



NHSN Antimicrobial Use (AU) Data: A Goldmine for Antimicrobial Stewardship

The National Healthcare Safety Network (NHSN) established an Antimicrobial Use (AU) Module to help create benchmarks for antibiotic use and aid antimicrobial stewardship programs in comparing their prescribing patterns to other organizations. Starting in 2024, most hospitals will be required to submit AU data to NHSN. Information provided by NHSN can aid in identifying opportunities for improvement, educating prescribers and engaging organizational leadership. But what do the numbers mean? Read on to take a closer look.

Data Reported to NHSN

NHSN primarily reviews antimicrobial use data based on antimicrobial days (i.e. days of therapy) per 1000 patient days present, aggregated over a month. One antibiotic day counts as ≥ 1 dose administered on a calendar day. This is divided by the number of the patients in the hospital, then multiplied by 1000. This method helps normalize for changes in census over time. See example below:



Benchmarking and Reports

NHSN reviews the AU data shared with them by reporting organizations, as well as information about the size of the hospital, type of patient population and services provided. NHSN groups similar hospitals together and compare AU data between them. NHSN does not publically share which hospitals are compared to one another, but will provide each participating organization with their Standardized Antibiotic Administration Ratio (SAAR). The SAAR compares a specific hospital’s actual antimicrobial use to the expected use estimated based on peer group data from 2017. SAAR does not impact reimbursement from Centers for Medicare & Medicaid Services. How to interpret an SAAR:

Low SAAR	Interpretation	High SAAR	Interpretation
<0.7	Use much LESS than predicted	>1.0 to 1.1	Use may be slightly GREATER than predicted
0.7-0.9	Use LESS than predicted	1.1-1.3	Use GREATER than predicted
0.9 to <1.0	Use may be slightly LESS than predicted	>1.3	Use much GREATER than predicted)
≈1.0	Use within predicted range		

NHSN can also provide SAARs for specific antimicrobial medications, groups of medications, and individual hospital units. As an example, there is a “High Risk for *Clostridioides difficile*” antibiotic group. If the SAAR for these medications is >1 and a hospital has a high rate of *C. difficile* infections, this data may help in motivating prescribing change and garnering support for antimicrobial stewardship initiatives.

Key Takeaway: NHSN antibiotic use data can provide valuable information for antimicrobial stewardship programs.

References:

1. National Health and Safety Network Protocol. Chapter 14: Anti microbial Use and Resistance (AUR) Module. Updated January 2023. Accessed January 2023. Available at: [NHSN Antimicrobial Use and Resistance \(AUR\) Module Protocol \(cdc.gov\)](https://www.cdc.gov/nhsn/antimicrobial-use-and-resistance-aur-module-protocol/)