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' Medicare Promoting Interoperability Program Requirements

Updated January 2025

The Centers for Medicare and Medicaid Services (CMS) published the FY 2025 IPPS/LTCH PPS final rule (89 FR 69600 through 69605) in the *Federal Register* that included updates to the Medicare Promoting Interoperability Program requirements for the Electronic Health Record (EHR) reporting periods in 2025 and forward. This operational guidance provides additional information about reporting NHSN AUR Module data as part of the Medicare Promoting Interoperability Program to meet requirements under the Public Health and Clinical Data Exchange Objective. 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).

As noted in the CMS FY 2025 IPPS/LTCH PPS final rule (89 FR 69600 through 69605), for the EHR reporting period in 2025, the AUR Surveillance measure has been split into two measures: AU Surveillance and AR Surveillance. Eligible hospitals and critical access hospitals (CAHs) must be in active engagement with the CDC's NHSN for submitting AU and/or AR data during the self-selected 180-day EHR reporting period and receive a report from NHSN indicating successful submission of AU and/or AR data or claim an applicable exclusion(s). Eligible hospitals and CAHs are also required to report their level of active engagement (Option 1 or Option 2).

Beginning in the EHR reporting period in 2025, eligible hospitals and CAHs may also claim an applicable exclusion for one or both measures separately. Eligible hospitals and CAHs that claim an applicable exclusion for only AU or AR would either need to be in active engagement for the other measure or claim a separate exclusion. For example, if claiming an exclusion for the AR Surveillance measure due to lack of access to discrete data elements, the eligible hospital or CAH must be in active engagement for the AU Surveillance measure or claim an applicable exclusion specific to the AU measure.

Eligible hospitals and CAHs that report a ''No'' response to either measure, fail to report any response, or fail to claim an applicable exclusion will not receive credit for the measure(s). These eligible hospitals and CAHs would fail to satisfy requirements of the Public Health and Clinical Data Exchange Objective and will earn a score of zero for the Medicare Promoting Interoperability Program.

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 must first register intent to submit AUR data within NHSN. Per the CMS measure specifications, registration should be completed within 60 days after the start of the self-selected, continuous 180-day 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 work towards submitting relevant test files 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 of receiving such request. The response should include the test files or a summary of the eligible hospital or CAH's progress in setting up AUR Module reporting. If the eligible hospital or CAH replies within 60 days, no further updates are needed until the test files are ready for validation. Please allow up to 8 weeks from receipt of test files for the NHSN Team to complete the validation of your test files.

Failure to respond to either the first or the second request for test files within an EHR reporting period will result in that eligible hospital or CAH not meeting minimum measure requirements and earning a total score of zero for the Medicare Promoting Interoperability Program.

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 EHR reporting periods in 2024 and subsequent years, eligible hospitals and CAHs must submit 180 continuous days of AU and/or AR data to NHSN. The same self-selected EHR reporting period is used for all measures required by the Medicare Promoting Interoperability Program. Please reach out to your Quality Department, Information Technology Department and/or C-Suite team to determine an EHR reporting period that works best for your hospital.

NHSN users reporting AU and/or AR 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 eight specimen sources (blood, cerebrospinal fluid, urine, lower respiratory, skin, soft tissue, wound, and musculoskeletal), contain an eligible organism, be collected while the patient was in an eligible location and have had

antimicrobial susceptibility testing performed (except in the case of *Candida* isolates – see AUR Module protocol for additional details). 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 AU and/or AR 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 AU and/or AR 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 Medicare 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 Medicare Promoting Interoperability 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 work toward the creation of AU and/or AR files within the EHR reporting period. If the hospital wants a letter from NHSN denoting the validation stage is complete, they must have passing test file(s): 2 AR test CDA files, 1 AU test CDA file, or all 3 test CDA files (2 AR and 1 AU). We ask hospitals and CAHs that would like official record of completing the test file process to submit test files no later than November 1st in the given calendar year to allow the NSHN AUR Team time to process the test files.

Hospitals that attest to "Option 2 – Validated Data Production" for the AU and/or AR measure must report *on an ongoing basis* during their self-selected 180-day 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 1st with the previous year's submissions. This letter will include all AU and/or AR Module data in NHSN as of January 31st of the following year.

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

Additional Resources

CMS Requirements – Acute Care Hospital:
https://www.cdc.gov/nhsn/cms/ach.html#anchor_1687351074355

- Operational guidance
- Training webinar and slides
- FAQs
- Office Hours slides

ASTP/ONC Certified Health IT Product List: https://chpl.healthit.gov/#/search

NHSN AUR Module Webpage: https://www.cdc.gov/nhsn/psc/aur/index.html

NHSN CDA Vendor Submission Support Portal: https://www.cdc.gov/nhsn/cdaportal/index.html

Questions for NHSN?

- Email the NHSN CDA Helpdesk for technical questions regarding CDA submissions: NHSNCDA@cdc.gov
- Email the general NHSN Helpdesk for all other NHSN-related questions: NHSN@cdc.gov

Questions for CMS?

- Use the QualityNet Question and Answer tool available on the QualityNet.cms.gov website. To access the tool, click on the "Help" tab in the upper right-hand corner, then select "Question and Answer Tool Main Page," then select "Ask a Question." From there, choose "PI - Promoting Interoperability" from the Program dropdown menu.
- You may also contact CMS live Support Center Help Desk at (844) 472-4477.
- CMS Promoting Interoperability Programs: https://www.cms.gov/regulations-and-guidance/legislation/ehrincentiveprograms