



Consumer Connections to IIS Records:

A Spectrum of Approaches and Results



Overview

Name	Organization	Topic
James Daniel	Office of the National Coordinator for Health IT (ONC)	The Possibilities of Engaging Consumers – an Orientation
Karl Moeller	Scientific Technologies Corporation (STC)	Improving the Consumer Matching Process
Jennifer Hui	Audacious Inquiry (Ai)	Experience from the Field & Engaging New Partners
Shannon Stokley	NCIRD/CDC	Findings from Evaluation of the Third Year of Providing Consumer IIS Records Access
Cathy Zier	Caredox	Other Models for Consumer Access
Angel Aponte	New York City Department of Health and Mental Hygiene	Other Models for Consumer Access

Consumer Engagement for IIS Project

- **Goal:** Increase consumer access to online immunization records and forecasts.
- Collaborative project between ONC, CDC, Audacious Inquiry (Ai), and Scientific Technologies Corporation (STC).



Consumer Engagement for IIS - Project Implementation

- Pilot an online portal that provides **consumer access to immunization** records after they complete a registration and authentication process.
- **Connect to IIS** in each Pilot State (AZ, LA, WA, WV)
- Engage health care providers and consumers
- Promote MyIR through various **marketing** techniques to consumers
- **Evaluate** project activities and impact on consumers

Consumer Registration Options – Years 1-2

Provider-Authenticate Registration: Consumer or Provider-Initiated

1. Register online at myir.net
 - Consumer
 - Provider
2. Consumer visits healthcare provider for in-person authentication and approval.
3. Healthcare provider identity-proofs consumer and provides access code to consumer.
4. Consumer enters access code to complete the authentication process and obtain access to immunization record.

Evaluation Findings – Pilot Year 2

Provider-Initiated registration process

- Forgot to go online and complete steps (27%)
- Forgot/lost PIN (22%)
- Didn't have time to complete (17%)

Consumer-Initiated registration process

- Didn't know had to go to provider office to complete registration (37%)
- Waiting until next scheduled visit to complete registration (23%)
- Not willing to schedule a visit just to complete registration (19%)

Overcoming Challenges

- Alternate approaches to increase consumer access:
 - » Implementation of Online Authentication May 2016
 1. The Online Authentication registration method allows consumers to self-register online and have an access code sent by SMS text or autodial to complete the authentication process.
 2. In the event that a record is not found (matched), consumers may request authentication by their healthcare provider/state health dept. to access their immunization record.
 - » Increase marketing efforts
 - » State-Assisted Registration
 - » Pharmacy pilot



Consumer Access to IIS Records: Secure Enrollment Techniques

Karl Moeller

VP Public Sector

Scientific Technologies Corporation (STC)

Connecting to Consumers



- Online Authentication
 - All states except WV
 - Connected through Phone number OR Address
 - Text Message/Auto Dial Code
 - Mail Code (only in LA/AZ)
 - Most Popular
 - Convenient
- Provider Registration
- State Assisted Registration
 - Only in WA
 - Good reception

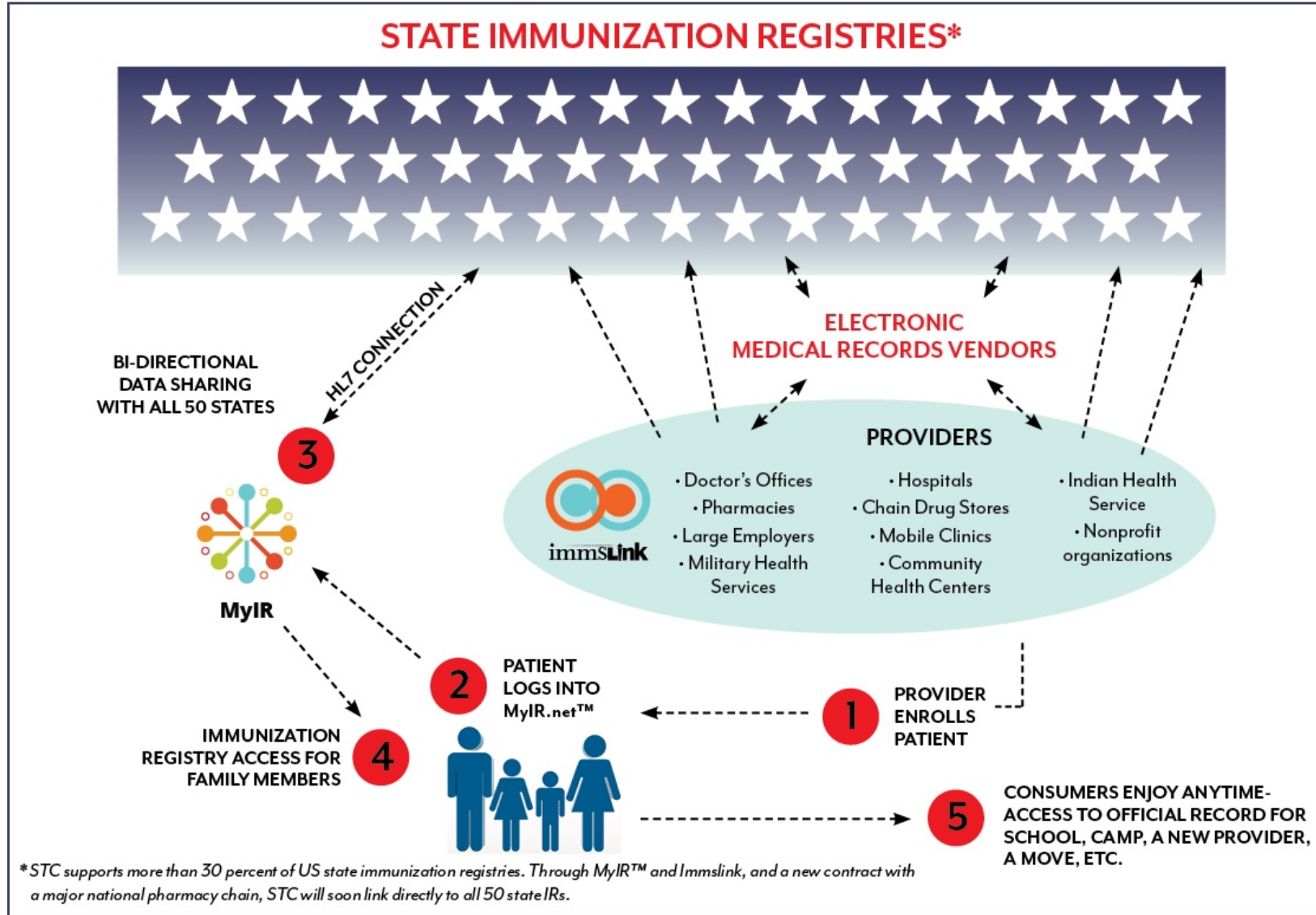
Identity-Proofing



- A person is who they say they are
- They are legally entitled to access the health records of related individuals
- An in-person visit to a healthcare provider was the “Gold Standard”
- This standard was the original procedure for the MyIR pilot project



Identity-Proofing



Automating Identity-Proofing



A new “two factor” method eliminates:
An in-person provider visit

Provider workloads, disincentives, etc. eliminated

An emailed link and login from home

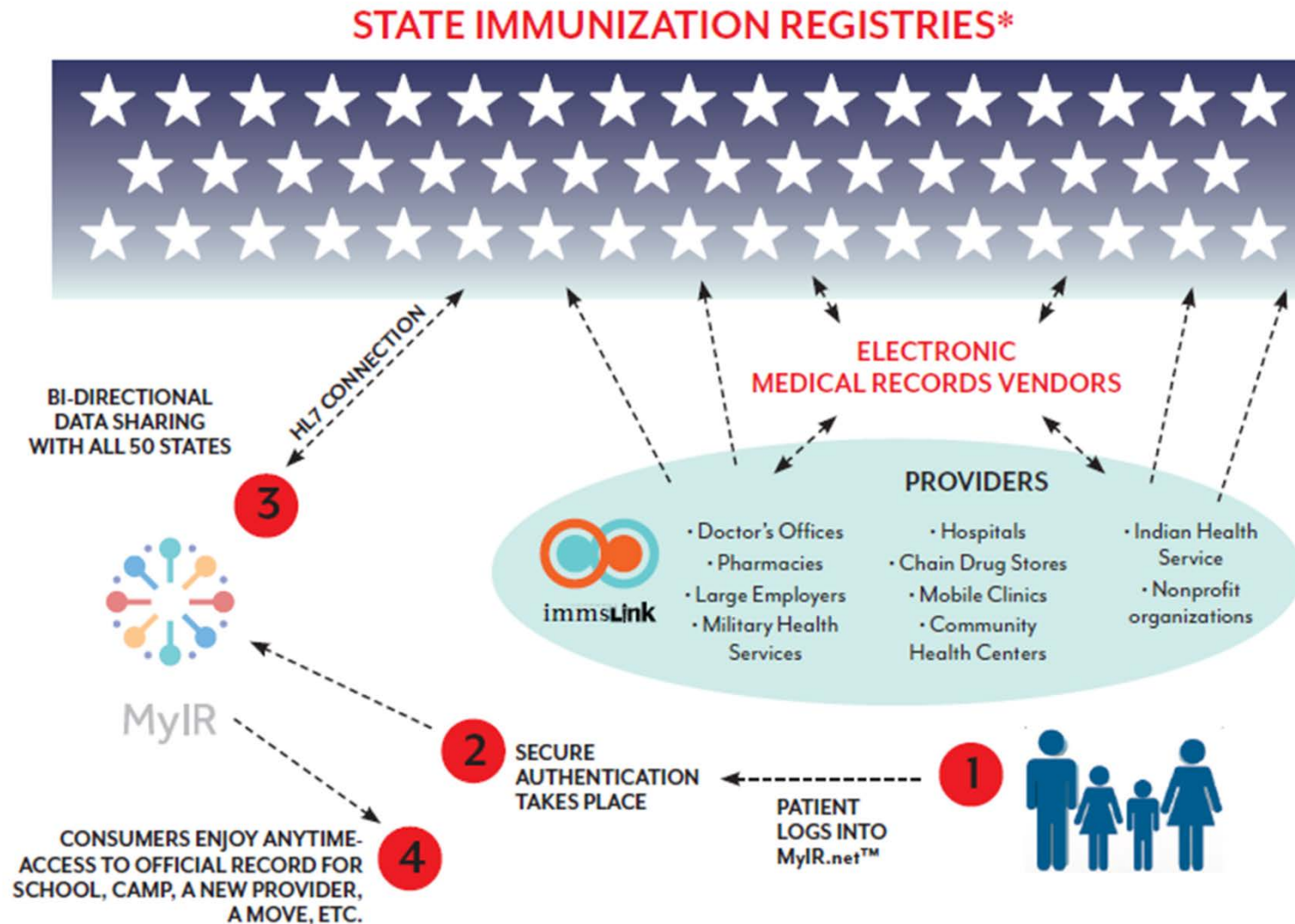
- Factor 1: Something you “know”

Consumer’s family registration data

- Factor 2: Something you “own”

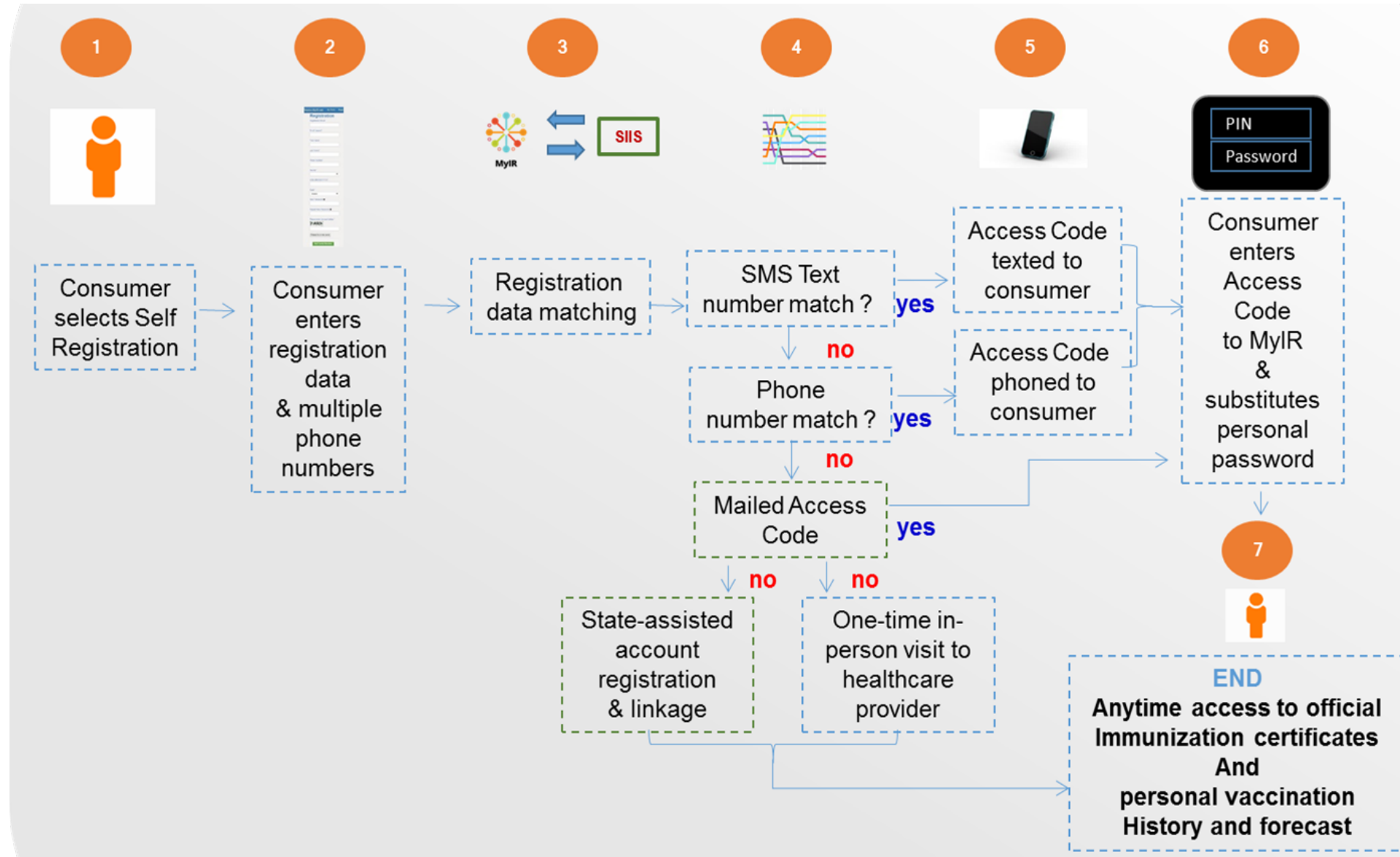
Consumer’s phone or physical mailing address

Identity-Proofing



*STC supports more than 30 percent of US state immunization registries. Through MyIR™ and Immslink, and a new contract with a major national pharmacy chain, STC will soon link directly to all 50 state IRs.

Online Authentication Workflow



1. Registration Data



*Something you **know***

Consumer submits
registration data
for themselves &
dependents
to MyIR.net™

- Email address
- Self-assigned password
- First name
- Last name
- Phone number(s)
- Gender
- DOB
- Address
- State
- Zip code
- Captcha
- Dependent(s) First Name
- Dependent(s) Last Name
- Dependent(s) Gender
- Dependent(s) DOB

2. ID-Proof & Records Matching



Option 1

Consumer
selects
"Auto Match"
ID-proofing
Option



Auto Match
Access Code
Sent by SMS
or Phone



Query to state IIS

3. Match Outcomes



A

Match Algorithm

If registration data & phone number exactly matches data in state IIS, Access Code sent to consumer via SMS text or phone autodial – consumer enters Access Code

B

Match Algorithm

If registration data (but NOT phone number) exactly matches data in IIS, Access Code sent to consumer via mail – Consumer enters Access Code

*Something
you
own*

C

Match Algorithm

If registration data does NOT exactly match data in state IIS) consumer can submit ID-proof to State -- State may approve account

4. Consumer Access



Consumer has
anytime, anywhere,
any device
real-time access to
copies of their
official
Immunization
Records

View

Print

Download

Share



Registration



Washington MyIR [My State](#) [Register](#) [Login](#) [Help](#) [About](#)



Log In to Washington MyIR

Log in now to access your and your family's immunization records

[Log In](#)



Washington State Department of Health
Office of Immunization and Child Profile



Immunization Action Coalition

Personal Testimonies about Vaccine-Preventable Diseases

Real-life accounts of suffering and loss due to vaccine-preventable diseases. Read these powerful stories



Your Immunization Record May Not Look Complete

There may be some vaccines you or your family received that don't appear on the immunization record in MyIR, such as the human papillomavirus (HPV) vaccine. HPV vaccine is sometimes given by a healthcare provider confidentially. Since MyIR doesn't know which HPV vaccines were given confidentially or not, all HPV vaccinations are hidden on immunization records in MyIR. Contact your healthcare provider if you think you need a more complete record of your or your family's immunization history.





Register

Registration

We will use your registration data and attempt to match your personal information with what is on record with your state immunization registry.

* An asterisk indicates that the field is REQUIRED

<input type="text" value="First Name *"/>	<input type="text" value="Last Name *"/>
<input type="text" value="Email *"/>	<input type="text" value="Repeat Email *"/>
<input type="password" value="New Password *"/>	<input type="password" value="Repeat New Password *"/>
<input type="password" value="Password *"/>	<input type="password" value="Repeat Password *"/>
<input type="text" value="Gender*"/>	<input type="text" value="Date of Birth*"/>
<input type="text" value="Select Gender"/>	<input type="text" value="Date Of Birth *"/>
<input type="text" value="Additional Guardian First Name (Optional)"/>	<input type="text" value="Additional Guardian Last Name (Optional)"/>
<input type="text" value="Phone 1 *"/>	<input type="checkbox" value="Text message enabled phone"/>
<input type="text" value="Phone 2"/>	<input type="checkbox" value="Text message enabled phone"/>
<input type="text" value="Phone 3"/>	<input type="checkbox" value="Text message enabled phone"/>
<input type="text" value="Address *"/>	
<input type="text" value="City *"/>	<input type="text" value="Washington"/>
	<input type="text" value="Zip Code *"/>



Add Family Member

[add dependent](#)

How did you find out about Washington MyIR *

Referral option:

Please enter the word below.*

[Reload for a new word](#)





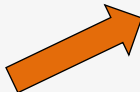




☐ I agree that I have read and accepted the [Conditions of Use](#) and our [Privacy Notice](#).

Online Authentication Option



Verification Required

You have successfully registered for MyIR! The next step is to have your identity verified and link your official state immunizations records with your account. Choose one of the verification options below then click NEXT to complete your registration.

- **Auto Match (instant)**
We will use your registration data and attempt to match your personal information with your state immunization record. If we find an exact match, an SMS text message or autodial will be sent to the matched phone number sending a verification code to enter into MyIR.
- **State Assisted Registration (may take up to a month)**
- **Health Care Provider Assisted Registration**

Next

You can come back to this page anytime by going to MyImmunizations and clicking on "Verification Options"

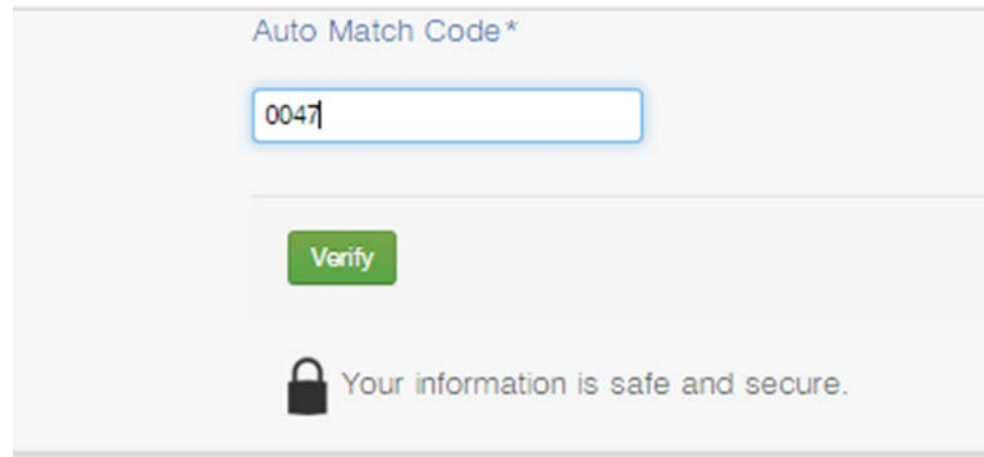
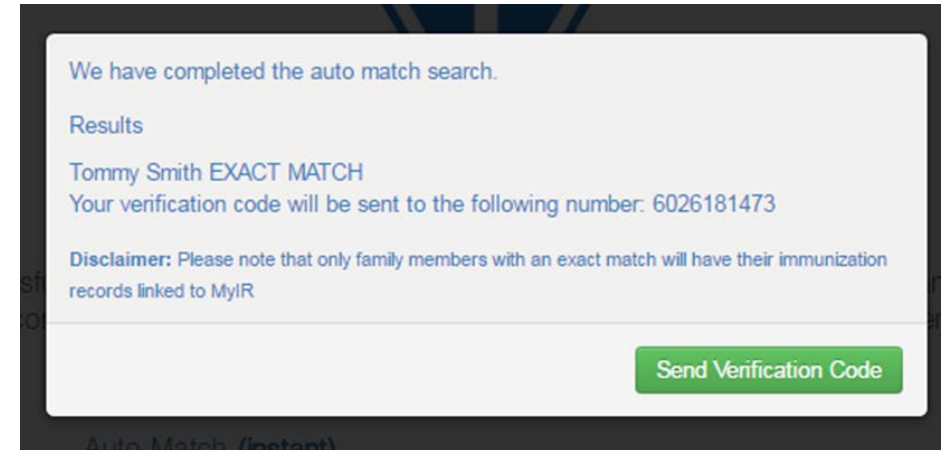
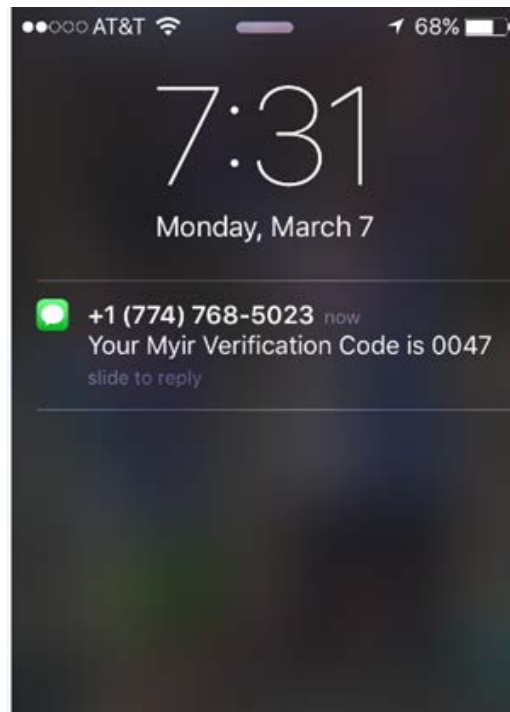


Your information is safe and secure.

Matching Options



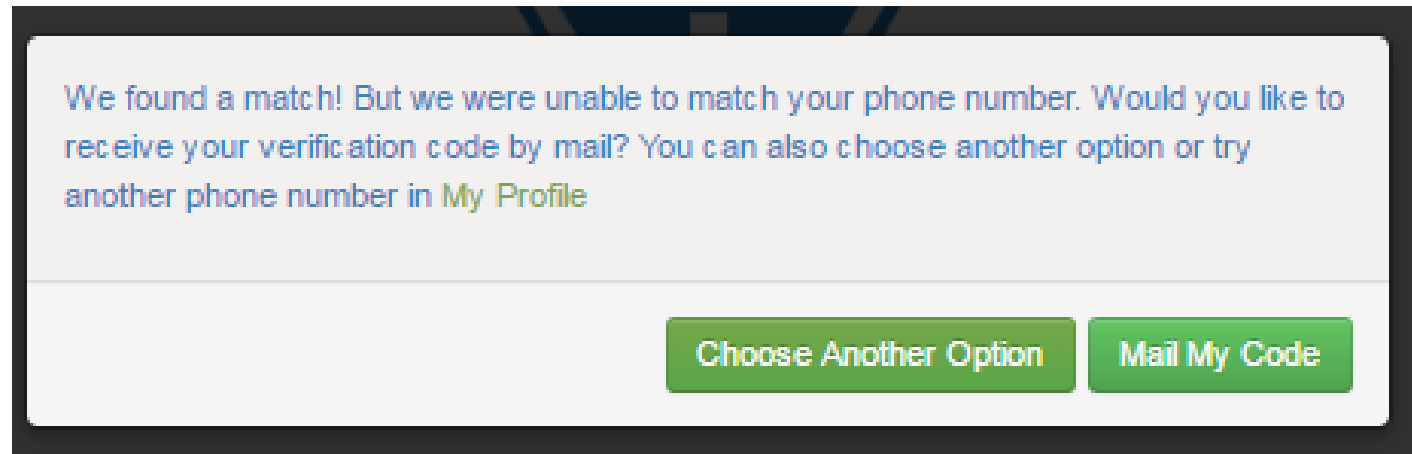
When Online Authentication works:



Matching Options




When Online Authentication fails, Mail Codes can be sent:



You and your family

[Add New Family Member](#)

View/Print	First Name	Last Name	DOB (MM/DD/YYYY)	Gender	Age	Delete	Status
<input checked="" type="checkbox"/>	John	Smith	03/06/1979	Male	37 years		 ✓

[Show me my immunization records](#)[Certificate of Immunization](#)For email assistance click [here](#)

NOTE: If you notice that any immunizations are missing, in error, or not up-to-date, please contact your healthcare provider.

**MyIR**

Looking for official Washington Immunization certificates?

- If your family's status in the table above shows a ✓, they have access to the official state immunization database and can receive official documentation certifying school and daycare immunizations
- If your family member needs an immunization certificate, click the [Certificate of Immunization](#) button.

Be informed! To review your family's immunization schedule according to state recommendations, click the [Personal Certificate With Schedule](#) button.



MyIR

You and your family

Add New Family Member

View/Print	First Name	Last Name	DOB (MM/DD/YYYY)	Gender	Age	Delete	Status
<input checked="" type="checkbox"/>	John	Smith	03/06/1979	Male	37 years		
<input checked="" type="checkbox"/>	Tommy	Smith	01/01/2017	Male	1 month	Delete	

Show me my immunization records

Certificate of Immunization

For email assistance click [here](#)

NOTE: If you notice that any immunizations are missing, in error, or not up-to-date, please contact your healthcare provider.



Patient Vaccination and Forecast Record



Smith Family

Vaccinations on Record for John Smith Age 37 years

Vaccine Name	Dose 1
Tdap	July 11, 2016

Vaccination Schedule

This table shows up-to-date, past-due, and upcoming vaccinations.

Vaccine Family	Dose	Scheduled Date	Minimum Valid Date	Status
FLU	1	Sept. 6, 1979	Sept. 6, 1979	Past Due
DTaP/DT/Td	8	July 11, 2026	July 11, 2021	Up to Date

Vaccinations on Record for Tommy Smith Age 1 month

Vaccine Name	Dose 1	Dose 2
HEP-B 3 DOSE	Jan. 1, 2017	March 1, 2017

Vaccination Schedule

This table shows up-to-date, past-due, and upcoming vaccinations.

Vaccine Family	Dose	Scheduled Date	Minimum Valid Date	Status
DTaP/DT/Td	1	March 1, 2017	Feb. 12, 2017	Due Now
HIB	1	March 1, 2017	Feb. 12, 2017	Due Now
PNEUMO (PCV)	1	March 1, 2017	Feb. 12, 2017	Due Now
POLIO	1	March 1, 2017	Feb. 12, 2017	Due Now
ROTAVIRUS	1	March 1, 2017	Feb. 12, 2017	Due Now
FLU	1	July 1, 2017	July 1, 2017	Up to Date
HEP-B 3 DOSE	3	July 1, 2017	June 18, 2017	Up to Date
MMR	1	Jan. 1, 2018	Jan. 1, 2018	Up to Date
VARICELLA	1	Jan. 1, 2018	Jan. 1, 2018	Up to Date
HPV	1	Jan. 1, 2028	Jan. 1, 2026	Up to Date
MENING	1	Jan. 1, 2026	Jan. 1, 2027	Up to Date

Official State-Specific Record



MyIR

Certificate of Immunization Status (CIS)

DOH 348-013 January 2015

Office Use Only:

Reviewed by: MyIR Date: 03/09/2017

Signed Cert. of Exemption on file? ☐ Yes ☒ No

Please print. See back for instructions on how to fill out this form or get it printed from the Immunization Information System.

Child's Last Name: Smith	First Name: John	Middle Initial: 	Birthdate (mm/dd/yyyy): 03/06/1979	Sex: M
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Symbols below:

- ◆ Required for School and Child Care/Preschool
- Required for Child Care/Preschool Only
- Recommended, but not required

I certify that the information provided on this form is correct and verifiable.

John Smith 03/09/2017

Parent/Guardian Signature Required _____ Date _____

Parent/Guardian Signature Required _____ Date _____

I give permission to my child's school to share immunization information with the Immunization Information System to help the school maintain my child's school record.

Vaccine	Dose	Date		
		Month	Day	Year
◆ Hepatitis B (Hep B)				
	1			
	2			
	3			
or Hep B - 2 dose alternate schedule for teens				
	1			
	2			
■ Rotavirus (RV1, RV5)				
	1			
	2			
	3			
◆ Diphtheria, Tetanus, Pertussis (DTaP, DTP, DT)				
	1			
	2			
	3			
	4			
	5			
◆ Tetanus, Diphtheria, Pertussis (Tdap)				
Tdap	1	07	11	2016
■ Tetanus, Diphtheria (Td)				
Tdap	1	07	11	2016
	2			
● Haemophilus influenzae type b (Hib)				
	1			
	2			
	3			
	4			
■ Influenza (flu, most recent)				

Vaccine	Dose	Date		
		Month	Day	Year
● Pneumococcal (PCV, PPSV)				
	1			
	2			
	3			
	4			
	5			
◆ Polio (IPV, OPV)				
	1			
	2			
	3			
	4			
◆ Measles, Mumps, Rubella (MMR)				
	1			
	2			
◆ Varicella (chickenpox)				
	1			
	2			
■ Hepatitis A (Hep A)				
	1			
	2			
■ Human Papillomavirus (HPV) – does not print from the IIS; write dates in by hand				
	1			
	2			
	3			
■ Meningococcal (MCV, MPSV)				
	1			
	2			

If the child named on this CIS had chickenpox disease (and not the vaccine), disease history must be verified.

Mark option 1, 2, OR 3 below (see # 5 on back)

1) ☐ Chickenpox disease verified by printout from the Immunization Information System (IIS) Must be marked by printout (not by hand) to be valid.

2) ☐ Chickenpox disease verified by healthcare provider (HCP) If you choose this box, mark 2A OR 2B below.
 2A) ☐ Signed note from HCP attached OR
 2B) ☐ HCP sign here and print name below:

Licensed healthcare provider signature _____ Date _____ (MD, DO, ND, PA, ARNP)

Printed Name: _____

3) ☐ Chickenpox disease verified by school staff from the Immunization Information System

If the child can show immunity by blood test (titer) and hasn't had the vaccine, ask your HCP to fill in this box.

Documentation of Disease Immunity

I certify that the child named on this CIS has laboratory evidence of immunity (titer) to the diseases marked.

Signed lab report(s) MUST also be attached.

<input type="checkbox"/> Diphtheria	<input type="checkbox"/> Mumps	<input type="checkbox"/> Other:
<input type="checkbox"/> Hepatitis A	<input type="checkbox"/> Polio	
<input type="checkbox"/> Hepatitis B	<input type="checkbox"/> Rubella	
<input type="checkbox"/> Hib	<input type="checkbox"/> Tetanus	
<input type="checkbox"/> Measles	<input type="checkbox"/> Varicella	

Licensed healthcare provider signature _____ Date _____ (MD, DO, ND, PA, ARNP)

Printed Name: _____

Measurement



- Weekly metrics count consumer choices and outcomes
- Consumers may still choose to visit a provider for in-person ID-proofing
- Targeted promotional campaigns will be tracked through a registration data field in MyIR™



THANK YOU

Karl Moeller
VP Public Sector
Scientific Technologies Corporation (STC)

karl_moeller@stchome.com

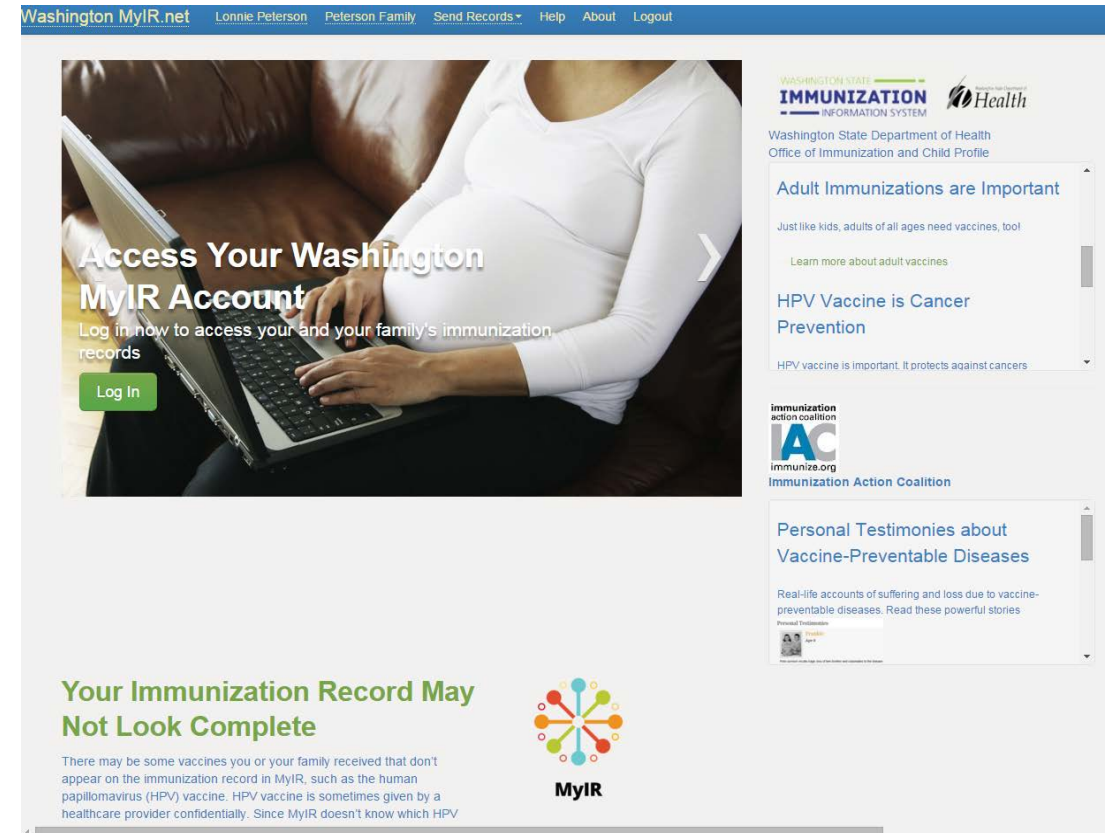
Washington State MyIR: Experience from the Field

Challenges Getting Started

1. Recruiting providers
2. Competition with EHRs
3. State DOH Resource Limitations

Alternative approaches

1. Build upon existing infrastructure
2. Provide alternative registration options



Washington State MyIR: Alternative Approach #1 - Records Requests



A COPY OF THIS COMPLETED ORIGINAL DOCUMENT IS CONSIDERED THE SAME AS THE ORIGINAL

AUTHORIZATION TO RELEASE IMMUNIZATION RECORDS
Washington State Immunization Information System, PO Box 47843, Olympia, WA 98504-7843
Phone: 1-866-397-0337 | Fax: 360-236-3590 | E-mail: WAHISRecords@doh.wa.gov

Patient/Child Information (if requesting records for more than one patient or child, see side 2 of this form):

Patient/Child First Name	Patient/Child Middle Name	Patient/Child Last Name
<hr/>		
Patient/Child Date of Birth (MM/DD/YYYY)	Patient/Child Previous Name(s)	
<hr/>		

Parent/Guardian Information:

Parent/Guardian Full Name (if patient is less than 18 years old)	Parent/Child or Parent Phone Number (include area code)		
<hr/>			
Address (including apt. #, if applicable)	City	State	Zip Code
<hr/>			
Parent/Guardian E-mail Address	Parent/Guardian Date of Birth (MM/DD/YYYY)		
<hr/>			

I request and authorize the Washington State Immunization Information System to release the system's immunization information for the patient/child named above and on side 2 of this form to the person or agency named here:

First and Last Name	Agency (if applicable)	Phone Number (include area code)
<hr/>		

Records requested by e-mail, fax, or postal mail will be sent no later than 15 business days (usually within 3 to 5 business days) after receipt of this signed authorization. If choosing to register for ©MyIR, records will be available immediately upon completion of registration. Choose all that apply:

☐ E-mail records to: _____

☐ Fax records to: (_____) _____

☐ Mail records to: _____
Mailing address, including apt. #, city, state, and zip code

☐ Access my and/or my child's records online via ©MyIR

Unless earlier terminated as provided for on the back of this form, this authorization expires 18 years after it is signed or when

Washington State MyIR: Alternative Approach #2 – Marketing and Promotions

- Promotional webpage (doh.wa.gov/immsrecords)
- Child Profile Health Promotion mailings

The screenshot shows the Washington State Department of Health website. The main navigation bar includes links for Home, Newsroom, Publications, and About Us. Below this is a search bar and a 'Topics A-Z' dropdown. The main content area is titled 'Access your Family's Immunization Information' and provides instructions on how to access immunization records. It lists three options: signing up for MyIR, requesting a record from a healthcare provider, or requesting a record from the Department of Health. A sidebar on the left contains a list of topics, including Breastfeeding, Family Planning, Food Safety, Healthy Aging, Healthy Home, Illness and Disease, Immunization, Adult, Children, Child Profile Health Promotion, Child Profile en Español, Evaluation, For Parents, Access your Family's Immunization Information, Frequently Asked Questions, For Partners, For Providers, Health Promotion Materials, Resources, College Students, Diseases and Vaccines, Forms and Publications, Immunization Information System, Immunization News, Preteens and Teens, School and Child Care, Travelers, Vaccine Safety, Inmunización, Infants, Children, and Teens, Injury and Violence Prevention, and Marijuana.

Access your Family's Immunization Information

There are a few ways you can access your family's immunization information:

- Option 1:** Sign up for MyIR to view, download, and print your family's immunization information
 - Already have an account? [Log in to MyIR](#)
- Option 2:** Request a complete immunization record from your healthcare provider
- Option 3:** Request a complete immunization record from the Department of Health

Option 1: Sign up for MyIR to View, Download, and Print Your Family's Immunization Information

MyIR allows you to manage your family's immunization records securely online. Once you register, you can access the records any time you need them. You can also print your child's [Certificate of Immunization Status \(PDF\)](#) for school and child care entry. You can do all of this without an extra trip to your healthcare provider or school. Fill out an [Authorization to Release Immunization Records \(PDF\)](#) or an [Autorización para entregar documentos de vacunaciones \(PDF\)](#). Mail, fax, or e-mail the form to:

Washington State Immunization Information System
PO Box 47843
Olympia, WA 98504-7843
Fax: 360-236-3590
E-mail: WAIISRecords@doh.wa.gov

Once we receive your signed form, we'll register you in MyIR and send you a temporary PIN and instructions on what to do next. When you're done, you'll have immediate access to your family's immunization records to view, download, or print as often as you need. If you have any questions, please contact us at 360-236-3595 or 1-866-397-0337 or by e-mail at WAIISRecords@doh.wa.gov.

Option 2: Request a Complete Immunization Record from Your Healthcare Provider



Washington State MyIR: Alternative Approach #2 – Marketing and Promotions

- **Pilot Ad Campaign in Seattle Metro Area**
 - » **Champion – Dr. Wendy Sue Swanson**
<http://www.king5.com/news/health/childrens-healthlink/ask-dr-swanson-what-we-know-about-vaccines/119953103>
 - » **Online ad campaign** with outlets such as:
 - Seattle Times
 - Volunteer Spot
 - Parent Map
 - Parenting/Mommy Blogs



Engaging New Partners in Washington

1. Outreach to School Districts
2. Rite Aid and RediClinic Pilot
(Seattle and Tacoma regions)



Rite Aid Pilot Planning and Implementation

- **Pilot Period:** February 2017 – July 2017
- **Pilot Area:** Seattle-Tacoma Region
- **Process**
 - » Integration with the Washington IIS
 - » Training pharmacists
 - » Marketing
 - In-store distribution of flat-panel cards with instructions on how to sign up for MyIR
 - Targeting Rite Aid customers who receive in-store immunizations

*“The MyIR service is a great tool that helps to initiate an important discussion between pharmacist and patient. In addition, it highlights the important services that pharmacists provide as part of the healthcare team. **We have been using this service to help provide immunization record access to patients but then further parlaying this interaction into a full discussion about the patient's vaccination needs.**”*

-Rite Aid Pharmacist Testimony

Rite Aid Pilot by the Numbers

# of Rite Aid Stores	27
# of RediClinics	11
# of Pharmacists Trained	65
# of Nurse Practitioners Trained	33 (training on 3/14)
# of Consumers Registered	27
# of Consumers Fully Activated	15
RiteAid.myir.net Sessions (since Feb 1, 2017)	124

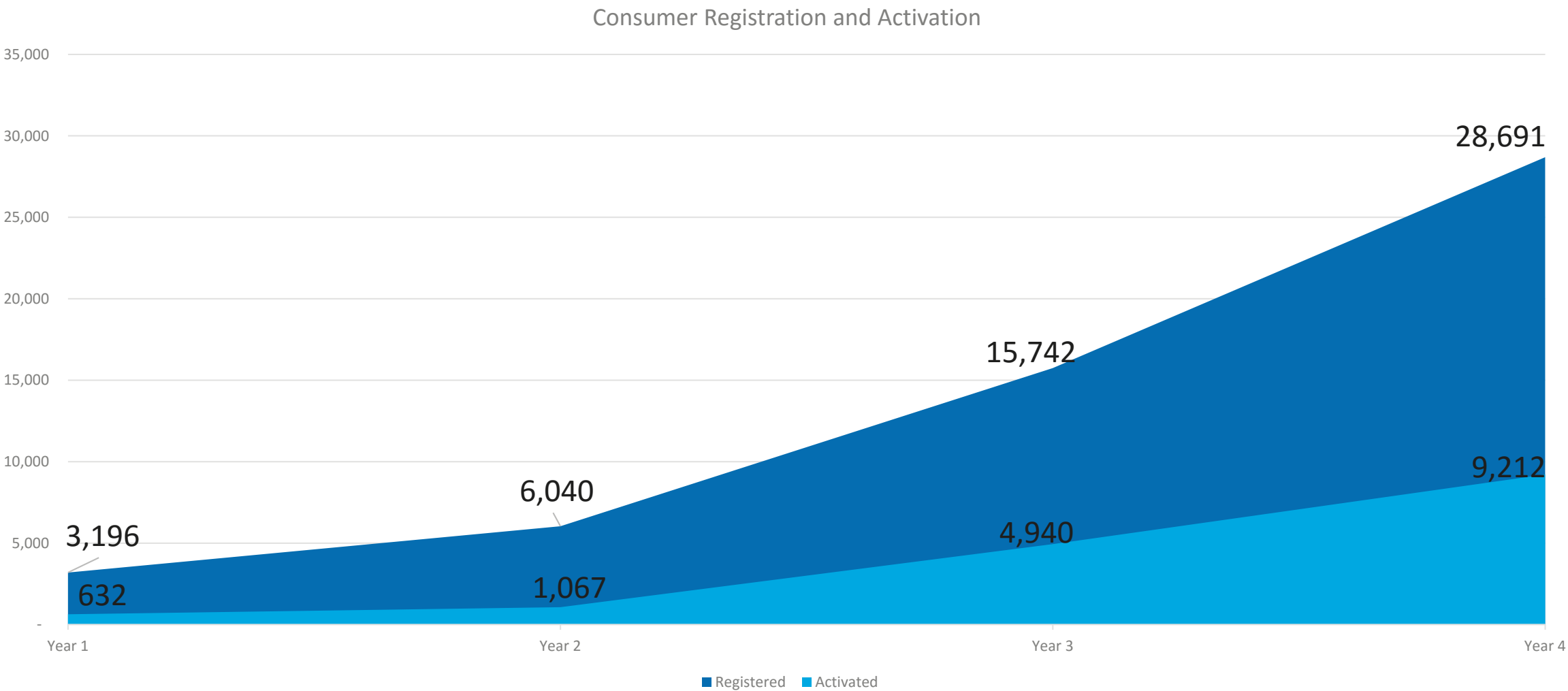
Evaluation – Sources of Information

1. Weekly Metrics
2. Consumer Survey Data
3. State Key Informant Interviews

Metrics

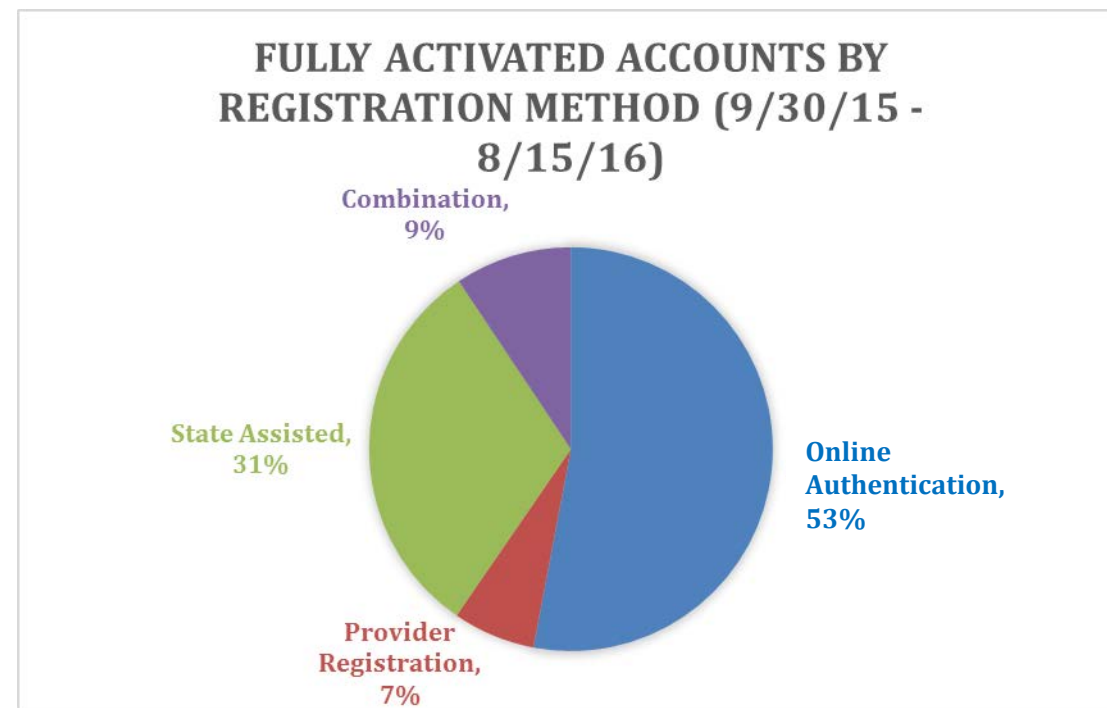
Registration Method	Program Inception to Date (2013 - 4/3/17)		Project Year (9/29/16 - 4/3/17)	
	Registered	Activated	Registered	Activated
Provider	12,050	1,600	2,213	147
(Success Rate)		(13%)		(7%)
State-Assisted	3,411	2,457	781	587
(Success Rate)		(72%)		(75%)
Online Authentication (Implemented 5/6/16)	20,931	6,746	10,736	3,538
(Success Rate)		(32%)		(33%)

Consumer Registration and Activation by Project Year



Evaluation Summary

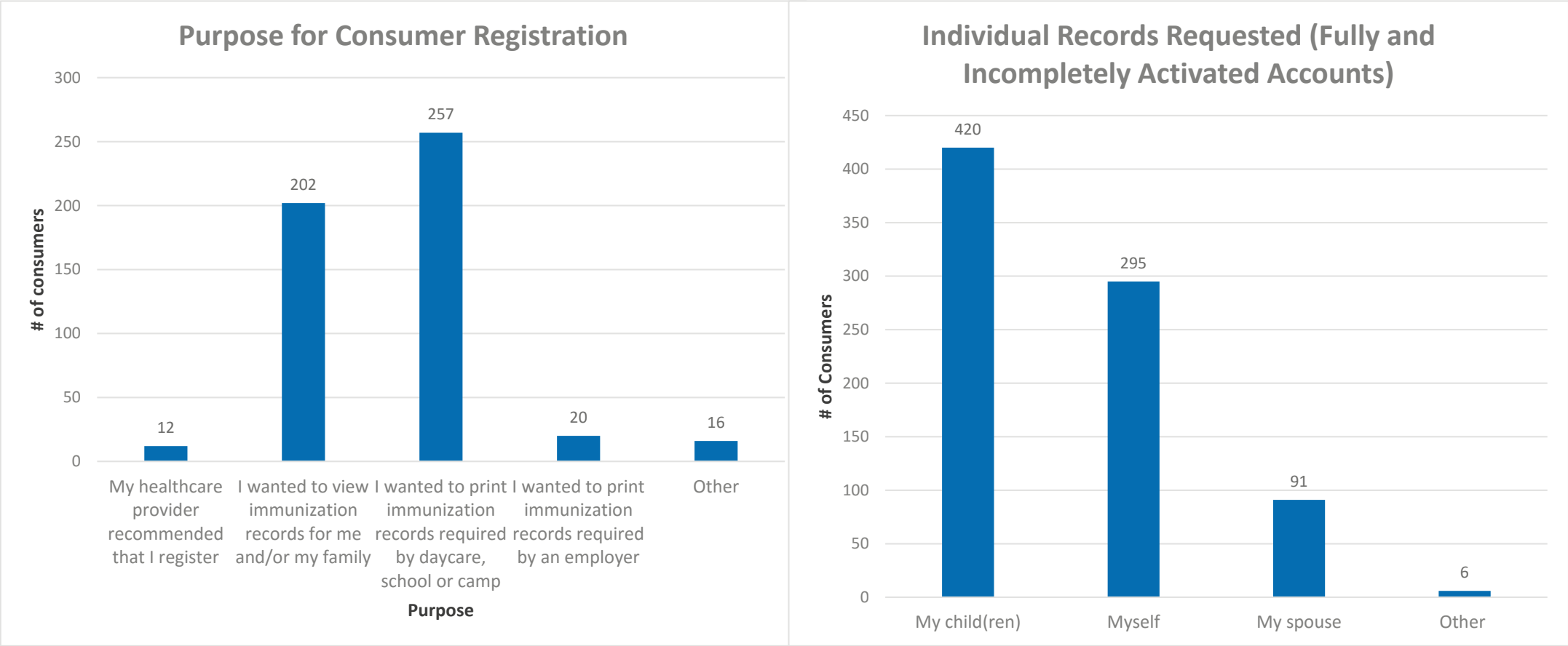
- Since program inception (2013 – April 2, 2017), across all 4 pilot sites:
 - » Record pulls to date: **77,074**
 - » # of accounts that have gained access to their immunization records through provider or state-assisted authentication: **4,057**
 - » Total accounts that have completed the Online Authentication registration and authentication process: **6,746**
 - Note that Online Authentication was implemented in May 2016 and has surpassed the provider registration method.



Evaluation – Consumer Survey Respondents

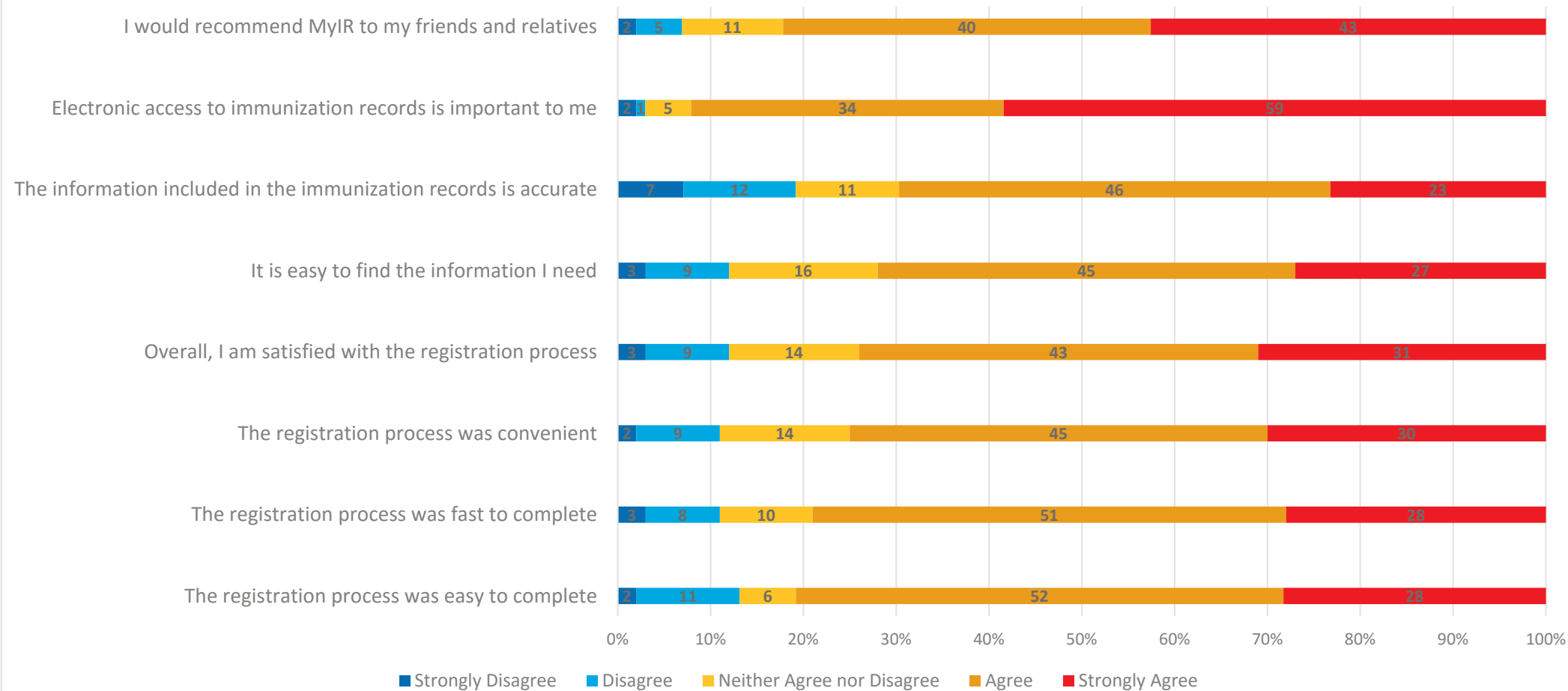
Consumer Survey Respondents		
State	Fully Activated Respondents (n= 212)	Incompletely Activated Respondents (n= 303)
Arizona	2 (<1%)	20 (7%)
Louisiana	21 (10%)	58 (19%)
Washington	188 (89%)	221 (73%)
West Virginia	1 (<1%)	4 (1%)

Consumer Surveys - Purpose for Consumer Registration



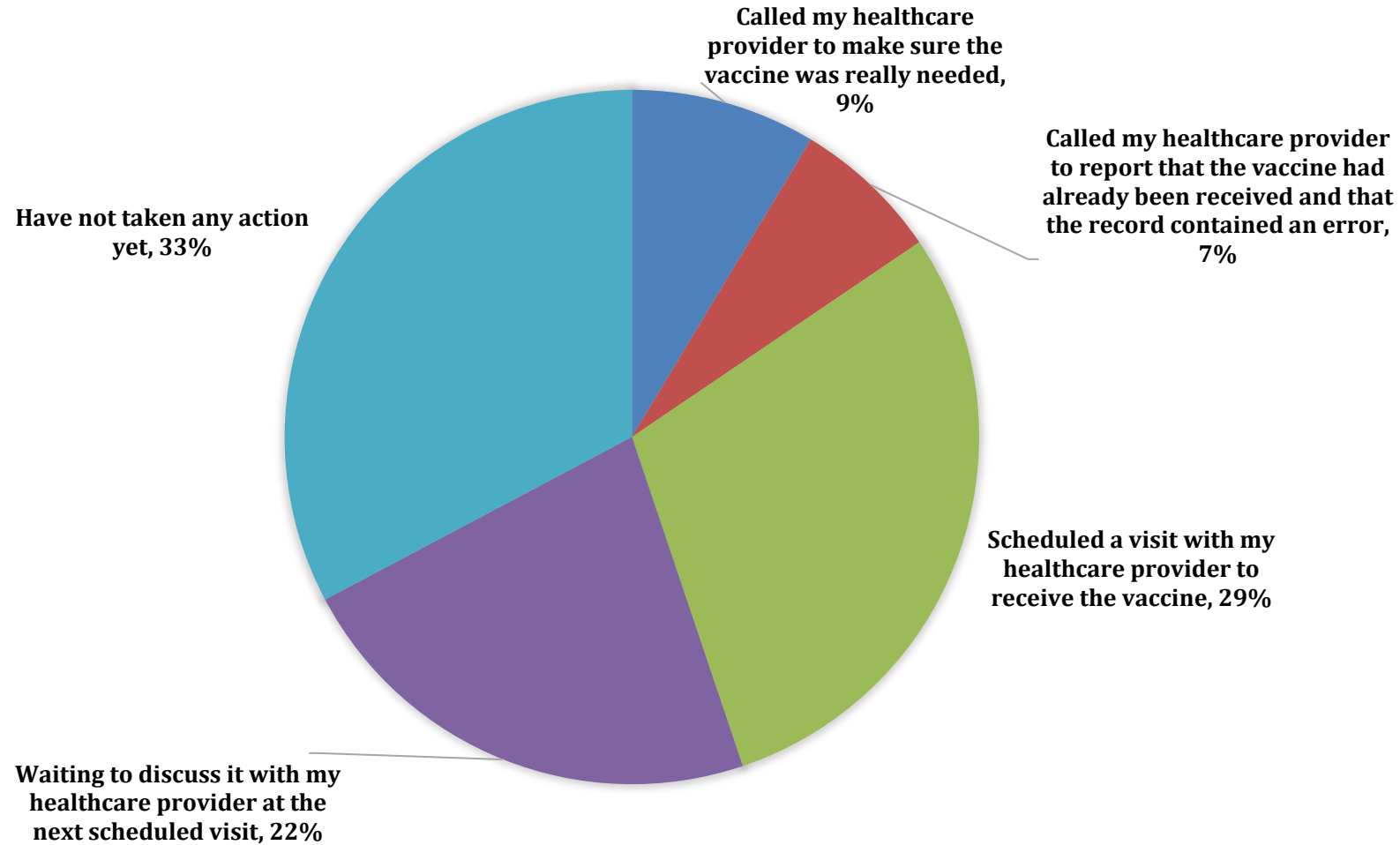
Consumer Survey Respondents Satisfaction

Fully Activated Consumers Satisfaction Registering for and Using MyIR



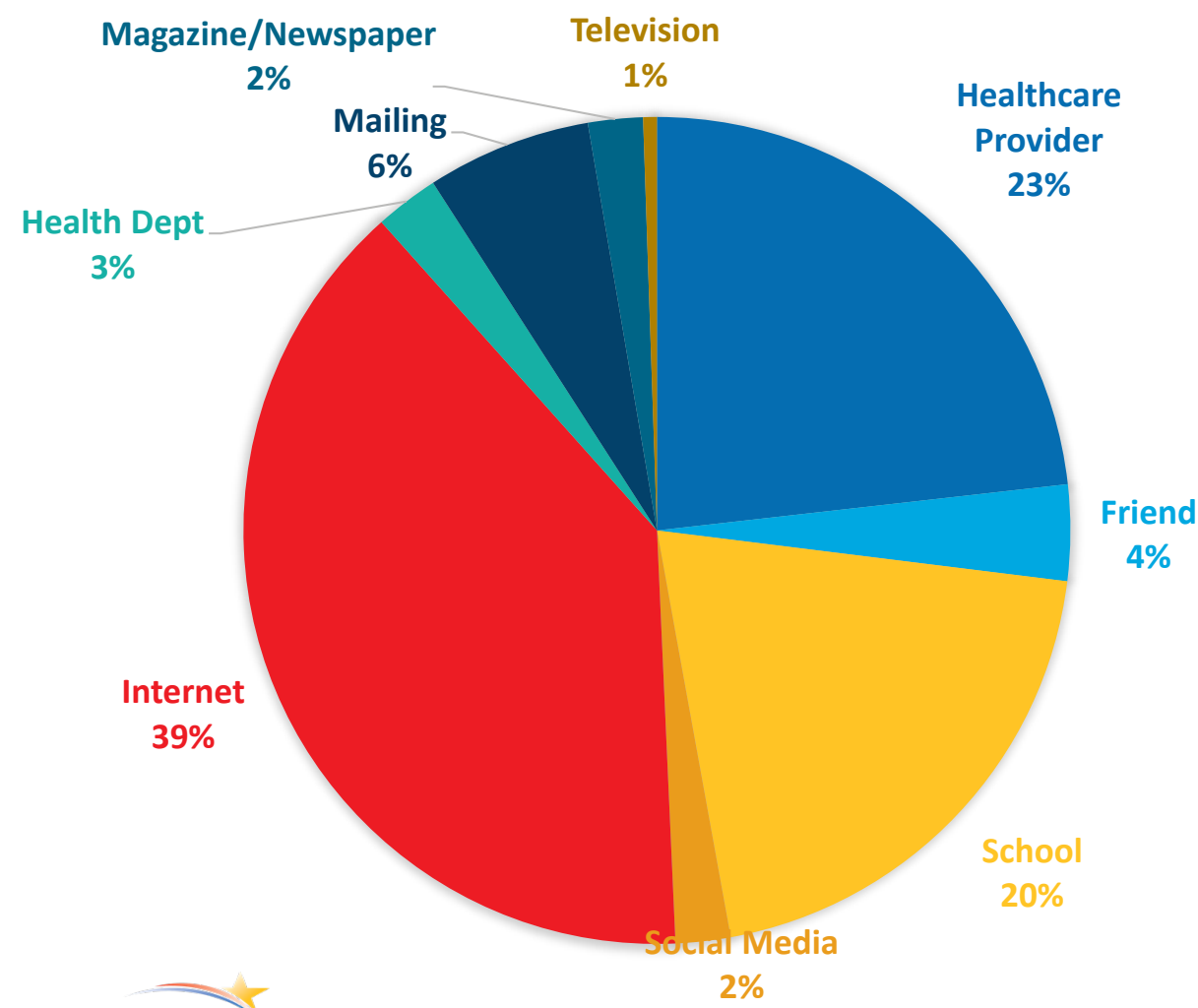
Impact of Use of MyIR on Consumer Behaviors

ACTIONS TAKEN WHEN A VACCINE WAS NEEDED



Consumer Survey Respondents – Marketing

HOW DID YOU HEAR ABOUT MYIR?



Save Time By Getting Your Family's Immunization Records Online!

April 2, 2016 · by [Leslie Pleasants](#) · [Leave a Comment](#)

If you don't need to see the doctor wouldn't you love that! Nothings worse then taking time out of your day to sit in the waiting room for who knows how long then to finally get in ONLY because you need some immunization records. Even making the phone call down there takes time out of your day. They typically wont mail them or fax them to you so you have to make the trip to their office whether you like it or not.

What if you could change all that?

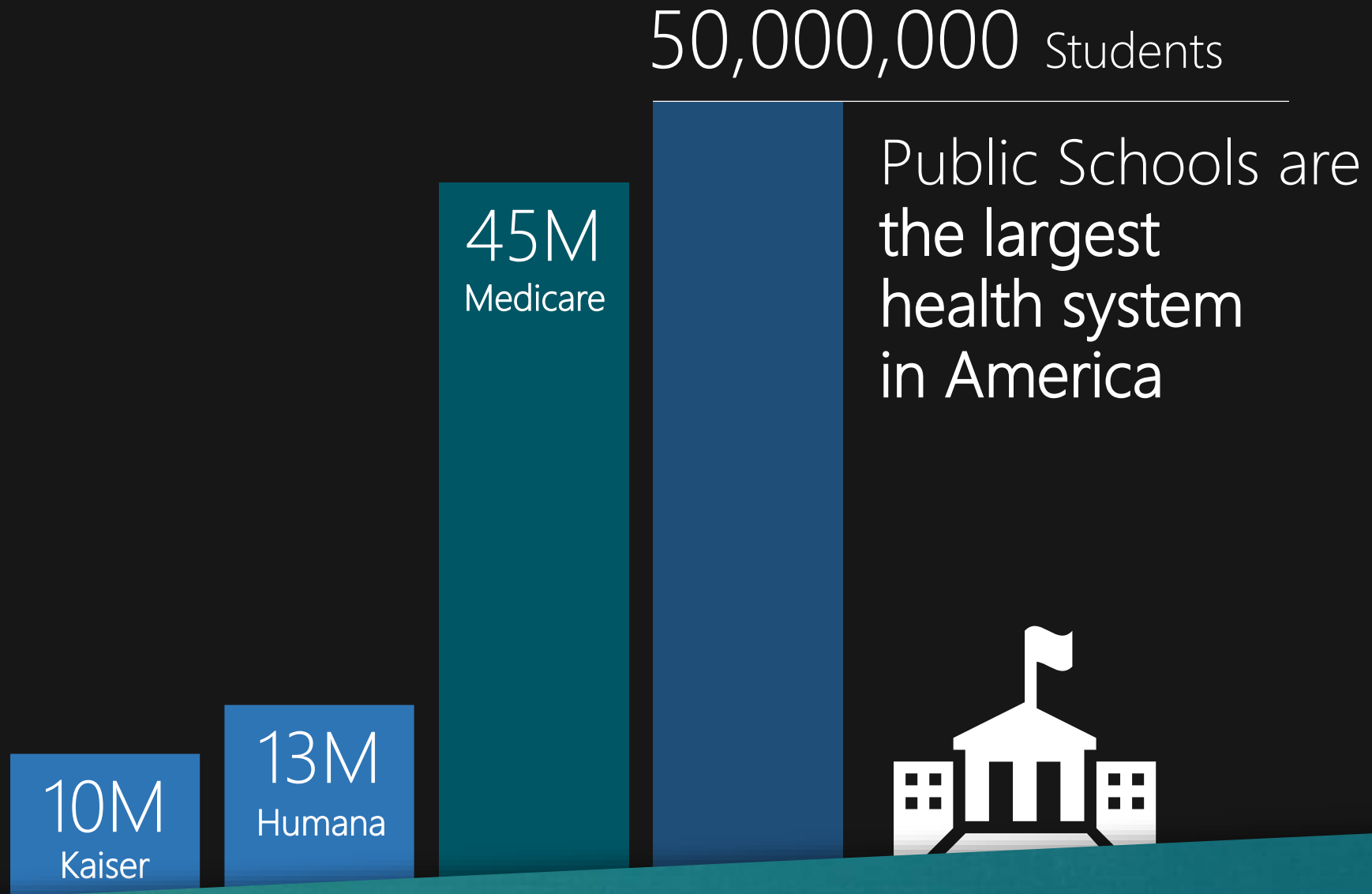
What if YOU had control and access to your families records?



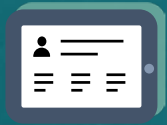
Parent Access in Partnership with
Schools

Agenda

- 1 The CareDox Approach
- 2 Metrics
- 3 Challenges
- 4 Process
- 5 Q&A



THE CareDox CareHub System



Parent Portal

Secure Portal for
Enrollment,
Health Alerts and Updates



Student Health Record



Nurse Portal

Cloud-Based Records &
Medication Mgmt.
System



District Portal

Data Reporting
& Analytics



Providers

Platform to share patient
Information with CareDox



Insurance

A comprehensive
source
of patient data



Medicaid, ACOs

Seamless coordination
with schools



Research

Unique data sets
of health indicators



IN ACTION NATIONWIDE

250,000

Growth in parental records access from 40,000 within the year

500,000

Health records with link to IIS

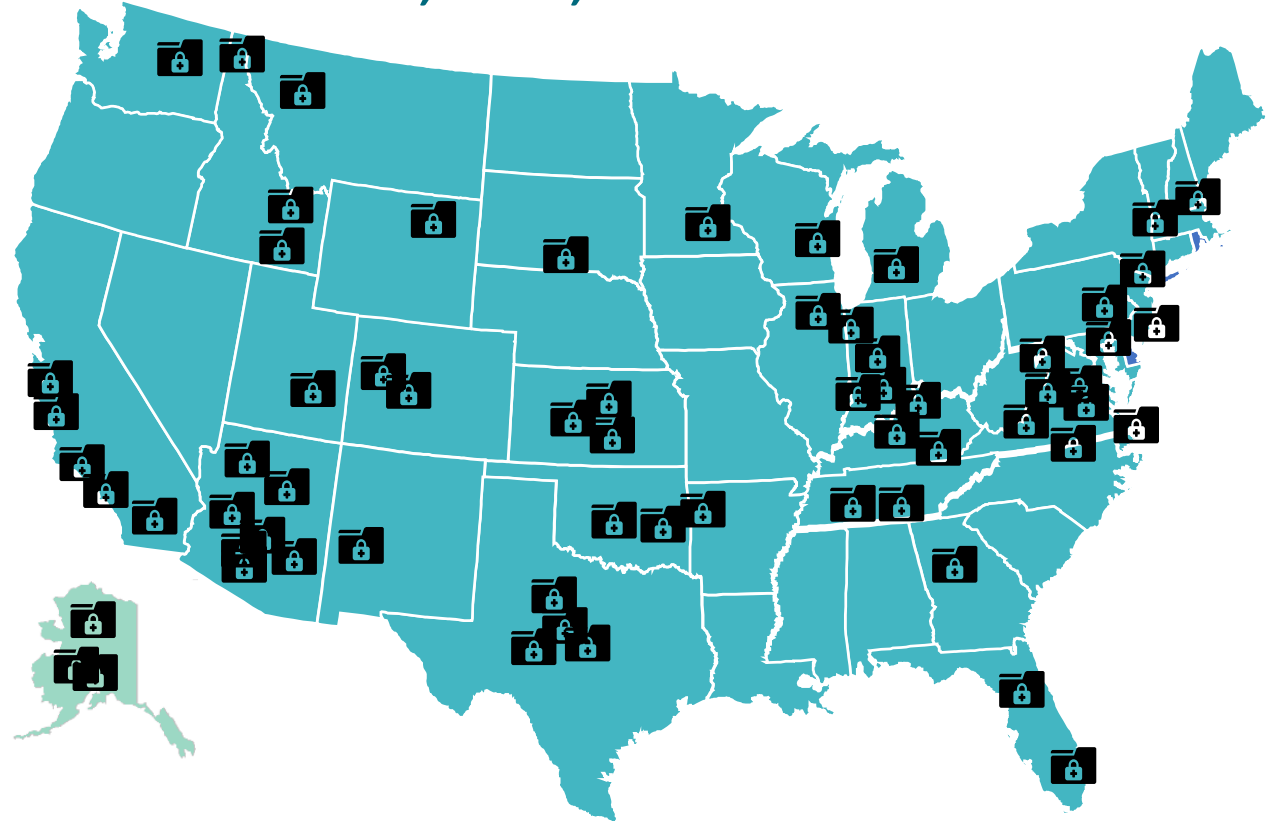
7,357,440

Immunization records (33% are from IIS)

282,974

Immunizations two way sent back in 2 states

36 States
1,500,000 children



Problem: why is it hard to engage patients



Credibility

Parents don't know who you are



Value

Parents don't wake up thinking about this unless...



Privacy

Authenticating identity and child guardian relationship



Efficiency

Laborious task. IIS' s already over worked — more to do?

Solution: why schools can work



Credibility

Through the schools — they know it and rely on it



Value

Schools creates triggers



Privacy

School authenticates both the parent and its relationship with child



Efficiency

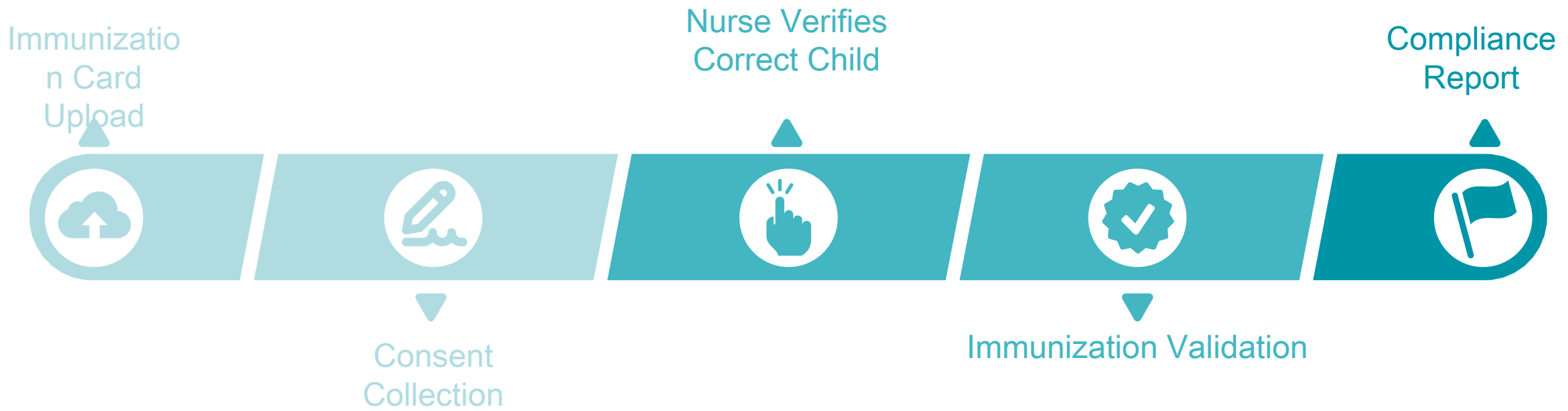
Ease of accessibility with seamless workflow



Value to Parent

- ✚ It's right there with everything else
- ✚ No need for new password
- ✚ A trusted source

Immunization Data CareDox Workflow



Nurse/School Health Staff View

With a registry relationship the nurse can call the state database, ensuring they have the most up to date shot records

Vaccine Group	Next Dose	1st	2nd	3rd	4th	5th	6th	Total
dtap		07/17/2014	05/04/2015	01/07/2016	02/02/2016	03/02/2016		5 of 4
polio		07/17/2014	05/04/2015	02/02/2016				3 of 3
mmr		07/16/2014	12/28/2015	01/01/2016				3 of 2
hepb		07/17/2014	02/02/2015	05/04/2015				3 of 3
varicella		12/27/2015	04/29/2016					2 of 1

ADD IMMUNIZATION

Last saved: 3/9/2017 9:07 PM

SAVE & RECALC IMMUNIZATIONS

RECALCULATE IMMUNIZATION STATUS


UPDATE FROM IMMUNIZATION REGISTRY

RULE BREAKDOWN


UPDATE FROM IMMUNIZATION REGISTRY

Family health profile overview

Parents & guardians can view their child's immunization status via the CareDox family view



An, Joy
Feb 01, 2010
Kindergarten Registration

Health Profile


ENROLLMENTS

CareDox K-12 School
Kindergarten Registration

Continue Enrollment

Summary
Health Profile
Immunizations
Enrollments
Documents / Care Plans
Visit History
Medications
Screenings

Immunizations below entered by school staff

Immunizations status: Valid

Vaccine Group	Next Dose	1st	2nd	3rd	4th	5th	6th	Total
dtap		07/17/2014	05/04/2015	01/07/2016	02/02/2016	03/02/2016		5 of 4
polio		07/17/2014	05/04/2015	02/02/2016				3 of 3
mmr		07/16/2014	12/28/2015	01/01/2016				3 of 2
hepb		07/17/2014	02/02/2015	05/04/2015				3 of 3
varicella		12/27/2015	04/29/2016					2 of 1



Value to Registries

- ✚ Easier way to engage parents
- ✚ Designed to start with little extra work from IIS
- ✚ A trusted source
- ✚ Additional robust data source

My Vaccine Record: Online Access to Immunization Records in the Citywide Immunization Registry

NYC Department of Health & Mental Hygiene
Bureau of Immunization, Division of Disease Control
[#AIRA2017](#)

Citywide Immunization Registry (CIR)

- New York City's Immunization Information System (IIS)
- Started citywide since 1997
- Mandatory reporting of immunizations for children 0-18 years; reporting for adults >19 years (verbal or written consent)
- 6.5 million patient records; 88 million immunizations
- > 2,400 facilities report; >90% report regularly
- Web-based access previously limited to health care providers, authorized agencies (i.e., MCOs, WIC, schools, child care)
- **My Vaccine Record:** NEW! Online access for parents, legal guardians or custodians, and individuals

Purpose of My Vaccine Record Web Application

- Goal: Give the public convenient access to their own and their children's immunization records
 - Access was previously limited to mail, fax, walk-in
 - Mail could take up to 2 weeks
- Other IISs currently offering online consumer access: Alaska, Arizona, Louisiana, Minnesota, Washington, West Virginia, Wisconsin, Puerto Rico, and more

Legal considerations

- Parents and patients are authorized CIR users by NYS law and NYC Health Code
- Parent, guardian, custodial relationship, or self
- User must find a unique match
- Verify relationship using birth record or healthcare facility reporting information

User Identity Verification and Authentication

- Issues:
 - Need more than a user ID and password to initially establish identity; e.g. medical record number
 - People forget user IDs and passwords and NYC population is 8.4 million
 - Considered SSN; no budget for per-transaction cost
- Solution: IDNYC municipal ID program
 - Identity and address verified when person gets card
 - Authentication using first name, last name, DOB, and IDNYC card number

My Vaccine Record Development

- Application workflow and Web page design
- IDNYC built card holder verification Web Service and CIR integrated it into Web application
- Re-used existing two-step search process from HL7 Web Service and Online Registry Web application
 - Step 1: Combination of exact match queries
 - Step 2: Probabilistic match
- Development, finalizing screens and language, testing, security scans, and launch

My Vaccine Record

nyc.gov/myvaccinerecord

Promoting and Protecting the City's Health

NYC
Health

Select Language  Text-Size

[Home](#) [About](#) [Accessing Records](#) [FAQs](#) [Contact Us](#)

Welcome Certification 1 Parent / Guardian 2 Search 3 Results 4 Feedback 5

My Vaccine Record

Use this site to look up immunization records for yourself or your child.

-  You will need an **IDNYC**  card to complete your request. [\(more...\)](#)
-  If you are searching for a child's record, you must be listed on the birth certificate or your information must have been reported to the New York City (NYC) Health Department by the child's health care provider. [\(more...\)](#)
-  If you are searching for your own record, your immunizations must have been reported to the NYC Health Department by your health care provider. [\(more...\)](#)

Most of the records in the Health Department's Citywide Immunization Registry (CIR) are for people born in New York City after 1995.

[Previous](#) [Next](#)

Legal Requirements: Certification Statement – Step 1

[Home](#)[About](#)[Accessing Records](#)[FAQs](#)[Contact Us](#)

Search

WelcomeCertification 1Parent / Guardian 2Search 3Results 4Feedback 5

Certification Statement

Please read this Certification Statement carefully. You can proceed only if you can agree to the accuracy of the statement. If not, exit the application and call 311.

I am the parent, guardian or other person in parental or custodial relation to the child whose information is entered for the immunization record search, and, as such, I am authorized to view this information; or, I am the individual to whom the immunization record relates. I understand that submitting false, untrue or misleading information to the Department of Health and Mental Hygiene is a violation of New York City Health Code [§3.19 \(PDF\)](#). I further understand that each incident of such violation is punishable by civil penalties of up to \$2,000 pursuant to New York City Health Code [§3.11 \(PDF\)](#).

☐ I agree to the above statement.

I certify that I am the (choose one of the following):

- ☐ Parent or guardian, or other person in parental or custodial relation to the child
- ☐ Individual to whom the record relates
- ☐ Other relationship to the child. Please describe your relationship to the child:

PreviousNext

Parent, Guardian, Custodian Verification – Step 2

[Home](#) [About](#) [Accessing Records](#) [FAQs](#) [Contact Us](#)

Welcome Certification 1 Parent / Guardian 2 Search 3 Results 4 Feedback 5

Parent/Guardian

[exit session](#)

Please enter **your information below**. Your information will be used to verify your relationship to the child. If your health care providers have not reported your information to the NYC Health Department, you will not be able to retrieve a record.

First Name

Last Name

Middle Name

Date of Birth

IDNYC Card Number

☐ Show Entry [About IDNYC Enrollment](#)

Address

House Number

Street

Apt.

City

State

ZIP Code

Country

Email Address

Phone Numbers

Home

Cell

☐ By checking this box, you are consenting to send your name and date of birth to the New York City Human Resources Administration to verify your IDNYC card. The NYC Health Department will not save your IDNYC card number. If you do not consent or do not have an IDNYC card, you will not be able to proceed with the immunization record search. You may visit [IDNYC](#) or the My Vaccine Record [FAQs](#) for more information if you are unable to proceed.

Previous

Clear

Next

Immunization Record Search - Step 3

Welcome

Certification 1

Parent / Guardian 2

Search 3

Results 4

Feedback 5


Immunization Record Search

[exit session](#)

Please enter your information below.

First Name Last Name Middle Name

Date of Birth Sex Assigned at Birth ☐ Male ☐ Female

IDNYC Card number ☐ Show Entry [About IDNYC Enrollment](#) 

Medicaid Number AA#####A (optional) CIR Number (optional)

Please enter your mother's information:

Mother's First Name Mother's Maiden Name (last name before first marriage)

Mother's Date of Birth


Please enter an address reported to the health care provider at the time of vaccinations:

House Number Street Address Apt. City

State New York ZIP Code Phone Number ### ### ##

If current address is different, please enter ZIP code, if in the U.S.:

If current address is outside of the U.S., please choose the country: United States of America

☐ By checking this box, you are consenting to send your name and date of birth to the New York City Human Resources Administration to verify your IDNYC card. The NYC Health Department will not save your IDNYC card number. If you do not consent or do not have an IDNYC card, you will not be able to proceed with the immunization record search. You may visit [IDNYC](#)  or the My Vaccine Record [FAQs](#) for more information if you are unable to proceed.

Previous

Clear

Next

Results - Step 4

Welcome

Certification1

Parent / Guardian2

Search3

Results4

Feedback5

Results

exit session


Sign up to receive immunization messages from the Health Department when this feature becomes available.


Text Messages: ☒ Yes ☐ No Cell Number

Email Messages: ☒ Yes ☐ No Email Address

[save](#)

This report contains immunization data that have been reported to the Health Department's Citywide Immunization Registry (CIR). Review this report with your health care provider for completeness and accuracy. Records may be updated by completing and mailing the [Immunization Record Enrollment or Update form \(PDF\)](#).

 save

 Print

NYC
Health
Bureau of Immunization


CIR ID: 578007887

Name: MINNIE MOUSE

DOB: 10/10/2005

Age: 11 y 5 m

Sex Assigned at Birth: Female

 Citywide
Immunization
Registry

42-09 28th Street, 5th Floor, CN 21
Long Island City, NY 11101-4132
email: cir-records@health.nyc.gov
www.nyc.gov/health/cir


Immunization History

Date 03/07/2017 03:08 PM


Vaccine	Vaccine Name	Date of Vaccination	Next Due/Recommendation
Influenza			Due on 08/01/2017 Influenza
	Influenza	09/23/2014	
	Influenza, IIV3, Adjuvanted, IM (>=65yrs)	08/25/2016	
	* Influenza, IIV3, IM	12/05/2016	
HepB			Completed Vaccine Series
	DTaP-Hep B-IPV (Pediarix)	12/10/2005	
	DTaP-Hep B-IPV (Pediarix)	02/13/2006	
	DTaP-Hep B-IPV (Pediarix)	05/10/2006	

- Download or Print.
- Enter cell phone number and or email for future messages from BOI.

Sample Printed Record



NYC
Health
Bureau of Immunization



Citywide
Immunization
Registry

CIR ID: 42-09 28th Street, 5th Floor, CN 21
 Name: Long Island City, NY 11101-4132
 DOB: email: cir-records@health.nyc.gov
 Age: www.nyc.gov/health/cir
 Sex Assigned


Immunization History

Date 09/16/2016 02:41 PM

Vaccine	Vaccine Name	Date of Vaccination	Next
Influenza			DUE NOW Influenza
	Influenza, injectable	10/05/2009	
	Influenza, injectable	11/04/2009	
	Influenza, injectable	10/29/2010	
	Influenza, intranasal	10/16/2012	
	Influenza, intranasal	10/25/2013	
	Influenza, intranasal	11/04/2014	
	Influenza, IIV4, P-free	11/05/2015	
HepB			Completed Vaccine Series
	Hep B, pediatric	01/14/2009	
	Hep B, pediatric	03/11/2009	
	Hep B, pediatric	05/12/2009	
Rotavirus			Completed Vaccine Series
	Rotavirus (RotaTeq)	12/05/2008	
	Rotavirus (RotaTeq)	02/11/2009	
	Rotavirus (RotaTeq)	04/07/2009	
DTP			DUE 10/03/2019 Tdap
	DTaP	12/05/2008	
	DTaP	02/11/2009	
	DTaP	04/07/2009	
	DTaP	01/12/2010	
	DTaP	10/16/2012	
Hib			Completed Vaccine Series
	Hib (ActHIB)	12/05/2008	
	Hib (ActHIB)	02/11/2009	
	Hib (ActHIB)	05/12/2009	
	Hib (ActHIB)	11/04/2009	

CIR ID	Name	DOB
Pediatric Pneumococcal (PCV & PPSV)		Recommended for high risk groups
	PCV7 (Pevnar7)	12/05/2008
	PCV7 (Pevnar7)	02/11/2009
	PCV7 (Pevnar7)	04/07/2009
	PCV7 (Pevnar7)	01/12/2010
	PCV13 (Pevnar 13)	03/24/2011
Polio		Completed Vaccine Series
	Polio, injectable	01/14/2009
	Polio, injectable	03/11/2009
	Polio, injectable	04/07/2009
	Polio, injectable	05/12/2009
	* Polio, injectable	10/25/2013
MMR		Completed Vaccine Series
	MMR	10/05/2009
	MMR	10/16/2012
Varicella		Completed Vaccine Series
	Varicella (chickenpox)	10/05/2009
	Varicella (chickenpox)	10/25/2013
HepA		Completed Vaccine Series
	Hep A, pediatric, 2-dose	01/12/2010
	Hep A, pediatric, 2-dose	10/29/2010
Meningococcal (MenACWY)		DUE 10/03/2019 MenACWY NOS
Human Papillomavirus		DUE 10/03/2019 HPV
Adult Pneumococcal (PCV & PPSV)		Not recommended
Other		
	H1N1	11/09/2009

Other languages: Spanish, Chinese (TC, SC)



The image displays two versions of the NYC Health website's vaccination record page. The top version is in Spanish, and the bottom version is in Chinese. A yellow arrow points to the language selection dropdown in the Spanish version.

Spanish Version (Top):

- Header: Promoviendo y protegiendo la salud de la ciudad. NYC Health. Seleccione el idioma. Tamaño del texto.
- Navigation: Acerca de nosotros, Acceso a registros, Preguntas frecuentes, Comuníquese con nosotros, Buscar.
- Progress Bar: Bienvenidos, Certificación 1, Padres / Tutores 2, Buscar 3, Resultados 4, Comentarios 5.
- Section: **Mi registro de vacunación**. Utilice este sitio para revisar su registro de vacunación y los registros de sus hijos.
- Instructions:
 - Necesitará una tarjeta IDNYC para completar su solicitud. (más...)
 - Si está buscando el registro de un menor, el nombre de usted debe aparecer en el certificado de nacimiento o su proveedor de atención médica debe haber proporcionado su información al Departamento de Salud de la Ciudad de Nueva York. (más...)
 - Si está buscando su propio registro, su proveedor de atención médica debe haber proporcionado la información sobre sus inmunizaciones al Departamento de Salud de la Ciudad de Nueva York. (más...)
- Note: La mayoría de los registros que se encuentran en el Registro de Vacunación de la Ciudad (CIR, por sus siglas en inglés) del Departamento de Salud pertenecen a personas que nacieron en la ciudad de Nueva York después de 1995.
- Buttons: Anterior, Siguiente.

Chinese Version (Bottom):

- Header: 选择语言. 字体大小.
- Navigation: 关于我们, 访问记录, 常见问题, 联系我们, 搜索.
- Progress Bar: 欢迎, 认证 1, 父母 / 监护人 2, 搜索 3, 结果 4, 反馈 5.
- Section: **我的疫苗接种记录**. 请使用该网站查找您或您孩子的疫苗接种记录。
- Instructions:
 - 您需要使用一张IDNYC卡来完成您的请求。 (更多详情.....)
 - 如果要搜索孩子的记录, 其出生证明上必须有您的姓名, 或儿童医疗服务提供者必须已将您的信息提交至纽约市(NYC)卫生局。 (更多详情.....)
 - 如果要搜索自己的记录, 您的医疗服务提供者必须已将您的接种信息提交至纽约市卫生局。 (更多详情.....)
- Note: 卫生局的全市免疫接种登记系统(CIR)中的大部分记录都是1995年以后于纽约市出生的人的记录。
- Buttons: 上一步, 下一步.

Promotion

My Vaccine Record

Vaccine Records at Your Fingertips

Access your or your child's official records from the Citywide Immunization Registry (CIR) for free.

Visit nyc.gov/myvaccinerecord to learn more.

Easy. Convenient. Secure.



My Vaccine Record

Keep track of your or your child's vaccines using **My Vaccine Record**.

Access official records anytime to give to child care centers, schools, camps, colleges or for international travel. The service is free and secure.

Visit nyc.gov/myvaccinerecord to learn more.

Most records in My Vaccine Record are for people born in NYC after 1995. If you cannot use My Vaccine Record, you can access your or your child's record by mailing a completed *Immunization Record Request Application*.

Call 311 to request to a copy of the application or visit nyc.gov/health and search immunization record request.



My Vaccine Record

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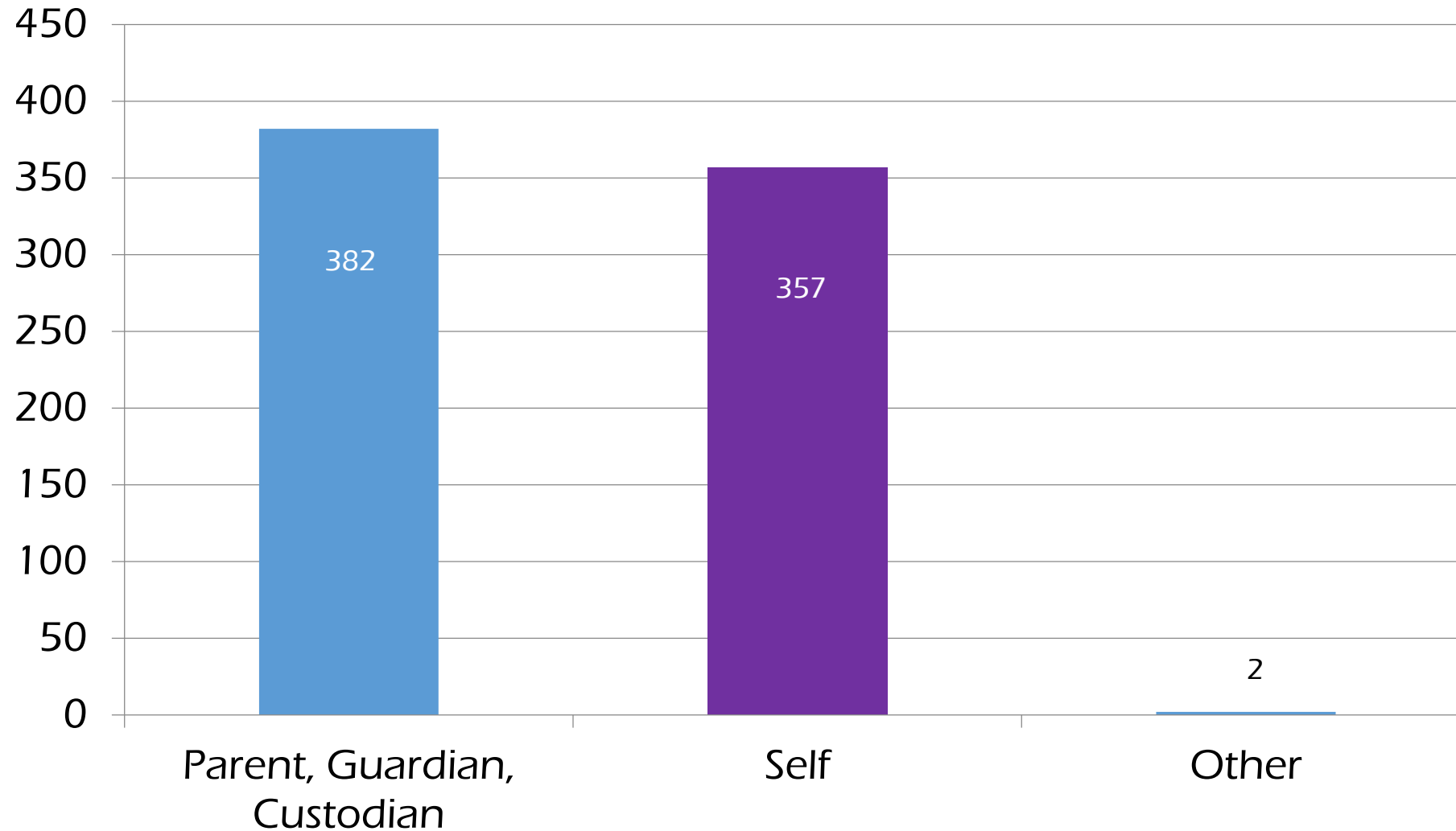


- Press release Jan.17, 2017: El Diario NY
- DOHMH Facebook
- DOHMH Twitter
- IDNYC
- Letter to Providers and forwarded press release Child Care Centers
- Sample one-page information sheet for office display with tear-off in English, Spanish, Chinese (TC and SC)

Results

Record Requests Before Identity Verification

Jan. 19, 2017 to April 5, 2017; N = 741



Initial Usage Results by Age - Jan. 19, 2017 to April 5, 2017

	Total	Found	Not Found
0-18 years	166 (50%)	164 (99%)	2 (1%)
>=19 years	166 (50%)	89 (54%)	77 (46%)
Total	332	253	79

*Among 320 verified IDNYC card holders

Challenges

IDNYC Verification - Jan. 19, 2017 to April 5, 2017

	Requests
IDNYC Verified	320 (45%)
IDNYC Not Verified	387 (54%)
Other	1 (<1%)
Total	708

Reasons for IDNYC verification failure:

1. Misspelling of first name and/or last name
2. Typing errors in 14-digit IDNYC
3. IDNYC registration error: Middle initial included in first name field

Usage Results - Jan. 19, 2017 to April 5, 2017

IDNYC Verified Requests	
Relationship Verified	253 (77%)
Relationship Not Verified	76 (23%)
Total	329

Parent/guardian/custodial relationship established via contact information entered in MVR matches CIR data

Immunization Record Search Results - Jan. 19, 2017 to April 5, 2017

	Immunization Records
Patient Found	253 (76%)
Patient Not Found	79(24%)
Total	332



125 records downloaded



136 records printed

Future Improvements

- Increase public awareness of MVR, such as schools, child care centers, and pediatric care providers
- Improve identity and relationship verification
- Cell phone and E-mail verification and authentication
- Add survey to the feedback page
- Translate into additional languages



Contact Information

Citywide Immunization Registry NYC Department of Health and Mental Hygiene

Angel Aponte

Shirley Huie

nyc.gov/health/cir

Tel: (347) 396-2400

cir-records@health.nyc.gov

nyc.gov/myvaccinerecord



Discussion



@ONC_HealthIT



@HHS ONC