



# Immunization Information System (IIS) Interoperability Analyst

**Sample role description**

May 2025

This sample role description identifies typical duties and responsibilities of an interoperability analyst and indicates sample competencies of a person fulfilling this role.

*Note: Actual position descriptions should include only the information applicable for the specific position or role. Depending on staffing levels, several roles may be combined within a single position, or several positions may fill the same role.*

## Summary

This role is responsible for promoting, implementing and ensuring standards-based interoperability between the immunization information system (IIS) and other information systems to obtain high quality data in the IIS and facilitate IIS data sharing with providers, schools, health plans, the Centers for Disease Control and Prevention (CDC), other IIS and other partners. A key activity is to onboard immunization providers by establishing and maintaining a Health Level 7 (HL7) interface between the jurisdiction's IIS and the provider's electronic health record (EHR) system, pharmacy information system or a Health Information Exchange (HIE). This role may create and manage accounts for internal and external IIS users based on program needs. In addition, this role will work to enable providers, pharmacies and other partners (e.g., health plans, schools or colleges) to query the IIS for immunization records in real time to help bring individuals of all ages up-to-date on recommended immunizations. This role will also create or maintain and update the interface between the IIS and vital records for timely IIS capture of all births, deaths and adoptions in the jurisdiction. Further, this role will ensure timely and complete IIS data submissions to CDC, interoperability with CDC's VTrckS system to support Vaccines for Children (VFC) and other vaccination programs, and collaborate with CDC, the American Immunization Registry Association (AIRA), other IIS and other national partners to implement interjurisdictional data exchange via the IZ Gateway.

## Alternate role titles

- Data exchange coordinator
- HL7 epidemiologist
- HL7 specialist
- Interface manager
- Interface analyst
- Onboarding analyst
- Onboarding technician
- Interoperability support specialist

## IIS core competencies

This role description is based on PHII's [IIS Core Competency Model](#), which provides functional, behaviorally-based tasks or processes that can be observed or measured and are required at an organizational level for the successful, high-performing functioning of an IIS. Major duties and responsibilities below are organized into the applicable domains from the model.

## Primary Duties and Responsibilities (as applicable within jurisdiction)

Duties may include but *are not limited to*:



### Leadership and management

- Provides leadership to IIS onboarding/interoperability/data exchange team and coordinates team activities to meet IIS and immunization program goals.



### Law and policy

- Facilitates IIS compliance with local and national laws, rules, policies and best practices to ensure authorized and secure IIS data access and exchange.
- Ensures data sharing and confidentiality agreements are executed prior to data access, sharing or use.



### Communication

- Engages providers, EHR vendors, and other internal and external partners in frequent two-way communications to obtain feedback, build support for the IIS, and keep them informed of changes impacting IIS interfaces (e.g., requirements for populating data elements such as race and ethnicity); new vaccine codes; scheduled downtime for enhancements and maintenance; and changes in standards for secure data exchange.
- Presents at IIS national meetings to share lessons learned.
- Serves as a subject matter expert to assist in developing best practices for IIS onboarding and data exchange.



### Data use

- Contributes data and content to the CDC Cooperative Agreement work plans, component applications and CDC IIS Annual Report (IISAR); participates in pre- and post-submission quality control activities to verify results.



### Data quality

- Regularly reviews CDC Data Quality Reports, the CDC IIS Dashboard, and the jurisdiction's Cooperative Agreement (CoAg) work plans and reports, as well as reports from the AIRA Measurement and Improvement Aggregate Analysis Reporting Tool (AART), to identify and assist in prioritizing IIS

enhancements and changes to internal reports and processes to align with CDC IIS Functional Standards and IIS community best practices.

- Works with the data quality analyst to assess incoming data during onboarding and testing and in IIS production over time; provides feedback to data exchange partners on data quality and necessary improvements, as needed.

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## Interoperability

- Creates and manages accounts for internal and external IIS users based on program needs.
  - Implements IIS onboarding of providers, HIEs, health plans, schools, and jurisdiction disease surveillance and other public health reporting systems for exchanging data based on CDC-approved interoperability standards, applicable laws and resources developed by community partners.
  - Develops, documents, reviews and periodically updates standard operating procedures (SOPs) for staff to conduct uni- and bi-directional onboarding activities (e.g., testing and review of HL7 message content, format and transport mechanism; error handling).
  - Provides technical and programmatic support to onboarding staff, providers, EHR vendors, HIEs and other partners to test and monitor data submitted to the IIS via HL7 during initial onboarding and over time in the IIS production environment; ensures collection of all CDC-endorsed data elements and conformance to national data exchange standards.
  - Monitors connections with data exchange partners and promptly resolves any technical issues.
  - Incorporates or onboards data from available sources (e.g., newborn screening, lead screening, driver license data) to improve demographic record completeness and accuracy.
  - Assists with establishment of and/or monitors the interface for loading vital records data (births, deaths, adoptions) into the IIS to ensure timely capture of all births in the jurisdiction; works with the Vital Records Office to assess and update the interface, as needed.
  - Facilitates and monitors interoperability of the IIS with CDC's VTrckS system (via file exchange or other methods) to streamline vaccine program operations and increase accountability for use of vaccines distributed through VFC and other vaccination programs.
  - Collaborates with IIS vendor/IT department, CDC, AIRA, other IIS and other national partners (e.g., Veterans Health Administration) to implement interjurisdictional data exchange via the IZ Gateway.
  - Participates in CDC, AIRA, PHII and IIS vendor consortium forums to collaborate on IIS upgrades and keep abreast of, and provide input into, changes to HL7, web service and other national standards for secure data exchange; works with IIS vendor/information technology (IT) department to facilitate IIS compliance with standards.
  - Collaborates with the jurisdiction's IIS vendor/IT department regarding security certificate management, web services functionality and documentation.
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## Information systems management

- Works with IIS vendor/IT department to regularly assess, update and improve key IIS functions, e.g., automated record matching and merging to minimize duplicate records, accurate vaccine forecasting based on CDC Clinical Decision Support for immunization (CDSi) Logic Specifications, production of files to send CDC high quality data as defined in the CDC Data Quality Blueprint (i.e., available, complete, timely, valid, accurate, consistent, unique), standardized HL7 query/response for timely and accurate data exchange with providers and other partners.



## Training

- Trains staff in use of SOPs for onboarding and other interoperability tasks.

## Background and qualifications

### Successful candidates should have:

- Master's degree (preferably in public health or a relevant field) with a minimum of 1 year of professional experience in data management and analysis, preferably in a public health or health care setting
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- Bachelor's degree in computer science, informatics, public health or related field with a minimum of 2 years of professional experience in data management and analysis, preferably in a public health or health care setting

### Preferred knowledge, skills and abilities include:

- Knowledge of HL7 and other standards, best practices and general guidance for accurately and securely exchanging data between health IT systems
- Knowledge of CDC, AIRA and PHII resources related to interoperability
- Excellent data analysis and visualization skills
- Strong oral and written communication and interpersonal skills
- Proficiency in Microsoft Excel, Word, statistical software (e.g., SAS, R, or SPSS), SQL query tool and data visualization tools such as Tableau
- Ability to apply high attention to detail in assessing IIS data quality and system functionality
- Ability to prepare, present and train on complex technical material to technical and non-technical IIS staff and data exchange partners
- Ability to work independently and well in a high-pressure environment
- Ability to develop and maintain constructive and cooperative relationships among staff and partners