

AU Bar Chart

Description

A bar chart is a graphical representation of data where the length or height of the bars represents counts of records meeting the criteria. Bar charts can only be produced as HTML output and therefore the results will appear in a pop-up window in your browser.

Report options include display of antimicrobial use data by the category of antimicrobial category (antibacterial, antifungal, and anti-influenza) and by location.

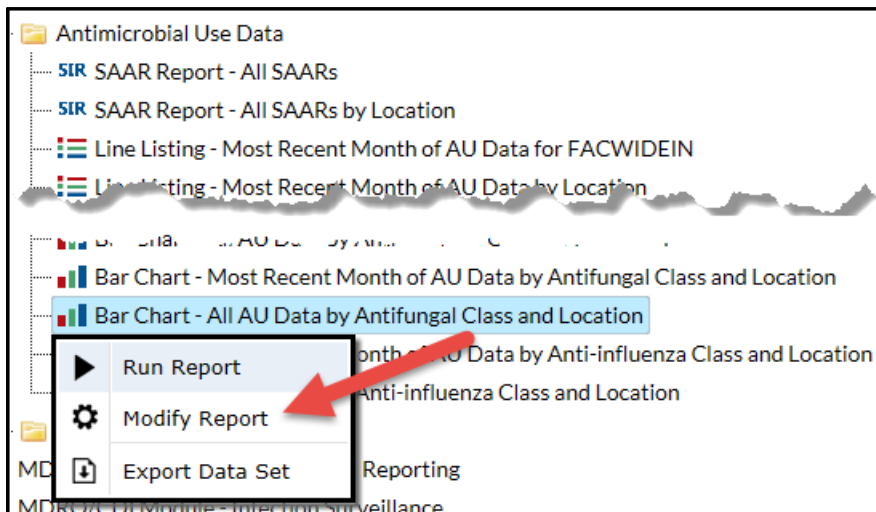
For a more basic explanation of the NHSN modification screen, refer to this document:

<https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/howtomodifyreport.pdf>.

Example (Using: Bar Chart – All AU Data by Antifungal Class and Location)

You would like to create a bar chart to graphically represent the distribution of antifungal prescribing in each critical care location in 2014 by class of antifungal. You would like to see vertical bars representing each class of antifungal with separate bar charts for each ICU location.

After generating datasets, to run a bar chart report, click Analysis > Reports > Antimicrobial Use and Resistance Module > Antimicrobial Use Data. After selecting the bar chart report you want, in this case, “Bar Chart – All AU Data by Antifungal Class and Location,” a pop-up box will appear that will allow you to “Run Report,” “Modify Report,” and “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.

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To filter the data by time period, choose the “Time Period” tab at the top of the page. In this example, we have limited the report to 2014 (Summary~Yr).

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).

Modify "Bar Chart - All AU Data by Antifungal Class and Location"

Show descriptive variable names (Print List) Type: Bar Chart Summary Data Set Generated On: 02/02/2017 11:27:00

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

Time Period:

Date Variable Beginning Ending

Summary~Yr 2014 2014

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

The “Filters” tab allows you to further filter the data that will be displayed in the report. For our example, we want to filter the report to only show data for antifungals in the critical care location type. First, select the variable “Antimicrobial Category” from the drop-down menu, set the operator to “equal” then select the value “Antifungal”. Next, click “Add rule” to add an additional filter. Then select the variable “Location Type” from the drop-down menu, set the operator to “equal” and select the value “CC - CC”.

Modify "Bar Chart - All AU Data by Antifungal Class and Location"

Show descriptive variable names (Print List) Analysis Data Set: SummaryAU Type: Bar Chart Summary Data Set Generated On: 02/02/2017 11:27:00

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

Additional Filters:

AND OR

AND OR

Antimicrobial Category equal Antifungal

Location Type equal CC - CC

Tip: For including more than one item in each filter such as multiple antimicrobial categories or multiple location types, the “in” operator can be used instead of the “equal” operator.



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The “Display Options” tab allows you to display the chart variable, stratification variable, the page-by variable, and the numeric variable to be charted for the entire time period selected.

- The “Chart Variable” is the variable being graphed on the bar chart; in this case, the variable is Antimicrobial class.
- Different colored bars will be “stacked” on each bar to represent the different values of the “Stratification Variable” if a stratification variable is chosen.
- Different bar charts can be created for each value of the “Page by” variable; here by “location”.
- The “Select Numeric Variable to Chart,” here “antimicrobialDays”, will determine the length or height of the bars.
- You can select 2D or 3D bars, placed either horizontally or vertically on the chart.
- You can also decide to place descriptive statistics (i.e., percent and count) either inside or outside the bars.

Modify "Bar Chart - All AU Data by Antifungal Class and Location"

Show descriptive variable names (Print List) Analysis Data Set: SummaryAU Type: Bar Chart Summary Data Set Generated On: 02/02/2017 11:27:00

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

Bar Chart Options

Chart Variable	Stratification Variable	Page by	Select Numeric Variable to Chart
Antimicrobial Class		Location	antimicrobialDays

Orientation of Bars: 3D Vertical

Placement of the Percent: Outside

Placement of the Value: Inside

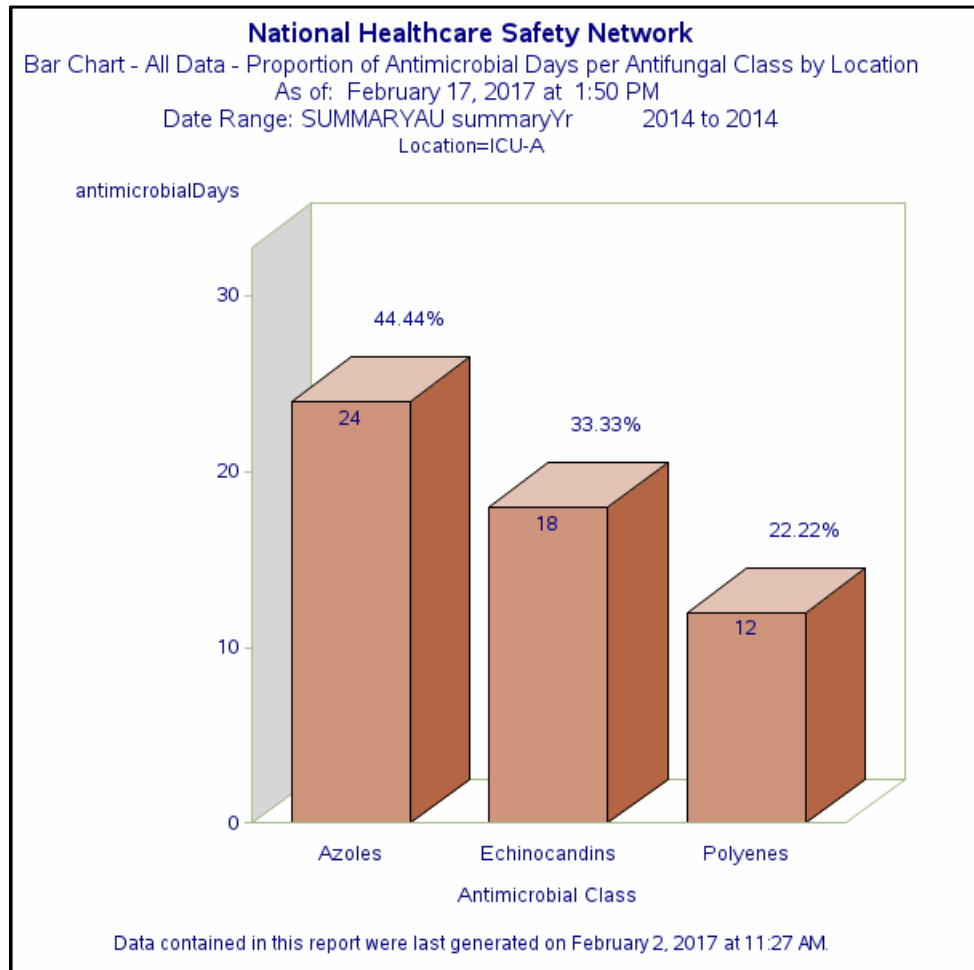
[Run](#) [Save...](#) [Export...](#) [Close](#)

Final Report

The example bar chart below is the result of the modifications shown in this document. This example displays days of antifungal therapy for the entire year of 2014.

- The y-axis (antimicrobialDays) is the total number of antimicrobial days and is represented by the height of the bars.
- The x-axis is antimicrobial class (antifungal class in this example). One bar is displayed for each antifungal class.
- The taller the bar, the greater number of antimicrobial days contributed by that class of antifungal. In this example, in ICU_A Azoles contributed 24 antimicrobial days or 44.4% of antifungal therapy for the year 2014, compared to Polyenes which contributed 12 antimicrobial days or 22.2% of antifungal therapy for 2014.
- In this example, we choose Location Type as our “Page by” selection criteria, and therefore have one bar chart for each critical care unit. The example shown here is location ICU_A.

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Additional Resources

Introduction to NHSN Analysis: <https://www.cdc.gov/nhsn/pdfs/training/2016/analysis-data-quality-parikh.pdf>

How to Export Data from NHSN: <http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/exportdata.pdf>

AUR Module Protocol: <http://www.cdc.gov/nhsn/pdfs/pscmanual/11pscaurcurrent.pdf>

Surveillance for Antimicrobial Use Option: <http://www.cdc.gov/nhsn/acute-care-hospital/aur/>