Patient Safety Component
NHSN Antimicrobial Resistance (AR) Option:
Facility-Wide Antibiogram Report

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NHSN Annual Training

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Objectives

By the end of this session, users will:

1. Describe the Facility-Wide Antibiogram analysis report
2. Explain the steps to generate the Facility-Wide Antibiogram report
3. Interpret the output produced in the Facility-Wide Antibiogram report

Summary of AR Event criteria

- **AR Event: isolate-level susceptibility results for specific organisms**

- **Qualifying isolate criteria for an AR Event:**
  - Collected in an eligible location/unit
  - Collected from one of **five** specimen source categories
  - Eligible organism identified
  - Must have completed antimicrobial susceptibility testing (AST) for at least one drug*
    - *Candida isolates can be reported **without** AST
    - Qualifies for submission regardless of susceptibility results

- **Reported for:**
  - All inpatient locations and 3 outpatient location types (ED, pediatric ED, & 24-hour observation area)

Invasive	Non-invasive
Blood	Urine
CSF	Lower Respiratory
	Skin, soft tissue, wound, musculoskeletal

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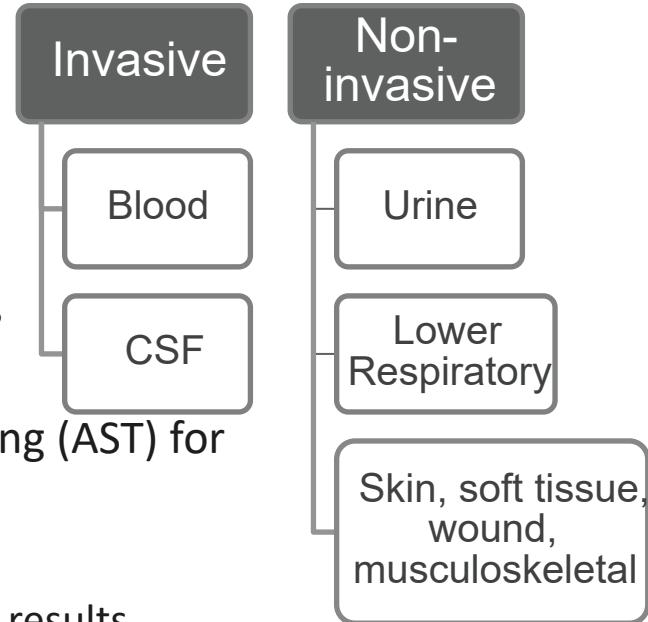
AR Option Reports Types

| AR Option Data	Type of Reports
AR Event (aka Numerator)	Line list, bar chart, antibiogram & percent tested
AR Organism (AR Event assigned phenotype)	Line list, frequency table, rate table
AR Summary (aka Denominator)	Line list
Incidence and Prevalence (AR Event and AR Summary)	Rate tables
Risk-adjusted (AR Event and AR Summary): Standardized Resistant Infection Ratio (SRIR) and Pathogen-specific Resistant Infection Ratio (pSIR)	Ratios

Facility-Wide AR Option Antibiogram Report

Facility-Wide Antibiogram and Percent Tested

- Provides tables based on AR events reported in NHSN
  - Percent susceptible (%S)
  - Percent tested (%Tested)
- Displays calculated values for each organism-antimicrobial combination reported from:
  - All locations
  - All specimen types
  - All patients
- Available to both facilities and group
- Filters allow for customization of the output

6
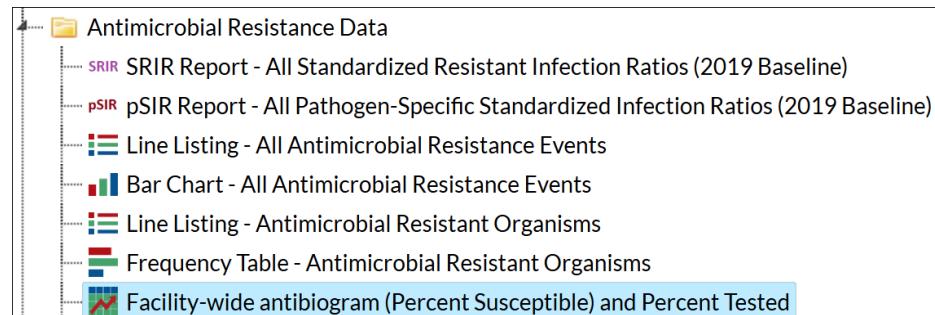
Percent Susceptible (%S)

- The %S is calculated for each organism-antimicrobial pairing using the following formula:

$$\frac{Number\ of\ isolates\ tested\ suceptible}{Number\ of\ isolates\ tested} \times 100 = \%S$$

- Numerator only includes susceptible (S) values

- Denominator includes susceptible (S), susceptible dose-dependent (S-DD), intermediate (I), resistant (R), and non-susceptible (NS) values

- %S is only calculated when 30 or more isolates have been tested for a particular drug.

  - To achieve a more precise %S, select a longer time period in the antibiogram to accumulate 30 or more isolates.

Percent Tested (%Tested)

- The %Tested is calculated for each organism-antimicrobial pairing using the following formula:

$$\frac{Number\ isolates\ with\ a\ susceptibility\ result}{Total\ number\ of\ isolates} \times 100 = \%Tested$$

- **Note:** Susceptibility results include S, S-DD, I, R, or NS.

- %Tested is only calculated when at least 1 isolate has been reported.

Low %Tested and Data Quality

- **Possible Causes**:
  - The drug is only tested by request
  - Your facility performs data suppression for antimicrobial stewardship purposes (i.e., selective or cascade reporting) through suppressing AST results of select drug(s) from clinician's view
- **Impacts of Data Suppression**:
  - Potentially leads to selection biases in the calculation of cumulative antibiograms

Why checking %reported is important?
# Impact of data suppression on Cumulative Antibiograms
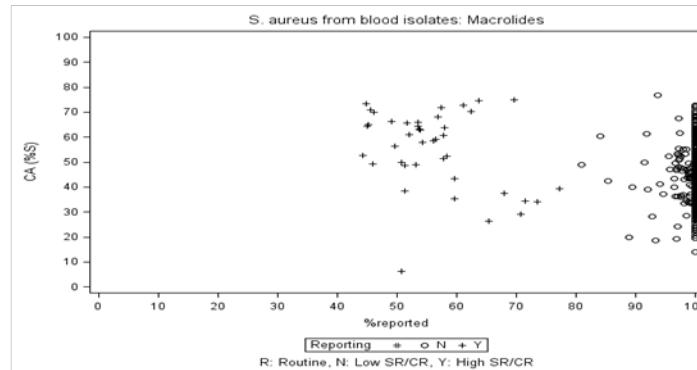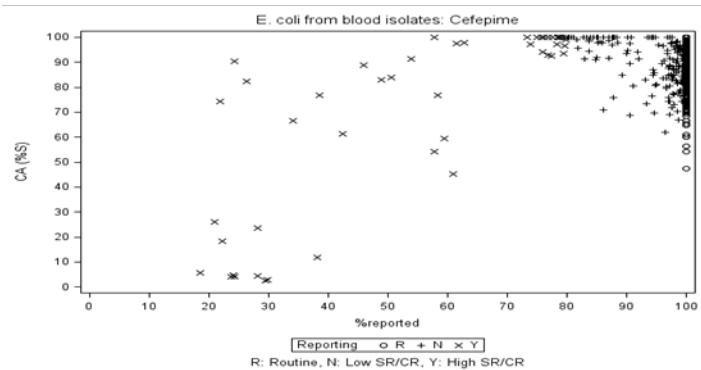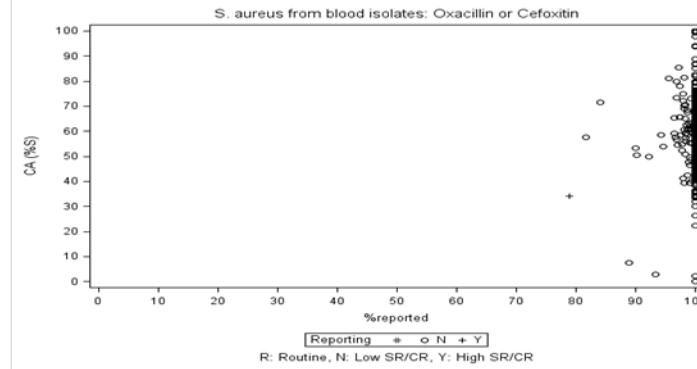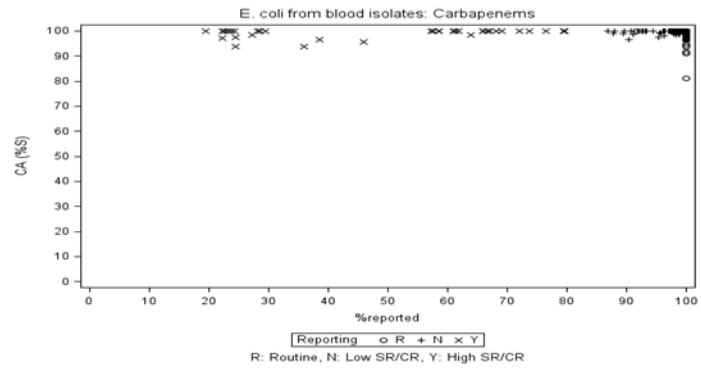
To minimize bias, do…

1. Submit **all** AST results that are tested and validated by your microbiology lab (i.e., bypass selective and cascade reporting)

2. Always check %tested values before interpreting %S or %R values. If %tested is low, reach out to your microbiology lab and/or IT to discuss potential solutions for extracting complete data for surveillance

3. When reviewing your cumulative antibiogram, make sure to include the organism-antimicrobial combinations that your lab routinely tests, to ensure that your NHSN antibiogram is reliable and representative.

For more information, refer to the AR Option Data Validation protocol:
https://www.cdc.gov/nhsn/pdfs/ps-analysis-resources/aur/ar-validation-508.pdf

Bypass SR/CR for surveillance purposes
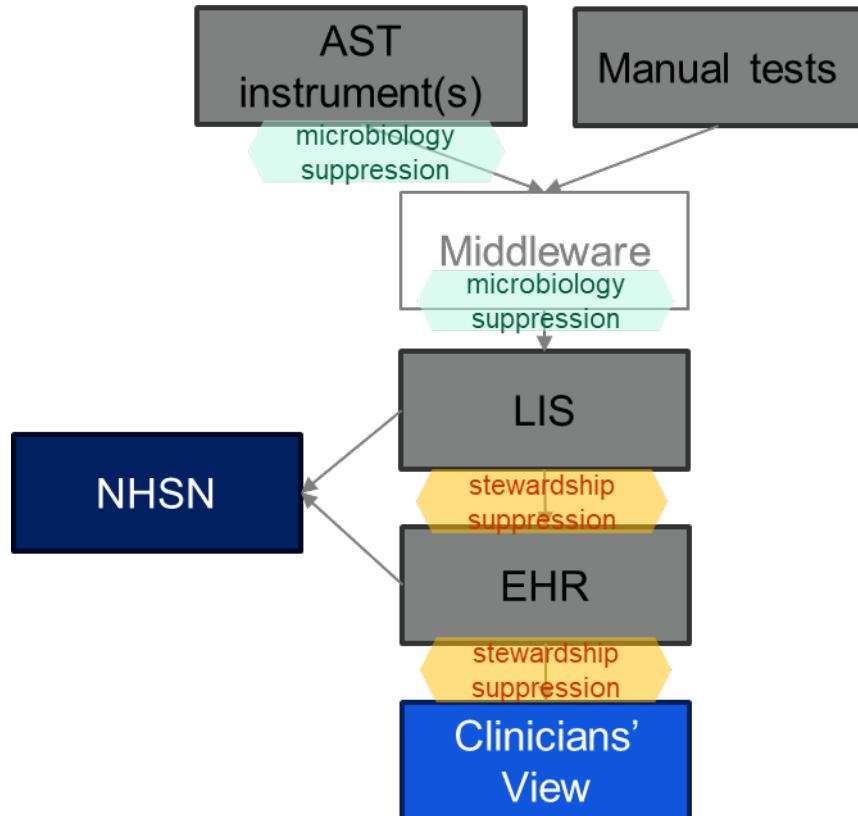
- **Potential solution: separate data suppression by purpose**
  - Data suppression for microbiology reasons → Keep suppressed
  - Data suppression for antimicrobial stewardship → Move to LIS or EHR if feasible
- **Extract surveillance data in between (after lab validation, before SR/CR)**

LIS: laboratory Information System
EHR: Electronic Health Records
SR/CR: Selective or cascade reporting

Cumulative Antibiogram: NHSN ARO vs. CLSI M39

Guidance	Isolate selection criteria	Specimen sources included	Possible impact on cumulative antibiograms
NHSN AR Option	14-day rule for invasive specimen One per calendar month for non-invasive specimen	**Invasive Sources**: CSF, Blood **Non-Invasive**: Lower respiratory, skin, soft tissue, wound, musculoskeletal, urine	May include multiple isolates for a patients under antimicrobial treatment. May show slightly lower %S than following M39.
CLSI M39	One (first) isolate of a given organism per period	Any	Less likely to include HAI isolates. May have higher %S than AR Option.

Eligible specimen sources for AR Option data pre-2025

- Prior to 2025, AR Option & AR antibiogram included only **blood, CSF, lower respiratory tract, or urine specimens**
- Other specimen types, such as wound cultures, may have been included in your lab produced M39 antibiogram.
  - As a result, only specimen-specific antibiograms can be compared, and use of NHSN AR Option surveillance data as guidance for empirical antimicrobial therapy is limited to infections of specific infection sites (bacteremia, pneumonia, central nervous system infections, or UTI)
- As of Jan 2025, hospitals report isolates for **blood, CSF, lower respiratory tract, urine, skin, soft tissue, wound and musculoskeletal specimens**
  - Your NHSN antibiogram may be closer to your lab produced antibiogram for 2025 and forward

Knowledge Check #1

Why might the antibiogram produced by NHSN differ from lab-produced antibiogram?

A. The deduplication rules in the two antibiogram reports differ

B. Other specimen sources may be included in a lab-produced antibiogram

C. The NHSN-produced antibiogram is affected by suppressed data

D. All of the above

Knowledge Check #1 - Answer

Why might the antibiogram produced by NHSN differ from lab-produced antibiogram?

A. The deduplication rules in the two antibiogram reports differ

B. Other specimen sources may be included in a lab-produced antibiogram

C. The NHSN-produced antibiogram is affected by suppressed data

D. All of the above
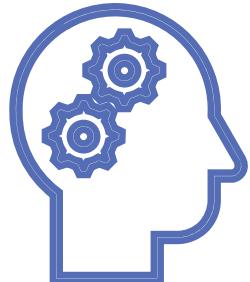
All answer choices above can contribute to the two antibiogram reports differing:

A. *Some labs follow the CLSI M39 guidance to include only the first specimen per patient per year in the annual antibiogram, while NHSN used the 14-day and one per month reporting rules.*

B. *NHSN AR Option surveillance may not include certain specimen sources that labs include in their antibiogram.*

C. *If the lab includes all data in their antibiogram but the NHSN antibiogram is affected by data suppression, the two reports will not match*

Updates

Updates to the Antibiogram Report

Updated display

- Pathogen category headings:
  - Number of isolates reported for each pathogen displayed in parenthesis as part of the column headings

- Percent Tested table specifications
  - %Tested table displays percentage values if 1 or more isolates were reported

- Reduction in columns in both tables
 - Group organisms into organism groups instead of displaying a column for each individual organism.

Future updates:

- The Skin, Soft Tissue, Wound, and Musculoskeletal specimen group will be added to the Antibiogram report

- A new pathogen group variable will be added as a filter to help users modify their Antibiogram report

Antibiogram Report Options

Facility-Wide Antibiogram Report Options

- Three options are available for viewing antibiogram and percent tested data that have been uploaded to NHSN.
  - Run Report
    - Generates the report using default settings
  - Modify Report
    - Allows user to make changes to the default settings and customize the report
  - Export Data Set
    - Allows users to take Antibiogram and percent tested data out of the NHSN application and analyze in a different software (*e.g.*, SAS, Excel, CSV)
- This presentation covers the default and modified report options.

Antibiogram Report Options

Default Report

- Tables produced by quarter
- Includes all isolates, for example:
  - **Specimen type**
  - **Patient population**
  - **Location**
  - **Onset**
  - **Organism category**

Customized Report

- The "Modify Report" option gives users access to modify:
  - Title/Format
  - Time Period
  - Filters
  - Display Options
    - Group by options (*e.g.*, Cumulative, Specimen Date~Year, Specimen Date~Year/Month)

Users can save modifications as a custom report for future use!

After making modifications:

1. Click "Save" on the bottom right-hand side of the modifications screen

2. Change the report name and title

3. Click "Save"

- Report will save to "Custom Reports" folder

- Modifications will be saved as a template; it will <u>not</u> save the results

  - To make changes, select the "Modify Report" option
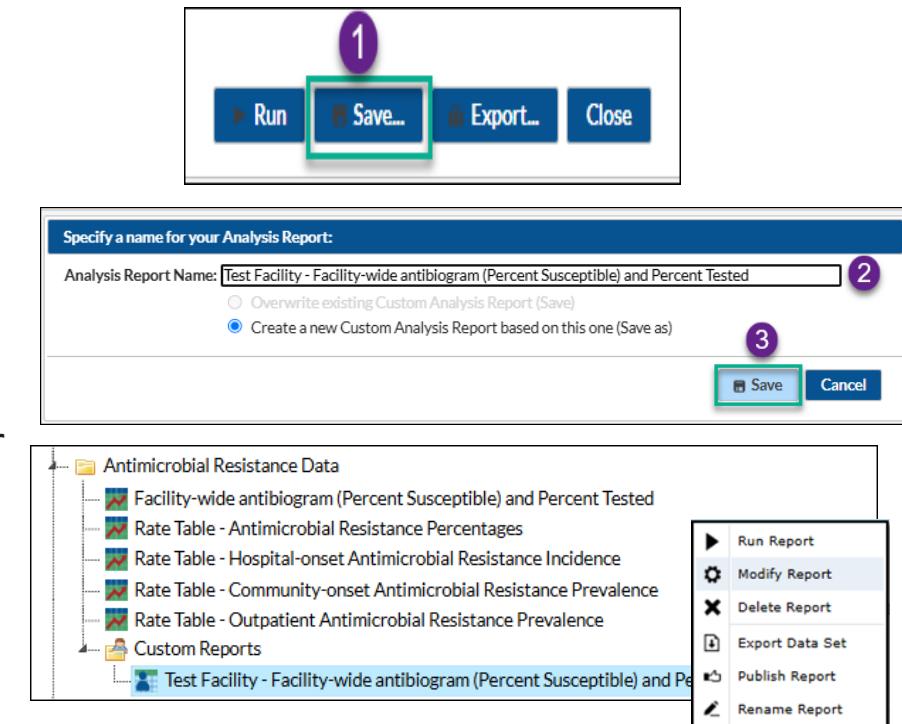
Steps to Generate Default Antibiogram Report

Run the default report

After generating datasets, click "Analysis" then "Reports"

- Once on the Analysis Reports page:
  1. Antimicrobial Use and Resistance Module
  2. Antimicrobial Resistance Data
  3. Facility-Wide Antibiogram (Percent Susceptible) and Percent Tested report
  4. Click "Run Report"
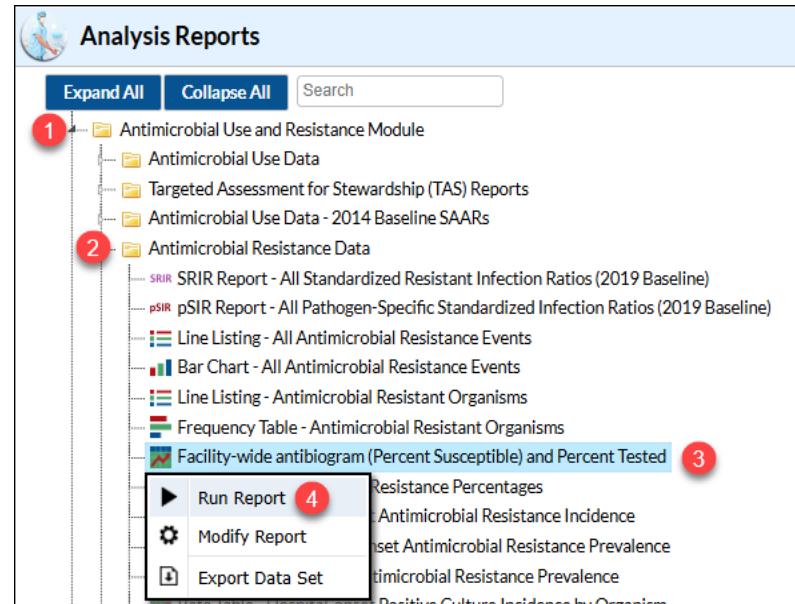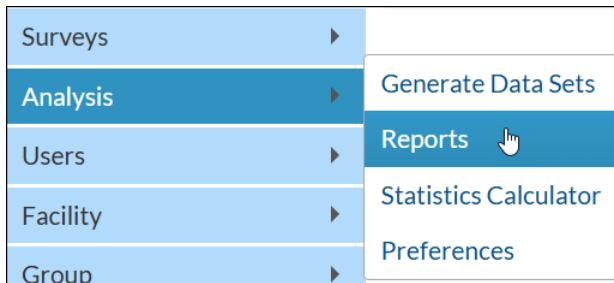
Facility-wide Antibiogram: Title

- Reports displays the %S and % Tested tables separately.

- The title of the report specifies which table is being displayed.

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates
Percent Tested per 100 Isolates
As of: February 19, 2025 at 7:08 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

				Gram-Negative		
Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (9)	Acinetobacter spp. (41)	Citrobacter amalonaticus, freundii, koseri, & diversus (7)	Enterobacter spp. (15)	Escherichia coli (10)
Aminoglycosides	AMK	89.0	85.0	100	87.0	100
	GENTA	89.0	90.0	100	100	100
	PLAZO			75.0	93.0	100
	TOBRA	67.0	78.0	100	87.0	40.0

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Facility-wide Antibiogram: Dataset Generation

- The data set generation timestamp, tells you when the antibiogram report was produced.

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates Percent Tested per 100 Isolates
As of: February 19, 2025 at 7:08 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

				Gram-Negative		
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Aminoglycosides	AMK	89.0	85.0	100	87.0	100
	GENTA	89.0	90.0	100	100	100
	PLAZO			75.0	93.0	100
	TOBRA	67.0	78.0	100	87.0	40.0

Facility-wide Antibiogram: Table details

- The header above the %S and %Tested tables displays the date as the year and quarter specimens were collected.

National Healthcare Safety Network

Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates Percent Tested per 100 Isolates

As of: February 19, 2025 at 7:08 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

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	PLAZO			75.0	93.0	100
	TOBRA	67.0	78.0	100	87.0	40.0

Facility-wide Antibiogram: Organism category

- NHSN sorts pathogens by three organism categories
  - Gram-Negative
  - Gram-Positive
  - Fungal

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates
Percent Tested per 100 Isolates
As of: February 19, 2025 at 7:08 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

					Gram-Negative	
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Aminoglycosides	AMK	89.0	85.0	100	87.0	100
	GENTA	89.0	90.0	100	100	100
	PLAZO			75.0	93.0	100
	TOBRA	67.0	78.0	100	87.0	40.0

2025 Eligible Gram-Negative Organisms and Organism Codes

	Organism	Pathogen Codes
Gram-Negative	All *Acinetobacter* species	ACS, ACBA, ACICBA, ACCA, ACIGEN, ACHA, ACJH, ACJU, ACLW, ACINNOSO, ACINPITT, ACIRADI, ACISCHI, ACIURSI
	Acinetobacter baumannii & *calcoaceticus-baumannii* complex	ACBA, ACCA
	All *Citrobacter* species	CITAM, CF, CITKO, CID, CS, CITA1, CITGILL, CITMURL, CITRODE, CITSED, CITWER
	All *Enterobacter* species	ESP, ENTA1, ENTA2, ENTAU, ENTAB, ENTCAN, ENC, ENTEDISS, ENCCX, ENTHO, ENTIN, ENTEKOBE, ENTELUDW, ENTEPYRI
	Escherichia coli	EC, ECO157, ECEP
	All *Klebsiella* species (excluding *Klebsiella aerogenes*)	KO, KP, KLEOZ, KLEPNE, KLERH, KS, KLEGRA, KLESING, KLEVARI
	Klebsiella aerogenes	EA
	Morganella morganii	MORMO
	All *Proteus* species	PM, PRTPE, PV, PTS, PROTHAUS
	Pseudomonas aeruginosa	PA
	Serratia marcescens	SM
	Strenotrophomonas maltophilia	STEMA

2025 Eligible Gram-Positive Organisms and Organism Codes

	Organism	Pathogen Codes
Gram-Positive	All *Enterococcus* species	ENTSP, ENTEASIN, ENTA, ENTECANI, ENTCA, ENTECECO, ENTDI, ENTD, ENTFS, ENTFM, ENTFL, ENTGA, ENTEGILV, ENTEHAEM, ENTEHERM, ENTHR, ENTEITAL, ENTMA, ENTEMORA, ENTMU, ENTEPALL, ENTEPHOE, ENTPS, ENTRA, ENTERATT, ENTESACC, ENTESULF, ENTEVILL
	Enterococcus faecalis	ENTFS
	Enterococcus faecium	ENTFM
	Staphylococcus aureus	SA
	Streptococcus agalactiae (group B streptococci)	GBS
	Streptococcus pneumoniae	SP
	Streptococcus pyogenes	GAS, STRABH, STRBA

2025 Eligible Fungal Organisms and Organism Codes

	Organism	Pathogen Codes
Fungal	*All Candida* species	CA, CAAUR, CG, CP, CT, CAS, CANBRAC, CANCIF, CANDUB, CANDUOB, CANGU, CANGUI, CANHAE, CANINC, CANINT, CANKEF, CK, CANLAM, CANLU, CANMETA, CANNIVA, CANNOR, CANORTH, CANPARACOM, CANPARA, CANPEL, CANPIN, CANPUL, CANRUG, CANSAKE, CANST, CANDSTEL, CANUTI, CANVIN, CANVIS, CANZEY
	Candida albicans	CA
	Candida auris	CAAUR
	Nakaseomyces glabratus (Candida glabrata)	CG
	Pichia kudriavzevii (Candida krusei)	CK
	Candida parapsilosis	CP
	Candida tropicalis	CT

Pathogen Codes Defined: Information Data Model

- Download the AR CDA Toolkit and open the Information Data Model (IDM) spreadsheet within the toolkit:
  https://www.cdc.gov/nhsn/cdaportal/toolkits.html

Pathogen Codes Defined: Information Data Model cont.

- Go to the "Pathogen Codes 2025" tab. Filter the ARO Pathogen variable (column S) to 'X' to show all eligible AR Option pathogens. The New Code variable (column G) is displayed in NHSN analysis reports.

E	F	G	S
Description for Drop-down in App	Old Code	New Code	ARO Pathogen
Acinetobacter		ACS	X
multidrug resistant Acinetobacter		ACS*1	X
carbapenem resistant Acinetobacter		ACS*2	X
Acinetobacter baumannii		ACBA	X
Acinetobacter calcoaceticus		ACICBA	X
Acinetobacter calcoaceticus-baumannii complex		ACCA	X
Acinetobacter haemolyticus		ACHA	X
Acinetobacter johnsonii		ACJH	X
Acinetobacter junii		ACJU	X
Acinetobacter lwoffi		ACLW	X
Acinetobacter nosocomialis		ACINNOSO	X
Acinetobacter pittii		ACINPITT	X
Acinetobacter radioresistens		ACIRADI	X
Acinetobacter schindleri		ACISCHI	X
Acinetobacter ursingii		ACIURSI	X
Citrobacter		CS	X
Citrobacter amalonaticus		CITAM	X

Type | **Pathogen Codes 2025** | Pathogen Codes 2024 | Pathogen Codes 2024-Synonym | Pathogen Codes 2023-Preferred | Pathogen Codes

Facility-wide Antibiogram: Drug class

- Tables show all drugs NHSN requires to be included in the CDA file for the organisms in the report.

- Full drug names can be found on the "AR – Antimicrobial Tests' tab here: https://www.cdc.gov/nhsn/xls/aur/aur-eligible-antimicrobial-agents.xlsx

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Iso
Percent Susceptible per 100 Isolates
As of: March 18, 2025 at 8:05 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (9)	Acinetobacter spp. (41)	Citrobacter amalonaticus, freundii, koseri, & diversus (7)
Aminoglycosides	AMK	.	20.0	.
	GENTA	.	8.0	.
	PLAZO			.
	TOBRA	.	34.0	.
Azoles	FLUCO			
	POSAC			
	VORI			

Facility-wide Antibiogram: Non-valid combinations

- Cells shaded in grey represent non-valid pathogen/drug combinations.

- For all valid pathogen/drug combinations, refer to the AUR Module Protocol here: https://www.cdc.gov/nhsn/pdfs/pscmanual/11pscaurcurrent.pdf

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Iso
Percent Susceptible per 100 Isolates
As of: March 18, 2025 at 8:05 PM UTC
Date Range: All AUR_SUMMARY

SpecimenDateYQ=2025Q1

Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (9)	Acinetobacter spp. (41)	Citrobacter amalonaticus, freundii, koseri, & diversus (7)
Aminoglycosides	AMK	.	20.0	.
	GENTA	.	8.0	.
	PLAZO			.
	TOBRA	.	34.0	.
Azoles	FLUCO			
	POSAC			
	VORI			

Knowledge Check #2

When generating a default report, which time period display option does the AR facility-wide antibiogram report group data by?

A. Cumulative

B. Specimen Date~Year

C. Specimen Date~Month

D. Specimen Date~Yr/Qtr

Knowledge Check #2 - Answer

When generating a default report, which time period display option does the AR facility-wide antibiogram report group data by?

A. Cumulative

B. Specimen Date~Year

C. Specimen Date~Month

D. Specimen Date~Yr/Qtr

The default settings for the AR facility-wide antibiogram produce a report by quarter, but users can make modifications to display the data by month, half-year, year, or cumulative time periods

Steps to customize Facility-Wide Antibiogram Report

Customize the report

Example:

- Your facility wants to review the susceptibility patterns for *Acinetobacter* spp.

- You want to generate a cumulative antibiogram report limited to healthcare facility-onset isolates from critical care locations, reported from 2023 through 2024.

Navigate to the report

After generating datasets, click "Analysis" then "Reports"

- Once on the Analysis Reports page:
  1. Antimicrobial Use and Resistance Module
  2. Antimicrobial Resistance Data
  3. Facility-Wide Antibiogram (Percent Susceptible) and Percent Tested report
  4. Click "Modify Report"
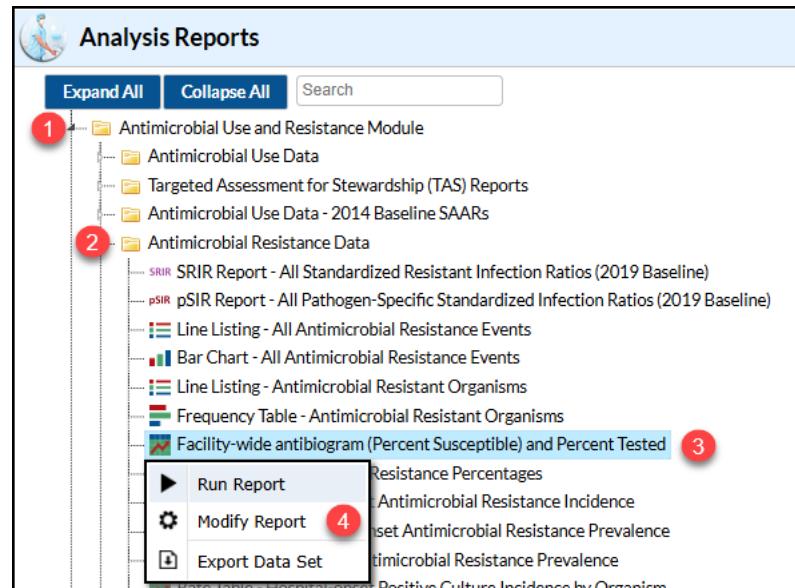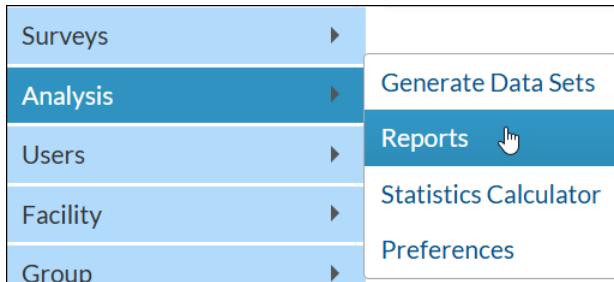
Modifications: Title

Modify "Facility-wide antibiogram (Percent Susceptible) and Percent Tested"

☐ Show descriptive variable names (Print List)   Analysis Data Set: AUR_Summary   Type: Rate Table   Last Generated (UTC) : March 3, 2025 9:35 PM

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

Title:
Acinetobacter species Antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results

Format:

html   pdf   xls   rtf

▶ Run   Save...   Export...   Close

Modifications: Time period

Modifications: Filters (Pathogen selection)

Modifications: Filters (Pathogen selection cont.)

Modifications: Filters (Pathogen selection cont.)

Modifications: Filters (Pathogen selection cont.)

Modifications: Filters (Location Type)

Modifications: Filters (Onset)

Modifications: Rate Table Display Options

- The "Display Options" tab allows you to view the final report organized by a specific criteria.

- Since we'd like the overall antibiotic susceptibility of *Acinetobacter* species from 2023 to 2024 to show in one table for %S and one table for %Tested, we will select "Cumulative" as the Group by value.
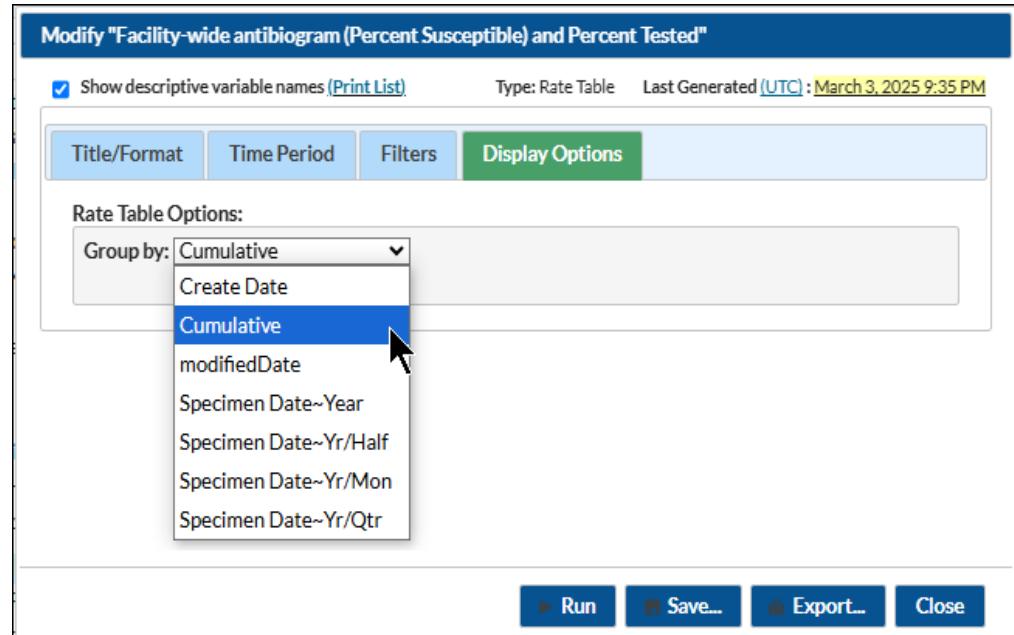
Facility-wide Antibiogram: Example output

- **Note**: NHSN groups certain organisms together, but certain organisms are also shown in separate columns.

National Healthcare Safety Network

Acinetobacter species Antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results

Percent Susceptible per 100 Isolates

As of: March 4, 2025 at 8:32 PM UTC
Date Range: AUR_SUMMARY SpecimenDateYr 2023 to 2024
if (((Pathogen IN ("ACS", "ACBA", "ACCA", "ACIGEN", "ACHA", "ACJU", "ACLW", "ACINNOSO", "ACINPITT", "ACIRADI", "ACISCHI", "ACIURSI")) AND (locationType = "CC") AND (onset = "HO")))

		Pathogen (Number of Isolates Reported)
		Gram-Negative
Drug Class	**Drug**	
Aminoglycosides	AMK	
	GENTA	
	TOBRA	
B-lactam/ B-lactamase inhibitor combination	AMPIWS	
	PIPERWT	

National Healthcare Safety Network

Acinetobacter species Antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results

Percent Tested per 100 Isolates

As of: March 4, 2025 at 8:32 PM UTC
Date Range: AUR_SUMMARY SpecimenDateYr 2023 to 2024
if (((Pathogen IN ("ACS", "ACBA", "ACCA", "ACIGEN", "ACHA", "ACJU", "ACLW", "ACINNOSO", "ACINPITT", "ACIRADI", "ACISCHI", "ACIURSI")) AND (locationType = "CC") AND (onset = "HO")))

		Pathogen (Number of Isolates Reported)	
		Gram-Negative	
Drug Class	**Drug**	**Acinetobacter baumannii & calcoaceticus-baumannii complex (11)**	**Acinetobacter spp. (41)**
Aminoglycosides	AMK	100	90.0
	GENTA	100	93.0
	TOBRA	0	49.0
B-lactam/ B-lactamase inhibitor combination	AMPIWS	100	95.0
	PIPERWT	100	100

Facility-wide Antibiogram: Missing Values

- Cells with a missing value "." represent *Acinetobacter*-drug combinations for which there were less than 30 isolates tested.

- **Reminder:** A minimum of 30 isolates for an organism-drug combination must be tested to calculate the percent tested.
  - See footnote #3 under %S table.

National Healthcare Safety Network
Acinetobacter species Antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results
Percent Susceptible per 100 Isolates

As of: March 4, 2025 at 8:32 PM UTC
Date Range: AUR_SUMMARY SpecimenDateYr 2023 to 2024
if (((Pathogen IN ("ACS", "ACBA", "ACCA", "ACIGEN", "ACHA", "ACJU", "ACLW", "ACINNOSO", "ACINPITT", "ACIRADI", "ACISCHI", "ACIURSI")) AND (locationType = "CC") AND (onset = "HO")))

		Pathogen (Number of Isolates Reported)	
		Gram-Negative	
Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (11)	Acinetobacter spp. (41)
Aminoglycosides	AMK	.	14.0
	GENTA	.	8.0
	TOBRA	.	.
B-lactam/ B-lactamase inhibitor combination	AMPIWS	.	8.0
	PIPERWT	.	12.0

1. Acinetobacter spp. includes all species including baumannii and calcoaceticus-baumannii complex. Enterococcus spp. includes all species including faecalis and faecium.

2. Percent susceptible is calculated as the sum of the number of isolates that tested susceptible divided by the number of total isolates tested for that pathogen-drug combination.

3. Percent susceptible is only calculated when at least 30 isolates have been tested for a particular drug. Cells with a missing value "." represent pathogen-drug combinations for which there were less than 30 isolates tested.

Facility-wide Antibiogram: Interpreting the output of %S table

- In 2023 and 2024, fewer than 30 hospital-onset *Acinetobacter* complex isolates (11) from critical care locations were tested for Amikacin, so %S was not calculated. Additionally, 14% of the 41 *Acinetobacter* isolates tested were susceptible to Amikacin.

National Healthcare Safety Network

Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results

Percent Susceptible per 100 Isolates

As of: February 20, 2025 at 8:30 PM UTC

Date Range: AUR_SUMMARY SpecimenDateYr 2023 to 2024

if (((Pathogen IN ("ACS", "ACBA", "ACCA", "ACIGEN", "ACHA", "ACJU", "ACLW", "ACINNOSO", "ACINPITT", "ACIRADI", "ACISCHI", "ACIURSI")) AND (locationType = "CC") AND (onset

| | | Pathogen (Number of Isolates Reported) | |
| | | Gram-Negative | |
Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (11)	Acinetobacter spp. (41)
Aminoglycosides	AMK	.	14.0
	GENTA	.	8.0
	TOBRA	.	.

Facility-wide Antibiogram: Interpreting the output of %Tested table

- In 2023 and 2024, all 11 hospital-onset *Acinetobacter* complex isolates (100%) and 90% of the 41 hospital-onset Acinetobacter species isolates reported from critical care locations were tested for Amikacin susceptibility.

National Healthcare Safety Network
Facility-wide antibiogram (Percent Susceptible) and Percentage of Isolates with Susceptibility Results
Percent Tested per 100 Isolates
As of: February 20, 2025 at 8:30 PM UTC
Date Range: AUR_SUMMARY SpecimenDateYr 2023 to 2024
if ((((Pathogen IN ("ACS", "ACBA", "ACCA", "ACIGEN", "ACHA", "ACJU", "ACLW", "ACINNOSO", "ACINPITT", "ACIRADI", "ACISCHI", "ACIURSI")) AND (locationType = "CC") AND (onset

		Pathogen (Number of Isolates Reported)	
		Gram-Negative	
Drug Class	Drug	Acinetobacter baumannii & calcoaceticus-baumannii complex (11)	Acinetobacter spp. (41)
Aminoglycosides	AMK	100	90.0
	GENTA	100	93.0
	TOBRA	0	49.0

Quick Reference Guide

- Provides:
  - Details on how to run and modify this analysis report
  - Example modifications and outputs

- NHSN Analysis Quick Reference Guides:
  http://www.cdc.gov/nhsn/PS-Analysis-resources/reference-guides.html

AR Option Facility-Wide Antibiogram and Percent Tested

Description

The Antimicrobial Resistance (AR) Option facility-wide antibiogram is a table that displays the calculated percent susceptible (%S) for each organism-antimicrobial combination reported from all locations (inpatient and outpatient) to the AR Option. Each organism reported to the AR Option has a specific antimicrobial panel for which NHSN requires facilities report antimicrobial susceptibility testing values. The specific panel requirements for each organism are in Appendix F of the AUR Module protocol: https://www.cdc.gov/nhsn/pdfs/pscmanual/11pscaurcurrent.pdf.

NHSN calculates %S for each organism-antimicrobial pairing using the following formula*:

$$\frac{Number\ isolates\ tested\ susceptible}{Number\ of\ isolates\ tested} = \%S$$

AUR Module webpage

- **Direct link: https://www.cdc.gov/nhsn/psc/aur/index.html**
- **One-stop shop for:**
  - Protocol
  - AR Validation material
  - Link to training resources
  - Link to AR Option Phenotype Definitions
  - Link to AR Option Analysis Quick Reference Guides
  - Link to AR Option FAQs
  - Link to AR Option CDA Toolkit

For NHSN questions or concerns, contact the NHSN Helpdesk

- **NHSN-ServiceNow** to submit questions to the NHSN Help Desk.
- Access new portal at **https://servicedesk.cdc.gov/nhsncsp** .
- If you do not have a SAMS login, or are unable to access ServiceNow, you can still email the NHSN Help Desk at nhsn@cdc.gov.

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348   www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

CDC