Immunization Data Quality Certification Program

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Agenda

- CDC Data Quality Background
- CDC's Focus Areas and Priorities
- IIS Data Quality Certification Program
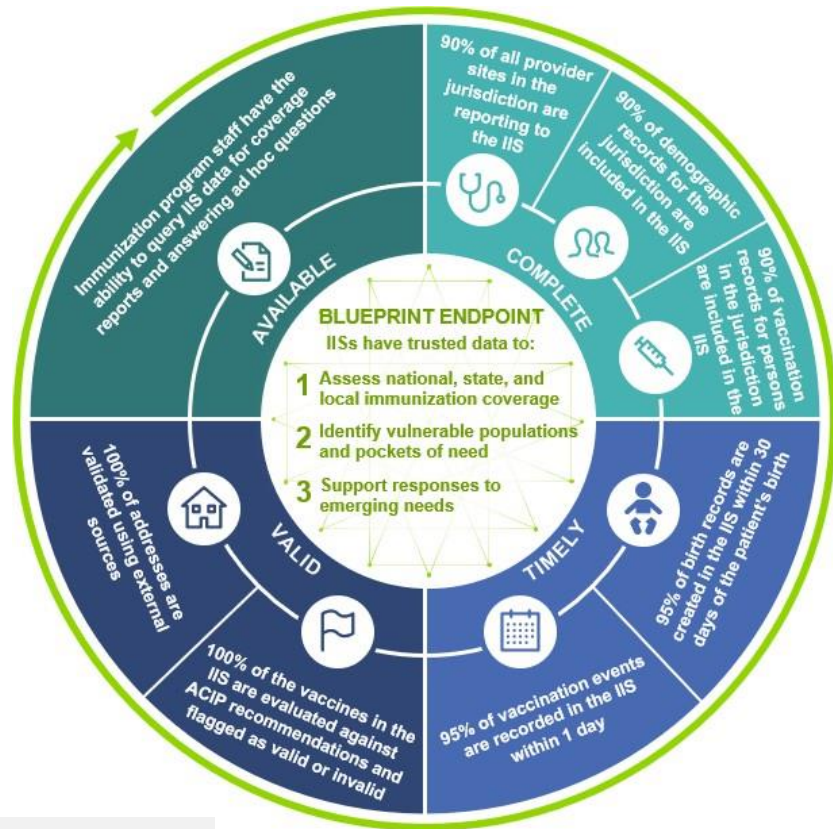
Background

IIS Data Quality Blueprint

The blueprint guides awardee activities to improve data quality by prioritizing a **small set of meaningful, quantifiable** measures.

IIS Data Quality Endpoint

- IISs will be *the* **trusted source** for reliable immunization data
- IISs will produce data to support:
  - Immunization coverage assessments
  - Identification of pockets of need
  - Responses to emerging needs

7 Data Quality Characteristics

Available **|** Complete **|** Timely **|** Valid **|** Accurate **|** Consistent **|** Unique

BLUEPRINT ENDPOINT
IISs have trusted data to:
1 Assess national, state, and local immunization coverage
2 Identify vulnerable populations and pockets of need
3 Support responses to emerging needs

AVAILABLE — Immunization program staff have the ability to query IIS data for coverage reports and answering ad hoc questions

COMPLETE — 90% of all provider sites in the jurisdiction are reporting to the IIS; 90% of demographic records for the jurisdiction are included in the IIS; 90% of vaccination records for persons in the jurisdiction are included in the IIS

TIMELY — 95% of birth records are created in the IIS within 30 days of the patient's birth; 95% of vaccination events are recorded in the IIS within 1 day

VALID — 100% of addresses are validated using external sources; 100% of the vaccines in the IIS are evaluated against ACIP recommendations and flagged as valid or invalid

IIS Data Quality Improvements

AVAILABLE

IIS data used to generate disseminated coverage reports

- **96% awardees share population-based coverage assessment reports** with stakeholders in jurisdiction

- **98%** generated population-based coverage assessments for a **public facing website**

IIS staff <u>can and do</u> run ad-hoc reports of IIS data.

- 93% of IIS produced provider level coverage assessments **based on user criteria**

COMPLETE

Between 2020 and 2021, there were improvements in all categories of providers (VFC, non-VFC, all providers) reporting to IIS.

- **79%** of all VFC providers report data (2021)

- **60%** of all non-VFC providers report data (2021)

- **64%** of all providers report data (2021)

VALID

There was an increase in use of an external entity to validate addresses from 2020 to 2021

- In 2021, **52%** of IIS used residential addresses standardized and validated as USPS addresses, compared to 38% in 2020

TIMELY

Small increase in timely posting of vaccines administered

- From 2020 to 2021, the percent of vaccine administration posted to production within 1 day increased from **70% to 73%**

High percentage of birth records established in a timely fashion

- **90%** of birth records established within 30 days of birth (Q.29)

Focus Areas and Priorities

Moving the Needle toward Data Modernization

1. Data Collection & Management

Develop governance, policy and strategy, and data and quality standards in support of collecting, managing, and sharing national IIS data
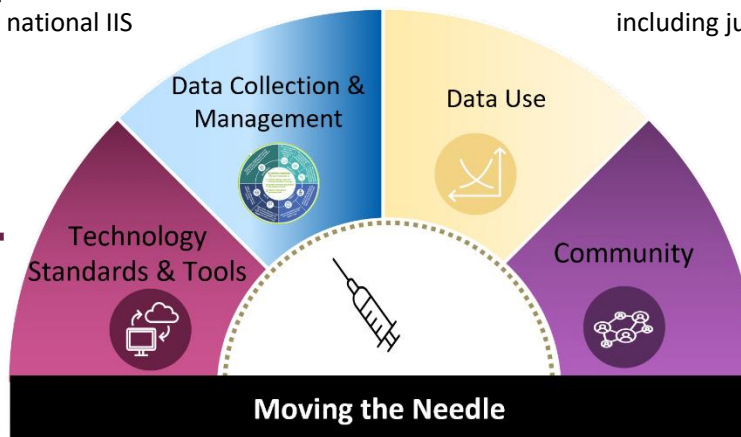
2. Data Use

Assess, analyze, and use data to drive public health action across the IIS community, including jurisdictions, providers, and partners

3. Technology Tools & Standards

Identify and develop new systems, tools, and standards, and support and modernize existing systems to improve performance, ensure consistency, and achieve mission goals

4. Community

Accelerate the enhancement and performance of IIS by convening key stakeholders to develop guidance, identify best practices, and collaboratively solve problems

Data Collection & Management

Data Use

Technology Standards & Tools

Community

Moving the Needle

Focus Areas and Priorities: Selected Priorities

Data Collection & Management

Develop governance, policy and strategy, and data and quality standards in support of collecting, managing, and sharing national IIS data

1.1 Establish a national immunization surveillance system at CDC to develop a comprehensive picture of vaccination

1.2 Support data sharing and management between IISs, CDC, and other vaccination partners

Data Use

Assess, analyze, and use data to drive public health action across the IIS community, including jurisdictions, providers, and partners

2.1 Establish governance function for immunization use cases to enforce appropriate data use

2.2 Use data to assess vaccination coverage

2.3 Increase confidence and demonstrate the value of IIS data

2.4 Ensure data are accessible for decision-making in reports, dashboards, and visualizations

Technology and Standards

Identify and develop new systems, tools, and standards, and support and modernize existing systems to improve performance, ensure consistency, and achieve mission goals

3.1 Define the baseline and target state for immunization systems environment

3.2 Maintain and evolve IIS standards

3.3 Establish and maintain an IIS certification program

3.4 Develop and execute modernization roadmap to achieve the target state

3.5 Support operations and maintenance of systems environment

Community Engagement & Support

Accelerate the enhancement and performance of IIS by convening key stakeholders to develop guidance, identify best practices, and collaboratively solve problems

4.1 Build awareness of IIS value to public health and IISSB's role in ensuring a comprehensive national and jurisdictional picture of vaccination

4.2 Establish a model for enhanced partnership collaboration

4.3 Ensure immunization is represented in the development of national standards and certification programs

4.4 Enhance and sustain the IIS workforce

Data Quality Certification Program

What is Certification?

Certification is a procedure by which a third party gives written proof that shows a specific product, process or service conforms to specified requirements or standards.
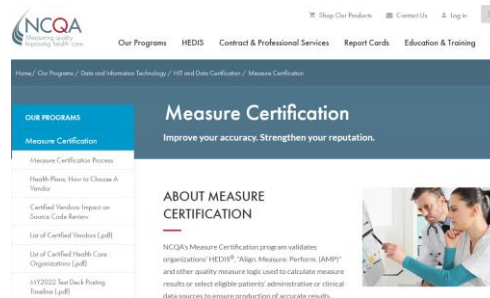
Why Certification is Important

- Establishes confidence, credibility and trust among consumers, clients and other business partners

- Functions as proof an organization abides by a set of identified standards

- Proves an organization's commitment to important business objectives

CDC IIS Certification Program

Will be comprised of two types of certification:

- Data Quality Certification
  - Focused on jurisdiction data
- Functionality Certification
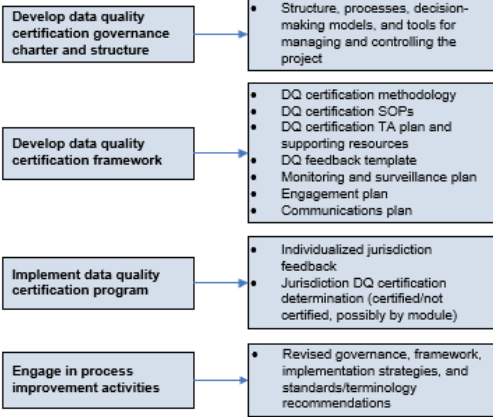 - Focused on technology partner functionality

Logic Model

Inputs

Resources
- Staff expertise
- Jurisdiction IIS technology program funding and spending authority
- IIS DQ Blueprint
- IIS Functional Standards
- IIS Functional Standards Resources Guide
- AIRA Measurement & Improvement (M&I) Initiative
- MIROW operational best practices guides
- National standards and code sets
- Routine and flu data submitted by jurisdictions to CDC and the associated feedback to jurisdictions

Collaborators with Developing and Implementing Certification Program
- IDAB
- Data Modernization Group
- 3rd party certifying entity
- IIS technology partners
- AIRA
- ONC technology standards (involved in technology certification)
- CMS/insurers (to influence requirements for providers to send data to IIS)
- Jurisdictions (immunization programs)

Other Impacted or Interested Entities
- CDC Leadership
- AIM
- Provider community
- EHR/HIE partners
- ASPR
- Consumers/general public
- Technology and terminology standards entities
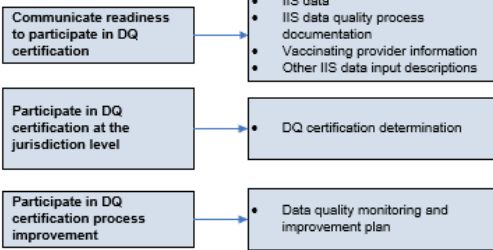- National security entities (contact TBD)

Process

Activities / Outputs

CDC Activities

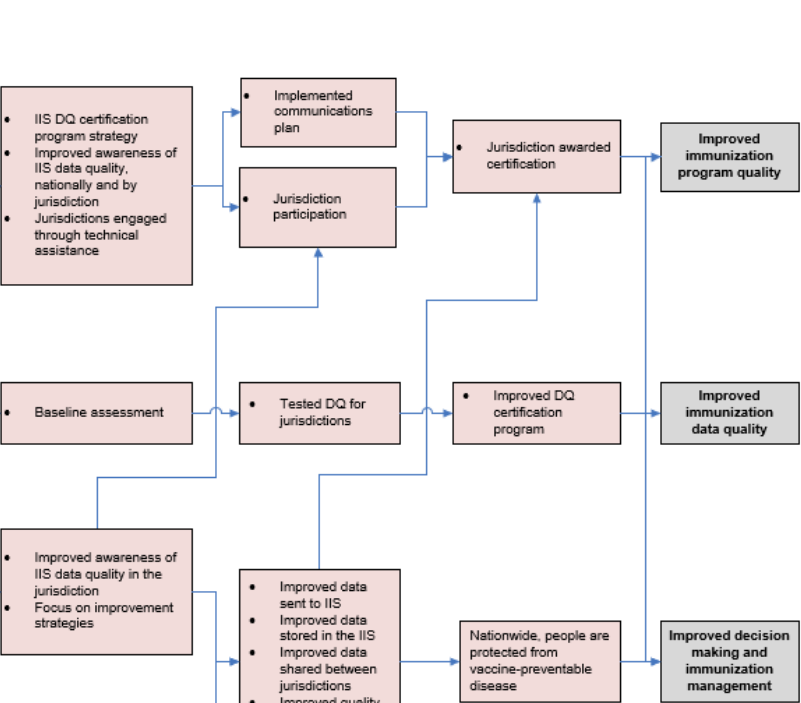**Develop data quality certification governance charter and structure**
- Structure, processes, decision-making models, and tools for managing and controlling the project

Develop data quality certification framework
- DQ certification methodology
- DQ certification SOPs
- DQ certification TA plan and supporting resources
- DQ feedback template
- Monitoring and surveillance plan
- Engagement plan
- Communications plan

Implement data quality certification program
- Individualized jurisdiction feedback
- Jurisdiction DQ certification determination (certified/not certified, possibly by module)

Engage in process improvement activities
- Revised governance, framework, implementation strategies, and standards/terminology recommendations

Jurisdiction Activities

Communicate readiness to participate in DQ certification
- IIS data
- IIS data quality process documentation
- Vaccinating provider information
- Other IIS data input descriptions

Participate in DQ certification at the jurisdiction level
- DQ certification determination

Participate in DQ certification process improvement
- Data quality monitoring and improvement plan

Outcomes

Short-term Outcomes
- IIS DQ certification program strategy
- Improved awareness of IIS data quality, nationally and by jurisdiction
- Jurisdictions engaged through technical assistance
- Baseline assessment
- Improved awareness of IIS data quality in the jurisdiction
- Focus on improvement strategies

Intermediate Outcomes
- Implemented communications plan
- Jurisdiction participation
- Tested DQ for jurisdictions
- Improved data sent to IIS
- Improved data stored in the IIS
- Improved data shared between jurisdictions
- Improved quality of routine data submitted to CDC

Long-term Outcomes
- Jurisdiction awarded certification
- Improved DQ certification program
- Nationwide, people are protected from vaccine-preventable disease

IMPACTS
- Improved immunization program quality
- Improved immunization data quality
- Improved decision making and immunization management

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  and spending authority
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Logic Model

| **Process** |

CDC Activities

Outputs

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| Engage in process improvement activities | → | • Revised governance, framework, implementation strategies, and standards/terminology recommendations |

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Logic Model

Process

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Logic Model

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Logic Model

Impacts

Improved immunization program quality

Improved immunization data quality

Improved decision making and immunization management

Project Plan Milestones and Tentative Dates

(DRAFT 1/27/23)

Half Years (H1/2)	2022 H2	2023 H1	2023 H2	2024 H1	2024 H2	2025 H1	2025 H2	2026 H1	2026 H2
1. Scoping	█	█							
2. Project Planning	█	░	░	░	░	░	░	░	░
3. Governance		█	█	░	░	░	░	░	░
4. Workflow Assessment		█							
5. Communications		█	░	░	░	░	░	░	░
6. Engagement		█	░	░	░	░	░	░	░
7. Baseline Assessment		█							
8. Certification Criteria and Model			█	█	█	█			
9. Certification Structure				█	█				
10. Jurisdiction IIS Roadmaps					█	█			
11. Technical Assistance Plan					█	█			
12. Impact Evaluation Plan						█	█	░	░
13. Certification Roll Out							█		
14. Technical Assistance Plan Implementation							█	░	░
15. Monitoring and Surveillance Plan Implementation									█
16. Impact Evaluation Plan Implementation									█

Questions?

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348   www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.