

Frequency Table

Antimicrobial-Resistant Organisms

Updated 01/2022

This document provides instructions for the antimicrobial-resistant organism frequency table that is available in the NHSN analytic reports located in the following analysis folder: **HAI Antimicrobial Resistance (DA + PA Modules) > Antimicrobial Resistant HAIs**.

Overview

There are several analysis reports available in NHSN that will allow you to analyze HAI events from your facility (or group) in which a specific antimicrobial-resistant organism (or “phenotype”) was identified. CDC has defined 13 phenotypes of epidemiologic importance; the analysis reports will display data from these 13 phenotypes by default. Criteria and definitions for the pre-defined phenotypes can be found here:

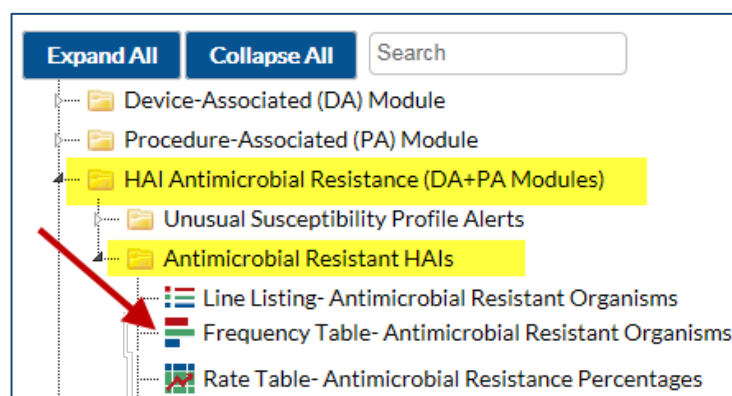
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/phenotype_definitions.pdf

Example

By default, the frequency table will provide you with counts of the number of pathogens for each phenotype, by HAI type (bloodstream infection, urinary tract infection, surgical site infection, pneumonia, and ventilator-associated events).

In this example, the hospital is interested in viewing the counts of each phenotype during the entire calendar year of 2020.

1. On the Reports screen, navigate through the following folders: HAI Antimicrobial Resistance (DA + PA Modules) > Antimicrobial Resistant HAIs > Frequency Table- Antimicrobial Resistant Organisms. Click on the report title to view options for running or modifying the report. On the pop-up menu, click “Run” to view all entered data from each of the 13 phenotypes, or click “Modify” to make specifications to the frequency table. In this example, we will click “Modify” to specify a time period.



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Modify "Frequency Table- Antimicrobial Resistant Organisms"

Show descriptive variable names ([Print List](#)) Analysis Data Set: Antibiogram_HAI

Title/Format **Time Period** **Filters** **Display Options**

Time Period:

Date Variable	Beginning	Ending	
summaryYr	2020	2020	Clear Time Period

Enter Date variable/Time period at the time you click the Run button

- To modify the time period, open the tab called "Time Period" shown at the top of the Modify screen. Select "SummaryYr" as the date variable and enter the date range 2020 to 2020.
- You can make additional modifications to the frequency table, such as limiting the report to a single phenotype, by using the tab called "Filters". By default, several specifications are already made in the "Filters" tab, and for this example, no further modifications are needed. However, if you wish to modify the phenotypes displayed in the output, you could make these edits the Filters tab.
- At the top of the Modify screen, there is a tab called "Display Options". Use this tab to modify the row variable, column variable, and "Page by" variable. Use the "Page by" option to select the time period for which the frequency tables are generated. For example, if you want a single frequency table containing data for the entire year, select 'summaryYr' as the "Page by" option. You can also view the frequency table by month (summaryYM), quarter (summaryYQ), or half-year (summaryYH).

Title/Format **Time Period** **Filters** **Display Options**

Frequency Table Options:

Selected Variables to include in report:

Row	Column	Page by
phenotype	eventType	summaryYr

Frequency Table Options:

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:

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

- For this example, no further modifications are needed. When you are ready to generate the report, click "Run" at the bottom of the screen. You may also choose "Export" if you wish to obtain this output in another format (e.g., xls).



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Report

The frequency table will display a single row for each phenotype in which your facility/group has reported at least 1 pathogen. Fictitious data are presented below.

summaryYr=2020

Frequency Row Pct	Table of phenotype by event Type				
	phenotype	event Type			
		BSI	SSI	UTI	Total
	CREall_HAI	1 33.33	1 33.33	1 33.33	3
	ESCecoli_HAI	0 0.00	0 0.00	1 100.00	1
	MDR_Acine_HAI	2 66.67	0 0.00	1 33.33	3
	MDR_PA_HAI	0 0.00	0 0.00	1 100.00	1
	carbNS_Acine_HAI	2 66.67	0 0.00	1 33.33	3
	carbNS_PA_HAI	0 0.00	0 0.00	1 100.00	1
	Total	5	1	6	12

In our example, this facility has reported pathogens for 6 phenotypes in 2020. *Hint: see document linked in Overview for the definitions of each phenotype code shown above.*

- Carbapenem-resistant Enterobacterales: 1 bloodstream infection (BSI), 1 surgical site infection (SSI), and 1 urinary tract infection (UTI) pathogen
- Extended-spectrum cephalosporin-resistant *Escherichia coli*: 1 UTI pathogen
- Multidrug-resistant *Acinetobacter*: 2 BSIs, 1 UTI pathogen
- Multidrug-resistant *Pseudomonas aeruginosa*: 1 UTI pathogen
- Carbapenem-non-susceptible *Acinetobacter*: 2 BSIs, 1 UTI pathogen
- Carbapenem-non-susceptible *Pseudomonas aeruginosa*: 1 UTI pathogen

Additional Resources

Antimicrobial Resistance Definitions:

https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/phenotype_definitions.pdf

How to run and modify a Frequency Table in NHSN:

<http://www.cdc.gov/nhsn/PS-Analysis-resources/PDF/FrequencyTables.pdf>



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