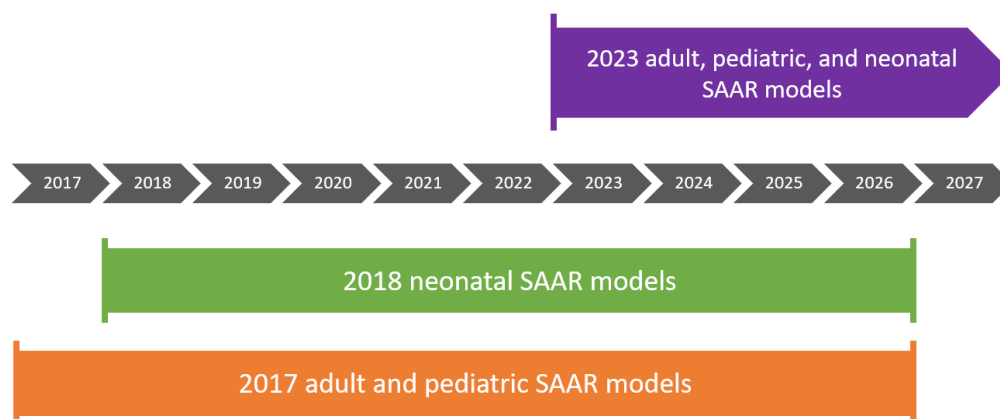


Standardized Antimicrobial Administration Ratio (SAAR) Reports – All SAARs by Location

Description

The Standardized Antimicrobial Administration Ratio (SAAR) provides a standardized metric of antimicrobial use (AU). The SAAR is a ratio comparing observed, or reported, AU to the AU predicted by a referent, or baseline, population. NHSN calculates the predicted antimicrobial days using predictive models developed by CDC and applied to nationally aggregated AU data reported to NHSN from the same group of patient care location types. CDC developed separate predictive models for each antimicrobial agent category. There are four SAAR baselines currently available in the National Healthcare Safety Network (NHSN), each applicable to a select set of patient care locations and time periods. The table and graphic below provide a high-level overview of each baseline.

SAAR Baseline	Locations	Dates
2014 baseline adult and pediatric SAARs	6 adult and pediatric intensive care units (ICUs) and wards	January 1, 2014 – December 31, 2018
2017 baseline adult and pediatric SAARs	13 adult and pediatric medical, surgical, medical-surgical ICUs, wards, step down units, and oncology units	January 1, 2017 – December 31, 2026
2018 baseline neonatal SAARs	4 neonatal units, including step-down nurseries and neonatal critical care units	January 1, 2018 – December 31, 2026
2023 baseline adult, pediatric, and neonatal SAARs	26 adult, 9 pediatric, and 4 neonatal units	January 1, 2023 – present



This document explains how to calculate and interpret the SAAR metric for individual SAAR locations. For more information, please see the [NHSN Antimicrobial Use and Resistance \(AUR\) Module Protocol](#).

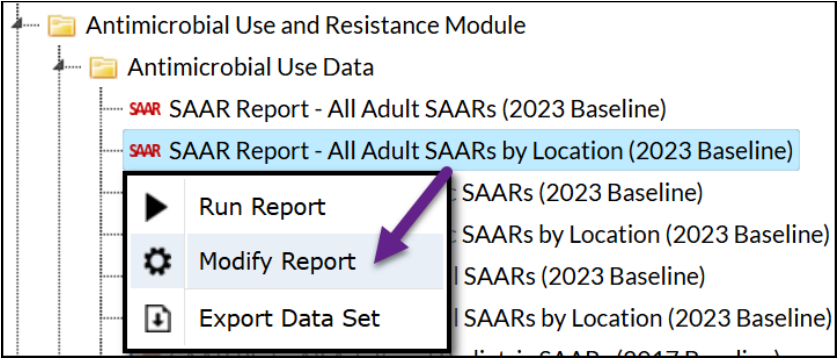


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Example

In this example, you are interested in reviewing your facility’s antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) SAARs used in adult orthopedic wards for the fourth quarter of 2025. After generating datasets, click Analysis > Reports > Antimicrobial Use and Resistance Module > Antimicrobial Use Data. After selecting “SAAR Report – All Adult SAARs by Location (2023 Baseline),” 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.

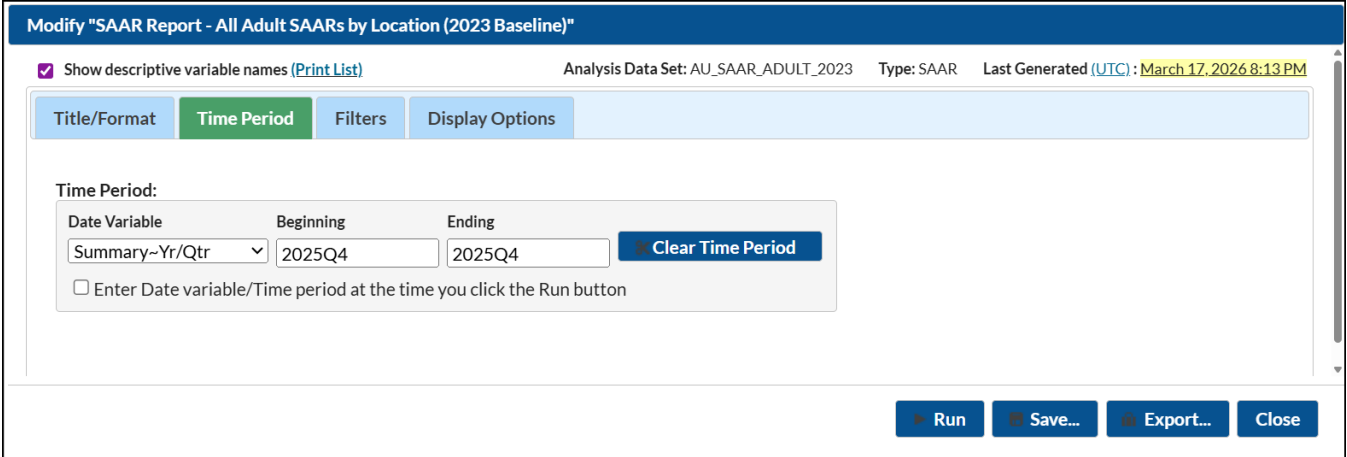
For a general, step-by-step explanation of the NHSN modification screen, please refer to this [How to Modify a Report document](#).



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 page. In this example, we have limited the report to only include data for the fourth quarter of 2025 (Summary~Yr/Qtr Beginning = 2025Q4 and Ending = 2025Q4).

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 our example, we want to filter the report to only show data for the antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) used in adult orthopedic wards SAAR type. After clicking **Add rule**, select “SAAR Type for Adult Locations 2023 Baseline” from the dropdown menu, then select “Antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) used in adult orthopedic wards.” Ensure the “equal” operator appears in the dropdown between “SAAR Type for Adult Locations 2023 Baseline” and “Antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) used in adult orthopedic wards.”

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

The “Display Options” tab allows you to view your rates by month, quarter, half-year, year, or cumulative time periods for the entire time period selected. Summary~Yr/Qtr is used in this example to show quarterly SAARs.

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 default report will contain one table for each SAAR type. In this example, because we specified a single SAAR type of interest, we will see only one table. For each time period, the SAAR tables display the observed antimicrobial days, predicted antimicrobial days, total days present, SAAR value, p-value, 95% confidence interval, and SAAR percentile by SAAR type and location. To determine which AU Option Data Report is used for the SAAR percentile distributions, refer to “Source of Percentile Distribution” in the footnotes. Please refer to the published [AU Option Data Reports](#).

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

National Healthcare Safety Network SAARs Table - All Adult Standardized Antimicrobial Administration Ratios (SAARs) High-Level Indicators and High-Value Targets by Location (2023 Baseline) As of: March 19, 2026 at 1:16 PM UTC Date Range: AU_SAAR_ADULT_2023 summaryYQ 2025Q4 to 2025Q4 if (((SAARTypeAdult2023 = "Adult_GramPos_ORTHO_2023"))) Antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) used in adult orthopedic wards											
Facility Org ID	SAAR Type for Adult Locations 2023 Baseline	Location	Summary Yr/Qtr	CDC Location	Antimicrobial Days	Predicted Antimicrobial Days	Days Present	SAAR	SAAR p-value	95% Confidence Interval	SAAR Percentile
13860	Adult_GramPos_ORTHO_2023	ORTHO2	2025Q4	IN:ACUTE:WARD:ORT	258	564.770	6870	0.457	0.0000	0.404, 0.515	15
13860	Adult_GramPos_ORTHO_2023	ORTHOT	2025Q4	IN:ACUTE:WARD:T_ORT	288	675.761	9480	0.426	0.0000	0.379, 0.478	9

Any reported use of Colistin will be combined with and reported as Colistimethate. Any reported use of Amikacin Liposomal will be combined with and reported as Amikacin.

Includes data for January 2023 and forward.

The SAAR is only calculated if the number of predicted antimicrobial days (numAUDaysPredicted) is >=1.

If antimicrobial days exceed days present for any SAAR categories except the All Antibacterial SAAR, a SAAR will not be calculated and data should be validated for accuracy.

Data restricted to specific location types. See NHSN AUR Module Protocol or SAAR Guide for details.

The SAAR percentile is not shown if the SAAR is not shown.

Source of aggregate data: 2023 NHSN AU Data

Source of Percentile Distribution: 2024 NHSN AU Option Report: <https://www.cdc.gov/nhsn/pdfs/datastat/2024-AU-Report-508.pdf>

Data contained in this report were last generated on March 17, 2026 at 8:08 PM UTC to include all data .

1. This example shows a SAAR table that contains antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA) [GramPos] used in adult orthopedic wards in 2025Q4. The report shows the modifications made in the line above the table title.

a. This SAAR table includes the observed and predicted antimicrobial days for antibacterial agents predominantly used for resistant gram-positive infections (e.g., MRSA). For a complete list of antimicrobials in each SAAR Type, please see the [AUR Module Protocol](#).
2. As shown in the first row of the table (purple box), there were 258 antimicrobial days reported for this facility’s adult orthopedic ward (ORTHO2) location during 2025Q4. In the second row (orange box), there were 288 antimicrobial days reported for this facility’s adult orthopedic trauma ward (ORTHOT) location during 2025Q4. This is the observed number of antimicrobial days. The SAAR is the number of observed antimicrobial days (numerator) divided by the number of predicted antimicrobial days (denominator). In this example, the 2025Q4 SAAR for ORTHO2 was $258/564.770 = 0.457$ and ORTHOT was $288/675.761 = 0.426$.
3. The SAAR p-value is a statistical measure that tells you if observed antimicrobial usage is significantly different from predicted usage. A p-value less than 0.05 (an arbitrary and conveniently



used cut point) indicates that the number of observed antimicrobial days is statistically significantly different (higher or lower) than the number of antimicrobial days predicted. Due to the large number of days present recorded and included in the predictive models, most SAAR p-values are less than 0.05 and users should interpret them with caution, as statistical significance does not necessarily translate into clinical significance.

4. The 95% Confidence Interval is a range of values in which we have a high degree of confidence that the true SAAR lies; however, the SAAR reported under the SAAR column is the most likely value. If the confidence interval includes the value of 1.000, then the SAAR is not statistically significant (the observed usage is not statistically significantly different from predicted usage, using the same convenient cut point). In this example, the SAAR 95% confidence interval did not contain 1.000 for either the adult orthopedic ward or orthopedic trauma ward, so the SAARs were statistically significantly different from 1.000.
5. The SAAR percentile of 15 for ORTHO2 indicates that the SAAR value of 0.457 falls within the 15th percentile for orthopedic wards. In other words, 14% of orthopedic wards have GramPos SAAR values lower than ORTHO2's SAAR value of 0.457, and 85% of orthopedic wards have GramPos SAAR values higher than ORTHO2's SAAR value of 0.457.

Additional Resources

- [How to Export Data from NHSN](#)
- [AUR Module Protocol](#)
- [Surveillance for AU and AR Options](#)
- [NHSN 2023 AU SAAR Rebaseline](#)
- [AUR Training](#)
- [NHSN Analysis Quick Reference Guides](#)



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