

Downstream Impacts of Updates to the IIS Functional Standards

Jan Hicks-Thomson, CDC
Candace Garcia, PHII



PUBLIC HEALTH
INFORMATICS
INSTITUTE

THE TASK
FORCE
FOR
GLOBAL HEALTH

Funding disclosure:

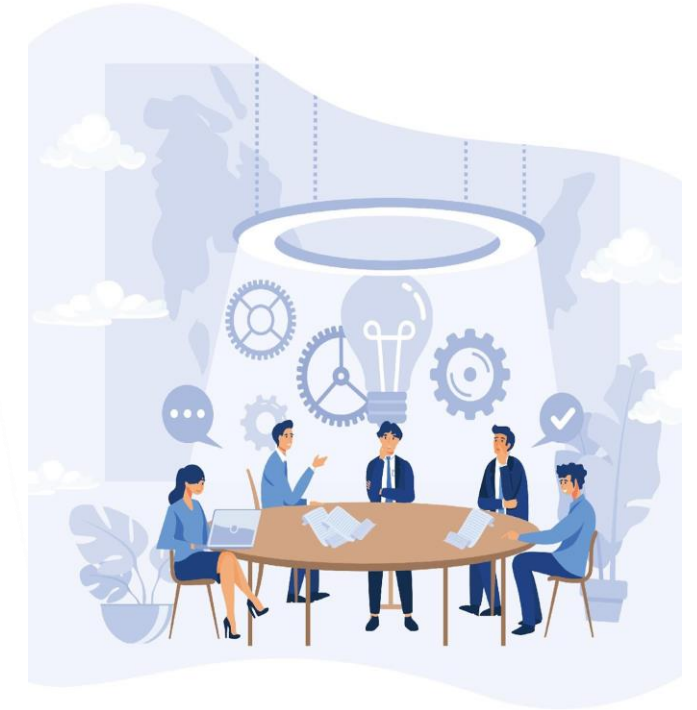
This presentation is supported by cooperative agreement number 6 NH23IP922664-01, funded by the Centers for Disease Control and Prevention (CDC). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

Agenda

- Updates to the Functional Standards v5.0
 - Impacted IIS Resources
 - Core Data Elements
 - Requirement Traceability Matrix

Functional Standards Overview

- IIS Functional Standards (FS) guide the operations, data quality and technology recommended for an IIS.
- IIS FS are updated about every 5 years to ensure they remain relevant and achievable within the CDC cooperative agreement (CoAg) period.
 - Interim updates are possible if technology or other environmental changes require.
- IIS FS updated December 2024



Specific updates implemented

- Streamline FS format
- Reduce crosswalking to other documents through the inclusion of resources in the matrix
- Clarify terms & acronyms
- Capture broader audience including those less familiar with the IIS
- Limit repetition
- Support the use of the FS
- Develop a visual representation of the standards

Functional Standards Diagram



Functional Standards Matrix

Programmatic Goal (Audience: Jurisdiction's Executive Level)	Functional Standard (Audience: Health Department Leadership)	Guidance Statement (Audience: IIS Staff)	Supporting Resources (Limited examples shown)
C. Promote electronic data exchange between the IIS and its partners and providers.	5.0 Manage interfaces for exchange and integration of data electronically between the IIS and other information systems in accordance with federal and jurisdictional standards.	5.1 The IIS exchanges data in accordance with current interoperability standards endorsed by CDC for message content, format, and transport.	IIS Transport (SOAP) IZ Gateway Information Sheet IZ Gateway HL7 Implementation Guide v1.1 Public Health IIS Interjurisdictional Memorandum of Understanding - Fillable Form Requirements Traceability Matrix - Support Interoperability: Data Exchange
		5.2 The IIS actively recruits, enrolls, and onboards IIS partners and providers for electronic data exchange.	Improving Immunization Information Sharing through Unified Adoption of a Transport Standard National Institute of Standards and Technology (NIST) Immunization Test Suite Requirements Traceability Matrix - Non-Functional Performance
		5.3 The IIS actively monitors and evaluates data submitted via electronic data exchange.	IIS Data Quality Practices - Monitoring and Evaluating Data Submissions Data Quality Assurance in Immunization Information Systems - Mini Guide Data Quality Assurance in Immunization Data Quality Incoming/Outgoing Validation: Complete Level
		5.4 The IIS investigates and resolves electronic data exchange errors and anomalies with IIS partners and providers.	

Benefits to the Community



- FS package that includes
 - Introduction
 - FS Diagram
 - Glossary of Terms
 - Functional Standards Matrix
 - IIS Program Goals
 - Standards
 - Guidance Statements
 - Resources
- Streamlined layout for ease of use
- Broaden target audience

How IIS staff utilize the FS

- Align IIS priorities and funding with Program goals
- Ensure staff/stakeholders understand the program goals and FS
- Ensure appropriate resources are available to achieve the FS
- Provide common language for communicating about IIS with internal and external partners
- Promote clear and transparent leadership for current and future IIS requirements

Core Data Elements

- Updated in conjunction with the IIS FS updates
- Assure alignment of updated IIS FS and national data sets like United States Core Data for Interoperability (USCDI)
- Support standardization in HL7 data exchange and immunization records
- Promote data quality improvement efforts

CDE image

Patient Demographics

COLLAPSE ALL

Description: Information used to uniquely identify a patient and describe key characteristics that differentiate them from others.

Rationale for inclusion:

- Ensures accurate patient demographic data collection to support effective immunization tracking.
- Facilitates seamless data exchange and integration with other information systems, adhering to federal and jurisdictional standards.
- Supports pediatric, adolescent and adult immunization scheduling aligned with Advisory Committee on Immunization Practices (ACIP) recommendations for immunization schedules.
- Enables users to generate immunization coverage reports independently, empowering jurisdictions to track vaccination progress.
- Contributes to the reporting and tracking of vaccine adverse events, ensuring patient safety and program accountability.
- Supports partner and provider onboarding for efficient vaccine management and risk reduction during vaccine-preventable disease outbreaks or public health emergencies.
- Enhances the reporting capabilities of federal and jurisdictional immunization programs, supporting decision-making and policy development.
- Enables ad-hoc queries of patient demographic and vaccination data to support targeted analysis and action.
- Facilitates reminder and recall activities, improving vaccination rates and ensuring timely immunizations.
- Assists in managing and enhancing the supply chain functions of federal and jurisdictional vaccine programs.

Functional Standard: 4.0, 5.0, 9.0, 11.0, 12.0, 13.0, 14.0, 17.0

Repeat: Yes

Requirements Traceability Matrix (RTM)

- Augments and streamlines the IIS FS by providing more technical detail and requirements for each standard.
- Provides a comprehensive framework for developing systems requirements
- Clarifies the minimum requirements for IIS technology by aligning the FS with the IIS Functional Model
- RTM will be updated in spring 2025 to further align with FS

RTM

Immunization Information System (IIS) Baseline Requirements Traceability Matrix (RTM)

FM Descriptions	Descriptions of the IIS Functional Model functions and capabilities and attributes; also provides an indication of total requirements by function/category.
RTM Format	Description of how the RTM is structured for presentation of the requirements.
Requirements by Function/Grouping:	
Admin System	Requirements related to the function: Administer System
Manage Orgs	Requirements related to the function: Manage Organizations and Facilities
Manage Users	Requirements related to the function: Manage Users
Interop	Requirements related to the function: Support Interoperability
Data Quality	Requirements related to the function: Ensure Data Quality
Eval Forecast	Requirements related to the function: Evaluate & Forecast
Manage Pt Iz Record	Requirements related to the function: Manage Patient & Immunization Records
Manage Vaccine Inventor	Requirements related to the function: Manage Vaccine Inventory
Data Access	Requirements related to the function: Provide Data Access
Non-functional	Technical requirements across key attributes
Glossary	List of terms used in requirements and their definitions
Crosswalk to FS	Compare the Functional Model to the IIS Functional Standards.

This RTM was developed by the Public Health Informatics Institute, in partnership with AIRA and CDC and with financial support from CDC under Cooperative Agreement number 6- NU38OT000316. Questions, comments and suggestions are welcomed at iis@phii.org.

Resources

- **Functional Standards [Introduction and Diagram](#)**
- **[Functional Standards v5.0](#)**
- **[Matrix](#)**
- **[Core Data Elements](#)**
- **[Requirements Traceability Matrix](#)**

Thank you

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.





Thank you

PHII IIS team: iis@phi.org