

THE AFIX-IIS INTEGRATION PROJECT

The Good, Bad and Lessons Learned

CDC, SMaRT AFIX, Envision, DXC Technology, MCIR and Florida SHOTS

OVERVIEW

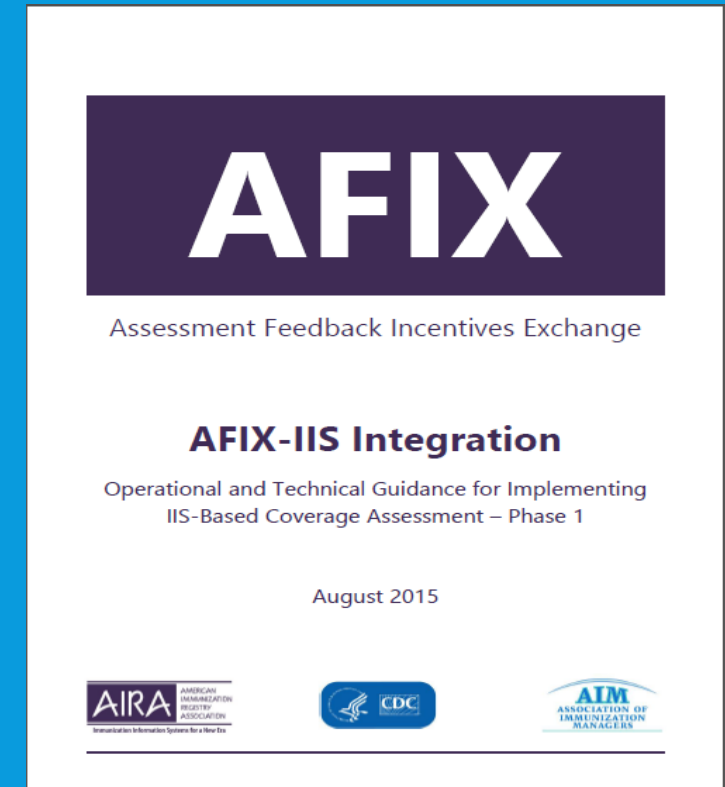
- Background
 - STC, Envision, DXC Technology, MCIR and Florida SHOTS presentations and CDC AFIX-IIS Integration Team lessons learned
 - Panel discussion (Q/A)
 - CDC Announcements
-
- *Note: laptops and a SME will be available to answer platform/tool specific questions*

BACKGROUND

- Joint effort between two CDC branches
- Guidance documents developed
 - Two (2) project development phases
 - Phase 1 – Required (Assessment)
 - Phase 2 – Recommended (Assessment/Feedback)
- STC competed successfully for a CDC contract to develop SMaRT AFIX
- 25 immunization awardees received PPHF funding in 2015 to the transition

AFIX SOLUTIONS

- Awardees that integrate AFIX into the IIS must follow the requirements in the AFIX/IIS Integration Phase 1 guide
- General Phase 1 Requirements
 - AFIX awardees will be required to leverage their Immunization Information Systems (IIS) to perform provider level assessment activities
 - IIS must be able to perform the minimum/mandatory reporting requirements to support the AFIX workflow
 - The IIS must apply all business rules for identifying the assessment cohort (denominator), applying the assessment criteria (numerator), and performing the calculation logic



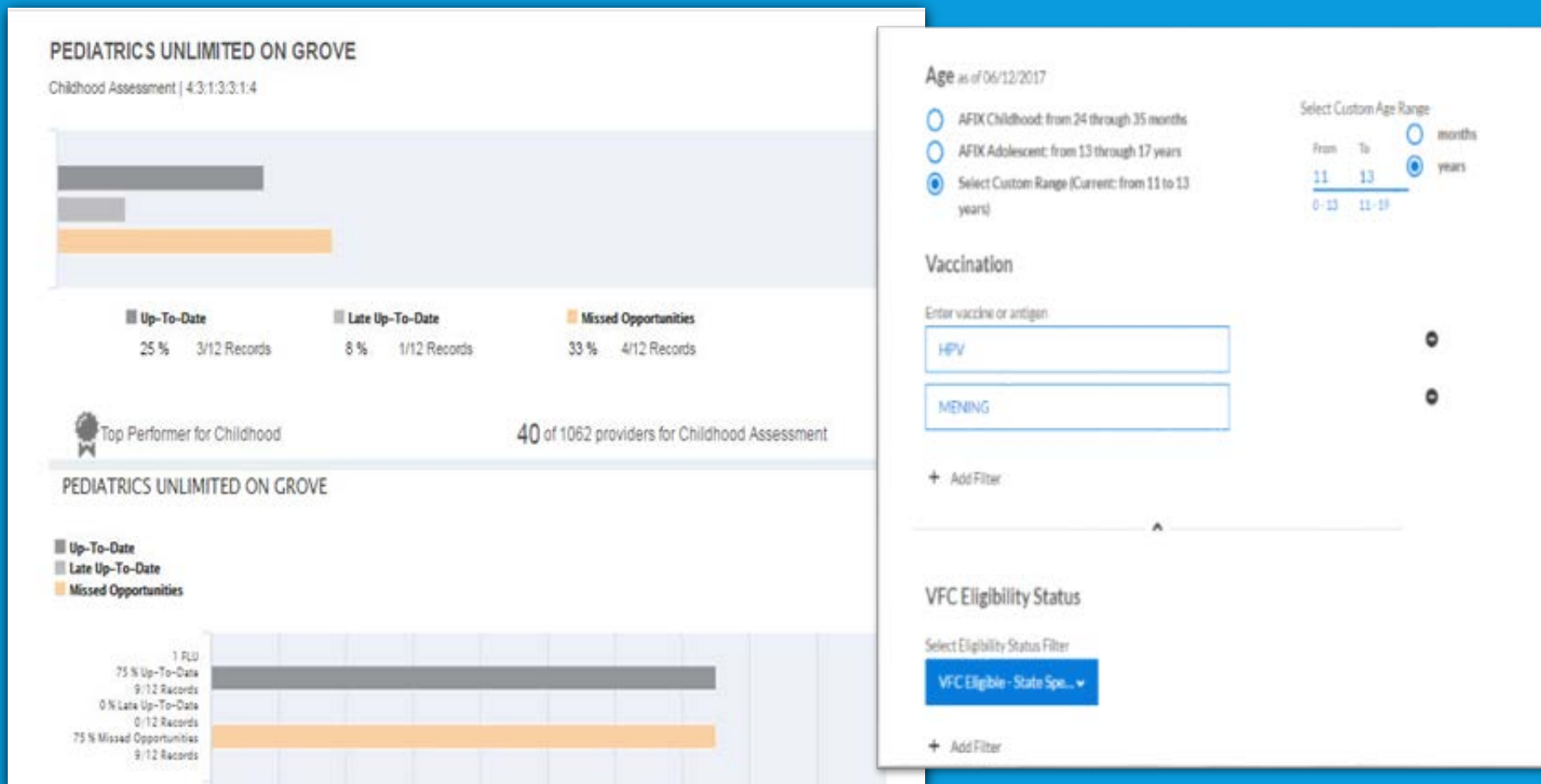
AFIX-IIS INTEGRATION PROJECT TEAM

THE GOOD, BAD AND LESSONS LEARNED

- GOOD
 - End users being included in the development of solutions
- BAD
 - Restrictions due to awardee, vendor and CDC relationships
- LESSONS LEARNED
 - Panel of SMEs from field and CDC
 - Discuss all resource needs prior to soliciting a vendor or providing PPHF funding



SCIENTIFIC TECHNOLOGIES CORP (STC) SMART AFIX



SCIENTIFIC TECHNOLOGY CORPORATION

ENHANCEMENTS

- All Phase 1 Guideline Requirements and a few “nice to have” features
 - Agnostic tool with a nightly import from any IIS
 - NIS state and national data on the landing page
 - Custom patient lists with user-defined parameters, which can be saved as reusable templates
 - Exportable provider lists to help state AFIX coordinators prioritize AFIX visits based on criteria such as coverage rates, practice size and location
 - Single sign on options for any IIS if they would like to improve the user experience
 - Updated CDSi logic to support 2 dose HPV recommendation

SCIENTIFIC TECHNOLOGIES CORPORATION

LESSONS LEARNED

- To address awardee concerns about data security and cloud hosting, it became a requirement to have the application reside in the same environment as their IIS
- Requirements lead to more of a “big data” application which *analyzes* and displays data in a meaningful way for users
- Estimated costs for hardware and hosting are challenging for a brand new application where production level data and processing are not well known yet
- Early and frequent communication to all key stakeholders and within state programs

ENVISION TECHNOLOGY PARTNERS

LESH, PHIL

ID: 499890

DOB: 02/03/2015

AGE: 1Y 8M 16D

GENDER: U

Patient Programs

Inactivate Patients

Clinic

History

Jurisdiction

Other Programs

	Update #	Effective Date	Clinic	Clinic Status	Jurisdiction Status	Audit
-	3	10/19/2016	HOSPITAL CLINIC	INACTIVE	ACTIVE	?
			Clinic Reason: NO LONGER A PATIENT - MOVED TO NEW CLINIC			
			Jurisdiction Reason: PHONE			
			Notification Method: 10/19/2016			
			Comment: Patient called to inform us that he is moving to a new clinic.			
+	2	10/19/2016	HOSPITAL CLINIC	ACTIVE	ACTIVE	?
+	1	10/19/2016	HOLSINGER CLINIC TYPE 3	INACTIVE	ACTIVE	?

Childhood Immunization Summary

Provider: BRAD TYPE 3
Clinic Name: BRAD AFIX

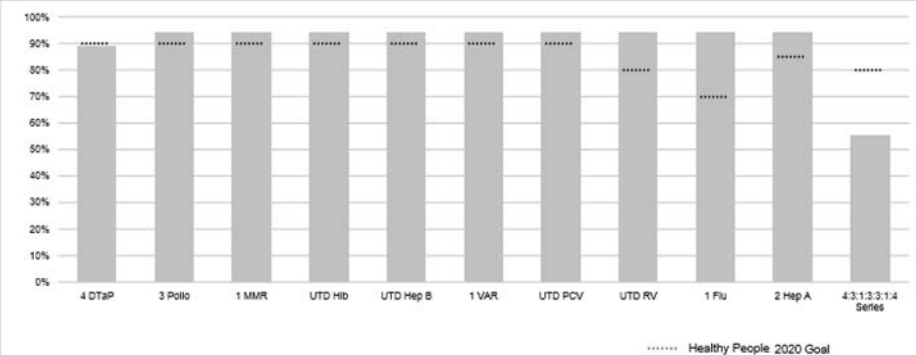
VFC Pin #: BC0001



As Of Date: 01/19/2017
Assessment Date: 01/19/2017
Feedback Date: 01/26/2017

Ages Assessed: 24-35 MONTHS
Birthdate Range: 01/20/2014 - 01/19/2015
Compliance by Date: 24 MONTHS

Assessment of Immunization Rates | 18 Patient Records Assessed



The following vaccines and doses are recommended for this patient population.

	Doses Up To Date #	%	Healthy People	
4 DTaP	16	89%	90%	4 valid doses of DTaP
3 Polio	17	94%	90%	3 valid doses of Polio
1 MMR	17	94%	90%	1 valid dose of MMR
UTD Hib	17	94%	90%	Patient Series Status Complete for Hib

ENVISION TECHNOLOGY PARTNERS

ENHANCEMENTS

- Phased implementation of Patient Active / Inactive Status (PAIS) changes, mandatory and optional AFIX reporting, datamart components
- Fully CDSi-compliant forecaster was completed separately and provided to customers for review beginning July 2016
- Enhancements delivered over three regularly scheduled releases between September 2016 and June 2017

ENVISION TECHNOLOGY PARTNERS

LESSONS LEARNED

- Changing the fundamental architecture of patients' status and default clinic was a complex project as this data is used for numerous purposes throughout an IIS
- The AFIX assessment output that is left with the clinic must be flexible and contain graphics to efficiently highlight areas that need improvement
- It pays for awardees to request funding via multiple channels.
- Awardees that have questions about guidance should consult the AFIX-IIS Integration Project Team. AFIX IIS represents new functionality and there may be a lot of questions

DXC TECHNOLOGY (FORMERLY HPE)

THE AFIX PRODUCT

Success! The Following job is successfully added to the Scheduler for Job ID= 836

Provider: Winchester Clinic - South Select Provider

Type: Childhood ▼

Childhood Cohort Assessment Criteria

Age Range: 24-35 Months

Polio 3	DTap 4	RV UTD
MMR 1	Flu 1	Hib UTD
HepA 2	PCV UTD	Hep B UTD
4:3:1:3:3:1:4 UTD		

As of Date: 02/21/2017

Birth Date Range

From: 02/22/2014 **To:** 02/21/2015

Reports:

☒ Assessment

☐ Patient Listing

☐ Both

Clear Submit

Provider: Winchester Clinic - South Select Provider

As of Date: 02/21/2017

Age Range

From: 2 **To:** 10 **Months** ▼

Vaccine Group Selection **Dose Count**

HIB +

Vaccine Group	Dose Count	
HepB	1	✎ ✕

Birth Date Range

From: **To:**

Reports:

☐ Assessment

☐ Patient Listing

☐ Both

Clear Submit

DXC TECHNOLOGY

ENHANCEMENTS

- Alignment with the Phase 1 Guidelines plus influences from Phase 2.
- Leveraging base IIS forecaster to ensure consistency
- Initial work on design currently underway with 6 states. (Idaho, Iowa, Nebraska, New York, Oregon and Virginia)
- Following Agile/Scrum Software Methodologies
- Sprints well underway with initial work products vetted with partners.
- 30 distinct user stories defined for product backlog
- Product model that will be available for all IIS
- Emphasis on developing a sustainable architecture and technology regardless of platform

DXC TECHNOLOGY

LESSONS LEARNED

- Important to recognize the world we live in, develop something simple that will work within the typical IIS environment
- Setting realistic expectations
- Merging grant requirements and complexities associated with that
- Be mindful of security policies as they are only getting tighter
 - While technology may support a more streamlined model, policies may not
- Agile moves faster than traditional development, requiring consistent patterns for dialogue and consensus
- Many from the AFIX side have not experienced software development before. It is important to have their voices heard
- Defining responsibilities between base IIS and The AFIX Product
 - Keeping lines clear and clean

MICHIGAN CARE IMPROVEMENT REGISTRY (MCIR)

Report Parameters	
Report	
People of age at least (m	
but not yet of age (month	
Doses of DTP/DT/Td	
Doses of IPV	
Doses of MMR	
Doses of Hib	

Basic Overview

Invalid Doses

Single Antigen

Diagnostic

Missing Immunizations - Overdue

Immunizations Coming Due

Summary

All

Select Provider	
County	Ingham (33) County Get Providers
Site	

Report Parameters	
Report	
People of age at least (months)	24
but not yet of age (months)	36
Doses of DTP/DT/Td	4
Doses of IPV	3
Doses of MMR	1
Doses of Hib	3
Doses of HepB	3
Doses of Varicella	1
Doses of PCV	4
Doses of Rotavirus	0
Doses of HPV	0
Doses of HepA	2
Doses of Influenza	0
Doses of MCV	0
Gender	All
Select People By	Provider Id
Patient Status	Standard
Missed Opportunities defined	On LAST immunization visit
List People Not Meeting Criteria	No
Display People As	<input checked="" type="radio"/> List <input type="radio"/> 1 Page - Official State of Mich Imms Record
Description	AFIX_1470758108136

Submit

Cancel

MICHIGAN CARE IMPROVEMENT REGISTRY (MCIR) ENHANCEMENTS


- AFIX reports (similar to those available in CoCASA) are now available to all MCIR users at pediatric and adolescent physician offices in Michigan
- Training webinars were presented to physician office staff (MCIR Users) detailing the use and efficiencies of AFIX reports.

MICHIGAN CARE IMPROVEMENT REGISTRY (MCIR)

LESSONS LEARNED

- Use of the term Quality Improvement vs. AFIX - physician offices are not familiar with “AFIX”; but they are familiar with “quality improvement” activity
- IIS programmers have multiple priorities. Funding was made available, but it takes time to design, test and implement the requested changes and enhancements to existing AFIX reports
- The buy-in of all staff is key to success

FLORIDA SHOTS



Keeping Shots in Check

User: BASKAR
KRISHNAMOORTHY

[Task List](#)
[Patients](#)
[Record Maintenance](#)
[Reminder Recall](#)
[System Transactions](#)
[Vaccine Inventory](#)
[Assess Imm Levels](#)
[Create Assessment File](#)
[Survey Report](#)
[Summary Report](#)
[AFIX Assessment Report](#)
[Patient List Report](#)
[Create CASA Extract File](#)
[Survey](#)
[Survey Maintenance](#)
[Reports](#)
[Administration](#)
[Organization](#)
[VFC](#)
[Configuration](#)
[Customer Support](#)
[Sys Admin](#)
[Sign out](#)



CREATE ASSESSMENT FILE CRITERIA

Create an Assess Immunization Levels file for the following criteria.

For Organizations: * ☐ All Organizations

☒ All CHDs

☐ All VFC Providers

☐ One organization:

For Age Group: * ☒ Children age 0 to 47 months of age

☐ Adolescent age 11 to 18 years of age

As of Date (Compute Age On): *

Compliance By (Evaluate At): * ☒ Age: * Months of age

☐ Date:

Allow Provider Access: ☐

* Asterisk indicates a required field

FLORIDA SHOTS



Submit

User: BASKAR
KRISHNAMOORTHY

Task List

Patients

Record Maintenance

Reminder Recall

System Transactions

Vaccine Inventory

Assess Imm Levels

Create Assessment File
Survey Report
Summary Report
AFIX Assessment Report
Patient List Report
Create CASA Extract File
Survey
Survey Maintenance

Reports

Administration

Organization

VFC

Configuration

Customer Support

Sys Admin

Sign out

SUMMARY REPORT CRITERIA

Assessment file created on 07/26/2016 for patients 0-47 months old as of 07/26/2016
Compliance with metrics computed at 12 months and 24 months.
Assessment file includes all service sites for [REDACTED]

Assessment Type: * ☒ AFIX Standard
☐ Custom

Base Complete on: *
2-3 RV
1 Flu
2 HepA
4:3:1:3:3:1:4

Report Format: * ☒ Browser
☐ Excel File - downloaded

* Asterisk indicates a required field

Generate Report

SUMMARY REPORT CRITERIA

Assessment file created on 07/26/2016 for patients 0-47 months old as of 07/26/2016
Compliance with metrics computed at 12 months and 24 months.
Assessment file includes all service sites for [REDACTED]

Assessment Type: * ☐ AFIX Standard
☒ Custom

Custom Assessment Criteria

Age range from: * 24 to * 35 months old as of: 07/26/2016

Compliance Age: * ☐ 12 months
☒ 24 months

Exclude: ☐ Patients without a WIC Id
☐ Patients with a religious exemption
☐ Patients with a MOGE date on or before the compliance age/date

Include Status Values: * ☒ ACTIVE

☒ INACTIVE-DOCUMENTED MOVE
☒ INACTIVE-UNABLE TO LOCATE/NO RESPONSE
☒ INACTIVE AT CONVERSION
☐ INACTIVE-WIC/PRIVATE PROVIDER RECALL
☐ INACTIVE-WIC/PRIVATE PROVIDER NO RECALL

Base Complete on: *
4:3:1:3
4:3:1:3:3
4:3:1:3:3:1
4:3:1:3:3:1:4

Report Format: * ☒ Browser
☐ Excel File - downloaded

* Asterisk indicates a required field

Generate Report

FLORIDA SHOTS

PATIENT LIST REPORT CRITERIA

[Show Help Text](#)

Assessment file created on 07/26/2016 for patients 0-47 months old as of 07/26/2016
Compliance with metrics computed at 12 months and 24 months.
Assessment file includes all service sites for [REDACTED]

Assessment Type: * ☐ AFIX Standard
☒ Custom Assessment

Custom Assessment Criteria

Age range from: * 24 to * 35 months old as of: 07/26/2016

Exclude: ☐ Patients without a WIC Id
☐ Patients with a religious exemption
☐ Patients with a MOGE date on or before the compliance age/date

Include Status Values: * ☒ ACTIVE
☒ INACTIVE-DOCUMENTED MOVE
☒ INACTIVE-UNABLE TO LOCATE/NO RESPONSE
☒ INACTIVE AT CONVERSION
☐ INACTIVE-WIC/PRIVATE PROVIDER RECALL
☐ INACTIVE-WIC/PRIVATE PROVIDER NO RECALL

Include Patient Data: ☐ City ☐ Medicaid ☒ MOGE Date ☒ Perm Contra
☐ Race ☒ Religious Exemption ☒ State Imm Id ☒ Status
☒ VFC ☐ WIC Id ☐ Zip Code

Include Patient Groups: * ☒ All patients (assessment cohort)
☐ Patients with no immunizations
☐ Patients with invalid doses (adds 'Invalid Doses' column)
☐ Patients with missed opportunities (adds 'Last Visit' and 'Missed Opportunities' columns)
☐ Patients that are complete (adds metric column)
☐ Patients that are incomplete (adds metric and 'Missing Series' columns)
☐ Patients that are late Up-To-Date (adds metric and 'Late Series' columns)

Report Format: * ☒ Browser
☐ Excel File - downloaded

* Asterisk indicates a required field

Generate Report

FLORIDA SHOTS

ENHANCEMENTS

- Updated the assessment functionality based on AFIX requirements in Jan 2016
 - Age cohort can be customized
 - Assessment can be run for an entire organization or for individual provider sites within that organization
- Design features
 - Creates an assessment file – a snapshot in time, with all relevant coverage metrics calculated
 - Customized Reports are generated from the snapshot file
 - Can compare assessments at different points in time to identify trends

FLORIDA SHOTS

LESSONS LEARNED

- Consistent Language/Definition for Metrics
- Not all providers use/need AFIX metrics
- Other providers need customized assessment capability to track their practice
- Assessment functionality is used by
 - AFIX team to assess VFC providers
 - non-VFC providers as self-assessment tool
- Design the functionality to include customization capabilities

CDC PROJECT ANNOUNCEMENTS



PANELIST

- CDC AFIX-IIS Integration Team
- Steve Murchie (Envision)
- Kristi Siahaya (STC)
- Katie Reed (DXC)
- Baskar Krishnamoorthy (Florida SHOTS)



QUESTIONS

CDC's AFIX IIS Integration Project Team

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