



# Deduplication Specialist

## Sample role description

June 2023

This sample role description identifies typical duties and responsibilities of an immunization information system (IIS) deduplication specialist 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 conducting data cleansing activities for both incoming data and data at rest in the IIS. A key responsibility of this role is manual IIS record deduplication, i.e., the process of identifying and resolving duplicate patient demographic and/or vaccination records created when information from multiple sources doesn't match (e.g., misspelled name or nickname, new address), or too little identifying information is submitted for the same patient and the IIS is unable to automatically match and merge the records.

The deduplication specialist makes decisions to merge duplicate records that are determined to belong to the same patient and separate records that are found to be incorrectly merged. The deduplication specialist also identifies trends in the creation of duplicate records and suggests improvements to IIS matching and merging processes and other interventions for preventing or resolving duplicate records automatically. Further, this role may also enter a small amount of new or corrected data that is sent by mail, fax, secure email or other methods by immunization providers or other authorized data submitters. The person in this role typically reports to the IIS manager or other senior IIS staff member. Internally, this role works closely with the help desk team, data quality analyst, and interoperability analyst. Externally, this role may interact with IIS users including immunization providers, school personnel, health plans, other public health programs and the public.

## Alternate role titles

- Deduplication/data entry Technician
- Deduplication/data entry specialist
- Merging specialist
- Data quality assistant

## 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

- Provide leadership on IIS record deduplication and data entry activities to the IIS data quality and interoperability teams; facilitate cross-team collaboration.
- Work with IIS manager and other IIS staff to develop, update and maintain clearly defined standard operating procedures (SOPs) to support the manual merging of immunization records and separation of records that had been incorrectly merged.



### Law and policy

- Adhere to jurisdiction policies to maintain the security and confidentiality of IIS data at all times.



### Communication

- Communicate frequently with IIS staff, immunization providers, electronic health record (EHR) vendors and other data submitters about the volume of duplicate records by data submitter and common issues creating duplicates; provide reports on actions needed to prevent duplicate records.
- Communicate and collaborate with staff, immunization providers, EHR vendors and other data submitters via teleconferences, site visits and other methods to improve the quality of IIS data submitted and resolve existing duplicates in IIS data at rest.
- Present at IIS national meetings to share lessons learned and serve as a subject matter expert to assist in developing best practices to resolve duplicate records and improve IIS data quality overall.



### Data quality

- Identify trends in the creation of duplicate records; suggest improvements to IIS matching and merging processes and other interventions for preventing or resolving duplicate records automatically.
- Resolve data discrepancies in patient records by contacting authorized IIS users for information, comparing to IIS data files and accessing information in vital records files.
- Implement jurisdiction SOPs for manual merging of duplicate demographic and vaccination records as well as separating incorrectly merged records; use vital records and other data sources to rebuild records that had been incorrectly merged.
- Solicit feedback on data quality from users of IIS data, e.g., immunization providers, health plans, schools, immunization program staff, other health department staff, and the Centers for Disease Control and Prevention (CDC); act on feedback to improve data quality and reduce records flagged for manual deduplication.
- Work with the data quality team to provide input into the jurisdiction's IIS data quality improvement plan.
- Ensure all data submitted on hard copy forms are entered in a timely and accurate manner, including patient demographic and vaccination data from immunization providers and facility data submitted to enroll providers and other partners in the IIS.

---

## Interoperability

- Work with the interoperability analyst to identify, assess and plan to incorporate data from available sources (e.g., EHRs, pharmacies, IZ Gateway, newborn screening, lead screening, driver's licenses, etc.) to improve IIS record completeness and accuracy.
- Work with data quality analyst and interoperability analyst to identify immunization providers that are submitting incomplete or incorrect data; conduct outreach to engage providers in correcting and improving the quality of their data submissions.

---

## Information systems management

- Work with IIS technology partners to regularly assess, update and improve IIS automated record matching and merging systems to minimize duplicate records.
- Participate in CDC, American Immunization Registry Association (AIRA), PHII and IIS technology partner consortium forums to collaborate on IIS upgrades and keep abreast of, and provide input into, changes to Health Level 7 (HL7), web service and other national standards for secure data exchange; work with IIS technology partners to facilitate IIS compliance with standards.
- Participate in thorough testing (e.g., documented test scripts, regression testing, user acceptance testing) to help ensure record matching and merging processes are working optimally when IIS enhancements are implemented.

---

## Training

- Train staff in use of SOPs for deduplication and other data quality assurance activities.
- Work with training staff to ensure that provider training and educational materials emphasize the importance of submitting high-quality data and avoiding common errors to prevent the creation of duplicate records.

---

## Evaluation

- Work with data quality analyst and interoperability analyst to evaluate and quantifiably document the impacts of deduplication and other data quality activities on data quality; improve and prioritize activities based on results.
- Contribute to assessments of IIS deduplication functionality to ensure alignment with IIS standards and best practice guidance; document gaps in IIS features and functionality and suggest enhancements to improve alignment.

## Background and qualifications

### Successful candidates should have:

- Master's degree (preferably in public health, epidemiology, or other 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

OR

- Bachelor's degree (preferably in public health, epidemiology, or other relevant 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 an IIS and other systems, including EHRs and other IIS
- Excellent attention to detail
- Data analysis and visualization skills
- Strong oral and written communication and interpersonal skills
- Proficiency in Microsoft Excel and Word
- Ability to work independently and well in a high-pressure environment
- Ability to develop and maintain constructive and cooperative relationships among staff and partners