

Effective IIS Data Use

Promoting Use of IIS Data to Protect Public Health

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Learning Objectives

- Understand the connection between data quality and data use
- Apply the SIPOC tool to identify the key **S**uppliers, **I**nputs, **P**rocesses, **O**utputs and **C**onsumers of IIS data
- Identify the internal and external partners who can use IIS data to increase up-to-date immunization of individuals and populations
- Recognize the potential impact of data visualization on increasing IIS data access, use, and awareness by the public and partners



IIS Data Use

*Data use is the translation of IIS data into **actionable information** to support clinical practice, immunization program operations and other purposes that protect and promote the health of individuals and communities.*

2021 IIS Core Competency Model



Why is IIS Data Use Important?

- The **purpose** of the IIS is to **collect, consolidate and share data** to increase immunization coverage rates and promote public health
- **Sustainability** and **credibility** of the IIS depends on data use
- **Data use improves data quality**
 - Users find the problems and help you fix them



Your Role as an IIS Leader

Continuously work to achieve high-quality IIS data

- Strengthen data quality processes and personnel
- Use PHII, CDC, AIRA resources

Promote and enable authorized use of high-quality IIS data by internal and external partners



How Can You Achieve Effective IIS Data Use?

SIPOC Framework for Effective IIS Data Use

Suppliers	Inputs	Processes	Outputs	Consumers
<ul style="list-style-type: none"> • Providers • Other IIS • Federal agencies 	<ul style="list-style-type: none"> • Patient demographics • Vaccination events 	<ul style="list-style-type: none"> • Onboarding for reporting and access • Matching, merging and de-duplicating records • Clinical Decision Support (forecasting) 	<ul style="list-style-type: none"> • Vaccination records • Immunization Forecasts • Vaccination coverage and line list reports • Reporting to CDC, jurisdiction • Dashboards 	<ul style="list-style-type: none"> • Providers • Immunization Program • Other Health Department staff • Other IISs • Public • Schools • Child Care • CDC • Medicaid, Health Plans • Researchers
<p><i>Role of IIS Leader</i></p> <ul style="list-style-type: none"> • Recruit and connect all suppliers 	<ul style="list-style-type: none"> • Motivate providers to report high quality data • Capture full range of IIS data inputs 	<ul style="list-style-type: none"> • Ensure integrity of data processes • Continuously improve data quality processes • Promote authorized access 	<ul style="list-style-type: none"> • Share high quality IIS data outputs 	<ul style="list-style-type: none"> • Meet consumer needs • Highlight data use champions

Recruit and Connect all IIS Data Suppliers

Onboard providers and partners for interoperability

Set up accounts for IIS user interface

- Hospital Clinics
- Public Health Clinics
- Private Provider Offices
- Federally Qualified Health Centers (FQHCs)
- Pharmacies – Chains and Independents
- School-Based Health Centers (SBHCs)
- Points of Dispensing (PODs)
- IIS in other jurisdictions and federal agencies – leverage **IZ Gateway**



Capture Full Range of IIS Data Inputs

Collect all IIS Core Data Elements

- Patient demographics
 - **Improve collection of race** and **ethnicity** and, if possible, sex/sexual orientation and gender identify (SOGI) data and priority group to **support equitable access to vaccines**
- Vaccination events
 - Vaccination date, presentation, manufacturer, lot number, etc.
 - Provider, Facility



Motivate Providers to **Input** Quality Data

Providers must input quality data to get useful data out of the IIS

To promote quality data:

- Facilitate **standards-based interoperability** for reporting
 - Ease reporting burden
 - Leverage Promoting Interoperability incentives
- Ensure confidentiality and security of IIS data
- Leverage VFC, COVID-19 vaccination programs to get quality data in
 - Obtaining publicly-purchased vaccines motivates providers



Ensure Integrity of Data Processes

- **Adhere to HL7 standards** for both IIS reporting and access
- Collaborate with your technology partners to **improve record matching, merging and deduplication**
- **Keep IIS Clinical Decision Support (CDS) engine (forecaster) updated** and aligned with Advisory Committee on Immunization Practices (ACIP) and CDS for immunization (CDSi) specifications
- Document and implement standard operating procedures (**SOPs**) for **key processes, e.g., onboarding and manual deduplication**



Continuously Improve Data Quality Processes

Designate a Data Quality Analyst - point person to lead a team

- Ensure active review and correction of incoming data and data at rest
- Work with providers to correct data quality problems

Engage with EHR vendors and providers to improve reporting of all core data elements

- Providers need to enter race, ethnicity, SOGI data in their EHR in order for the IIS to collect the data



Promote Authorized Access

Support HL7 query/response (**bidirectional data exchange**) for providers, health plans, schools

- Delivers quick, easy access to patient records and forecasts

Facilitate IIS capacity to handle large volume of data requests

- Support access to a **data warehouse/database replica/data lake**
- Ensure sufficient processing capacity, bandwidth, storage and redundancies

Expand public access by supporting a **consumer access application**

Assign sufficient staffing to support and train users



Share High Quality IIS Data **Outputs**

- Provide **vaccination records, forecasts, coverage reports** and line lists to providers, immunization program, schools, payers (Medicaid), other public health partners
- Share more complete data via the **IZ Gateway**
 - Exchange data with other IISs and federal agency providers (e.g., Veterans Administration) to capture **out-of-jurisdiction immunizations** in your IIS and supply it to other IISs



Share High Quality IIS Data **Outputs** (cont'd)

Report to CDC

- **Send CDC aggregate and patient record-level, de-identified data regularly - use PPRL** or other redaction methods
- Complete the IIS Annual Report (IISAR)

Report to **jurisdiction**, elected officials, other government leaders

Create or support **dashboards**

- Promote effective data visualization to inform and guide action for population health at local, national levels



Meet **Consumer** Needs with Useful IIS Functionality

Immunization Providers

- Support vaccine ordering, receiving, managing, and accounting for VFC, adult, other public vaccine programs

Health Department

- Promote use of IIS data and functionality to support all components of immunization program
- Enable internal access to colleagues for public health activities

Public

- Offer a consumer access application for self, children and digital proof of vaccination



Highlight Data Use Champions

Recognize providers using the IIS to achieve high immunization coverage

Collaborate with AAP and other professional associations (e.g., nurses)

- Recognize providers at meetings
- Post Honor Roll on websites (AAP, health department)
- Collaborate on quality improvement initiatives

Encourage champions to share their work with peers





Activity: Small Group Discussion

Convene in assigned team and discuss the questions below. Designate one person to report out for your group.

- What data use challenges are you facing now?
- How can you work to overcome them?

After 15 minutes, return to your table to hear a report out from each group and engage in a large group discussion.

Questions/Comments/Discussion?



Data Use Key Resources

- [CDC Core Data Elements for IIS Functional Standards v4.1](#) - list of CDC-endorsed data elements
- [CDC IIS HL7 Version 2.5.1 Implementation Guide \(IG\) and Addendum](#) - guide for EHR vendors, immunization providers, and other partners to implement standards-based data exchange with an IIS
- [AIRA Onboarding Guidance and Shared Services](#) - supports awardee jurisdictions with onboarding providers to their local IIS
- [AIRA Aggregate Analysis Reporting Tool \(AART\)](#) - an application developed to visualize and compile results and information on community-driven measures and tests related to IIS Functional Standards

