How to Create a Frequency Table

Description

A frequency table is 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.

Example

Suppose you are interested in looking at the distribution of all device-associated (DA) events across the different cardiac center locations in your facility, for all events that were identified in 2014 and 2015.

Modification Page

For further information, please visit the Modification Guidelines page: https://www.cdc.gov/nhsn/pdfs/ps-analysisresources/howtomodifyreport.pdf

In the "Supplemental Reports" folder, click "Event-level Data", then "All Events/Infections" to display the available reports. Click "Frequency Table- All Events" and select "Modify Report" to limit the time period and show only desired variables.
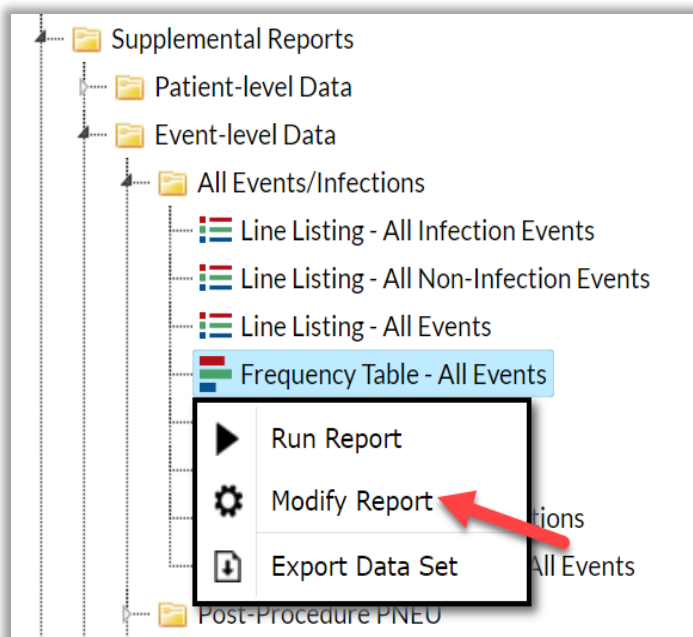
To modify the time period, navigate to the "Time Period" tab of the modifications page. Select "evntDateYr" as the date variable and enter the date range 2021 to 2022.

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To modify the filters, navigate to the "Filters" tab on the Modification screen and select "eventType" from the third dropdown box for the first filter. Set the second dropdown box to "in" and the following dropdown boxes to "BSI- Bloodstream Infection", "UTI- Urinary Tract Infection", and "VAE- Ventilator-Associated Event". Select "Add rule", then select "locationType" from the first dropdown box, "equal" from the second dropdown box, and "CC-CC" from the third dropdown box.

To modify the display options, select the "Display Options" tab on the Modifications page. For the Frequency Table Options, select "location" for the Row, "eventType" for the column, and leave the Page by selection black. 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" as well as "Column Percent – Display cell frequency divided by column total" for Two-Way Table Options.

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Output/Results and Interpretation

This example frequency table is the result of the modifications shown on page 1. For each row/column combination, there are four cells of data. Let's look at the BCC location/BSI event type combination (boxed in red):

- NOTE: In the top left corner of the table, there is a "legend" explaining what each cell in the frequency table represents (boxed in green).

- The top 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 bloodstream infection (BSI) in the BCC between 2021 and 2022.

- The second cell for the BCC is the percent of all events in the dataset that meet both the row and column variables (percent of table total). For example, 5.56% of all device-associated events in 2021 and 2022 were BSIs in the BCC (1/18).

- The third cell is the percent of events of a given type per total of a given row (row percent). In this example, 100.00% of all device-associated (DA) events in the BCC were bloodstream infections (BSI) (1/1).

- The fourth cell is the percent of events of a given type across all <u>columns</u> (Column Percent), and in this case shows the percent of each DA event type that occurred in a certain location. For example, 9.09% of all BSI events occurred in the BCC (1/11).

- The margins of the column and row variables (boxed in purple) contain the total counts (top cells) and total percentages (bottom cells) of data for each location (or strata). For example, in BCC, there was 1 DA event accounting for 5.56% (1/18) of all DA events reported from these locations during 2021-2022. Similarly, there were 11 BSIs accounting for 61.11% (11/18) of all DA events reported from these locations during 2021-2022.

National Healthcare Safety Network
Frequency Table for All Events
As of: December 7, 2023 at 6:36 PM
Date Range: EVENTS evntDateYr 2021 to 2022
if (((eventType IN ("BSI", "UTI", "VAE")) AND (locationType = "CC")))

Table of location by eventType

Frequency Percent Row Pct Col Pct	location	BSI	UTI	VAE	Total
	1029-8	1	0	0	1
		5.56	0.00	0.00	5.56
		100.00	0.00	0.00	
		9.09	0.00	0.00	
	BCC	1	0	0	1
		5.56	0.00	0.00	5.56
		100.00	0.00	0.00	
		9.09	0.00	0.00	
	CARDCRIT	0	0	1	1
		0.00	0.00	5.56	5.56
		0.00	0.00	100.00	
		0.00	0.00	33.33	
	ICU	1	1	0	2
		5.56	5.56	0.00	11.11
		50.00	50.00	0.00	
		9.09	25.00	0.00	
	ICU-A	7	0	2	9
		38.89	0.00	11.11	50.00
		77.78	0.00	22.22	
		63.64	0.00	66.67	
	ICU-C	0	3	0	3
		0.00	16.67	0.00	16.67
		0.00	100.00	0.00	
		0.00	75.00	0.00	
	MICU	1	0	0	1
		5.56	0.00	0.00	5.56
		100.00	0.00	0.00	
		9.09	0.00	0.00	
	Total	11	4	3	18
		61.11	22.22	16.67	100.00

Data contained in this report were last generated on December 6, 2023

Addition Resources

- Introduction to NHSN Analysis:
  http://www.cdc.gov/nhsn/PDFs/training/intro-AnalysisBasics-PSC.pdf

- How to filter your data by time period:
  https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/filtertimeperiod.pdf