

Frequency Table for LOS/MEN Events and LOS/MEN Denominators

January 2022

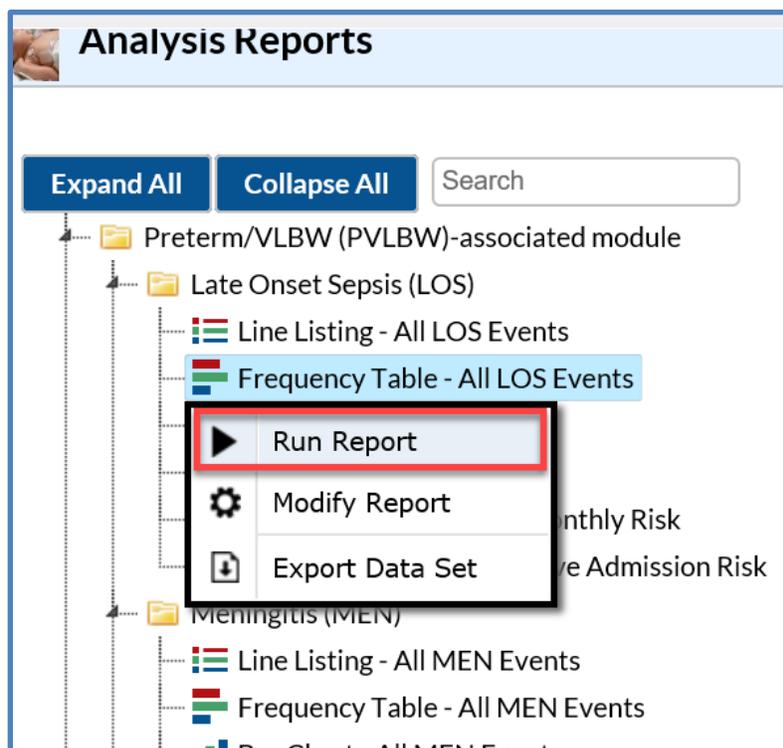
Overview

A frequency table is an analysis report with an organized display of counts and percentages. The data are organized by a row variable and a column variable, and the frequency table provides a count of the number of observations in the data set that meet the specifications of both the row and column variables. Examples below are described for the Late Onset Sepsis (LOS) events frequency table.

Examples

Default Frequency Table analysis reports:

Step 1 - If an NHSN user is interested in viewing the distribution of LOS events by quarter, without any modification to the report, then select **'Run Report'** under **'Frequency Table – All LOS Events'** in the report as shown below.



Step 2: - A frequency table is generated with 'eventDateYQ x spcEvent', the default row and column variables, respectively, which provides the number of observations that satisfy this criterion.

**National Healthcare Safety Network
Frequency Table for All LOS Events
As of: December 7, 2021 at 3:35 PM
Date Range: All NEO_LOS_EVENTS**

Frequency Percent Row Pct Col Pct	Table of evtDateYQ by spcEvent		
	evtDateYQ	spcEvent	
	NLCB1	Total	
2021Q1	4	4	
	100.00	100.00	
	100.00		
	100.00		
Total	4	4	
	100.00	100.00	

Modified Frequency Table reports:

Step 1: If an NHSN user prefers to run modified LOS report, then select 'Modify Report' under 'Frequency Table – All LOS Events'.

The screenshot shows the 'Analysis Reports' interface. At the top, there are buttons for 'Expand All' and 'Collapse All', and a search box. Below these, a tree view shows the following structure:

- Preterm/VLBW (PVLBW)-associated module
 - Late Onset Sepsis (LOS)
 - Line Listing - All LOS Events
 - Frequency Table - All LOS Events** (highlighted)
 - Run Report
 - Modify Report** (highlighted with a red box)
 - Export Data Set
- Meningitis (MEN)
 - Line Listing - All MEN Events
 - Frequency Table - All MEN Events

Step 3: Make changes as needed in the sections of the Modify **'Frequency Table – All LOS Events'** report – Title/Format, Filters, Display Options.

Step 4: To modify the time period, navigate to the **'Time Period'** tab of the modifications page. For example, select **'evntDateYr'** as the date variable and enter the date range from 2021.

The screenshot shows the 'Modify "Frequency Table - All LOS Events"' interface. At the top, there is a checkbox for 'Show descriptive variable names (Print List)' and the text 'Analysis Data Set: NEO'. Below this are four tabs: 'Title/Format', 'Time Period' (which is selected and highlighted in green), 'Filters', and 'Display Options'. Under the 'Time Period' tab, there is a section titled 'Time Period:' containing a table with columns 'Date Variable', 'Beginning', and 'Ending'. The 'Date Variable' dropdown is set to 'evntDateYr', 'Beginning' is '2021', and 'Ending' is empty. To the right of the 'Ending' field is a blue button labeled 'Clear Time Period'. Below the table is a checkbox labeled 'Enter Date variable/Time period at the time you click the Run button'.

Step 5: To modify the filters, navigate to the **'Filters'** tab on the Modification screen and select **'Add rule'** → **'locCDC'** from the first dropdown box for the first filter → set the select dropdown box to **'equal'** → enter **'Neonatal Critical Care (Level II/III)'** in the last box. If you need to add more rules to this same group of filters you can do that by 'add rule' followed by the steps explained above.

The screenshot shows the 'Modify "Frequency Table - All LOS Events"' interface with the 'Filters' tab selected. At the top, there is a checkbox for 'Show descriptive variable names (Print List)', the text 'Analysis Data Set: NEO_LOS_Events', 'Type: Frequency Table', and 'Last Generated: December 17, 2021 2:09'. Below this are four tabs: 'Title/Format', 'Time Period', 'Filters' (which is selected and highlighted in green), and 'Display Options'. Under the 'Filters' tab, there is a section titled 'Additional Filters:' with 'Show' and 'Clear' buttons. Below this is a filter rule structure. It starts with 'AND OR' buttons. Inside a group, there is another 'AND OR' button and a filter rule: 'locCDC' (highlighted with a red box) equal to 'Neonatal Critical Care(Level II/III)'. To the right of the filter rule are 'Add group', 'Add rule', and 'Delete' buttons.

Step 6: To modify the display options, select **'Display Options'** tab on the Modifications page. Under the Frequency Table Options, select **'eventDateYM'** for the Row, **'spcEvent'** for the Column, and leave the Page by selection blank. Next, select **'Table percent – Display cell frequency divided by table total'** for Frequency Table Options and **'Row Percent – Display cell frequency divided by row total'** for Two-Way Table Options.

Note: Variables for the Row and Column can be changed to any of the listed variables in the drop-down list of both.

The screenshot shows a software interface titled "Modify 'Frequency Table - All LOS Events'". At the top right, it indicates "Analysis Data Set: NEO_LOS_Events" and "Type: Frequency Table". Below this is a navigation bar with tabs for "Title/Format", "Time Period", "Filters", and "Display Options" (which is highlighted in green). The main area is titled "Frequency Table Options:" and contains several sections:

- Selected Variables to include in report:** This section has three dropdown menus. The "Row" dropdown is set to "evntDateYM", the "Column" dropdown is set to "spcEvent", and the "Page by" dropdown is empty. Each dropdown is highlighted with a red box.
- Frequency Table Options:** This section contains three checkboxes:
 - Table percent - Display cell frequency divided by table total
 - Missing - Include observations with missing values
 - Print the table in list form
- Two-Way Table Options:** This section contains four checkboxes:
 - Row Percent - Display cell frequency divided by row total
 - Column Percent - Display cell frequency divided by column total
 - Expected - Expected cell frequencies
 - Chi-square - Test for independence

Report/Results

The frequency table is the result of the modifications made in Steps 1-6. For each row/column combination, there are 3 cells of data. Let's look at the eventDateYM frequency row in the screenshot below (A),

- **Note:** In the top left corner of the table, there is a 'legend' explaining what each cell in the frequency table represents (B)
- Let's assume there are 4 sub-cells in each combination of row and column variables (eventDateYM x NLCBI). The top sub-cell of each combination provides a simple count of the number of events (frequency) that have occurred meeting both the row and column criteria. In this example, there was 1 Neonatal laboratory confirmed bloodstream infections (NLCBI) in January 2021.
- The second sub-cell for the eventDateYM is the percent of all events in the dataset that meet both the row and column variables (percent of table total). For example, 50% of the spcEvent were NLCBI in January 2021.
- The third sub-cell is the percent of specific event types per total of a given row (row percent). In this example, 100.0% of all specific events were NLCBI in January 2021.
- The fourth sub-cell is the percent of specific events of a given type across all columns (Column Percent), and in this example 50% of specific events were NLCBI in January 2021.

National Healthcare Safety Network
Frequency Table for All LOS Events
As of: December 17, 2021 at 4:01 PM
Date Range: NEO_LOS_EVENTS evtDateYr After and Including 2021
 if (((locCDC = "IN:ACUTE:CC_STEP:NURS")))

Frequency Percent Row Pct Col Pct	Table of evtDateYM by spcEvent		
	evtDateYM	spcEvent	
		NLCB1	Total
	2021M01	1	1
		50.00	50.00
		100.00	
		50.00	
	2021M02	1	1
		50.00	50.00
		100.00	
		50.00	
	Total	2	2
		100.00	100.00

- The margins of the column and row variables contain the total counts (top sub-cells) and total percentages (bottom sub-cells) of data for each event type (or strata). For example, for eventDateYM, there were 2 NLCBI specific events accounting in January 2021.

Note: Please follow the same method of analysis for all frequency tables in the Neonatal component, inclusive of MEN events and LOSMEN Denominator reports.

Additional Resources from Neonatal and non-Neonatal component

- LOS/MEN Event Overview: https://nhsn.cdc.gov/LOS_MEN/
- LOS/MEN Module Overview: <https://www.cdc.gov/nhsn/pdfs/training/2021/losmen-508.pdf>
- Line lists for LOS/MEN events:
- Introduction to NHSN Analysis: <http://www.cdc.gov/nhsn/PDFs/training/intro-AnalysisBasics-PSC.pdf>
- General tips for NHSN Analysis: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/General-Tips-NHSN-Analysis.pdf>
- How to modify a report: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/howtomodifyreport.pdf>
- How to filter your data by time period: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/filtertimeperiod.pdf>
- How to filter your data on additional criteria: <https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/selectioncriteria.pdf>