How to Run Healthcare Personnel COVID-19 Vaccination Data Reports for Long-Term Care Facilities: January 2024 and Forward

Introduction

Line listings for COVID-19 vaccination summary data can be produced in NHSN for healthcare personnel, long-term care (LTC) residents, and dialysis patients. The line listing is an organized, detailed list of each record entered into NHSN, available to both facilities and groups. The purpose of this resource is to provide step-by-step instructions for using the "**All COVID-19 Vaccination Cumulative Summary Data"** line listing report to view weekly rates of COVID-19 vaccination.

*Note: Information on primary vaccination series is no longer collected for healthcare personnel beginning with Quarter 1, 2024. As such, for guidance on how to review data including weeks from January 1, 2024 onward, please use this document. If you are interested in only reviewing data from before January 1, 2024, please see this document: How to Run COVID-19 Vaccination Reports for Long-Term Care Facilities Prior to June 2023

Example

Say you want to determine the number of healthcare personnel during weeks starting with January 1, 2024, and after who are up to date with COVID-19 vaccines.
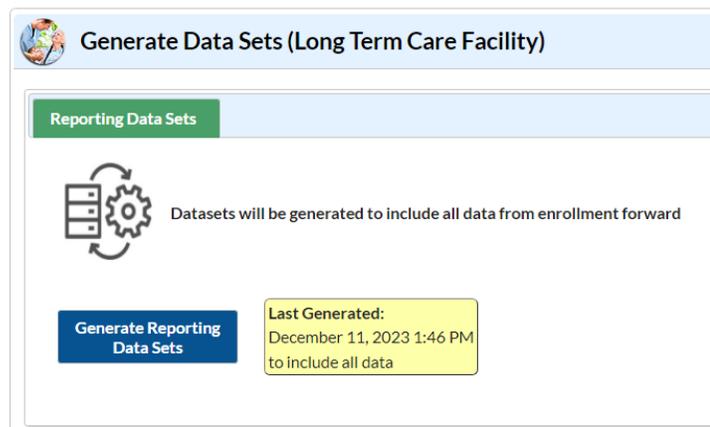
To view this information, you can modify a line listing report to include the variables of interest. The steps below show how to do this.

Generating Data Sets

Generating datasets is the first step to performing analysis in NHSN. This process will freeze your NHSN data at the current date and time and copy it into defined datasets. If you wish to view updates to the data contained in your NHSN reports, you must regenerate datasets for updates to be reflected. Datasets are user-specific; therefore, each user in NHSN who wishes to analyze data must generate datasets.

To generate datasets in NHSN, navigate to Analysis > Generate Data Sets. Then, on the Reporting Data Sets tab, click "Generate Reporting Data Sets". A pop-up alert will appear, asking the user if it is ok for datasets previously generated to be overwritten.

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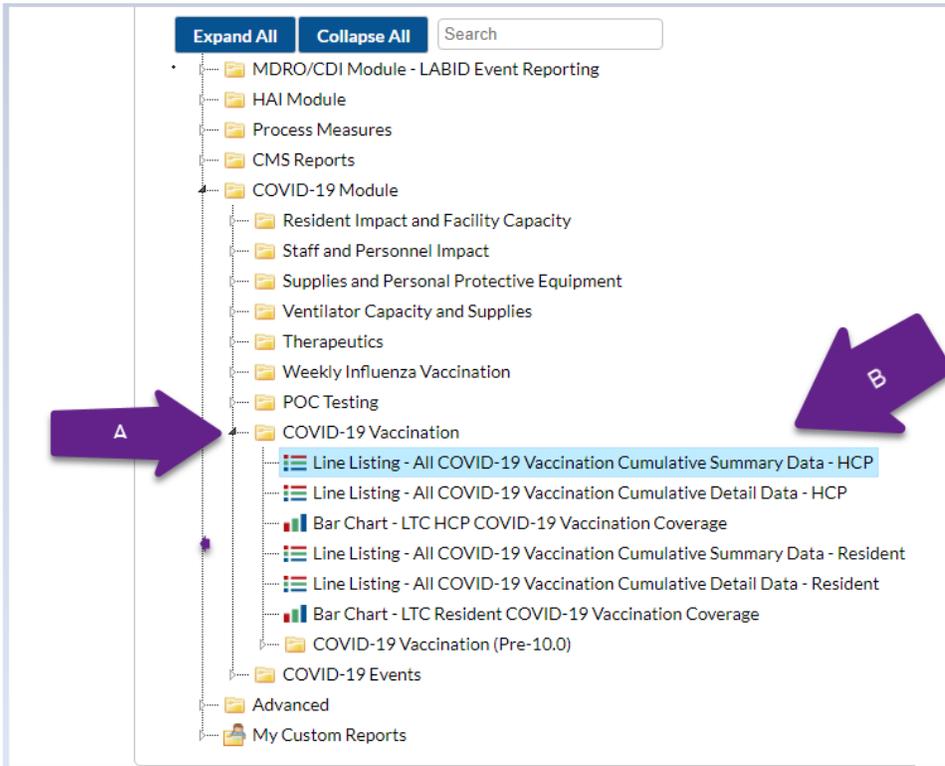National Center for Emerging and
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Creating the Line Listing

Once you have generated your datasets, you are ready to produce a line listing report.

1. On the "Analysis Reports" screen, click on the "COVID-19 Module" folder.

2. Select the "COVID-19 Vaccination" subfolder (indicated by an "A" in the screenshot below). Since this guide discusses resident, not healthcare personnel data, the folder "COVID-19 Vaccination" is selected in the example below, regardless of the time period included in the output*.
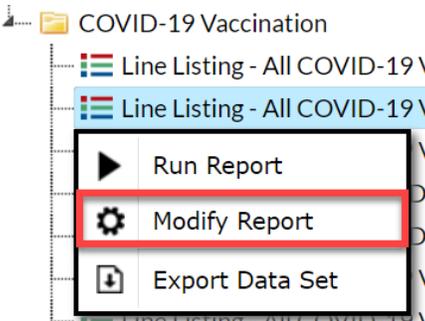
    Note that the folder "COVID-19 Vaccination" includes default output variables for reporting weeks after the surveillance week of 9/27/2021-10/3/2021 for healthcare personnel data while the folder "COVID-19 Vaccination (Pre-10.0)" includes default output variables for weeks prior to the surveillance week of 9/27/2021-10/3/2021 for healthcare personnel data. This is because many variable names changed for healthcare personnel data following an NHSN application update on September 27, 2021.

3. Click on the report that you would like to run. In our example, "Line Listing – All COVID-19 Vaccination Cumulative Summary Data – HCP" (indicated by a "B" in the screenshot below).

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Modifying the Report

Using the "Modify Report" option allows you to customize your report. You can add a title to the output, select a time period, add filters, select additional variables, or remove variables from the default list, choose how to sort variables, and select display options. Below are modifications for this example.

Time Period

To filter the data by time period, choose the "Time Period" tab at the top of the page. For our example, we will not need to modify the time period. If you do not select a time period, your report will include all data from your previously generated dataset.

Filters

The "Filters" tab allows you to further filter the data that display in the report. The default filter will restrict output data from 9/27/2021 and onward. You can remove this filter to create reports that include data entered before 9/27/2021 by simply clicking "Delete." For our example, we do not need to filter the data.

Display and Sort Variables

The "Display Variables" and "Sort Variables" tabs are specific to line listing reports and allow you to display and sort specific variables in your report. Both tabs allow you to move variables from the available list in the left column to the selected list in the right column by using the directional arrows in the center. You can also re-order the selected variables using the "Up" and "Down" buttons, found to the right of the selected variables list. For our example, the variables we want to see are already in the selected variables column. The variables were moved up from their initial position so that they were grouped together for ease of viewing in the report.

Recommendation for Group-level Users: If you are analyzing data as a NHSN Group User, it is recommended to also select a "Page By" orgID – this will result in one table per NHSN facility. To select a "Page By" variable, select the "Display Options" tab on the modification screen, and select "orgID" as the Page by variable.

Final Report

After modifying the report, you are now ready to see the output. Select "run" to see an HTML output, as shown below. The key columns with the variables of interest are within the red box.

National Healthcare Safety Network
Line Listing - All COVID-19 Vaccination Cumulative Summary Data - HCP
As of: December 13, 2023 at 5:46 PM
Date Range: All LTC_COVID19_VACCSUM_STAFF
if (((survWeekStart >= input('09/27/2021',mmddyy10.))))

Facility Org ID=

12/10/2023

Facility Org ID	Type of Vaccination	Week of data collection start date	Week of data collection start date	Number of HCP Eligible to Work	Medical contraindication Up to Date	Offered but declined Up to Date	Unknown vaccination status Up to Date	COMPLETE PRIMARY VACCINATION SERIES-HCP	PARTIAL VACCINATION -HCP	Medical contraindication	Offered but declined	Unknown vaccination status	Additional or Booster Vaccination- HCP	Only One Booster- HCP	Two or More Boosters - HCP	Vaccinations Up to Date- HCP
	COVID19	12/11/2023	12/17/2023	100	.	.	.	70	10	10	10	0	50	20	30	60
	COVID19	12/18/2023	12/24/2023	100	.	.	.	70	10	10	10	0	50	20	30	60
	COVID19	12/25/2023	12/31/2023	100	.	.	.	70	10	20	0	0	50	20	30	60
	COVID19	01/01/2024	01/07/2024	110	0	10	0									100
	COVID19	01/08/2024	01/14/2024	110	10	10	10									80
	COVID19	01/15/2024	01/21/2024	110	10	20	0									80
	COVID19	01/22/2024	01/28/2024	110	10	20	0									80

Sorted by orgID survWeekStart

Keep in mind, beginning January 1, 2024 questions on primary series vaccination a were removed from the NHSN application. This means the cells highlighted in green will appear as missing (".") for weeks beginning with January 1, 2024.

If we look at the time period beginning with the week of 12/11/2023 and 12/17/2023, we can see the changes in variables over time. We can see that at the beginning of the time period, there were only 100 residents staying at the facility for at least 1 day. Of these 100 residents, 70 had a complete vaccination series, 50 had received an additional dose or booster, 20 received only one booster, 30 had two or more boosters, and 60 residents were had an up to date vaccination status. Contraindications, declinations, or unknown status for up to date vaccination were not collected until January 2024. This accounts for why these fields have a dash in the time period.

Looking at the end of the report time period, 1/22/2024 and 1/28/2024, after the change in questions on the data collection forms, there were 110 residents staying at the facility for at least 1 day and that 80 were up to date, 10 had medical contraindications to the up-to-date vaccine, and 20 were offered but declined the up-to-date vaccine. Please note the dashes in the fields highlighted in green are questions no longer collected after January 1, 2024.

Note: The data in this example output are fictitious and intended for illustrative purposes only.

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