

Duplicate Patient and Dose Records

Getting Started

The number of duplicate patient and dose records created in the NDIIS continues to increase due to the high volume of immunization providers submitting data to the NDIIS electronically from their electronic health record (EHR) system.

The NDIIS messaging engine looks for an exact patient match, based on first name, last name and birthdate. If an exact match to the information in the EHR message cannot be found, the NDIIS will create a new patient record. The majority of duplicate patient records are due to hyphenated names, differences in name spelling, and patients that have a name suffix (i.e., Jr., Sr.). The NDIIS team has made changes to the messaging engine to try and account for these differences, increasing the match rate and reducing the overall number of duplicate records created, however this will continue to occur. In an effort to further reduce the number of duplicate patient records created, the NDIIS team suggests that providers use a space not a “-“ for a hyphenated last name (i.e., Smith Johnson not Smith-Johnson), put a space between names in the first name if a patient has two first names (i.e. Mary Jane, not MaryJane), and putting any name suffix (i.e., Jr., Sr., III) as part of the last name separated by a space.

Interoperable providers also routinely reconcile their patient immunization records from the NDIIS with their EHR record by entering historical dose records from the NDIIS into their EHR system. This process sends the dose records back to the NDIIS creating duplicate doses.

In an effort to standardize our process and to reduce the amount of NDHHS staff time spent on de-duplication, the NDIIS has implemented automated patient and dose de-duplication functionality that identifies duplicate records and either fully resolves them or put them in a queue for review and resolution by NDIIS team members. Additional details on the process for both patient and dose deduplication as well as how NDIIS users can flag potential duplicate patient records are outlined below.

Patient Duplicates

When a duplicate patient record is found in the NDIIS, users need to:

- ⇒ update the patient demographics in one or both records so that the first name, last name, and birthdate match exactly
 - ◆ If the name and birthdate in the two records do not match, the automated process cannot identify the records as duplicates and they will not be merged.
- ⇒ flag at least one record but turning on the **Possible Duplicate** toggle at the top of the *Core Demographics* page.

The NDIIS has automated deduplication functionality that runs throughout the day looking for records flagged as duplicates and records that were touched by a user or through an EHR interface. The deduplication function searches for any potential patient record that is a match to the flagged/touched record.

If a duplicate is found, the records are placed in a queue for manual review by the NDIIS team. This review is completed daily.

If the automated process cannot find a matching record, the **Possible Duplicate** flag is cleared and the process moves on.

Note: Duplicate patient records should not be reported to the NDIIS team via phone or email.

Patient Details

TEST AA VACCINES (1/1/2021) - (3524911)
Modified Date: 7/12/2023

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CORE DEMOGRAPHICS OTHER DEMOGRAPHICS STATUS IMMUNIZATIONS REC BIRTH RECORD COMMENTS

SAVE UNDO CHANGES

Core Demographics

Possible Duplicate

Last Name AA VACCINES	First Name * TEST	Middle Name A
Alias Last Name	Alias First Name	Alias Middle Name
Race * Unknown/undetermined	Ethnicity * Unknown	
Primary Language		

Dose Duplicates

Since April 2014, the NDIIS has had automated dose level de-duplication functionality. This function evaluates all doses added to NDIIS patient records through direct data entry and from provider EHR interfaces. The dose level de-duplication will automatically remove doses that are identified as a duplicate (i.e., same vaccine/type of vaccine with the same dose date). The dose entered closest to the administration date with the most complete information will be kept and the other will be deleted.

Doses that cannot be automatically de-duplicated are placed in a queue for review and resolution by NDIIS team members. At a minimum, doses with an add date from the previous day will be resolved by the end of the current business day.

In an effort to reduce the number of vaccine duplicates created, the NDIIS team suggests that EHRs electronically consume, not just display, historical doses from the NDIIS into the EHR. This will reduce the number of vaccine duplicates, because providers won't have to manually enter historical doses from NDIIS into the EHR.

NDIIS users with Provider Admin and Standard level access are also able to delete duplicate doses in NDIIS patient records. Users can delete historical or administered doses entered under their NDIIS provider ID and can delete any historical dose entered under the 9999—*UNKNOWN* provider.

Note: If you find duplicate doses in a patient record and you are not able to delete the doses, please reach out to the NDIIS team via email at NDIIS@nd.gov or by phone at 701-328-3386 for assistance.