

2023 AU SAAR Rebaseline: Talking Points for Organizations & Health Departments

TOP 5 TAKEAWAYS

1 What the SAAR is:

The SAAR compares a hospital's observed, or reported AU, to the amount predicted for specific patient care locations and groupings of drugs. Predicted AU is calculated using statistical predictive models that include risk adjustment and were developed using national data reported during the baseline year

$$\text{SAAR} = \frac{\text{Observed antimicrobial days}}{\text{Predicted antimicrobial days}}$$

2 Why the baseline changed:

Calendar year 2023, in which substantially more hospitals submitted AU data to NHSN compared with previous baseline years, was selected for the new baseline, allowing risk adjustment models to represent a more recent national average of antimicrobial use rates.

3 What's improved in the new baseline:

The 2023 models use a larger sample size of U.S. hospitals and expand SAAR reporting to additional hospital types and patient care locations, including more specialty ICUs, specialty wards, adult mixed acuity, and oncology units.

4 What impact this has on groups:

Organizations currently sharing or publishing member hospital SAAR values should determine a transition plan for moving to the new 2023 baseline. Remember to update your comparative values (e.g., state median SAAR value) and/or SAAR Targets accordingly.

5 Important comparison note:

SAARs based on the 2023 baseline should **not** be compared with SAARs calculated from the 2017/2018 baselines because they use different risk adjustment models. The 2023 baseline establishes a new starting point, allowing hospitals to track improvement over time by comparing SAARs year-over-year starting from 2023 forward (for example, comparing 2023 SAARs to 2024, 2024 to 2025, etc.).

The 2023 Antimicrobial Use (AU) Standardized Antimicrobial Administration Ratio (SAAR) Rebaseline updates the national baseline year from 2017 (adult and pediatric) and 2018 (neonatal) to 2023. This update enables hospitals to compare their antimicrobial use rates to more current national data reported to NHSN. This document provides organizations, including health departments, healthcare systems, and hospital associations, with important considerations for using and publishing SAAR data from NHSN.

Shifting SAAR Values

When calculated using the 2023 baseline, the SAARs may shift closer to 1 compared to those calculated using the 2017 or 2018 baseline. For many SAAR categories, national average antimicrobial use was lower in 2023 than in 2017/2018, which can result in higher SAAR values under the new baseline. This may change a hospital's perceived performance over a given time period without a true change in prescribing.

Risk adjustment factors such as hospital bed size and facility type, if significant, are included in the risk adjustment for the 2023 SAAR baseline models. Organizations can compare SAARs across hospital sizes and facility types.

SAAR Risk Adjustment

NHSN used 2023 AU Option data to recalibrate the SAAR models. SAAR risk adjustment is based on [facility and location/unit-specific factors](#). No new factors were assessed compared to 2017/2018 baselines; however, the 2023 models use different groupings of variables. Risk adjustment factors such as hospital bed size and facility type, if significant, are included in the risk adjustment for the 2023 SAAR baseline models. Organizations can compare SAARs across hospital sizes and facility types. As with 2017/2018 baseline SAAR models, patient-level AU data and NHSN Antimicrobial Resistance (AR) Option data were not included in the 2023 baseline SAAR models.

Transition Recommendations

Organizations should clearly label the national baseline year used in any publication, website, document, or report that includes SAARs. During a transition period, complete and close out analyses based on the 2017/2018 baseline while introducing metrics based on the 2023 baseline. **Remember to avoid displaying SAARs from different baselines together in the same graph or plot.** After the transition period, all SAARs reported should use the 2023 national baseline. Provide member hospitals with advance notice of your plans and timelines for adopting the 2023 baseline.

Best Practices when Presenting or Displaying Data

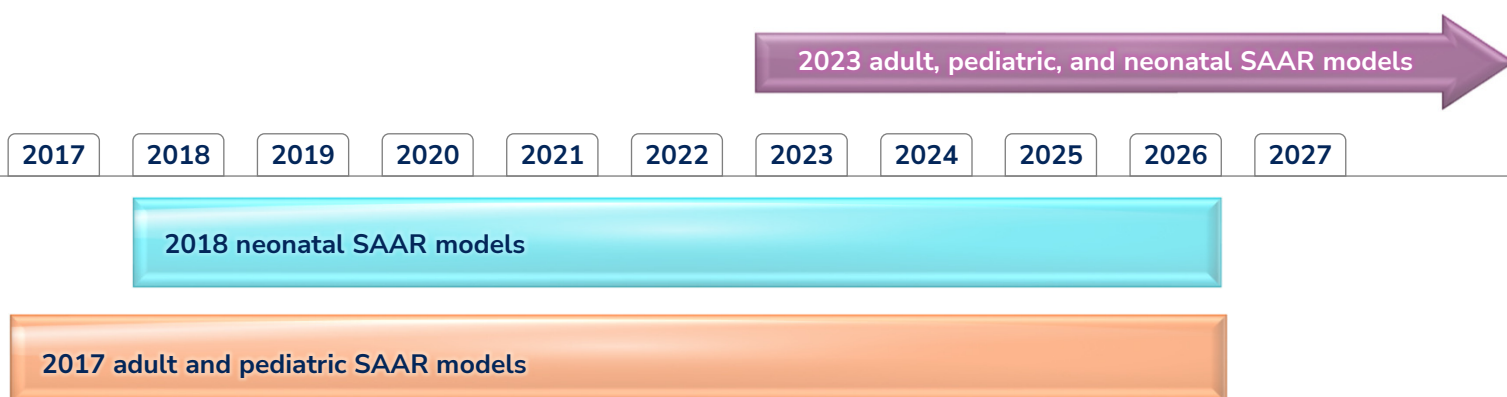
Ensure the graphic includes:

- Which baseline is used
- Which SAAR category is displayed
- Which population (adult, pediatric, neonatal) is shown
- Which location/location groups are included
- Time period of data
- If showing AU rates, list the denominator (e.g., days present, admissions)

Remember: Don't show SAAR values from two different baselines in the same graphic/figure.

SAARs in NHSN

The NHSN application will continue to provide reports that calculate SAARs under the 2017/2018 baselines; however, data from January 1, 2027, and forward will not be included in those reports. In addition, new reports are available that calculate SAARs under the 2023 baseline.



Remember:

NHSN does not provide AUR data, including SAARs, to the Centers for Medicare and Medicaid Services (CMS).

The NHSN application includes built-in analysis reports that calculate SAARs for each SAAR-eligible location; however, it does not produce a "Facility-wide" SAAR. SAARs are generated only for eligible locations within each population type (adult, pediatric, or neonatal). For example, if a hospital reports AU data for a unit mapped as a respiratory critical care location, because that location type is not a SAAR eligible location, the AU from that location will not be included in the hospital's "All antibacterial agents" SAAR.

Interested in learning more?

[NHSN's Guide to the SAAR](#) provides detailed information on the locations and antimicrobials included in the SAARs along with risk adjustment factors and example calculations.

Additional materials can be found on the [2023 AU SAAR Rebaseline webpage](#).