Operational Guidance for Reporting Antimicrobial Use and Resistance (AUR) Module Data to CDC's National Healthcare Safety Network (NHSN) for the Purpose of Fulfilling CMS' Promoting Interoperability (PI) Program Requirements

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The Centers for Medicare and Medicaid Services (CMS) published a Final Rule in the *Federal Register* on August 10, 2022, that included reporting into the Antimicrobial Use and Resistance (AUR) Module within the Centers for Disease Control and Prevention's (CDC's) National Healthcare Safety Network (NHSN) to fulfill the Medicare Promoting Interoperability (PI) Program requirements. This operational guidance provides additional information about reporting NHSN AUR Module data as part of the CMS Promoting Interoperability Program beginning in calendar year 2024. The requirements for NHSN AUR Module reporting for this CMS program do not preempt or supersede any state mandates for reporting AUR data to NHSN (specifically, hospitals in states with reporting mandates must abide by their state's requirements, even if they are more extensive than the requirements for this CMS program).

The AUR Surveillance Reporting measure requires that eligible hospitals and critical access hospitals (CAHs) are in active engagement with CDC to report both AU and AR data and receive a report from NHSN indicating their successful submission of AUR data for the EHR reporting period or claim an applicable exclusion. Eligible hospitals and CAHs can meet the active engagement criteria in one of two ways:

Option 1 – Pre-production and Validation

Eligible hospitals and CAHs first have to register intent to submit AUR data within NHSN. Per the CMS measure specifications, the registration should be completed within 60 days after the start of the EHR reporting period. The registered eligible hospital or CAH will then receive an automated email from NHSN inviting it to begin the Testing and Validation step. Following the instructions in the email, hospitals must submit one test file for each file type (AU Summary, AR Event, and AR Summary) for validation by the NHSN AUR Team. **Per the CMS measure specifications, eligible hospitals and CAHs should respond to the request for test files within 30 days. Failure to respond twice within an EHR reporting period will result in that eligible hospital or CAH not meeting the measure.** If the eligible hospital or CAH registers intent to submit AUR data within NHSN prior to having test files ready, the eligible hospital or CAH should reply to the request for test files with their current status. The eligible hospital or CAH should continue to email a status update at least every 60 days until the hospital has test files to send for validation to complete Option 1.

Option 2 – Validated Data Production

Eligible hospitals and CAHs first have to register intent to submit AUR data within NHSN if they did not complete Option 1 – Pre-production and Validation. CMS defines production data as data generated through clinical processes involving patient care, and it is used to distinguish between data and "test data," which is submitted for the purpose of testing and validation. **For CY 2024 the EHR reporting period is a minimum of 180 days, thus eligible hospitals and CAHs must submit 180**

continuous days of AUR data. Those 180 days **must** be the same for all CMS Promoting Interoperability Program measures for your hospital. Keep in mind, too, that you must report the same 180 days of AU and AR data as they are considered a single measure for the CMS PI Program.

Beginning with the EHR Reporting period in CY 2024, reporting a "No" for the AUR Surveillance Reporting Measure or failing to claim an applicable exclusion will result in a total score of zero points for the Public Health and Clinical Data Exchange objective. Eligible hospitals and CAHs that fail to achieve a minimum total score of 60 points are not considered meaningful users and may be subject a downward payment adjustment. **Failure to fulfill any of the required measures, including the AUR Surveillance Reporting Measure, will result in a score of zero for the Promoting Interoperability Program.**

NHSN users reporting AUR data to the system must adhere to the definitions and reporting requirements specified in the NHSN Antimicrobial Use and Resistance (AUR) Module Protocol. Within the NHSN Antimicrobial Use (AU) Option, hospitals report numerator data as antimicrobial days (also known as days of therapy), which is defined by any amount of a specific antimicrobial agent (see Appendix B of the AUR Module Protocol for the complete list of required drugs) administered in a calendar day to a particular patient as documented in the electronic medication administration record (eMAR) and/or bar-coding medication administration (BCMA) system. All antimicrobial days for a specific agent administered across a population are summed in aggregate. Hospitals report denominator data as days present, which is defined as the aggregate number of patients housed in a patient care location or hospital anytime throughout the day during a calendar month as captured in the Admission Discharge Transfer (ADT) system. For each hospital, the numerator (antimicrobial days) is aggregated by month for each patient care location and overall for inpatient areas facility-wide (specifically, facility-wide inpatient or FacWideIN). Similarly, the denominator (days present) is calculated for the corresponding patient care-location-month or facility-wide inpatient-month.

Within the NHSN Antimicrobial Resistance (AR) Option, hospitals report isolate-based events that meet AUR Module eligibility criteria: an isolate must have been collected from one of four specimen sources (blood, cerebral spinal fluid, urine, and lower respiratory), contain an eligible organism, be collected while the patient was in an eligible location and have had antimicrobial susceptibility testing performed. Hospitals should report all eligible isolates regardless of the antimicrobial resistance of the isolated organism (specifically, report even isolates susceptible to all antimicrobials tested). The ultimate source of the isolate data included in these reports is the laboratory information system (LIS). Laboratory results data from the electronic health record (EHR) can be used to populate the AR Option numerator records submitted to NHSN in healthcare settings where the LIS is directly connected to the EHR. Hospitals report denominator data to the AR Option as patient days, admissions, and outpatient encounters from the ADT system (or similar system that allows for electronic access of required data elements).

NHSN requires hospitals individually map all inpatient locations, including procedural areas like operating rooms, and select outpatient acute care settings (specifically, outpatient emergency department [ED], pediatric ED, and 24-hour observation area) from which the numerator and denominator data can be accurately electronically captured. Location mapping guidance can be found here. Monthly reporting plans must be created or updated in NHSN to include AUR reporting for

FacWideIN, all individual inpatient locations, ED, pediatric ED, and 24-hour observation locations, specifically, locations must be in the monthly reporting plans ("in-plan") in order for the AUR files to upload into NHSN. All data fields required for both numerator and denominator data collection must be submitted to NHSN, including checking the "no events" field for any month during which no AR Option Events were identified. **Manual data entry into the NHSN web-based application is not available for the AUR Module nor would this meet the CMS Promoting Interoperability Program requirements.** Data must be reported via file imports using the Clinical Document Architecture (CDA) file format for numerator and denominator data. Per CMS PI Program requirements, eligible hospitals and CAHs must use Certified EHR Technology (CEHRT) that has been updated to meet the 2015 Edition Cures Update criteria. Additionally, per NHSN requirements, hospitals must use vendors that have completed the NHSN AU and AR Synthetic Data Set Validation requirements. Eligible hospitals and CAHs can find the list of vendors that have passed AU validation and AR validation on NHSN's website.

Hospitals that attest to "Option 1 – Pre-production and validation" must register within 60 days of the start of their EHR reporting period and submit test files no later than November 1, 2024, to allow the NSHN AUR Team time to process the test files.

Hospitals that attest to "Option 2 – Validated Data Production" for the AUR measure **must report *on an ongoing basis* during their selected EHR reporting period**. NHSN automatically sends out letters showing the registered hospital's status with reporting on the 1st of every month. A final letter is sent out on February 1 with the previous year's submissions. This letter will include all AUR Module data in NHSN as of January 31, 2025.

For detailed guidance on how to complete the required steps within NHSN, please see the NHSN AUR Promoting Interoperability Guidance (cdc.gov).

For more information, please see the associated materials:

2023 AUR Module Reporting for the CMS Promoting Interoperability Program Training

- Video
- Slides

Facility guidance on using the NHSN AUR Module for the CMS Promoting Interoperability Program

AUR Reporting for CMS PI Program FAQs