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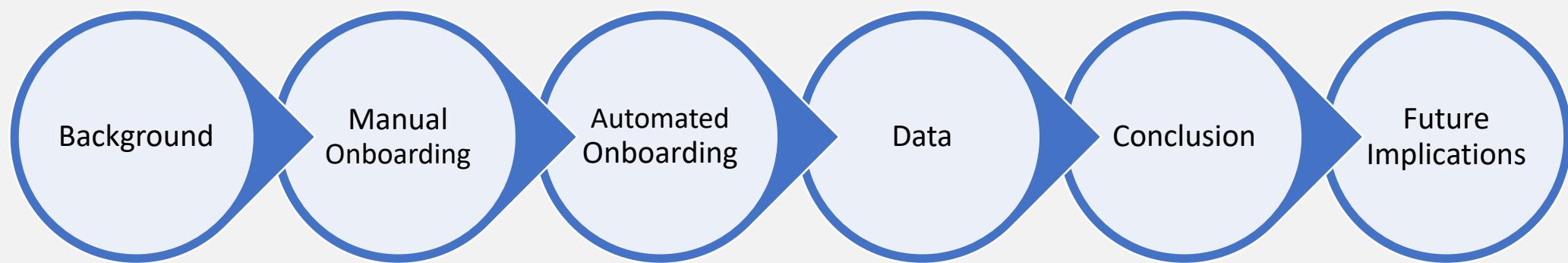
**Texas Department of State
Health Services**

Comparative Analysis: Manual vs. Automated Onboarding Process in Texas

2024 AIRA National Meeting

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Agenda



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Background



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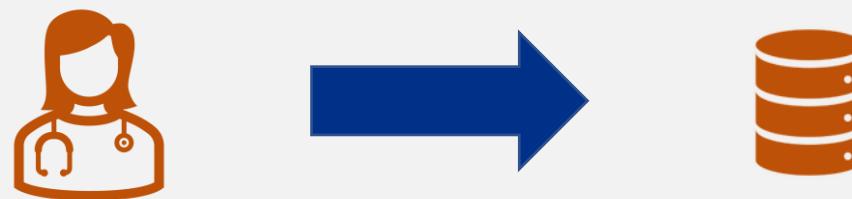
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Data Exchange Overview

Two ways to electronically exchange data with Texas IIS:

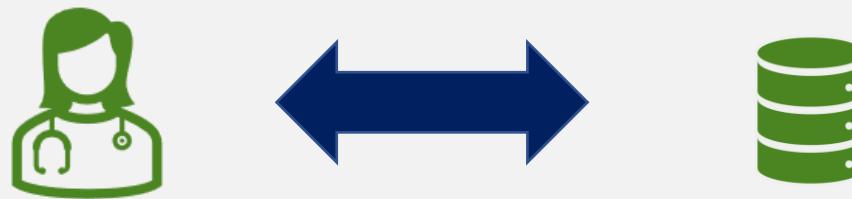
- **Uni-directional (Batch):**

- Providers report data from EHR to registry, no feedback to EHR
- Delay between data submission and appearance in Texas IIS



- **Bi-directional Exchange (BiDx):**

- Real-time communication between providers' EHR and IIS
- No delay; seamless integration with EHR systems



History



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June 2020:
Texas IIS
launches bi-
directional
data exchange

Real-time data
reporting
enabled

Real-time
responses and
error

Increase in
organizations
interested in
bi-directional
onboarding

May 2023:
Texas IIS
launches
automated bi-
directional
onboarding

Manual Bidirectional Onboarding



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Manual Onboarding Steps

Step 1

Registration
Site Renewal

Step 2

Organization
outreach to IIS

Step 3

Registration of
Intent

Step 4

Data Exchange
Connection

Step 5

Testing

Step 6

Go-Live
Production



Manual Onboarding Issues



Large
Onboarding
Queue

Staff Limits

Longer
Onboarding
Duration

Delays



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Manual Onboarding Issues



Dependence on staff



Coordination challenges



Required manual interactions

Consent

Texas' unique opt-in consent requirement
Hurdle managing interoperability

EHR vendors needed unique logic for TX consent

Configuration challenges led to testing delays



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Manual Data Validation

Data Exchange Activity:

Displays counts of clients, immunizations added, and reporting latency for data exchange activity.

Total Files Submitted: 476

Clients Submitted: 476

Clients Accepted: 473

Clients Rejected: 0

Immunizations Submitted: 36

Imms Accepted: 29

Imms Rejected: 5

99%
Client Accept
Rate

81%
Immunizations
Accept Rate

1**
Average Entry
Latency

*** Average Entry Latency: In days, the amount of time taken to report immunizations via Data Exchange.*

Involved review of most recent Texas Immunization Provider Summary (TIPS)

Data quality achievement based on 90% client and immunization acceptance rating not on real-time data quality



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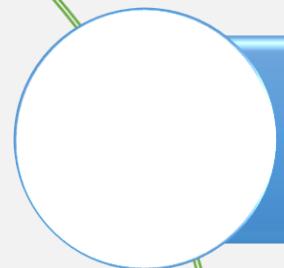
Automated Bidirectional Onboarding



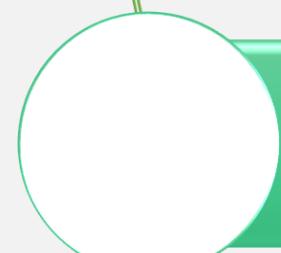
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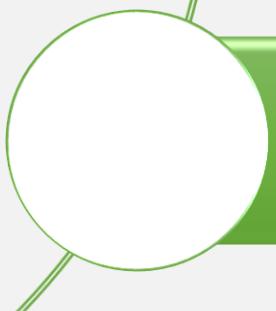
Automated Bidirectional Onboarding



Enabled real-time data exchange



Automated onboarding



Central application

Automated Onboarding Steps

Step 1

Registration

Step 2

Preparation,
Message Pre-Test

Step 3

Preparation,
Connectivity &
Transport

Step 4

Pre-Prod Test,
Message
Validation

Step 5

Pre-Prod Test,
Data Quality
Review

Step 6

Go-Live, Connectivity &
Transport



Benefits of Automated Onboarding

Allows providers autonomy over their onboarding timeline

Promotes engagement in the testing and production

Facilitates interoperability; allowing easier data exchange IIS

Immediate auto-generated data quality metrics and reports

Submit required documents electronically

Communication within one system vs tracking e-mails



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Provider Tracks Data Quality

- Allows providers to assess and track their data quality
- Review the quality of their message stream independently
- Allows registry staff to validate messages in real time

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
<input type="checkbox"/> Patient Demographic Completeness	
<input type="checkbox"/> Immunization Completeness	
<input type="checkbox"/> Immunization Accuracy	

0%

Review Data Quality Corrections Needed



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Provider Tracks Data Quality

Messages: a list of the messages sent.

Pre-Production: Data Quality Review						
Messages		Immunization Report	Patient Report	VFC Report	Quality Summary	
#	Result	Control ID	Message Type	Received	Validation Summary	View Message
1		2041M2727599	VXU: Non-Hx	03 06 2023 20:28	 0 Valid  12 Errors  2 Warnings	View
2		2038M2727599	VXU: Non-Hx	03 06 2023 20:26	 0 Valid  23 Errors  6 Warnings	View
3		2037M2727599	VXU: Non-Hx	03 06 2023 20:25	 0 Valid  11 Errors  2 Warnings	View



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Access to Immunization Reporting

Immunization Report: Completeness for immunizations given.

Immunization Report Patient Report VFC Report Quality Summary

Completeness

Field	% Required To Pass Completeness	Current % of Completeness	Pass/Fail
Action Code Set	90%	100.00%	✓
Administering Provider	90%	100.00%	✓
Administration Site	95%	100.00%	✓
Dosage- Completeness	95%	100.00%	✓
Lot ID Number	95%	100.00%	✓
Manufacturer	90%	100.00%	✓
Vaccination Date	100%	100.00%	✓
Vaccine Administered Code	100%	78.65%	✗
Vaccine Expiration Date	95%	100.00%	✓
Vaccine Program Eligibility	90%	100.00%	✓
VIS	90%	100.00%	✓



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Patient Report

Patient Report: completeness for patient data.

Pre-Production: Data Quality Review

Messages	Immunization Report	Patient Report	VFC Report	Quality Summary
Reporting Period From <input type="text" value="b2"/> / <input type="text" value="06"/> / <input type="text" value="2023"/> To: <input type="text" value="03"/> / <input type="text" value="08"/> / <input type="text" value="2023"/> <input type="button" value="Run Report"/>				
Completeness				
Field	% Required To Pass Completeness	Current % of Completeness	Pass/Fail	
Address	100%	100.00%		
Mother/Father/Guardian	90%	100.00%		
Patient Name	100%	100.00%		
Phone Number	95%	0.00%		



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VFC Report

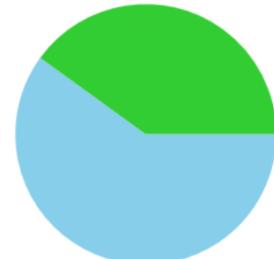
VFC Report: tallies by eligibility category

Pre-Production: Data Quality Review

Messages	Immunization Report	Patient Report	VFC Report	Quality Summary
VFC Eligibility				
	Count	Percentage		
Adult, No Insurance	0	0.00%		
Adult, Private Pay/Insurance	3	60.00%		
Adult, Underinsured	0	0.00%		
American Indian/Alaskan Native	0	0.00%		
CHIP	0	0.00%		
Medicaid	0	0.00%		
No Insurance	0	0.00%		
Private Pay/Insurance	2	40.00%		
Underinsured, FQHC/RHC/Deputized	0	0.00%		
Underinsured, Not FQHC/RHC/Deputized	0	0.00%		

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

2/6/2023 to 3/8/2023



21

Provides Access to Data Quality Summary

Quality Summary: overall message quality trends.

Pre-Production: Data Quality Review				
Messages	Immunization Report	Patient Report	VFC Report	Quality Summary
Report Date: 03/08/2023 Report Created by: Reporting Period: 1/1/2019 to 3/8/2023	Total Number of Patients Reported: 15 Total Number of Administered Shots Reported (VXU): 15 Total Number of Historical Shots Reported (VXU): 0 Total Number of Queries Submitted (QBP): 0	Total Number of Errors: 15 Total Number of Warnings: 0 Total Number of Rejections: 0 Average Timeliness for Period: 0		



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Consent

As a step of automated onboarding organizations indicate how they will submit registry consent:

- Flat File
- HL7 Submission
- Manually

Indicate below how you intend to submit patient consent.

Flat File
Selecting this option indicates patient consent will be sent in a flat file, which is separate from HL7 submissions to ImmTrac2

HL7 Submission
Selecting this option indicates that patient consent will be included in updates from your electronic health record's HL7 submission to ImmTrac2

Manually
Selecting this option indicates patient consent will be manually entered into the ImmTrac2 by a staff member from this organization



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Note: We highly encourage providers to submit via HL7 submission when possible

HL7 Consent Indicators

When consent is selected as being sent via HL7 submission, Texas requires these specific consent codes to be sent:

TXY = ImmTrac2 Minor
(Age 0-18)

TXA = ImmTrac2 Adult
(Age 18+)

TXD = ImmTrac2 Disaster Retention
(All Ages)



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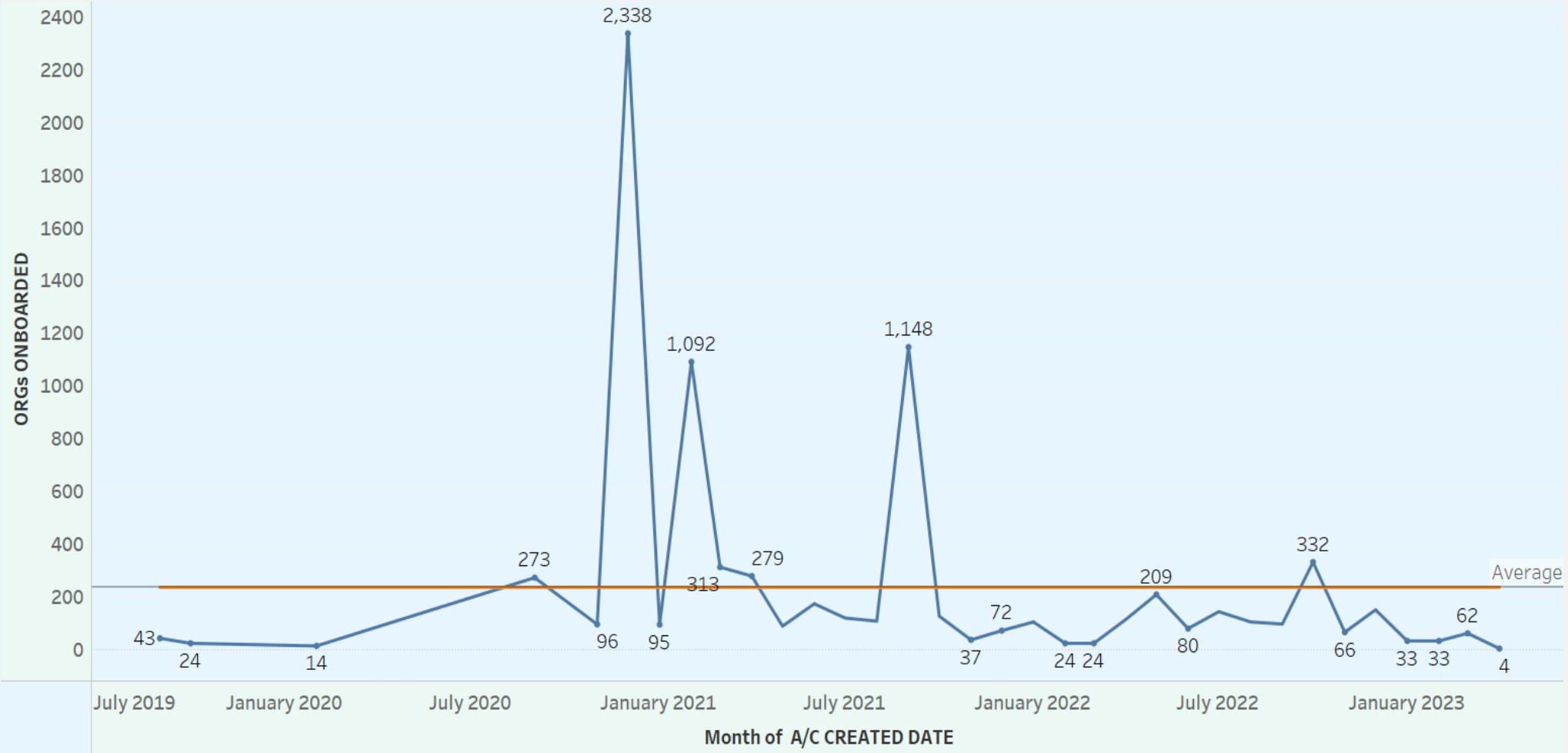
Let's Talk Numbers!



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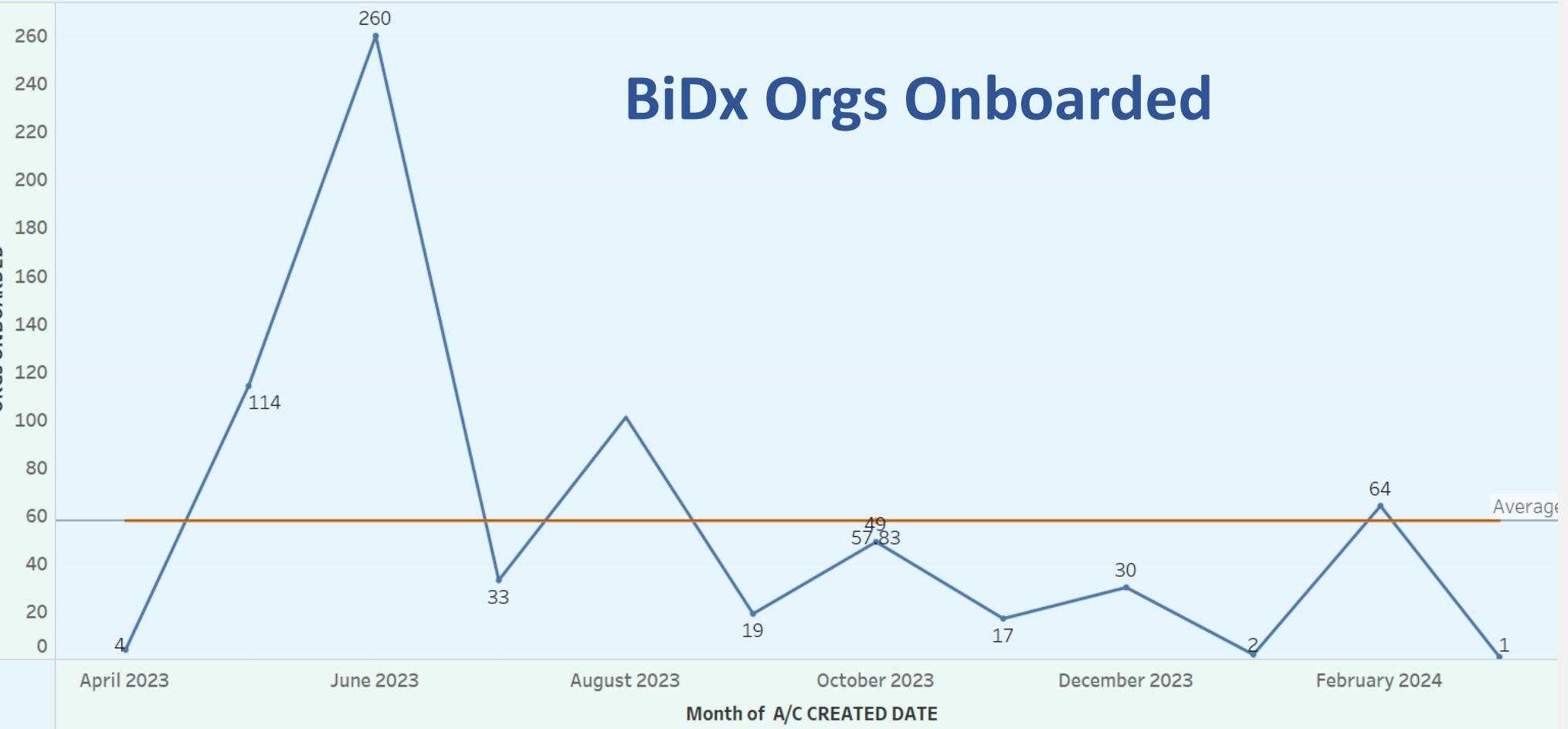
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Manually Onboarded Organizations



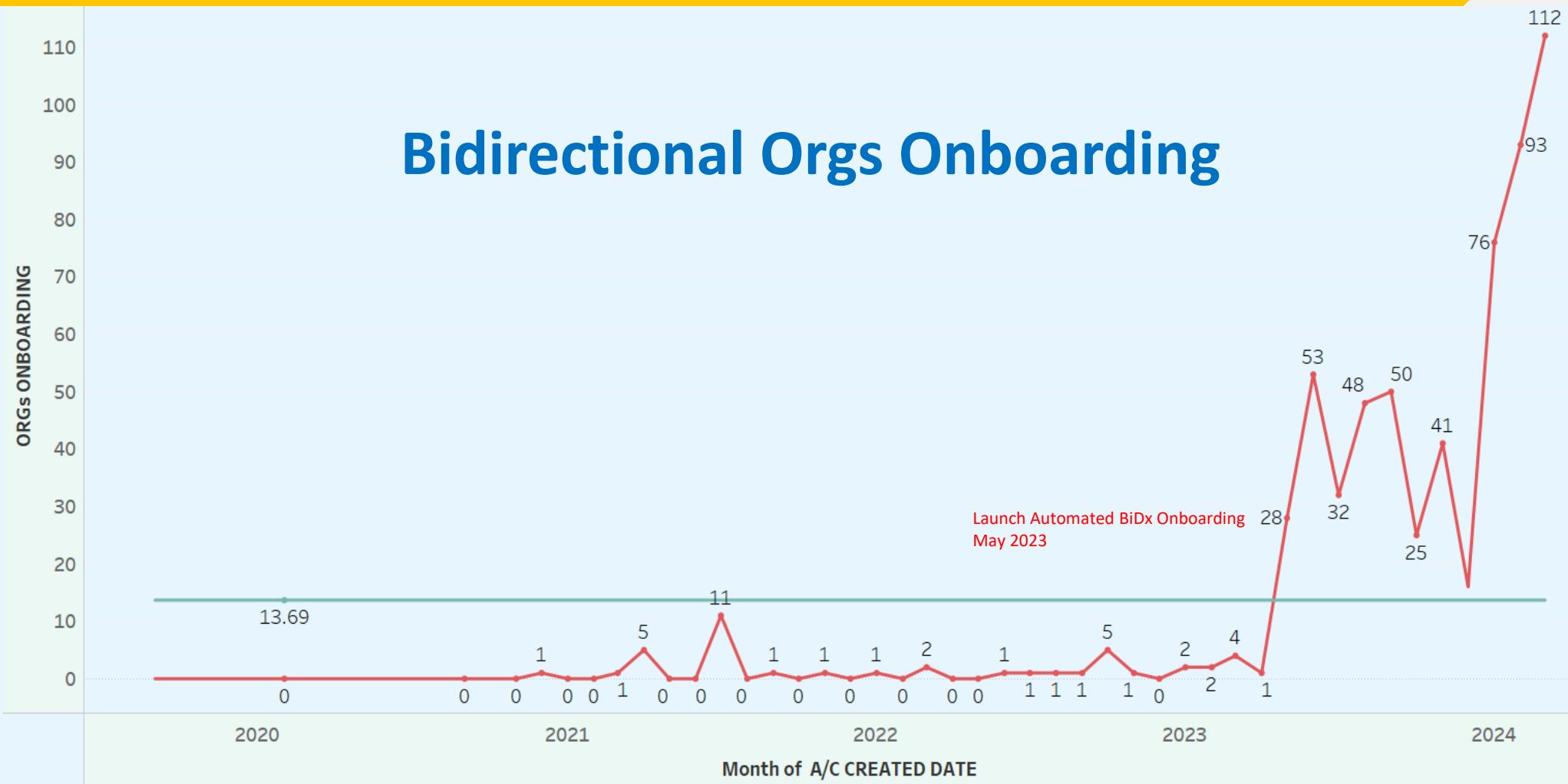
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Launch of Automated Onboarding



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Automated Onboarding Progress



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Report Month	As Of Date	ORGs CATEGORY	ORGs ONBOARDED _TOTAL	ORGs ONBOARDING _TOTAL	TOTAL BiDX ORGs	Number of NEW BiDX ORGs (since from last report month)	Total NEW BiDX ORGs (since from last report month)	Number of ORGs ONBOARDED (since from last report month)	Total ORGs ONBOARDED (since from last report month)
Feb-24	1/3/2024	StandAlone	673	163	836				
		Parent	199	67	266				
		Child	7,761	369	8130				
Mar-24	1/4/2024	StandAlone	686	169	855	19	145	13	
		Parent	203	72	275	9		4	
		Child	7,872	375	8247	117		111	128

Benefits of Automated Onboarding

Autonomy for providers over their onboarding timeline

Promotes engagement in the testing and production

Facilitates interoperability by allowing an easier data exchange to Texas IIS

Receive auto-generated data quality metrics and reports

Download test and production WSDL to connect with the registry

Submit required documents electronically

Communication within one system vs tracking e-mails

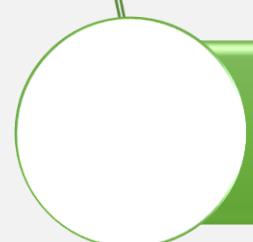


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Benefits of Automated Onboarding



Simplifies staff workflow in one system



Automated testing allows staff to efficiently address errors



Collaboration between teams working on onboarding

Conclusion

Automated onboarding is empowering healthcare organizations to join at their own pace

Efficient onboarding of multiple providers simultaneously

Increased engagement in testing and production



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Future Vision

- Platform facilitating simultaneous onboarding for unidirectional and bidirectional organizations
- Commitment to enhance efficiency and streamline the overall process



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Resources

For questions, please contact:

- Online entry via ImmTrac2 – 800-348-9158, Option 2 or ImmTrac2@dshs.texas.gov
- Electronic data exchange – 800-348-9158, Option 3 or ImmTracMU@dshs.texas.gov



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Acknowledgements

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Thank You AIRA