

ANTIMICROBIAL RESISTANCE EVENT LINE LIST

Description

The line list is an organized, detailed list of each record entered into NHSN, which can be used by both facilities and groups. The default settings are likely to produce a report that is too lengthy to be useful. Therefore, modifying the AR line list is recommended. The example below demonstrates a sample modification of AR data reported using the AUR Module.

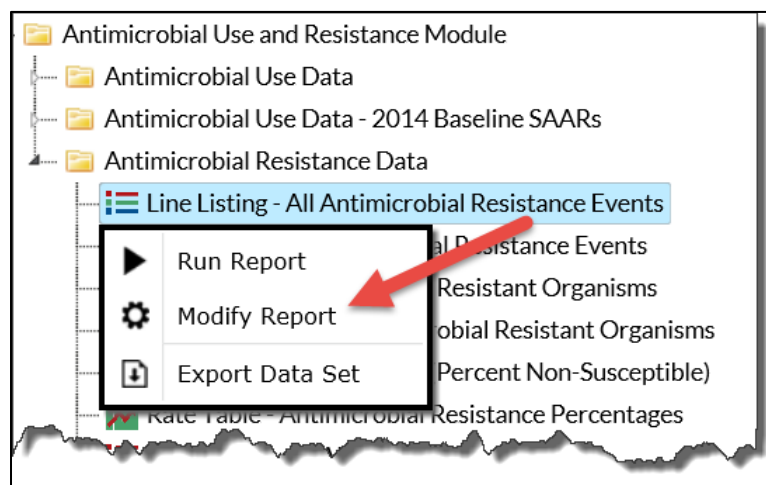
For a more basic explanation of the NHSN modification screen, refer to this document:

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

Example

Suppose you are interested in looking at all drug-specific susceptibility results for *Staphylococcus aureus* isolates identified in blood specimens in the fourth quarter of 2018. You would like to produce a line list that includes facility org ID, event ID, patient ID, date of birth, location label, date specimen collected, isolate ID, specimen group, pathogen, drug description, and final interpretation.

There is one AR Option report to generate a line listing for AR Events. After generating data sets, to run a line list report, click Analysis > Reports > Antimicrobial Use and Resistance Module > Antimicrobial Resistance Data. After selecting the report, in this case, “Line Listing – All Antimicrobial Resistance Events,” 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.

ANTIMICROBIAL RESISTANCE EVENT LINE LIST

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 line list to include only antimicrobial resistance data in the fourth quarter of 2018 (Specimen Date~Yr/Qtr = 2018Q4).

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 screenshot shows the 'Modify Line Listing - All Antimicrobial Resistance Events' window. At the top, there is a header bar with the title. Below it, a row of tabs includes 'Title/Format', 'Time Period' (which is highlighted in green), 'Filters', 'Display Variables', 'Sort Variables', and 'Display Options'. The 'Time Period' section contains a 'Date Variable' dropdown set to 'Specimen Date~Yr/Qtr', a 'Beginning' text box with '2018Q4', and an 'Ending' text box with '2018Q4'. There is a 'Clear Time Period' button and a checkbox labeled 'Enter Date variable/Time period at the time you click the Run button'. At the bottom right, there are buttons for 'Run', 'Save...', 'Export...', and 'Close'. The top right corner shows 'Type: Line Listing' and 'Data Set Generated On: 01/09/2019 16:00:00'.

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 Pathogen = Staphylococcus aureus - SA and Specimen group = Blood.

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

The screenshot shows the same window with the 'Filters' tab selected. The 'Additional Filters' section has 'Show' and 'Clear' buttons. Below, there are 'AND' and 'OR' logic buttons. Two filter rules are added. The first rule has 'Pathogen' set to 'equal' and 'Staphylococcus aureus - SA'. The second rule has 'Specimen Group' set to 'equal' and 'Blood'. Each rule has a 'Delete' button. There are also 'Add group' and 'Add rule' buttons. At the bottom right, there are buttons for 'Run', 'Save...', 'Export...', and 'Close'. The top right corner shows 'Type: Line Listing' and 'Data Set Generated On: 01/09/2019 16:00:00'.

ANTIMICROBIAL RESISTANCE EVENT LINE LIST

The “Display Variables” and “Sort Variables” tabs allow you to display and sort specific variables in your report. Both tabs will produce a similar window, shown below, which allows you to move variables from the available list in the left column to the selected list in the right column by using the directional arrows in the center. You can also re-order the selected variables using the “Up” and “Down” buttons, found to the right of the selected variables list.

Tip: Not sure of the meaning of the variables in the list? Use the variable reference list:

http://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/varlabelxref-ps_current.pdf.

Modify "Line Listing - All Antimicrobial Resistance Events"

☒ Show descriptive variable names ([Print List](#)) Analysis Data Set: AUR_Detail Type: Line Listing Last Generated (UTC): January 24, 2025 3:44 PM

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

Display Variables:

Available Variables:

- admitDateYH
- admitDateYM
- admitDateYQ
- admitDateYr
- Bed Size
- CDA Vendor ID
- CDC Location
- CMS Certification Number
- Create Date
- Date of Birth
- Drug Code
- E-test sign
- E-test value
- Final interpretation

Selected Variables:

- Facility Org ID
- Event ID
- Patient ID
- Fac Admission Date
- Date Specimen Collected
- Location
- Isolate ID
- Specimen Group
- Pathogen Description
- Drug Description
- Final interpretation Description

Run Save... Export... Close

Final Report

The example line list shown below is the result of the modifications shown in this document. Within the line list, one row is displayed for each antimicrobial submitted for the specific organism. Blood specimens identifying *Staphylococcus aureus* are required to include susceptibility testing information on 26 antimicrobials (see AUR Module protocol for complete list). Therefore, for each single AR *Staphylococcus aureus* blood isolate event reported to NHSN, there will be 26 rows of data in the line list.

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

ANTIMICROBIAL RESISTANCE EVENT LINE LIST

National Healthcare Safety Network

Line Listing - Antimicrobial Resistance Events by Pathogen

As of: January 9, 2019 at 5:13 PM

Date Range: AUR_DETAIL SpecimenDateYQ 2018Q4 to 2018Q4

Pathogen Description=SA

Event ID	Patient ID	Fac Admission Date	Date Specimen Collected	Location	Isolate ID	Specimen Group	Pathogen Description	Drug Description	Final interpretation
1 34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	AZITH - Azithromycin	R
34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	CEFOX - Cefoxitin	S
34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	CHLOR - Chloramphenicol	S
2 34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	CIPRO - Ciprofloxacin	S
34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	CLARTH - Clarithromycin	S
34818739	MRSA_2018_2	01/13/2018	12/20/2018	MSICU	MRSA_2018_2	Blood	Staphylococcus aureus - SA	CLIND - Clindamycin	S

1. *Staphylococcus aureus* was isolated in the blood specimen collected from the patient on 12/20/2018 and it was resistant to Azithromycin.
2. *Staphylococcus aureus* from the same blood specimen collected from this patient on 12/20/2018 was susceptible to Ciprofloxacin. In fact, *Staphylococcus aureus* was susceptible to multiple drugs as shown in this report snapshot.

Additional Resources

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

Introduction to NHSN Analysis: <https://www.cdc.gov/nhsn/pdfs/training/2018/intro-to-analysis-508.pdf>

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

Surveillance for Antimicrobial Resistance Options: <https://www.cdc.gov/nhsn/acute-care-hospital/aur/>