

Colorado's Success with AIRA's Onboarding Consensus-Based Recommendations

August 2019



COLORADO
Department of Public
Health & Environment



Recommendations

- ✓ Online Registration Tool
- ✓ HL7 Message Format/Structure Pretest
- ✓ Project Tracking Tool
- ✓ HL7 Message Content Validator
- ✓ HL7 Data Quality Analysis Testing
- ✓ HL7 Feed Monitoring



**ONBOARDING
CONSENSUS-BASED
RECOMMENDATIONS**

NOVEMBER 2018



AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Online Registration Tool

Recommended Attributes: Registration Tool	iSIS Vision™ Meets Recommendation
Should provide an interface that is accessible externally to providers/vendors	✓
Captures facility details (facility name, address, etc.)	✓
Captures facility/org contacts (names, phone number, email, etc.)	✓
Captures EHR details (vendor, product/version, vendor contact info, etc.)	✓
Includes electronic signing of required forms if applicable or as allowed by jurisdictional law/policies	✓
Includes questionnaire-type questions (system capabilities, type of interface requested, connection method, type of practice, number of doses administered, facility client profile, ability to capture required fields, etc.)	✓
Should be stored in a searchable format	✓
Should have the capability for electronically transferring the information into other IIS/onboarding tools (tracking tool, provider profile, etc.)	✓
Could utilize appropriate triggers in the registration workflow to improve efficiencies and automate other onboarding actions (e.g., welcome email, creating a ticket in the tracking tool, etc.)	✓
Tool should be integrated into each IIS's individual onboarding workflows	✓


Online Registration Tool

Step 1: What Facility are you Registering?
Select the type of facility you are registering*
Non-Hospital
Healthcare Facility Name*
Doing Business As (DBA: alternative facility name)
CIIS Family Test Clinic

Step 2: Create your CoPHR Account
First Name*
Chuck
MI
Last Name*
Test
*Phone ☒ Check if same as Facility Phone
555 522 2356 x
*Employee Type
Nurse (LPN)
*I am a contact for the following program(s):
☒ CIIS (Immunizations) ☐ CCCR (Cancer)
*Are you the Meaningful Use Contact for Immunization
Please create a password to access this site in the future
number and 1 special character (for example #5%!.@&).
Password*
Secret Question*
What is your favorite cartoon character?
Back

CONGRATULATIONS!
Your CoPHR Account has successfully been created.
Your Information
Name
Chuck Test
Username
Chuck.Test
Password

Email
Chucky@CIISTestClinic.com
Provider Site Information
Provider Site Name
CIIS Family Test Clinic
Address
4322 Cherry Creek South Drive, Aguilar CO 80246
Phone
(555) 522 2356
Fax
(555) 565 1111
Email
CIISTestFC@TestClinic.com
Contact Name
Chuck Test
Print
Continue

**COLORADO**
Department of Public
Health & Environment
Dedicated to protecting and improving the health and environment of the people of Colorado
Colorado Immunization Information System
Participating Clinic Letter of Agreement
Date: 08/07/2019
Clinic Name: DTest Family Test Practice
Address: 4300 Cherry Creek South Drive
City: Aguilar State: CO Zip Code: 80246
Pursuant to C.R.S. §25-4-2401 et seq., the Colorado Department of Public Health and Environment (CDPHE) operates a web-based state immunization registry, the Colorado Immunization Information System (CIIS). The CIIS mission is to establish and maintain a population-based, confidential, fully functional, and sustainable immunization information system that facilitates the timely and complete immunization for all Coloradans to prevent disease and reduce health care costs to individuals and the State.
The term "Participating Clinic" refers to the entity identified at the top of this Letter of Agreement (LOA). By returning a signed copy of this LOA you acknowledge and confirm that: 1) you are authorized to sign this LOA on behalf of the Participating Clinic, 2) the Participating Clinic is an entity authorized to disclose information to and receive information from CIIS under the Immunization Registry Act, 3) the Participating Clinic will only permit access to the disclosed information for clinical, quality improvement and school entry law purposes, 4) if entering data manually into the CIIS web application, the Participating Clinic must enter their clients' non-historical immunization services into CIIS within 14 days of the respective vaccine administration dates, or if submitting data electronically to CIIS, the Participating Clinic must send their clients' non-historical immunization services to CIIS within 7 days of the respective vaccine administration dates, 5) the Participating Clinic will provide feedback and take necessary action when CIIS provides ongoing data quality reports to ensure the continued integrity of the system, 6) the Participating Clinic will treat all information in CIIS as confidential, 7) if the Participating Clinic discloses information to CIIS, it has provided notice to individuals, parents or guardians as required by C.R.S. § 25-4-2403(7) stating that the individual, parent or guardian can choose to have their (or their child's) immunization information excluded from CIIS, 8) the Participating Clinic is responsible for the provision and maintenance of any necessary computer hardware, network connections, telecommunication lines, internet access and data uploads/downloads from existing electronic health record systems which may be necessary for the clinic's participation in CIIS, and 9) the Participating Clinic is responsible for ensuring that all persons or entities (including providers, staff, contractors and agents) who access information through CIIS are authorized to receive access to such information and will comply with all applicable laws, regulations and CIIS policies, including the CIIS Confidentiality Policy and the CIIS Security Policy. The CIIS Confidentiality Policy and CIIS Security Policy are reviewed and potentially revised at least annually. You may obtain a copy of current policies at www.ColoradoCIIS.com.
CIIS agrees to: 1) provide and maintain a secure and functional immunization registry, 2) provide ongoing technical assistance and support to facilitate access to and use of the system, and 3) notify the Participating Clinic of any potentially incorrect information in CIIS attributable to one of its patients so that it may promptly correct the information, if necessary. We also ask that the Participating Clinic perform regular quality assurance audits of information concerning its patients to ensure the continued integrity of the system.
To terminate your access to and participation in the CIIS program, please email us at CDPHE.CIIS@state.co.us at least 30 days prior to your planned termination date. Please note that CDPHE will not delete any data sent to CIIS by any Participating Clinic prior to a clinic's termination of participation.

By: Participating Clinic Representative Printed Name Charlie Tester	Date: 08/07/2019
By: Participating Clinic Representative <input type="checkbox"/> I agree to the above terms and conditions as set forth by the Public Health Agency.	
By: Heather Roth, MA Colorado Immunization Information System Program Manager	Date

August 2014

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CIIS Online Registration Tool

CIIS Enrollment - Step 1: Clinic Immunization Profile

***Please select the type of clinic you are registering.** Family Practice

***Please select the type of Vaccines that are given at the clinic.**

☒ Child ☒ Adolescent ☒ Adult ☐ Travel ☐ Clinic does not give immunizations

Are you the Main Immunization Contact for the Clinic? ☐ Yes ☒ No

First Name	Last Name	Phone Number	Email Address
Shirley	Test	555 522 4569 x 1	shirley@CIISTestClinic.com

***Is this Clinic enrolled in the Vaccine for Children (VFC) Program?** ☒ Yes ☐ No

Please provide the VFC PIN for this Clinic* 55555

Save & Continue Reset

CIIS Enrollment - Step 2: CIIS Manner of Usage

***How does your Clinic intend to use the Colorado Immunization Information System (CIIS)?**

☐ Direct Data Entry - Manually enter data into CIIS web application

☒ Electronic Data Exchange (HL7) - Electronically report data to the CIIS through an interface from EHR.

Clinic Technical Contact

As part of creating an interface with CIIS, you will need to identify someone as the IT/Technical contact that will work with the CIIS Program to establish the interface.

Are you the Technical Contact for this Clinic? ☐ Yes ☒ No

Data Validation Contact

As part of creating an interface with CIIS, you will need to identify someone who can pull 30 patient records so that we can perform a data validation check. This is generally someone within the clinic. Please identify this person below:

Are you the Data Validation Contact for the Clinic? ☐ Yes ☒ No

Please provide Data Validation Contact information below: [Click to add another Data Validation Contact](#)

First Name	Last Name	Phone Number	Email Address
Hal	Test	555 569 8955 x 5	Hal@CIISTESTClinic.com

Electronic Health Record Information

Does the Provider Site currently record immunizations in an Electronic Health Record (EHR)? ☒ Yes ☐ No

Please provide your EHR information:

Please select your Electronic Health Record.* ACOM Health

Please select the product provided by the selected EHR.* RAPID - 7.1

Please select your Electronic Health Record Contact BobTest COM [Add New \[+\]](#)

Health Information Exchange Participation

***Is this clinic affiliated with or planning to work with a Health Information Exchange?** ☐ Yes ☒ No

If yes, please SELECT your preferred HIE

Other Data Aggregation Services

Will data be sent through a 3rd party data bridge or Integrated Delivery Network? ☐ Yes ☒ No

Select the Data Aggregation Service.


Save & Continue Reset

- ✓ Creates Searchable Profile
- ✓ Links Site to EHR Vendor
- ✓ Identifies EHR-S and Contact
- ✓ Links Site to HIE *(if applicable)*
- ✓ Links Site to other Reporting Hub *(if applicable)*

Online Registration Tool

- ✓ Online Form Submission
- ✓ Electronic Signature
- ✓ Stored as PDF with Profile
- ✓ Easily accessible by Site and IIS
- ✓ Initiates site IIS Approval
- ✓ Initiates onboarding workflow



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August 2014

SUBMIT

PRINT

CLOSE

Online Registration Tool



IIS Manager



Data Quality Coordinator

Pending Site Approvals

#	Enrollment Type	LOA Submitted For	Person Completing Enrollment	LOA Submission Date	View and Approve	Status	Remove
1.	Practice	CIIS Family Test Clinic	Chuck Test (555) 522 2356 Chucky@CIISTestClinic.com	08 07 2019	Go to LOA		
2.	Practice	DTest Family Test Practice	Charlie Tester (555) 553 3333 Extn. 3 Charlie@FakeTestClinic.com	08 07 2019	Go to LOA		
3.	Practice	TestClinicCode Gen 1	Darrin TestCodeGen (555) 555 5555 dtestCodeGen@Fakemail.com	07 30 2019	Go to LOA		
4.	Practice	Test CIIS Code Clinic	Kim Gulliver (123) 456 5123 Extn. 156 kgtest@test24.com	07 08 2019	Go to LOA		
5.	Child Care	CCAD CHILD CARE TEST	Christina Cruz (303) 692 1111 CCADCC@YAHOO.COM	07 02 2019	Go to LOA		
6.	Child Care	CCAD CHILD CARE TEST	Christina Cruz (303) 692 1111 CCADCC@YAHOO.COM	07 02 2019	Go to LOA		
7.	Practice	ABC PHARMACY TEST	Christina Cruz (303) 692 4567 ABCPHARMACYTEST@YAHOO.COM	07 02 2019	Go to LOA		



Registering Provider

DE Registered Pre-Testing ACK Monitor On-Board Eligible Onboarding In Production No Longer Active

Immunization Reporting: **Data Exchange Registered**

#	Date Registered	CIIS Clinic Code	Provider Site	Group	EHR	HIE
173.		WRB	Christopher Trojanovich, MD	Boulder Community Hospital Physician Clinics	Greenway Health - PrimeSuite - 17.0	
174.	08/07/2019	CFTC	CIIS Family Test Clinic		ACOM Health - RAPID - 7.1	
175.	07/23/2018		Cindy Test Peds		Allscripts - Allscripts ED - 6.3 Service Release 4	
176.	05/01/2019	CCGT20000	Clinica Code Gen Take 2		ACOM Health - Other -	
177.	01/24/2017	CLO	Clinica Colorado		Greenway Health - Prime Suite - 17.40	
178.	12/22/2016	CLI	Clinica Family Health Services - Administration	Clinica Family Health Services	NextGen Healthcare - NextGen Ambulatory EHR - 5.8 UD1	CORHIO
179.	08/09/2017	LAC	Clinica Teoevac		eClinicalWorks LLC - eClinicalWorks - 10	CORHIO

Provider Registration initiates onboarding workflow

HL7 Message Format/Structure Pretest

- ✓ Step-by-Step Defined Process
- ✓ Instruction-based
- ✓ Task-based
- ✓ Controlled process
- ✓ Aligns with IIS Onboarding Project
- ✓ Adds Continuity to Workflow



Get Started . . .

The step-by-step Onboarding process is represented below. The status indicators provide an up to date status for the completion of each step based on your actions. Clicking on the step will navigate you to the area within the service to provide the necessary information or perform the appropriate actions to complete the step. Click Step 1 to begin or if there are steps completed, click the first step marked as incomplete to progress through the onboarding process.

Preparation
The tasks below are required to be completed prior to moving forward to the next phase of the CIIS Data Exchange On-Boarding process.

- Submit the CIIS Letter of Agreement (LOA)
- Review and Update your Data Exchange profile
- HL7 Message Pre-Testing. The requirements and status are displayed below:

VXU MSG Validation:	0 of 1 Valid Historical MSGs AND 0 of 2 Current MSGs have passed validation.
QBP MSG Validation:	0 of 1 Valid Query MSGs have passed validation.

Continue

Connection & Test Review
Follow the steps below to establish and interface with the CIIS Test system. Once connected, begin submitting messages. The system will automatically track and update your success status below. Use ACK messages received to correct any issue messaging and data issue identified.

- Download the WSDL to Connect to the CIIS Test environment
- Establish Test Interface: Install the WSDL in your EHR and Connect to CIIS Test
- Submit HL7 Messages to CIIS Test for validation: Achieve a 90% Success Rate

VXU MSG Validation:	Successful VXU Message Count (AA Acknowledgments): Rate:
QBP MSG Validation:	Successful Query/Response (RSP Acknowledgments):

Previous Phase Must be Completed

Data Validation
Follow the steps below to establish and interface with the CIIS Production system. Once connected, begin submitting messages with live production data. The system will automatically track and update your success status below. Use ACK messages received to correct any issue messaging and data issue identified.

- Download the WSDL to Connect to the CIIS Production environment
- Establish Production Interface: Install the WSDL in your EHR and Connect to CIIS Production
- Submit HL7 Messages to CIIS Production for validation: Achieve a 95% Success Rate

VXU MSG Validation:	Successful VXU Message Count (AA Acknowledgments): Rate:
---------------------	--

Previous Phase Must be Completed

Go Live
The CIIS Data Exchange Team has been notified that your Organization has passed Pre-Production Validation. A CIIS Team member will contact you to schedule a Go Live meeting.

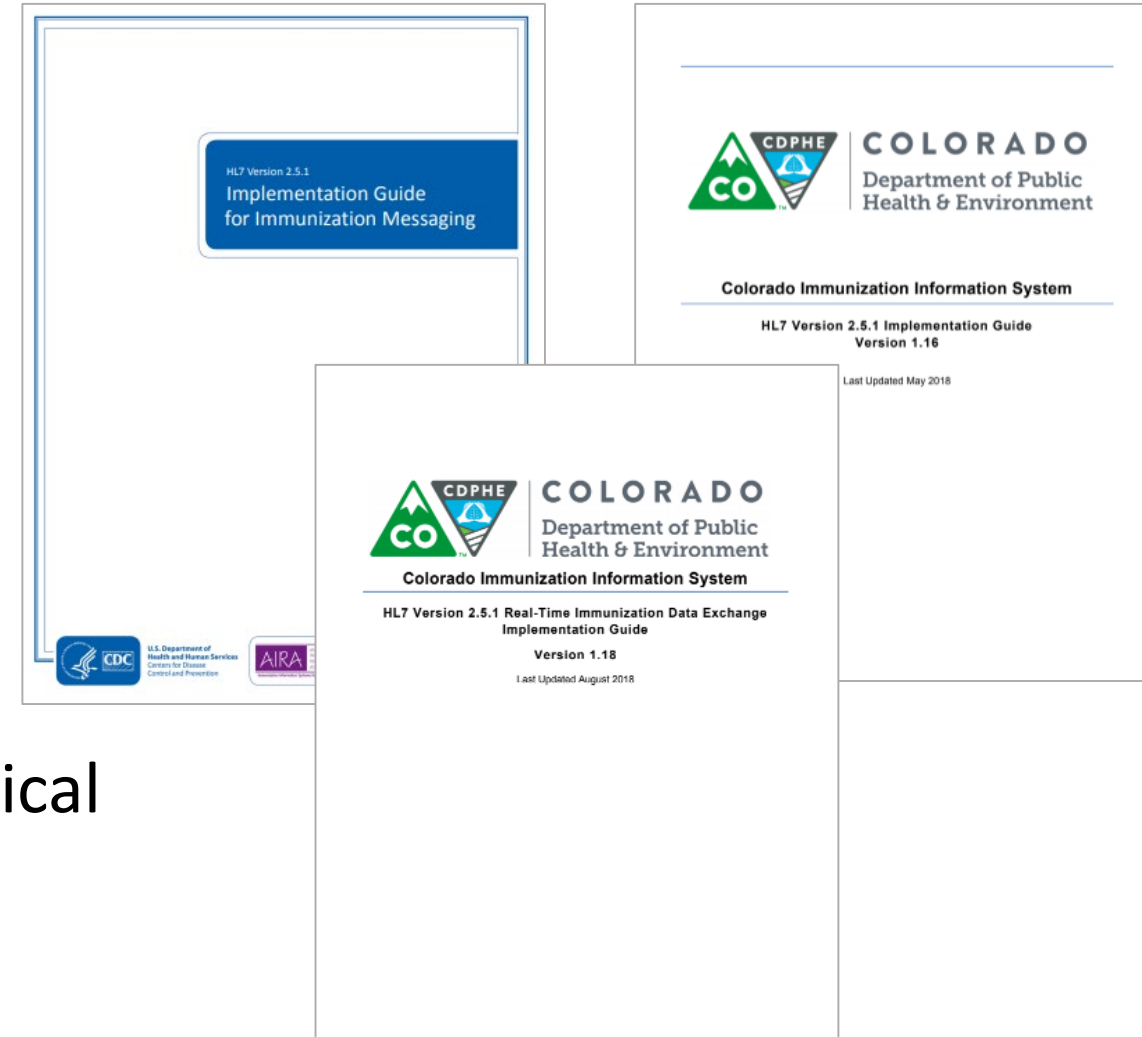
- Ongoing Submissions

HL7 Message Format/Structure Pretest

Recommended Attributes: HL7 Message Format/Structure Pretest	iSIIS Vision™ Meets Recommendation
Offered as a self-service tool to providers/vendors	✓
Provides guidance on constructing an appropriate HL7 message	✓
Provides ability to submit and assess a sample HL7 message for proper segments (parsing)	✓
Provides ACK feedback on the submitted message	✓
Customized to meet any jurisdiction-specific requirements	✓
Provides minimum/core test scenarios and expected results	✓

Online Pre-Testing Tool

- ✓ Self-Serve
- ✓ Accessible by Site
- ✓ Accessible by linked EHR Vendor
- ✓ Accessible by linked Reporting Hub
- ✓ Enforces to CDC 2.5.1 Guide
- ✓ Enforces Local Jurisdiction Requirements
- ✓ Initial Message Content validation
- ✓ Supports VXU & QBP validation
- ✓ Discriminates b/n Administered vs. Historical
- ✓ Immediate feedback



Online Pretesting Tool

Pretesting is automatically logged and monitored.

Determines eligibility to ensure EHR and Site are ready to actively participate in the interface project with CIIS Staff.

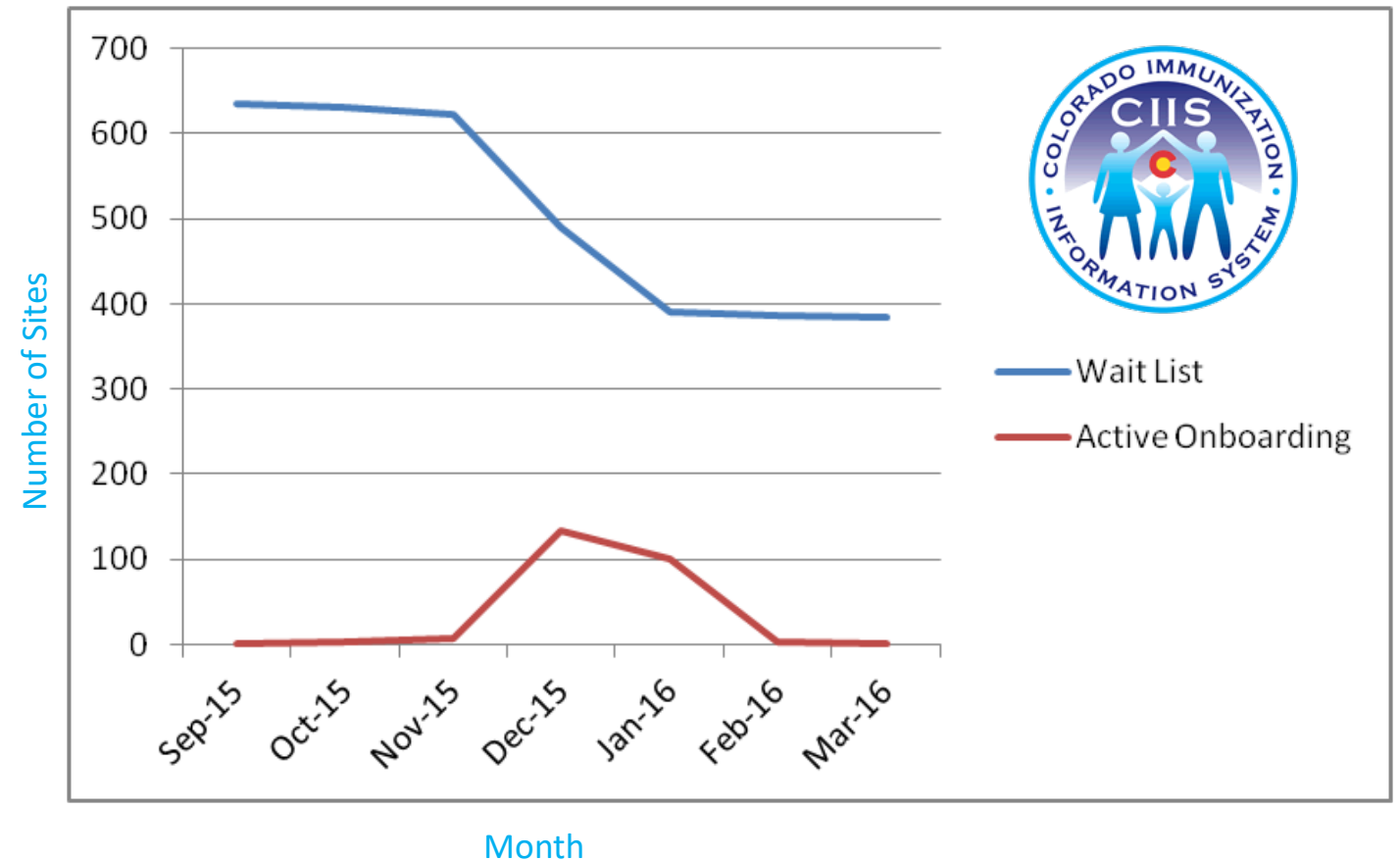
Colorado requires at minimum 3 historical and 10 administered messages pass validation without error prior to moving forward in the onboarding process.

Immunization Reporting: Pre-Testing										
DE Registered Pre-Testing ACK Monitor On-Board Eligible Onboarding In Production No Longer Active										
#	MU	CIIS Clinic Code	DE Mode	Provider Site	Group	EHR	HIE	Pre-Testing		Tester Information
								VXU	QBP	
9.		CFTC		CIIS Family Test Clinic		ACOM Health - RAPID - 7.1		08/07/2019 2.5.1		by: Provider Site Chuck Test
10.	EP-2	CPL	↔	Colorado Pulmonary Associates		GE Healthcare - Centricity Practice Solution - 12	CORHIO - Colorado Regional Health Information Organization	02/08/2019 2.5.1		by: Provider Site Leigh Steeves
11.				Deb Test Family Practice		ACOM Health - RAPID - 7.1		04/19/2019 2.5.1	04/19/2019 2.5.1	by: Provider Site Deb TestFP
12.	EH-1	029	←	Delta County Memorial Hospital		Meditech - Other -	QHN	01/31/2018 2.5.1		by: Provider Site Diane Clampitt
13.	EP-2		↔	Demo CDC Pediatrics		Allscripts - Allscripts ED - 6.3 Service Release 4		02/19/2019 2.5.1	04/19/2019 2.5.1	by: Provider Site Nurse Sheila Demo-Person
14.		FPH		Family Practice Of Holyoke		NextGen Healthcare - NextGen Ambulatory EHR - 5.8.1.01		01/10/2017 2.5.1		by: EHR Matt Lynam

Benefit to Self-Serve HL7 Pretesting

After implementation, Colorado successfully transitioned over 50% of their waitlist to active engagement in less than 7 months.

Transition from Wait List to Active Onboarding



Online Pre-Testing Tool Usage

Metric	Count
1. Total HL7 validations performed	7,503 Messages
	1,283,713 Validations
2. How many providers completed onboarded	1721
3. How may EHR companies have enrolled	48
4. How many EHR Vendor Users have enrolled	99
5. How many provider have enrolled in IIS	1191
6. How may provider site/group users have enrolled	1568

Project Tracking Tool

Recommended Attributes: Project Tracking Tool	iSIS Vision™ Meets Recommendation
Typically used as an internal resource for the IIS program	✓
Provides a master dashboard for the status of each active onboarding “project” that can be viewed by all internal team members	✓
Ability to create a unique tracking project for each active onboarding entity	✓
Ability to move the project through each of the various onboarding phases	✓
Ability to define jurisdiction-specific onboarding phases (e.g., forms completion, connectivity testing, validation testing, preproduction)	✓
Ability to assign projects to internal team members when action is needed	✓
Ability to document actions, communications, and milestones for each project/provider	✓
Includes ability to securely post project-related documents and screenshots	✓
Includes ability to generate automated emails	✓
Provides a historical record of all production interfaces	✓

Standardized Interface Project

1131 - Denver New Site - Immunization

Denver New Site Project Owner: Assigned to:

CIIS Clinic Code: DNCC Location: 123 Denver, Denver CO 80222 Phone: (222) 222 2222 Extn. 2 Primary: Gerard Butler (222) 222 2222 Extn. 2

EHR: Advanced Medical Software Systems LLC - MedScribe - 1 Tech FromEHR (555) 555 5555 No Request

Preparation	Config/Connection	Testing/Review	Data Validation
✓ Completed	✓ Completed	✓ Completed	✓ Completed
✓ KickOff - Completed ✓ Contacts Established	Sending ID: DNCC Mode of Connectivity: Dx Type: ✓ HIE Participation: CORHIO IDNs Association:	VXU Validation: 2.5.1 05/18/2018 ✓ Current: 10 of 10 Historical: 3 of 3	Validation Round: 1 Records Received: 20 Total # of Vaccine Svcs: 20 Total # of Discrepancies: 0 Accuracy Rate: 100%
Gerard Butler (222) 222 2222 Extn. 2	Salie HIEcontact (555) 999 9999 Extn. 9	Tech FromEHR (555) 555 5555	Devi DateReview (555) 665 5555
Go Live Status: ✓ Completed			



CIIS Staff



Interoperability
Coordinator



Data Interface
Specialist



Data Quality
Coordinator

Stakeholders



Physician Offices



Hospitals



Medical Groups



EHR Vendors



HIE & IDNs

TRANSPARENT INFORMATION EXCHANGE ADDS CONTINUITY TO PROJECT

HL7 Message Content Validation

Recommended Attributes: HL7 Message Content Validation	iSIS Vision™ Meets Recommendation
Historically used as an internal resource for the IIS program	✓
Should be available to providers/vendors through an outward-facing user interface	✓
Meets CDC HL7 Implementation Guide ⁵³ and Addendum ⁵⁴ standards	✓
Customizable to meet jurisdiction-specific HL7 implementation guidance requirements	✓
Provides support for volume assessment of in-bound VXUs from an EHR test or production environment	✓
Provides user interface to review ACKs for submitted messages	✓
Ability to drill down into message (parsing) for troubleshooting selected messages	✓
Ability to drill down into ACK detail for troubleshooting	✓
Ability to filter on specific segments or values within segments	✓
Ability to assess population of required technical elements—expected percentage and actual percentage	✓
Includes support for other data validations	✓
Provides minimum/core test scenarios and expected results	✓

CIIS Real-Time ACK Monitoring

OnBoarding

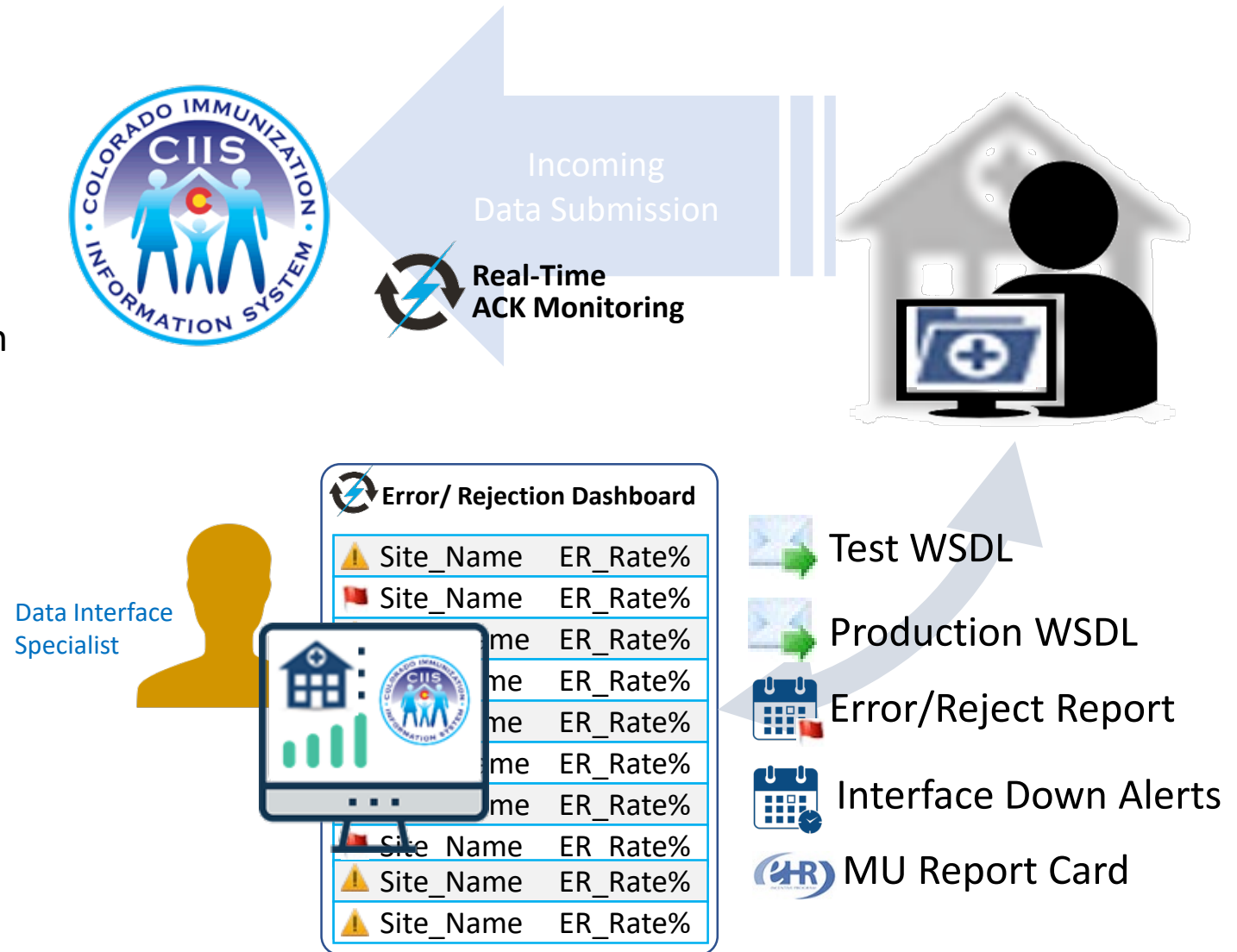
- Generates CIIS Clinic Code (IIS Site ID)
- Generates Prefilled SOAP WSDL for CIIS Test
- Monitors & Confirms Test Connection
- Sets & Confirms Pass Rate to begin Pre-Production
- Generates Prefilled SOAP WSDL for CIIS Production

Production

- Monitors CIIS Production Interface
- Monitors Submission Frequency
- Monitors Error and Rejection Rate
- Monitors Query Frequency

Meaningful Use

- Monitors Ongoing Submissions
- Monitors Bi-Directional Exchange



CIIS Real-Time ACK Monitoring

DE Registered

Pre-Testing

ACK Monitor

On-Board Eligible

Onboarding

In Production









No Longer Active



Immunization Reporting: ACK Monitor

#	Connection Date	CIIS Clinic Code	Provider Site	Group	EHR	MSG Count	AR	AE-W	AE-E	Success Rate
1		TCH	Children's Hospital Colorado	Children's Hospital Colorado	Epic Systems Corporation - Other -	49	0	0	0	100
2		PPCH	CHPG Porter Primary Care	Centura Health	Epic Systems Corporation - Epic - 2015	3	0	0	3	0
3		024	Pagosa Mountain Hospital		Cerner Corporation - Cerner Millennium - 2015.01.19	2	0	0	0	100
4		PMT	Pagosa Springs Primary Care Clinic		Cerner Corporation - Other -	10	0	0	0	100
5		151	Prowers Medical Center Hospital		CPSI (Computer Programs and Systems) Inc - Other -	23	0	0	11	52
6		129	Saint Mary's Hospital And Medical Center	SCLHS	Epic Systems Corporation - Other -	2	0	0	0	100
7		067	St. Anthony Hospital	Centura Health	Epic Systems Corporation - Epic - 2015	8	0	0	8	0
8		WMA	Western Medical Associates		athenahealth, Inc - Other -	1	0	0	0	100

HL7 Data Quality Analysis Testing

Recommended Attributes: HL7 Data Quality Analysis Testing	iSIS Vision™ Meets Recommendation
Typically used as an internal resource for the IIS/immunization program	
Assesses whether required fields are populated with valid info (correct codes)	
Ability to assess population of required programmatic elements— expected percentage and actual percentage	
Includes inventory management/decrementing verification	
Provides end user data quality report(s) for providers and other onboarding partners	
Ability to automate report generation based on predetermined criteria	
Includes support for other data validations	
Could possibly be combined with HL7 Message Content Validation	

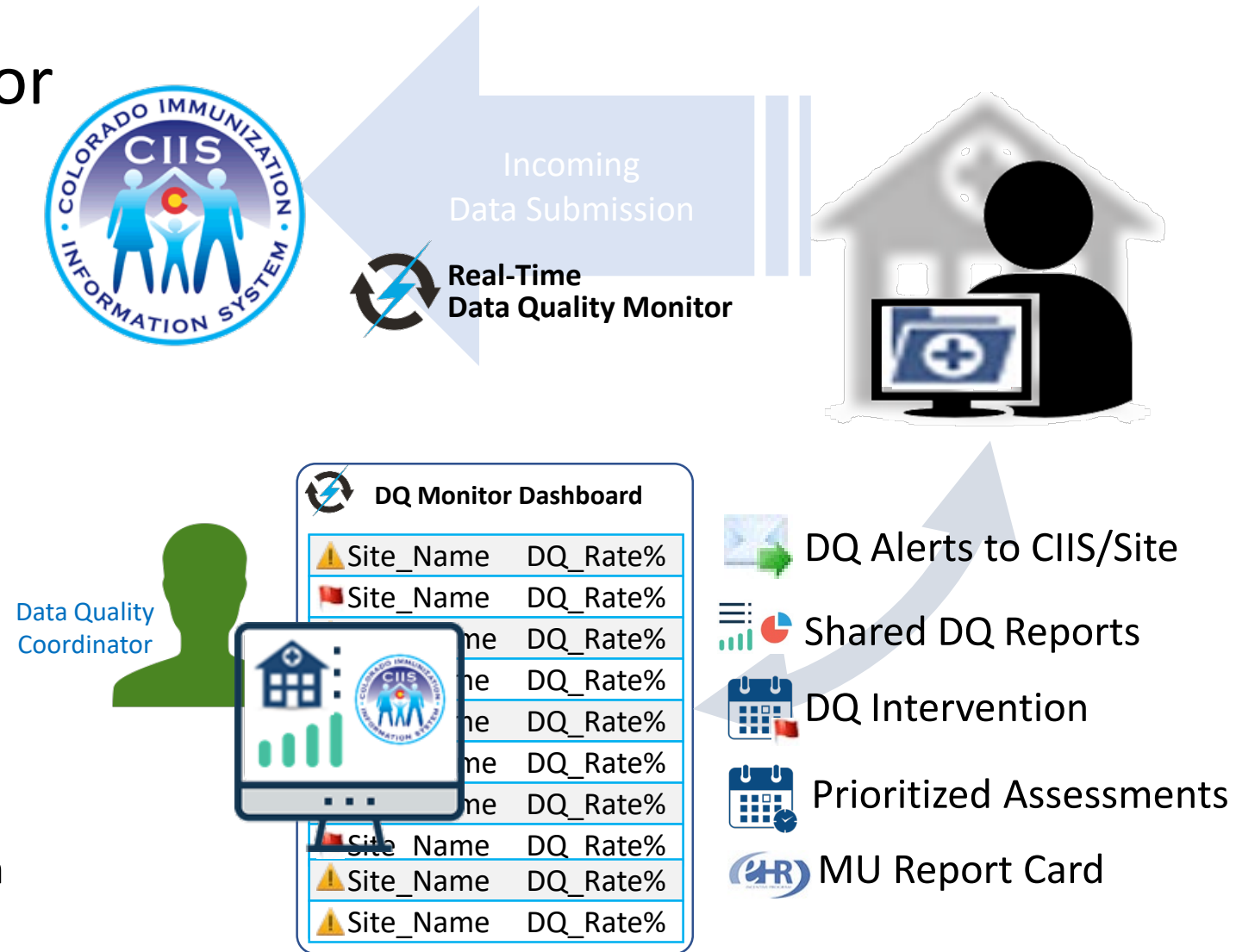
CIIS Real-Time Data Quality Monitoring

Real-Time Data Quality Monitor

- Identifies sites for 6 Month DQ Review
- Provides Proactive Data Quality Alerts
- Prioritizes Providers for Data Quality Review
- Provides MSG drilldown detail
- Provides Data Quality Reporting
 - CIIS Data Quality Coordinator
 - Provider Site
 - Medical Group

Meaningful Use

- Monitors Prioritized Data Element Submission
 - For example: NDC



HL7 Feed Monitoring

Recommended Attributes: HL7 Feed Monitoring	iSIS Vision™ Meets Recommendation
Can be used as an internal resource for the IIS program or external resource for EHR vendors and/or providers	✓
HL7 stats monitoring—volume of messages coming in, number and type of ACKs	✓
Should track Query/Response in addition to VXUs	✓
Ability to drill down to org-level, facility-level, etc. performance	✓
Ability to automate report generation or alerting mechanism based on predetermined criteria	✓

CIIS Real-Time Data Quality Monitoring

- Cyclical Review
 - Sites queued for 6- month review
- DQ Projects
 - List of current projects
- DQ Alerts
 - Sites needing intervention with Data Quality Rate dropping below acceptable level

Immunization Reporting: Data Quality Cyclical Review												
Status	Clinic Code	Clinic Site	Group Name	AA	AE-E	AE-W	DQ Rate	Assigned To	Last DQ Review	Schedule	Reports	Remove
	TCH	Children's Hospital Colorado	Children's Hospital Colorado	49	0	0		Assign				
	PPCH	CHPG Porter Primary Care	Centura Health	0	3	0		Assign				
	024	Pagosa Mountain Hospital		2	0	0		Assign				
	PMT	Pagosa Springs Primary Care Clinic		10	0	0		Assign				
	151	Prowers Medical Center Hospital		12	11	0		Assign				
	120	Saint Mary's Hospital And Medical	SCUHC	2	0	0		Assign				

CIIS Real-Time Data Quality Monitoring

Message Drill Down

- Received Message
- Corresponding ACK
- View issues

Immunization Report

- Completeness
- Accuracy

Patient Report

- Completeness

VFC Report

- VFC Specific Completeness


Timeliness

- Administered vs Reported

Validation Summary

- Annual Trendline summary of each metric

ProfileVFCData ExchangeData QualityManage ContactsSupportCommentsView/Submit FormsShipping/VTrcks

**Immunization Reporting: Data Quality Reports**

CIIS Family Test Clinic4322 Cherry Creek South Drive , Aguilar CO 80246Group:

County:	DENVER	Phone Number:	(555) 522 2356
CIIS Clinic Code:	CFTC	Fax Number:	(555) 565 1111
Site Admin:	Chuck Test	Email Address:	Chucky@CIISTestClinic.com
Clinic Type:	Family Practice	Type of Vaccines:	✔ Pediatrics ✔ Adolescent ✔ Adult

MessagesImmunization ReportPatient ReportVFC ReportValidation SummaryTimeliness

#	Result	Control ID	Message Type	Received	Validation Summary	View Message
1	?	356306	VXU: Non-Hx	07 31 2019 20:32	0 Valid 29 Errors 2 Warnings	View

#	Result	Control ID	Message Type	Received	Validation Summary	Close Message
1	?	1	VXU: Non-Hx	07 31 2019 20:32	0 Valid 29 Errors 2 Warnings	Close

Message DQ Validation Summary
Segments Processed:

Segment	Segment Count	ERRORS	WARNINGS
MSH	4	4	0
NK1	0	0	0
OBX	0	0	0
ORC	2	2	0
PID	4	4	0
RXA	16	14	2
RXR	4	4	0

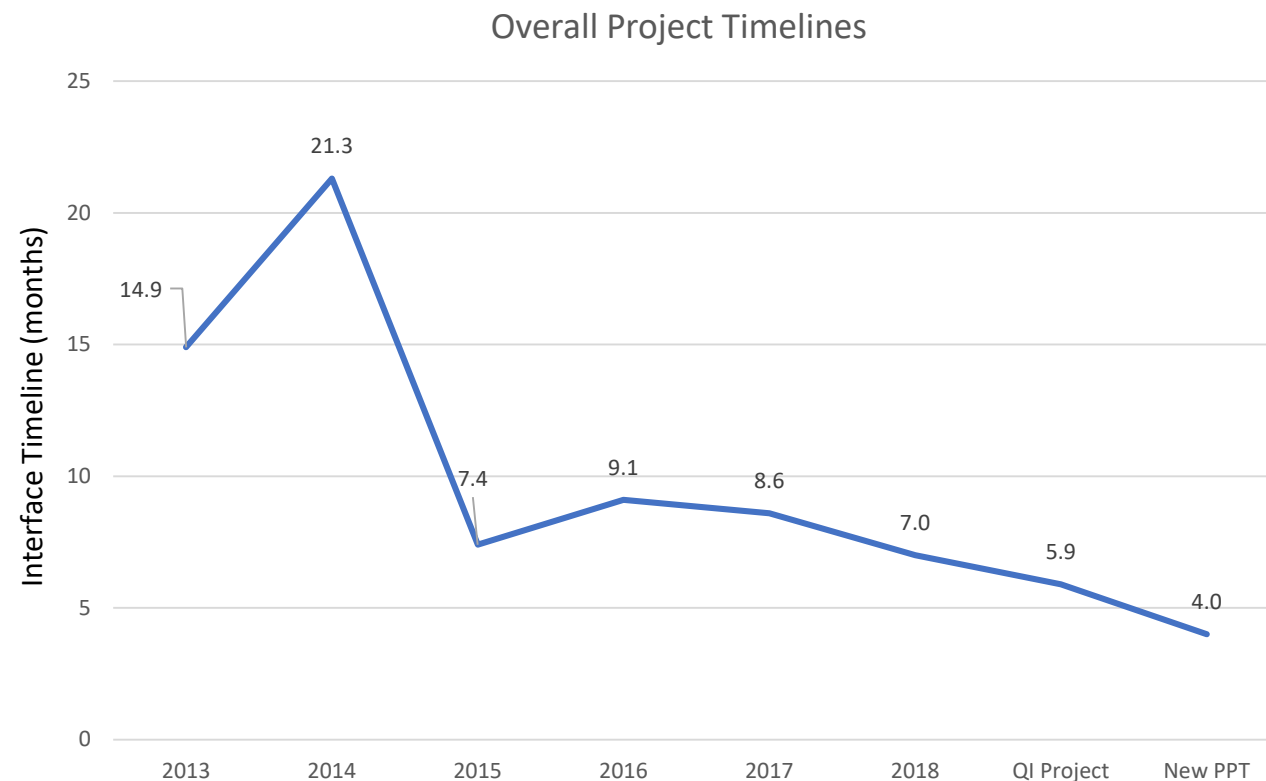
Message Received

Type: VXU: Non-Historical

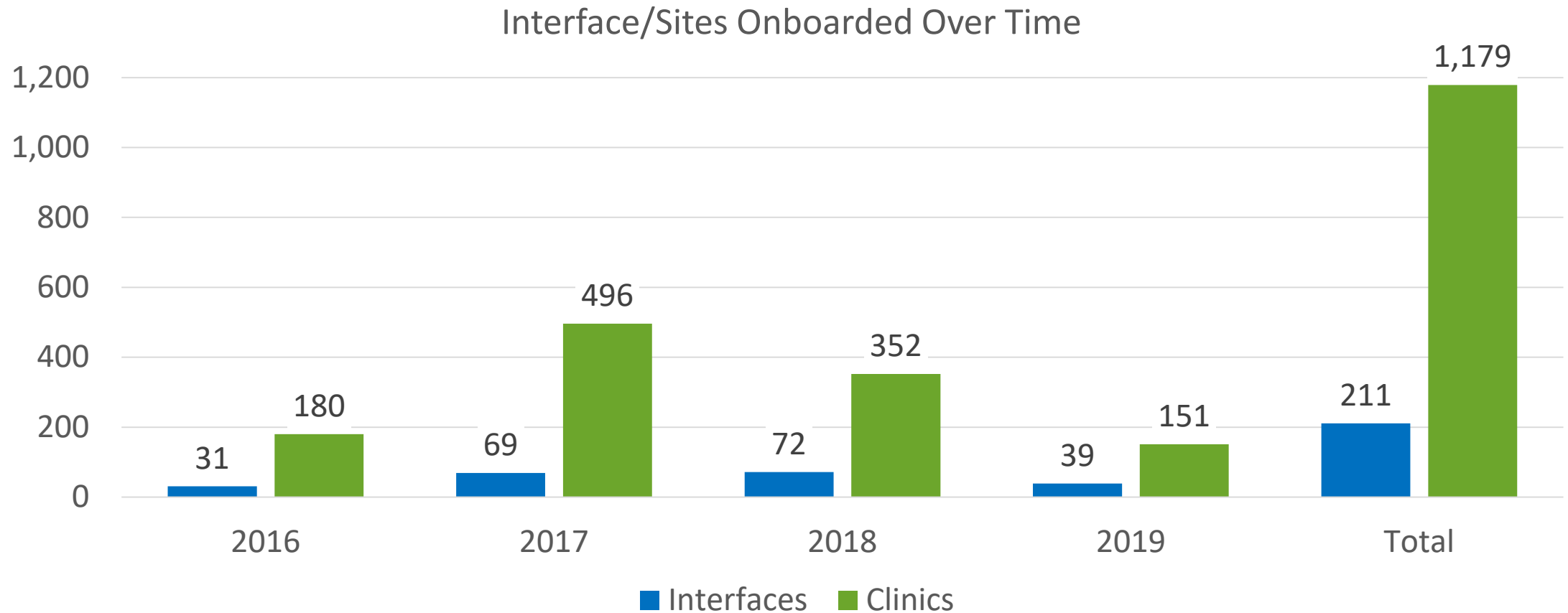
MSH|^~^&|EPIC|EXO|CIIS|CDPHE|20190610070811||VXU^V04^VXU_V04|356306|P|2.5.1|||||Z22^CDCPHINVS PID|1||XXX-XXXX-XXXX^CEU^XX|XXXXXXXXXX^XXXXX^AAAA^L|XXXXXXXX|M||U^Unknown^HL70005|XXXXXXXXXXXXXXXXXXXX^XXXX^CO^XXXX^USA^L^XXXXX||^PRN^PH^XXXX^XXXXXXX|

Overall Onboarding Timelines

	Year	Number of Interfaces	Number of Clinics	Average Project Duration
	2013	17	50	14.9 months
	2014	20	58	21.3 months
Prep	2015	28	171	7.4 months
Phase1	2016	21	21	9.1 months
Phase 2	2017	58	269	8.6 months
	2018	37	66	7.0 months
	QI Project	102	310	5.9 months
	New PPT	37	98	4.0 months



Colorado Onboarding Statistics



Thank you!



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