Antimicrobial Resistant Organisms 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.

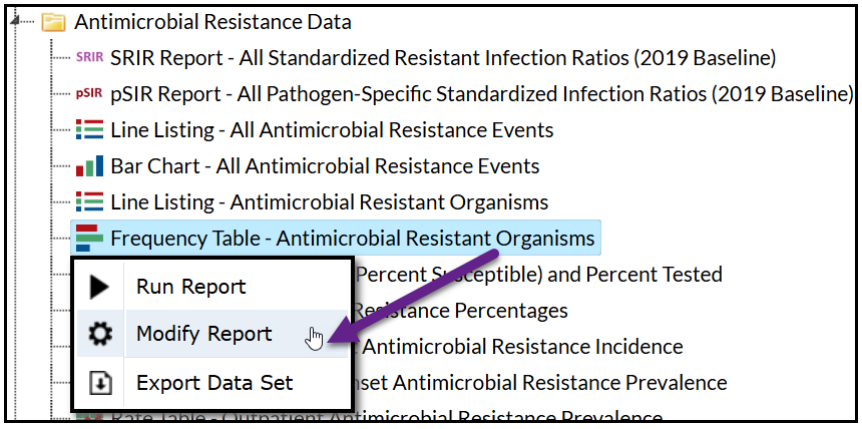
The Antimicrobial Resistant Organisms Frequency Table report allows you to analyze Antimicrobial Resistance (AR) Option Events from your facility (or group) in which a specific antimicrobial resistant organism (or "phenotype") is identified by NHSN based on the susceptibility results included in the uploaded AR Event Clinical Document Architecture file. CDC has defined many AR Option phenotypes of epidemiologic importance; the analysis report will display data from these phenotypes by default. Criteria and definitions for the pre-defined phenotypes can be found in Appendix I of the AUR Module Protocol.

For a general, step-by-step explanation of the NHSN modification screen, please refer to this How to Modify a Report document.

Example

Suppose you are interested in looking at the distribution of AR Events that met the NHSN AR phenotype definitions across each calendar year, by the locations in your facility.

After generating data sets, to run the frequency table report, click Analysis > Reports > Antimicrobial Use and Resistance Module > Antimicrobial Resistance Data. After selecting the report, in this case, "Frequency Table – Antimicrobial Resistant Organisms," a pop-up box will appear that will allow you to **Run Report**, **Modify Report**, or **Export Data Set**. Select **Modify Report** to customize your report.

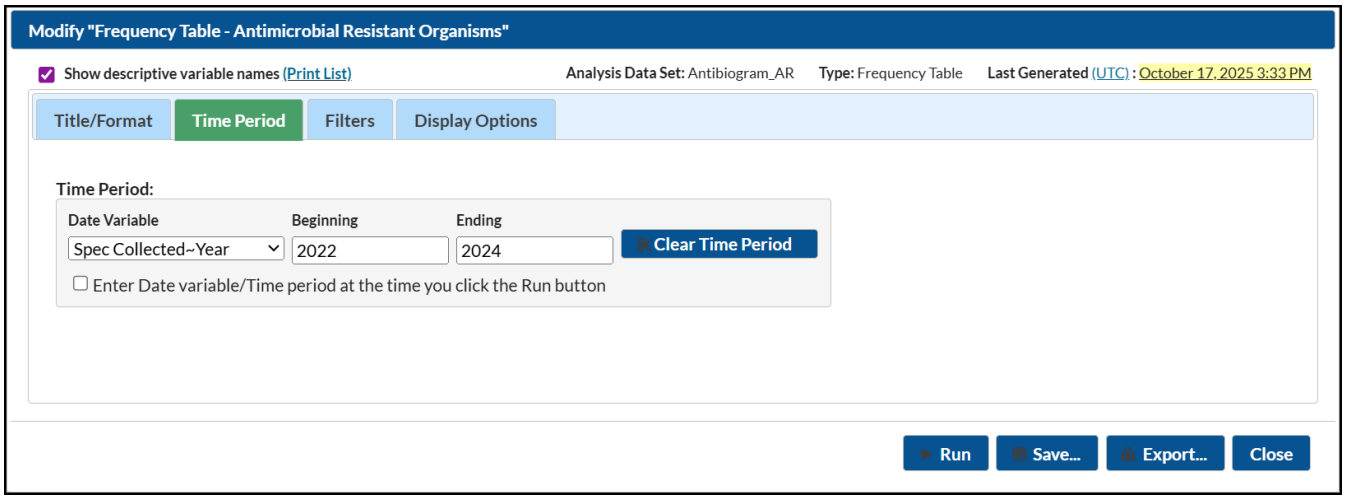


Modifying the Report

When you choose to modify the report, the modification screen appears showing multiple tabs containing available modifications for the given report. The "Title/Format" tab allows you to update the

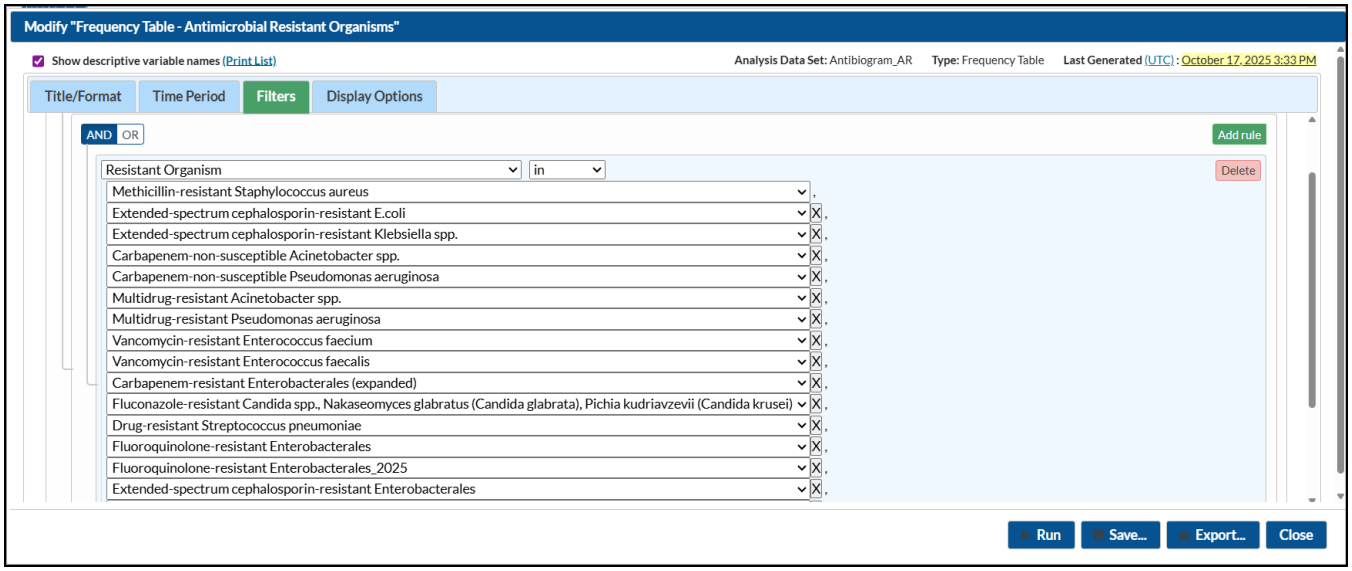
report title and select the format in which you want the report displayed, such as HTML or PDF. To filter the data by time period, choose the “Time Period” tab at the top of the screen. In this example, we have limited the report to include only AR Events that were collected from 2022 through 2024 (Spec Collected~Year Beginning = 2022 and Ending = 2024).

Tip: *For more descriptive variable labels on your report, check the box “Show descriptive variable names” that appears near the top of the modification window (recommended).*



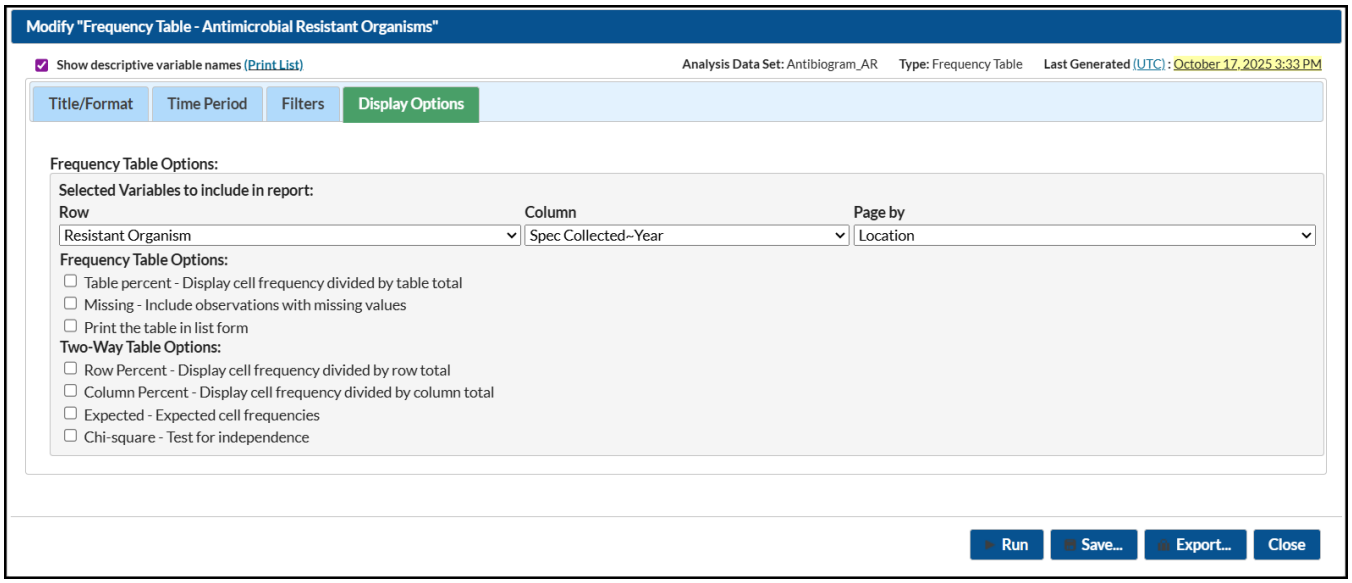
The “Filters” tab allows you to further filter the data that will be displayed in the report. For this example, we included several AR phenotypes by selecting “Resistant Organism” from the dropdown menu then selecting “in” to select multiple AR phenotypes.

Tip: *For including just one item in each filter such as a single phenotype, the “equal” operator can be used instead of the “in” operator.*



The “Display Options” tab allows you to customize the variables to display in your report. In our example, we used the default “Resistant Organism” for Row, selected “Spec Collected~Year” for Column, and selected “Location” for Page in the drop-down menus. Additional selections are available below the Frequency Table Options and Two-Way Table Options for even more customization.

Tip: *Not sure of the meaning of the variables in the list? Click “Print List” in the upper left corner of the modification window.*



Final Report

The example frequency table shown below is the result of the modifications described in this document. There is one row for each AR phenotype and one column for each year. The output below shows only the frequency table for the MEDWARD location (medical ward), but the full report would include the facility’s other locations in separate tables.

Note*: This example uses fictitious data for illustrative purposes only.*

National Healthcare Safety Network
Frequency Table - Antimicrobial Resistant Organisms
As of: October 21, 2025 at 7:49 PM UTC
Date Range: ANTIBIOGRAM_AR specDateYr 2022 to 2024

if (((phenotype_AR IN ("MRSA_AR", "ESCecoli_AR", "ESCklebsiella_AR", "carbNS_Acine_AR", "carbNS_PA_AR", "MDR_Acine_AR", "MDR_PA_AR", "VREfaecium_AR", "VREfaecalis_AR", "CREexpanded_AR", "FR_Candi_AR", "DR_SP_AR", "FQEall_AR", "ESCEall_AR", "VRE_general_AR", "FQPA_AR", "FQEall_AR_2025", "CREall_AR", "CREecoli_AR"))))

Location=MEDWARD

Frequency	Table of phenotype_AR by specDateYr				
		specDateYr(Spec Collected~Year)			
	phenotype_AR(Resistant Organism)	2022	2023	2024	Total
	CREall_AR	0	2	5	7
	CREecoli_AR	0	0	1	1
1	CREexpanded_AR	0	2	9	11
	DR_SP_AR	0	1	2	3
	ESCEall_AR	0	2	7	9
	ESCecoli_AR	0	0	1	1
	ESCklebsiella_AR	0	0	3	3
	FQEall_AR	0	1	4	5
	FQEall_AR_2025	0	1	4	5
2	FQPA_AR	0	0	2	2
	FR_Candi_AR	0	0	2	2
	MDR_Acine_AR	2	1	2	5
	MDR_PA_AR	0	0	2	2
	carbNS_Acine_AR	1	1	1	3
	carbNS_PA_AR	0	0	4	4
	Total	3	11	49	63

1. Please find the document containing Phenotype_AR definitions at https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/aur/ar-phenotype-definitions-508.pdf

Data contained in this report were last generated on October 17, 2025 at 3:30 PM UTC to include all data .

1. In the three-year timeframe shown, the orange box (#1 above) shows a total of 11 carbapenem-resistant Enterobacterales (expanded) (phenotype_AR = CREexpanded_AR) reported from the MEDWARD with none reported in 2022, two in 2023, and nine in 2024.
2. The purple box (#2 above) shows in 2024, two fluoroquinolone-resistant *Pseudomonas aeruginosa* (phenotype_AR = FQPA_AR) were reported from the MEDWARD but none were reported in 2022 and 2023.

Additional Resources

- How to Export Data from NHSN
- AUR Module Protocol
- Surveillance for AU and AR Options
- AUR Training
- NHSN Analysis Quick Reference Guides