

What is the 2022 HAI Rebaseline and Why is it Important?

The National Healthcare Safety Network (NHSN) is a system for tracking healthcare-associated infections (HAIs) using data from US healthcare facilities. The NHSN data is our source of national data to promote comparisons between facilities and serves as the population for standardized metrics. These national NHSN data are analyzed to support collaborations with infection preventionists across the country to identify areas of concern, mitigate risks, and ultimately eliminate HAIs. Establishing this system for tracking and preventing HAIs across the country required NHSN to understand key baseline data about facilities and healthcare. Information about:

- Facility demographics (like number of beds and medical school affiliation),
- Units within facilities (like the type of medical services or care provided on a unit), as well as
- Surveillance data about infections (if, when, and where they occur) allow NHSN to measure the incidence rates of HAIs represented in these baseline data.



The original baseline yielded the creation of two essential measures for HAI prevention and surveillance:

1 The Standardized Infection Ratio (SIR): a metric based on HAI rates used to track prevention progress over time; lower SIRs are better. The SIR compares the number of infections observed in a facility to the number of infections that were predicted, based on national HAI rates in the baseline data.

2 The Standardized Utilization Ratio (SUR): a metric based on device utilization incidence used to track use over time; lower SURs are better. The SUR compares the number of device days reported by a facility to the number of device days predicted to occur, based on the national device utilization in the baseline data.

The original baseline data were established for specific HAIs, an effort that took many years from 2006-2013. Better understanding of HAI prevention gained from the original baseline and the 2015 baseline, together with changes in aspects of healthcare over time, necessitate an update – a rebaseline – to continue the pursuit of HAI prevention and improve patient safety.



What is Rebaselining?

In this context, a rebaseline is the process of updating the national incidence data that are best captured in an array of models. These models allow efficient estimation of predicted events that are required as the denominator and used to calculate NHSN's SIR and SUR metrics. A rebaseline allows NHSN to leverage progress in HAI detection and prevention progress that are critical to further improve patient safety. The current HAI rebaseline effort is the second this major effort to occur. The first rebaseline updated all SIRs and SURs to use 2015 as the baseline year. This next rebaseline will enable facility HAI and device utilization incidence data to be compared to 2022 NHSN data as the newest baseline year. These 2022 NHSN incidence data serve as the national source used to build models, estimate predicted events, and calculate NHSN's SIRs and SURs.



Why is it important to Rebaseline?

As a nation, we are getting better at surveillance and prevention of HAIs, and creating a new baseline, also called rebaseline, is a way to incorporate changes in detection practices and establish an updated national standard to continue prevention and reduction of HAIs.