2 Test. Statuses are displayed below:

Message Validation Summary

Connected	to Test	# MSG's Rec'd:	Last Submit Date:	🧭 # Min Req Met:	
		VXU Va	lidation Summary		
# AA:	# AE-W:	# Min Req to P	ass%:	Current Rate:	
# AE-E:	# AR:	# RSP:			



Step 5: Pre-Production Testing, Data Quality Review





Review Corrections Needed

- Review the quality of your message stream.
- To begin, select the **Review Data Quality Corrections Needed** button.

Pre-Production Testing

Data Quality Review

This phase of the onboarding process ensures the data being sent to ImmTrac2 is complete and accurate information pertaining to the patient and immunization records. A 90% Data Qualiting Rate is required to pass this phase. Click on the Review Data Quality Corrections Needed button below to see issues to fix in order to meet the

Data Quality Rate: Achieve a 90% success rate to pass

Calculated Metrics	Calculated Data Quality Rate
Patient Demographic Completeness	
Immunization Completeness	0%
Immunization Accuracy	





Messages Sent

Messages: a list of the messages sent.

Pre-Production: Data Quality Review

	Messa	ges	Immunization Report	Patient R	eport	VFC Report	Qua	lity Summary
#	Result	Control ID	Message Type	Received	V	alidation Summary		View Message
1	8	2041M2727599	VXU: Non-Hx	03 06 2023 20:28	🗹 0 Val	id 🥝 12 Errors 📥 2 Wa	arnings	View
2	0	2038M2727599	VXU: Non-Hx	03 06 2023 20:26	⊻ 0 Val	id 🥝 23 Errors 📥 6 Wa	arnings	View
3	8	2037M2727599	VXU: Non-Hx	03 06 2023 20:25	🗹 0 Val	id 🥝 11 Errors 📥 2 Wa	arnings	View



Immunization Report (1 of 2)

Immunization Report: Completeness for immunizations given.





Immunization Report (2 of 2)

Immunization Report: Accuracy for immunizations given.





Patient Report

Patient Report: completeness for patient data.

Pre-Production: Da	ata Quality Review			
Messages	Immunization Report	Patient Report	VFC Report	Quality Summary
	Reporting Period F	From (20)/06 / 20	023 To: 03 / 08	/ 2023 Run Report
Completeness				
Field	% Red Co	quired To Pass mpleteness	Current % o Completenes	f Pass/Fail ss
Address		100%	100.00%	∠
Mother/Father/Guardian		90%	100.00%	∠
Patient Name		100%	100.00%	✓
Phone Number		95%	0.00%	0



VFC Report

VFC Report: tallies by eligibility category

Messages	Immu Re	inizatic port	n	Pati	ent Report
VFC Eligibility		Count	Perce	ntage	The VF
Adult, No Insurance		0	0.00%		eligible f
Adult, Private Pay/Insu	rance	3	60.00%		Eligibil
Adult, Underinsured		0	0.00%		
American Indian/Alaska	an Native	0	0.00%		
СНІР		0	0.00%		
Medicaid		0	0.00%		
No Insurance		0	0.00%		
Private Pay/Insurance		2	40.00%		
Underinsured, FQHC/R	HC/Deputized	0	0.00%		
Underinsured, Not FQHC/RHC/Deputized		0	0.00%		

Pre-Production: Data Quality Review

The VFC Report indicates counts of patients eligible for VFC (Vaccines for Children) by VFC Eligibility Category for a given date range.

Quality Summary

VFC Report





Data Quality Summary (1 of 2)

Quality Summary: overall message quality trends.

Immu		zation				
Messages	Report		Patient Report	VFC Repor	t Quality Summa	
Report Date: 03/08	/2023	Total Numbe Total Numbe	er of Patients Reported: 15 er of Administered Shots R	eported _	otal Number of Errors: 15	
Report Created by: (VXU): 1		(VXU): 15	(U): 15		Total Number of Warnings: 0	
Report Created by:		(
Report Created by: Reporting Period: 1	/1/2019 to	Total Numbe	er of Historical Shots Repo	rted (VXU): 0 To	otal Number of Rejections: 0	



Data Quality Summary (2 of 2)

- Testing focused on data quality metrics:
 - Patient completeness.
 - Immunization completeness.
 - Immunization Accuracy.
- Organizations must:
 - Submit test messages.
 - Review for gaps in completeness and accuracy.
 - Meet a 90% pass rate.



Step 6: Go Live, Connectivity & Transport





Go Live (1 of 3)

Allows org to:

- Connect with the registry's Interoperability Team for a go live meeting
- Download production web service credentials
- Connect to registry's production environment

Go Live

Connectivity & Transport

In this phase of the onboarding process the data submission from the EHR will be transitioned from sending data to the ImmTrac2 Production System.

Go Live- Not Started.

Ownload ImmTrac2 Production WSDL

Production Interface Validation

Previous Phase Must be Completed



Go Live (2 of 3)

Go live meeting will include:

- Org, DX Contacts, IT Support, registry's Interoperability Team and EHR vendor
- Discussions on anticipated go-live date



Texas Department of State Health Services Addressing any outstanding questions from Org

Go Live (3 of 3)

Onboarded organizations will:

- Download and share production WSDL and credentials with EHR vendor to establish an interface
- Establish a successful connection to ImmTrac2 production environment
- Initiate formal submission of patient and immunization data
- Submit real patient and immunization HL7 messages to ImmTrac2 production environment



Data Exchange Resources

Support is available.



Live Support

Interoperability Team

- Phone: 800-348-9158, Option 3
- Email: <u>ImmTracMU@dshs.texas.gov</u>
- Hours: Monday Friday, 8:00 a.m. to 4:30 p.m.



Forms & Documents

- Available on <u>https://www.dshs.texas.gov/immunization-unit/immtrac2-texas-immunization-registry/immtrac2-forms-documents</u>
- Texas Immunization Registry HL7 2.5.1 Implementation Guide (Stock # 11-14972)
- Texas Immunization Registry HL7 2.5.1 Error Guide (Stock # 11-15703)
- Affirmation of Registry Consent via Health Level Seven (Stock # 11-15773)





Texas Department of State Health Services

Thank You!

From the Texas Immunization Registry