



AIRA
AMERICAN IMMUNIZATION
REGISTRY ASSOCIATION

Immunization Information Systems (IIS)

NCSL State Public Health Symposium
June 22, 2023

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American Immunization Registry Association

Overview



IIS

[i - i - s] noun

1. Confidential, **population-based**, computerized database
2. Records all immunization doses administered by participating providers to persons residing within a given geopolitical area



Data Sources



Healthcare Providers



Pharmacies



Hospitals



Long Term Care
Public Health,
Occupational
Health, Urgent
Care, etc.

Data Consolidation & Exchange

Most use
electronic
systems

80%

IIS-IIS Exchange Automated send & receive
data to complete vaccination records



Jurisdictional
Immunization
Information
System (IIS)



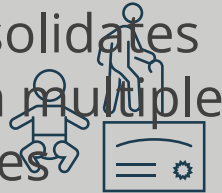
Sources **send & receive**
vaccination records



Healthcare Providers

Use information to see
which vaccinations their
patients have had and
may need

Other Sources
The IIS consolidates
records from multiple
sources



Vital Records
Human Services

State and Local Public Health Authorities

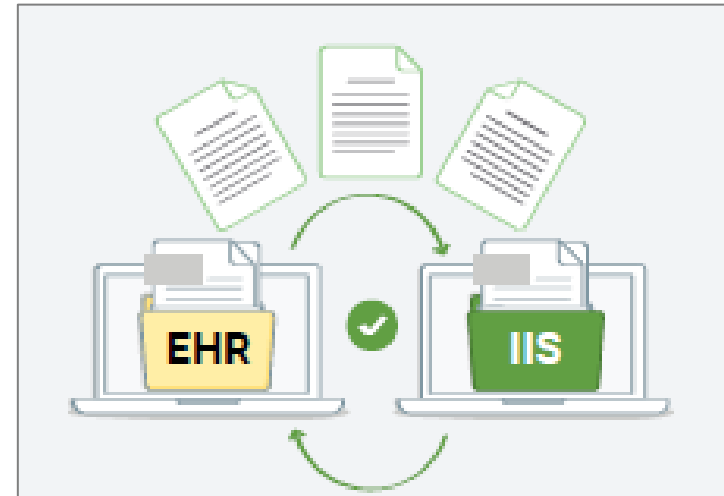
Use data to develop programs to increase vaccination coverage and decrease harm from VPDs (e.g., manage outbreak response)

Parents and General Public

Use records to enroll children in schools and daycare and determine when they need vaccinations. (e.g., through a consumer access portal)

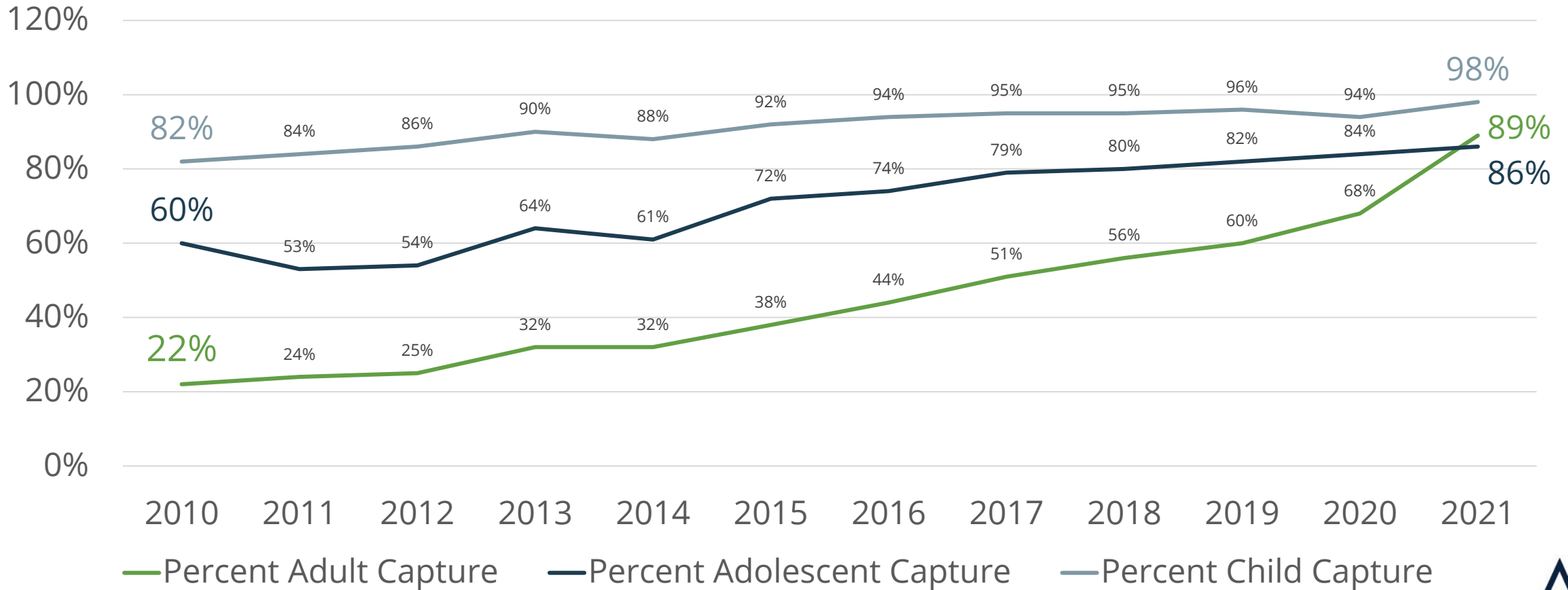
Data Exchange

- In 2021, IIS reported **over 146,000** data exchange connections
- **~59%** of connections were bidirectional



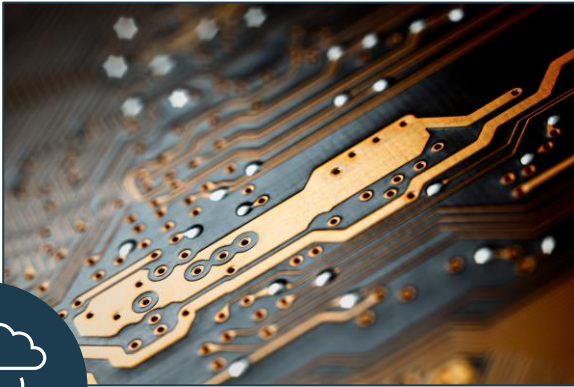
Trends in Capture, 2010-2021

Percentage of children, adolescents, adults represented in an IIS, 2010-2021





Policy



Technology



Operations



Workforce

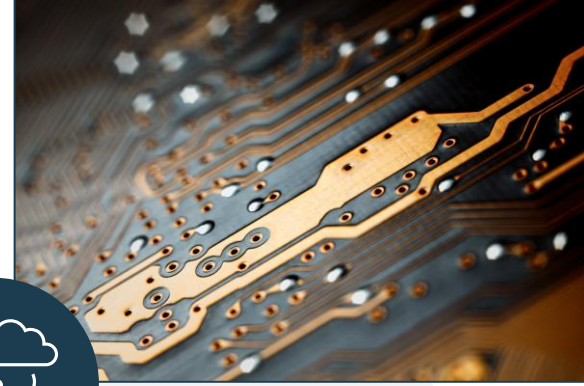


Technology

Standards & Data Modernization Initiative (DMI)



Technology



Technology

- Maintain systems
 - Implement new standards
 - New vaccines & forecasting
- Enhance systems
 - New functionality – school nurse modules
 - Dashboards
- Monitor quality
- System security
- New technology & enterprise-wide systems



What are standards?

Standards are the recipe for how to do something

- Connect with another system (interoperability)
- Data elements

Gingerbread Cookies

4½ cups flour
3-4 t ground ginger
½ t cinnamon
1 t ground cloves
2 t baking soda
¼ t salt

1½ cups butter softened
2½ cups sugar
2 eggs
½ cup molasses

In a large bowl cream butter and sugar. Add eggs and molasses and combine. Add spices, salt, flour and soda and mix well.

Shape dough into small (~1" diameter) balls. Place on greased cookie sheets and flatten slightly.

Bake at 350 degrees for 6-8 minutes (set timer for lowest number and check) or until bottoms are lightly browned and tops are puffed (do not overbake). Let cool and remove from baking sheet. Makes about 150 cookies.

Standards

1

New issue emerges or existing process needs to be harmonized across systems



2

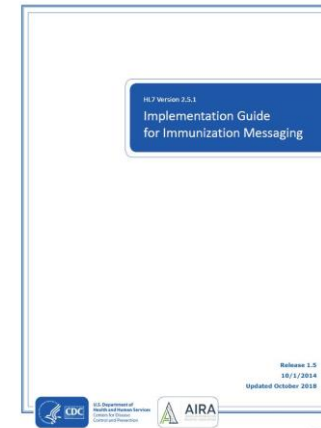
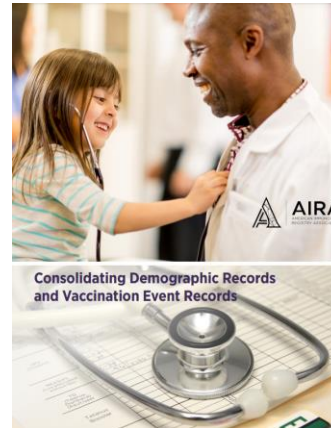
Several IIS may have implemented a way to address the new issue



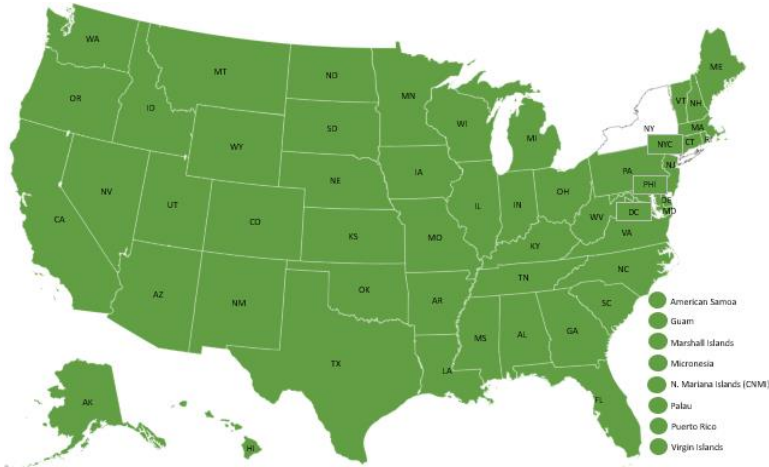
3

Monitor issues and raises awareness on emerging topics

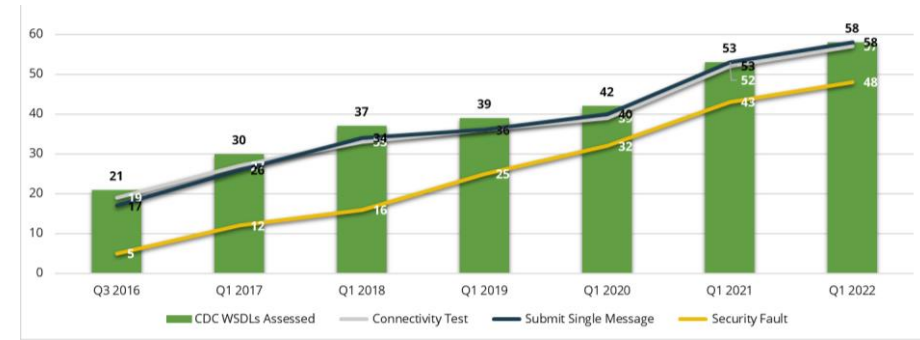
Topics that need additional work are identified & type of resource is identified



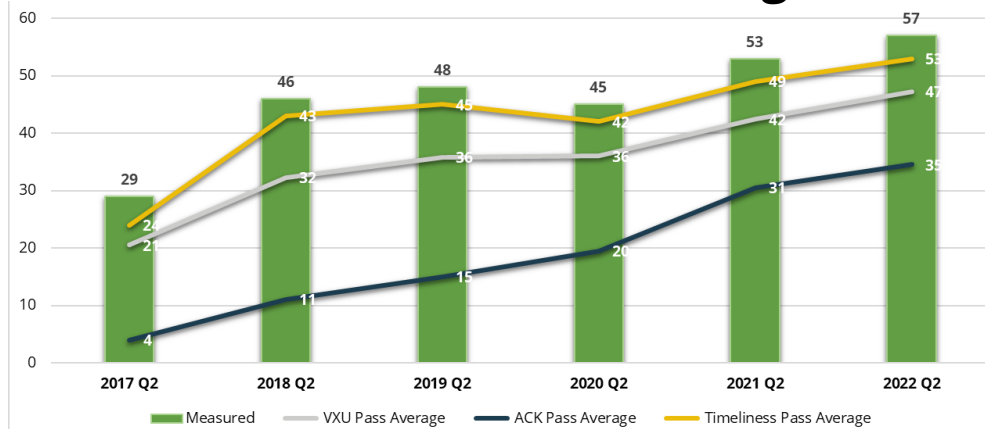
Alignment with standards



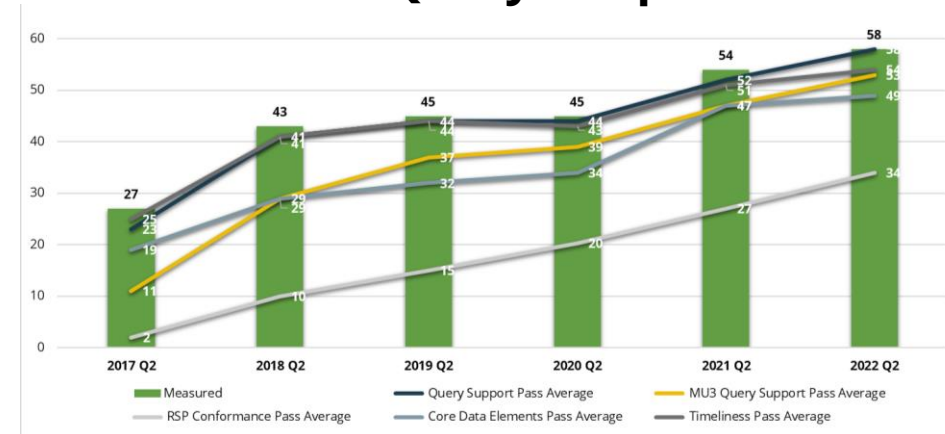
SOAP/Web Services Transport



HL7 Submission/Acknowledgement



HL7 Query/Response



The Evolution of Vaccine Records

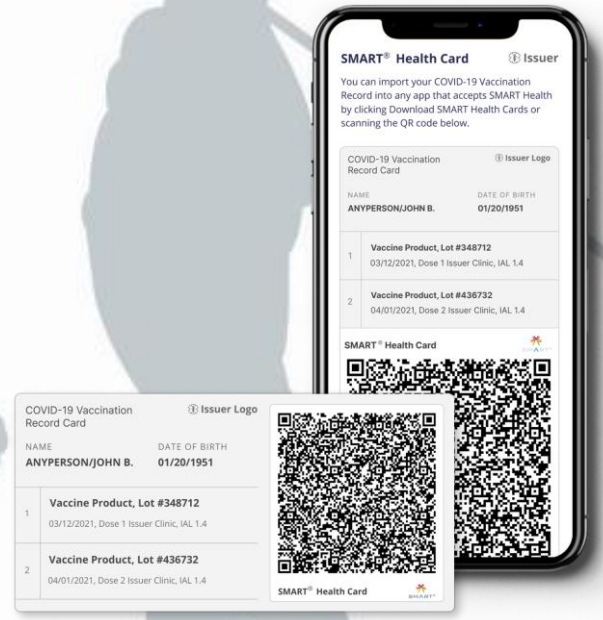
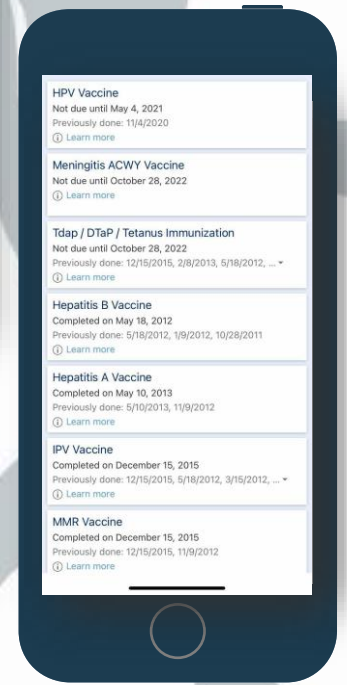
VACCINE	Date Given MO/DAY/YR	DOCTOR OR CLINIC	DATE NEXT DUE
1	AUG 25 1989	State of Hawaii, PHN4	
2	10/24/88	Josephine County Health Dept	
3	10/24/88	Josephine County Health Dept	
4	1-1-93	JOSEPHINE COUNTY HEALTH DEPT.	
5			
DPT	1	AUG 25 1989 State of Hawaii, PHN4	
diphtheria	2	10/24/88 Rdwinkle MD/HS	
pertussis	3	10/24/88 Rdwinkle MD/HS	
(whooping	4	10-9-89 JOSEPHINE COUNTY HEALTH DEPT.	
cough),	5	1-1-93 JOSEPHINE COUNTY HEALTH DEPT.	
tetanus	6	3-17-97 Olivia Leo Codes	
DT			
or			
Td			
MEASLES			
RUBELLA	10-9-89	JOSEPHINE COUNTY HEALTH DEPT.	
MUMPS			
Hemophilus D	2-28-90	JOSEPHINE COUNTY HEALTH DEPT.	
OTHER			
T.B. - first test done 6/25/85: Neg			
Hsp			
VACCINE REACTIONS AND OTHER NOTES:			
EXEMPTION-VACCINE:	PROVIDER:	DATE:	

COVID-19 Vaccination Record Card

Please keep this record card, which includes medical information about the vaccines you have received.
Por favor, guarde esta tarjeta de registro, que incluye información médica sobre las vacunas que ha recibido.

Last Name _____ First Name _____ MI _____
 Date of Birth _____ Patient number (medical record or NS record number) _____

Vaccine	Product Name/Manufacturer Lot Number	Date	Healthcare Professional or Clinic Site
1 st Dose COVID-19	mm / dd / yy	
2 nd Dose COVID-19	mm / dd / yy	
Other	mm / dd / yy	
Other	mm / dd / yy	



Data Modernization Initiative (DMI)

- The ultimate goal of CDC's Data Modernization Initiative (DMI) is to get better, faster, actionable insights for decision-making at all levels of public health.



Build the right foundation.



Accelerate data into action.



Develop state-of-the-art workforce.



Support and extend external partnerships.



Manage change and governance.



Operations



Operations

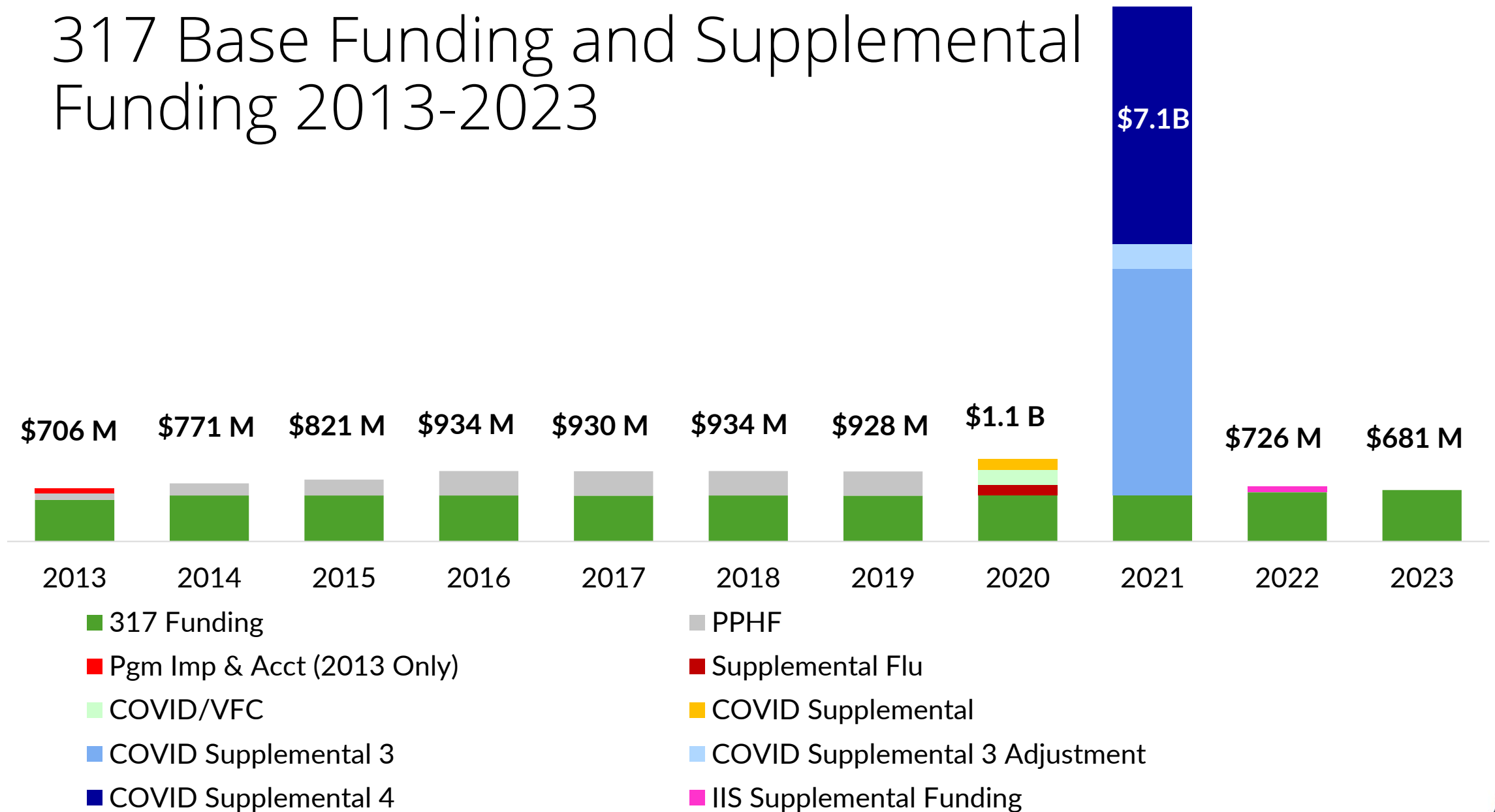


Operations

- Grant Management
 - Integrate the Vaccines for Children (VFC) program, adult programs, etc.
 - Contract management
-
- Funding to support system and operations
 - State funds can open the door to more funds (Medicaid match funds), state priorities

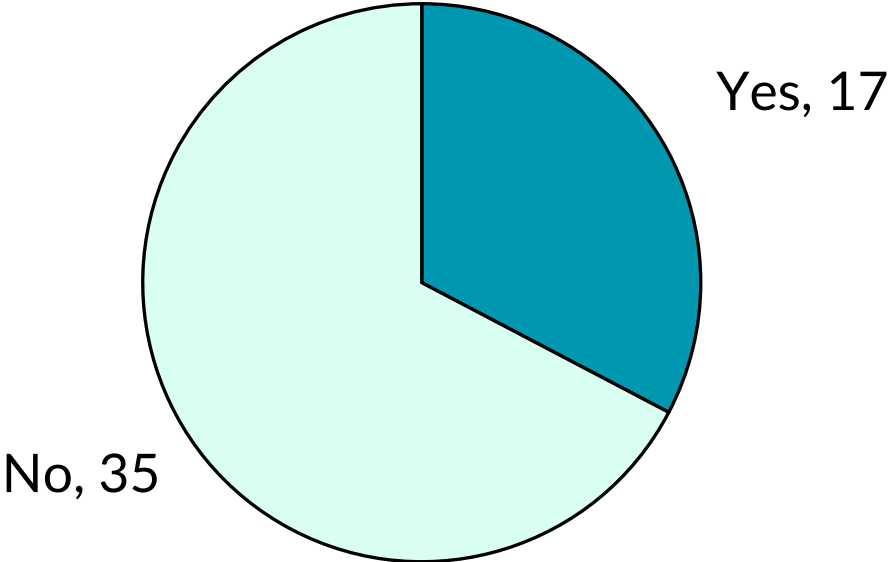


317 Base Funding and Supplemental Funding 2013-2023

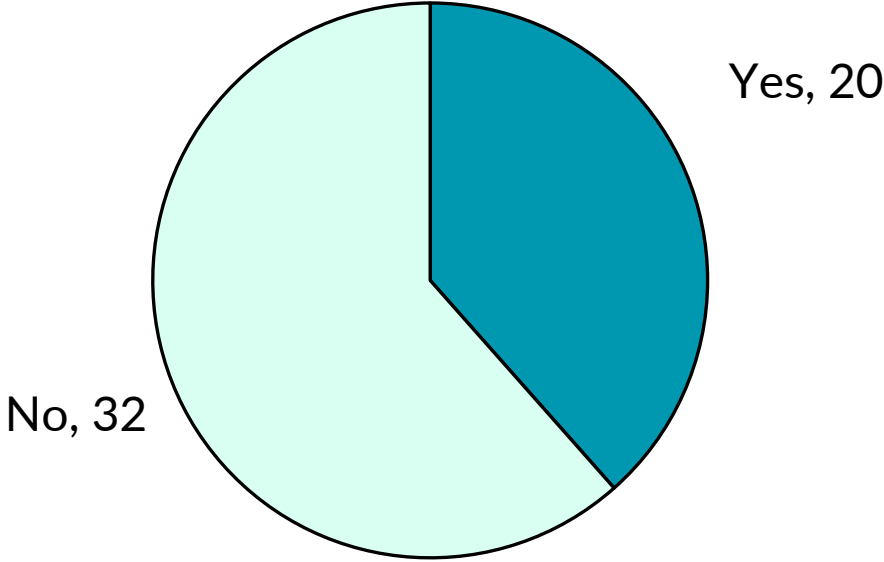


AIM Annual Survey 2022

Programs receiving state/local funds for operations/infrastructure for adults (n=52)



Programs receiving state/local funds for vaccine purchase for adults (n=52)



Workforce



Workforce



Workforce

- Ensure adequate staff to fulfill critical roles
 - Ideal & required skills have morphed
 - Will likely continue to change in the future
-
- Public vs. private sector salaries are not comparable
 - High turnover rates



Policies



Policy Decision Law ♦ Rules ♦ Other

Data Privacy Protections

Data Sharing

Impact the ability to utilize data
for disease outbreak
interventions while assuring
data safety & privacy



Foundation Careers **Login**

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Lawmakers Turn to Data Systems to Guide Vaccine Decision-Making

By Shannon Kolman | March 28, 2023

State Legislatures News Policy Health



ess



Policies to consider

Does your state have IIS enabling legislation?

- Law/statute may be silent

Consent

- Is consent required?
- Is it required for specific populations (≥ 19)
- Who is responsible for collecting consent



Policies to consider

Does your state have IIS enabling legislation?

- Law/statute may be silent

Consent

- Is consent required?
- Is it required for specific populations (≥ 19)

Reporting to IIS

- Is it required for specific populations (e.g., 0-18)
- Is it required for specific provider types (e.g., pharmacies)



Required provider reporting for vaccinations administered for individuals >19 years

- **20** required for all vaccinations from all providers
- **12** required for all vaccines but only from specific providers
- **7** only for certain vaccines through the state vaccine program
- **10** Since 2020, **ten** jurisdictions made changes to consent policies and **17** changed reporting mandates.
- **3** yes, for specific vaccinations from specific providers
- **16** no requirements



Policies to consider

Access

- Who can have access and for what purposes?
 - Clinical care
 - Schools
 - Other public health programs, Medicaid, etc.?
 - Payers?

Data Use & Data Sharing

- What can data be used for?
- In what format can data be shared (aggregate, deidentified, etc.)
- Research?



Policies to consider

Security & Protection

- Protection of the data is foundational and critical!
 - Investment at the enterprise level
 - Industry standards



Privacy

- Privacy does not have to be a tradeoff for access – it can be both
 - Data use agreements
 - Re-disclosure agreements



Federal Laws Relevant to IIS

- Health Insurance Portability and Accountability Act (HIPAA)
 - **Is the IIS a covered entity? A hybrid?**
- Family Educational Rights and Privacy Act (FERPA)
 - Protects the privacy of student education records but indirectly affects data exchange between schools/IIS
- 21st Century Cures Act
 - Health information reform, includes provisions around TEFCA (Trusted Exchange Framework and Common Agreement)



Final thoughts

- When considering policy changes – define the issue(s), what do you want to accomplish?
- Work with your Department of Health (or equivalent) to identify existing options
 - Example – vaccine safety systems
- Consider impacts beyond state systems
 - Example – DoH fiscal impacts to modify an IIS from opt-out to opt-in may be \$\$, but the impact on providers to implement is \$\$\$\$\$



Thank you!

More information @ www.immregistries.org

