



Welcome!



Agenda 10/27/23

- Introductions of CDPH Staff (5 min)
- NHSN AU/AR Overview (15 min)
- NHSN AU/AR Survey Analysis (5 min)
- Q& A / Open Discussion (20 min)
 - Tips and Tricks to AUR
 - Future Topics



Chicago Department of Public Health Stewardship Team

Medical Directors

- Stephanie Black
- Do Young Kim

Antimicrobial Stewardship Pharmacist

- [Star \(Estrella\) Cervantes](#)

Epidemiologist

- Kelly Walblay
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- Linda Li

Public Health Administrators

- [Jazmine Wright](#)
- Matthew Mondlock

Other

- MPH Student Interns
- Pharmacy
Students/Residents



National Healthcare Safety Network Antibiotic Use and Resistance

Star Cervantes, PharmD, BCPS, AAHIVP

Pharmacist, Healthcare Associated Infections and Antibiotic Resistance

10/27/23



NHSN Antibiotic Use and Antibiotic Resistance (AUR)

The AUR Module allows hospitals to electronically report & analyze antibiotic-related data

AU Option: Used to assess use of specific antimicrobial agents

AR Option: Used to assess patient isolates that test resistance to specific antimicrobial agents

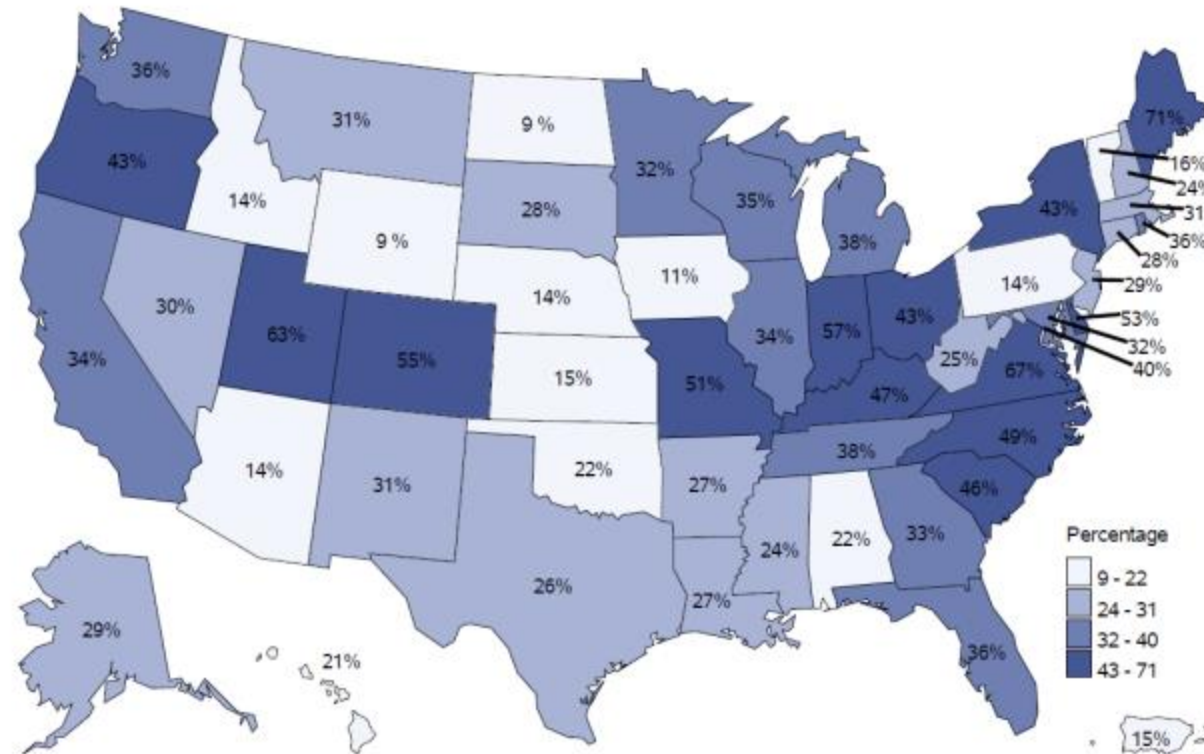
Primary objective = provide risk adjusted intra-and inter-facility benchmarking of antimicrobial usage and resistance

Secondary objective = evaluate trends of antimicrobial usage & resistance over time

- Facility
- State
- National

NHSN Antibiotic Use Module

Percentage of active NHSN acute care facilities reporting at least one month of data to the AU Option as of 2021



Chicago

Number of facilities reporting: 33.3%



Current state of facility engagement¹

- ✓ 923/4,500² (21%) facilities can attest to being in active engagement with NHSN
- 503/4,500² (11%) facilities registered for the PI Program in the NHSN app but have not submitted test files nor data
- 367/4,500² (8%) submitted enough data to qualify for the PI Program but have not registered in the NHSN app
- ✗ 2,707/4,500² (60%) facilities are not engaged with NHSN for the purposes of the PI Program

1. As of Oct. 1, 2023

2. CMS reports 4,500 facilities are eligible for the PI Program in 2023



Benefits of AUR Reporting

Insights and Data Benefits

- Benchmarks for antimicrobial stewardship
- Benchmarks for antimicrobial quality improvement activities
- Compare with antimicrobial use trends across the nation (SAAR)
- Identify problem areas within a facility to target interventions
- Antibiotic Stewardship guidance from Chicago AS team

Regulatory and Payment Benefits

- Meet the CMS Promoting Interoperability requirement added for CY 2024
- Satisfy the Joint Commission's antimicrobial stewardship standard for tracking and reporting
- Added to the CDC Priorities for Hospital Antibiotic Stewardship Core Element Implementation in 2022
 - [Priorities for Hospital Core Element Implementation | Antibiotic Use | CDC](#)



CMS requirements for AUR reporting beginning in CY 2024



CMS requirements for AUR reporting beginning in CY 2024

- Beginning in CY 2024, AUR Module data are required under the Public Health and Clinical Data Exchange Objective of the CMS PI Program
- Applies to eligible hospitals and critical access hospitals (CAH) that participate in the CMS PI Program
- Measure includes submission of both AU and AR Option data
- For CY 2024 facilities attest to either:
 - Being in active engagement with NHSN to submit AUR data or,
 - Claim an applicable exclusion



What is due in 2023?

- Bonus points only for AUR in CY 2023
 - For CY 2023, AUR reporting is within the Public Health Registry Reporting
 - Facilities can receive 5 bonus points for being in active engagement with NHSN to submit AUR data
 - For CY 2024, AUR reporting moves out of the Public Health Registry Reporting measure and becomes its own required measure



Does my hospital participate in the CMS Promoting Interoperability (PI) Program?

Most facilities participate in the CMS PI Program

Reach out to person(s) in charge of quality reporting within the facility (Critical access hospitals are eligible to participate)

Facilities not paid under the CMS Hospital Inpatient Prospective Payment System (IPPS) are not included in the CMS PI Program

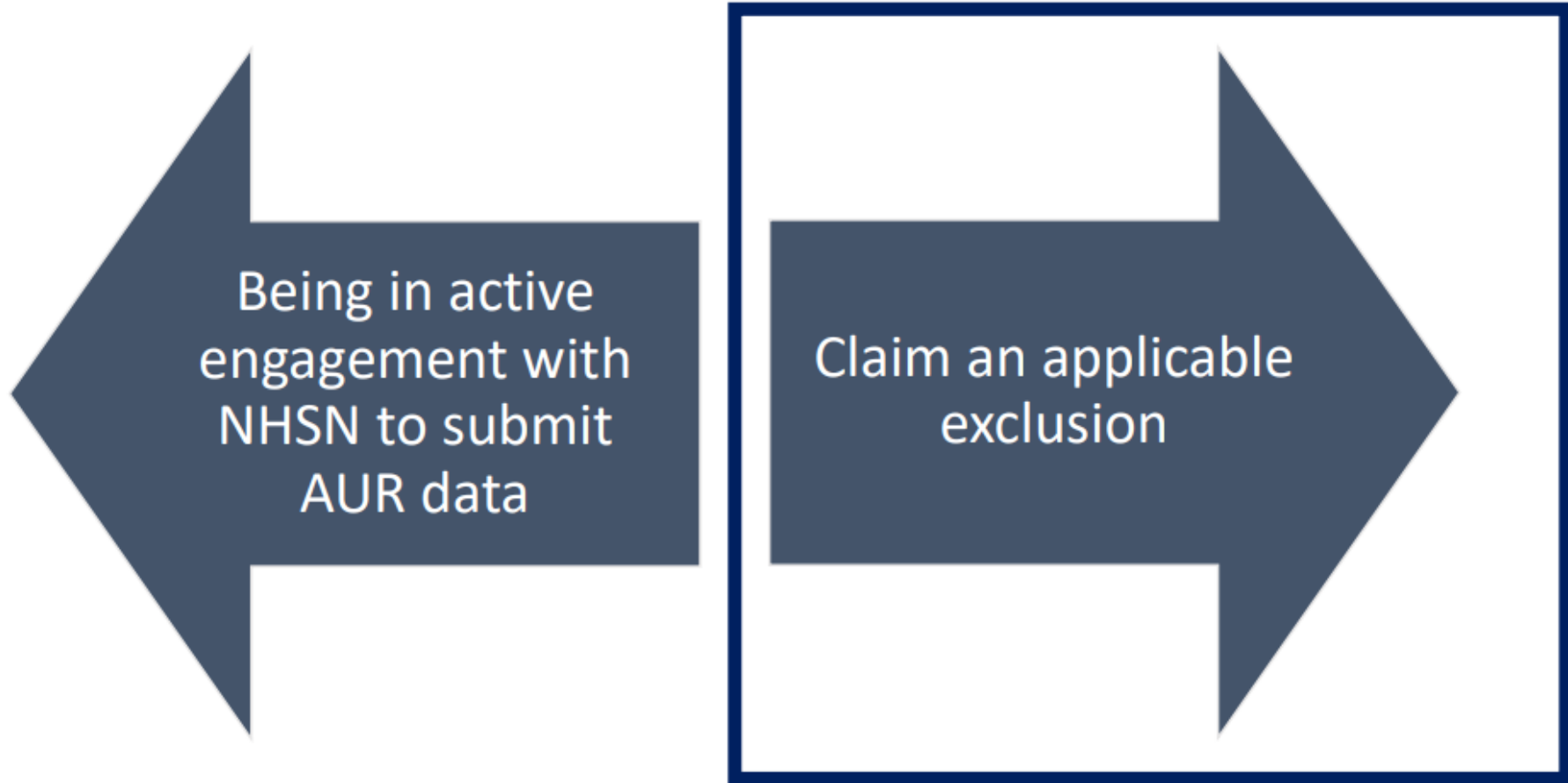
- Includes but is not limited to:
 - Inpatient rehab hospitals
 - Inpatient psych hospitals
 - Long term acute care hospitals



For CY 2024, facilities attest to either:



■ ★ For CY 2024, facilities attest to either:





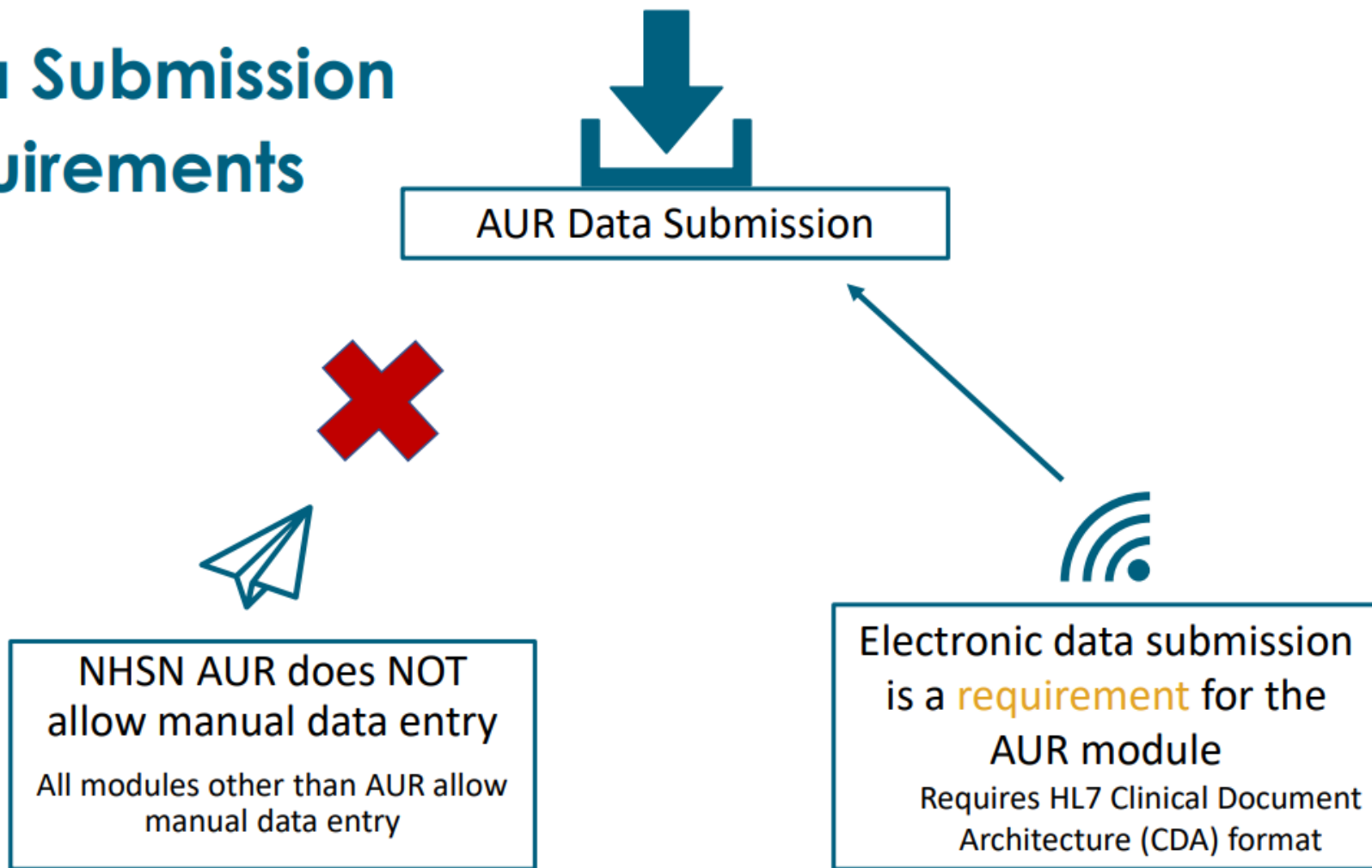
Exclusions for the AUR measure

- The hospital or CAH does not have any patients in any patient care location for which data are collected by NHSN during the EHR reporting period
- The hospital or CAH does not have electronic medication administration records/barcoded medication administration records or an electronic admission discharge transfer (ADT) system during the EHR reporting period
- The hospital or CAH does not have an electronic laboratory information system or electronic ADT system during the reporting period

Getting started in the process of reporting data to the AUR module



Data Submission Requirements



Data Submission Requirements

Eligible hospitals and CAHs must meet the following prerequisites:

- Required data systems or electronic access to the required data elements for the NHSN AUR Module:
 - Electronic Medication Administration Record (eMAR) or Bar Coding Medication Administration (BCMA) system for capturing antimicrobial administrations
 - Electronic Laboratory Information System (LIS) for capturing antimicrobial susceptibility results
 - Electronic Admission, Discharge, Transfer (ADT) system for capturing patient movement within the facility



Data Submission Requirements

Use vendor or homegrown technology that has been NHSN-validated and Office of the National Coordinator for Health Information Technology (ONC)-certified:

- The NHSN vendor validation process involves using NHSN-provided synthetic data to confirm vendor/homegrown software can accurately compile and aggregate AU and AR data according to the NHSN AUR Module protocol. See the lists of AU and AR NHSN validated vendor software.
- The ONC vendor certification process involves producing valid Clinical Document Architecture (CDA) files to upload AU and AR data into NHSN.

★ Software Vendors

- As a facility, begin evaluating software vendors
 - Cost considerations
 - Using hospital's EHR vs. third party
 - Additional features (prospective audit and review capabilities)
 - Implementation timeline
 - IT involvement
 - Trainings
 - C-suite/IT services approval
- Always use a vendor that has passed SDS validation



[Antimicrobial Use Synthetic Data Set \(AU SDS\)](#)



[Antimicrobial Resistance Synthetic Data Set \(AR SDS\)](#)

★ What options does a facility have?

Option 1 – Pre-production and validation

- Registration within NHSN
- Testing & validation of the CDA files

Option 2 – Validated data production Submitting production AU & AR files to NHSN

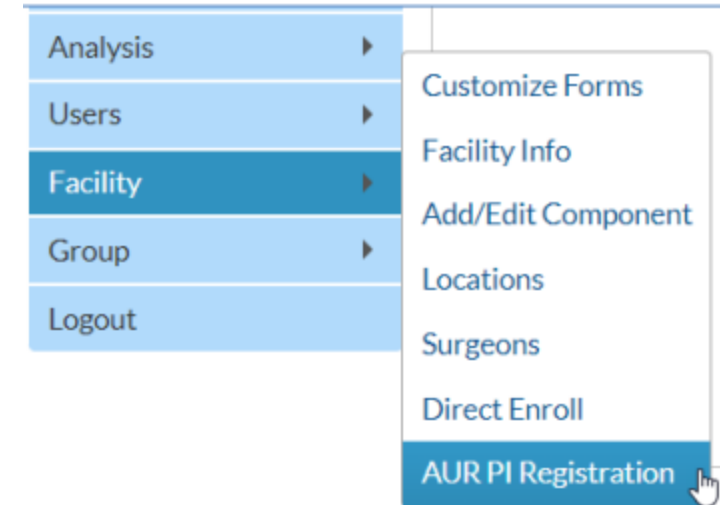
- CY 2023
 - 90 continuous days of AUR data submission
- CY 2024
 - 180 continuous days of AUR data submission

- Note: Beginning in CY 2024, facilities can only spend one calendar year in Option 1 (pre-production and validation)

★ Registration of Intent to Submit Data

- The eligible hospital must first register the facility's intent to submit AU and AR data into NHSN.
- Facilities should **NOT** register intent to submit data until they have verified that the vendor being used has been certified.
- After logging into the NHSN facility, click "Facility" then "AUR PI Registration" on the left-hand navigation bar
- On the AUR Promoting Interoperability (PI) Program Registration page, read the text and check the box to automatically add your name and the facility name to the form

By checking this box _____ registers facility _____ intent to satisfy a PI Program objective by submitting NHSN Antimicrobial Use and Antimicrobial Resistance (AUR) monthly data via an electronic interface.



- ❖ Only the NHSN Facility Administrator can view and complete this task.
- ❖ All facilities must complete this step regardless of whether they are already sending production AU and AR data to NHSN.

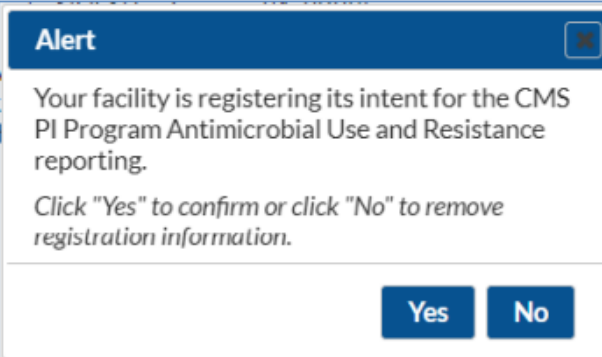
★ Registration of Intent to Submit Data

- A facility can add up to two optional email addresses for individuals, who will receive copies of submission documentation

NHSN Facility Administrator:	<input type="text" value="FacAdmin@test.com"/>
Optional facility PI Program contact:	<input type="text" value="ExtraEmail1@test.com"/>
Optional facility PI Program contact:	<input type="text" value="ExtraEmail2@test.com"/>

- Verify all information is correct and click the “Save” button.

- Click “Yes” on the pop-up alert to confirm your facility’s registration of intent to submit AU and AR data.









The image shows a blue-tinted alert dialog box with a title bar that says "Alert" and a close button. The main text reads: "Your facility is registering its intent for the CMS PI Program Antimicrobial Use and Resistance reporting. Click 'Yes' to confirm or click 'No' to remove registration information." At the bottom right, there are two buttons: "Yes" and "No".

- Contacts will receive an automated confirmation email from NHSN that should be saved for your records.

Testing and Validation of the AUR CDA Files

- Email the three test CDA files to the NHSNCDA@cdc.gov according to the specifications outlined in the invitation letter **-Ask your vendor for these!**
 - Antimicrobial Use Summary CDA
 - Antimicrobial Resistance - Numerator CDA
 - Antimicrobial Resistance - Denominator CDA
- The NHSN CDA Helpdesk will email describing any errors that were identified during the validation process. The facility must work with their vendor to correct the errors and resend the updated test CDA files
- When all three test CDA files pass validation, you will receive an email indicating that all test files have passed and that AU and AR data can now be uploaded into the NHSN production environment. **This email should be saved for your records.**

Submission of Production AUR Data

-  Once test files are complete, the facility will be invited to submit AU and AR data into the NHSN production environment
-  Recommend upload within 30 days following the completion of the month
-  For data to be accepted by the NHSN application, a facility is required to use vendor/homegrown software that has been validated by NHSN
-  Per CMS PI Program guidance, facilities should report data on an ongoing basis during their EHR reporting period
-  On the first day of every month, the NHSN Facility Administrator and Optional Facility PI Program Contacts will receive an automated email with a monthly summary of AU and AR data submission
-  Facilities that reach this step can attest to meeting the CMS PI Program's Option 2 – Submitting production data.

★ What can you do to get started today?

Getting started with NHSN AUR

- Fulfill the basic requirements for submission of data into NHSN:
 - Hospital is enrolled in NHSN
 - Hospital has mapped NHSN locations
 - Hospital has requested and entered an NHSN Facility object identifier (OID)
- Get your pharmacist involved!

Complete Antimicrobial use training

- Antimicrobial Use Option Reporting and Analysis (50 minutes)
- Beginner Analysis (30 minutes)
- Advanced Analysis (36 minutes)
- Standardized Antimicrobial Administration Ratio (24 minutes)
- NHSN Targeted Assessment for Antimicrobial Stewardship (60 minutes)



Complete Antimicrobial Resistance training

- Reporting and Analysis (1 hour 12 minutes)
- Facility-Wide Antibigram Report (23 minutes)



Additional Resources

AUR Module Resources

- NHSN Helpdesk: NHSN@cdc.gov
- AUR Module Website: <https://www.cdc.gov/nhsn/psc/aur/index.html>
- AUR Trainings: <https://www.cdc.gov/nhsn/training/patient-safety-component/aur.html>

CMS-related Questions

- QualityNet help desk: QnetSupport@cms.hhs.gov or 1-866-288-8912

Chicago DPH Contacts

- Star Cervantes (estrella.cervantes@cityofchicago.org), Antimicrobial Stewardship Pharmacist
- Matthew Mondlock (matthew.mondlock@cityofchicago.org), NHSN Technical Assistant Lead
- Jazmine Wright (jazmine.wright@cityofchicago.org), Antimicrobial Stewardship Support
- Kelly Walblay (kelly.walblay@cityofchicago.org) NHSN Senior Epidemiologist
- Clarissa Najera (clarissa.nejera@cityofchicago.org) Antimicrobial Stewardship Epidemiologist



Please do not reply to this email. Responses to this email will not be received by the NHSN Team. To contact NHSN, please send a new email to: nhsn@cdc.gov

This email is intended for facilities within the Patient Safety Component of NHSN that participate in the CMS Promoting Interoperability Program.

Dear NHSN Users,

Beginning in 2024, reporting to the National Healthcare Safety Network (NHSN) Antimicrobial Use and Resistance (AUR) Module will be required under the Public Health and Clinical Data Exchange objective of the CMS Promoting Interoperability Program. Eligible hospitals and critical access hospitals are required to be in active engagement with CDC to report both AU and AR data. Facilities will receive a report from NHSN indicating their successful submission of AUR data for the EHR reporting period or claim an applicable exclusion.

To support NHSN facilities with this new requirement, the NHSN Team will be hosting two additional Office Hours sessions. These sessions will start with a brief presentation and the remainder of the hour will be used for Q&A with attendees.

• Monday, October 30: 12:00-1:00pm ET

Registration link: https://cdc.zoomgov.com/webinar/register/WN_ZMgWvgwxR8Sn3uz_sC6eng

• Tuesday, December 5: 1:00-2:00pm ET

Registration link: https://cdc.zoomgov.com/webinar/register/WN_M0ba-W2wS6KX4Dn4NbF_A

Note: These sessions will be recorded for internal use only. No distribution of the recording will be available.

For more information and additional resources, please see the materials in the [Antimicrobial Use and Resistance section](#) of CMS Reporting Requirements for Acute Care Hospitals page. Please direct questions about NHSN AUR Reporting to the NHSN Helpdesk. If you have SAMS credentials you can submit a ticket to the NHSN Helpdesk using this link: <https://servicedesk.cdc.gov/epg>. If you do not have SAMS credentials you can email us at NHSN@cdc.gov.

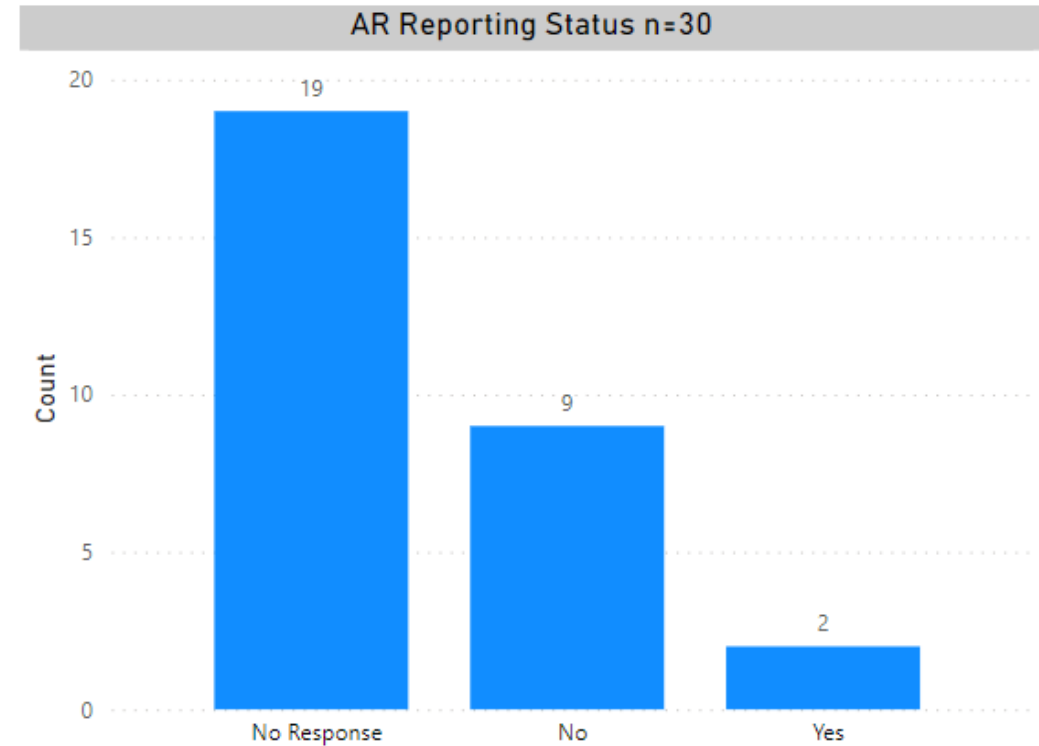
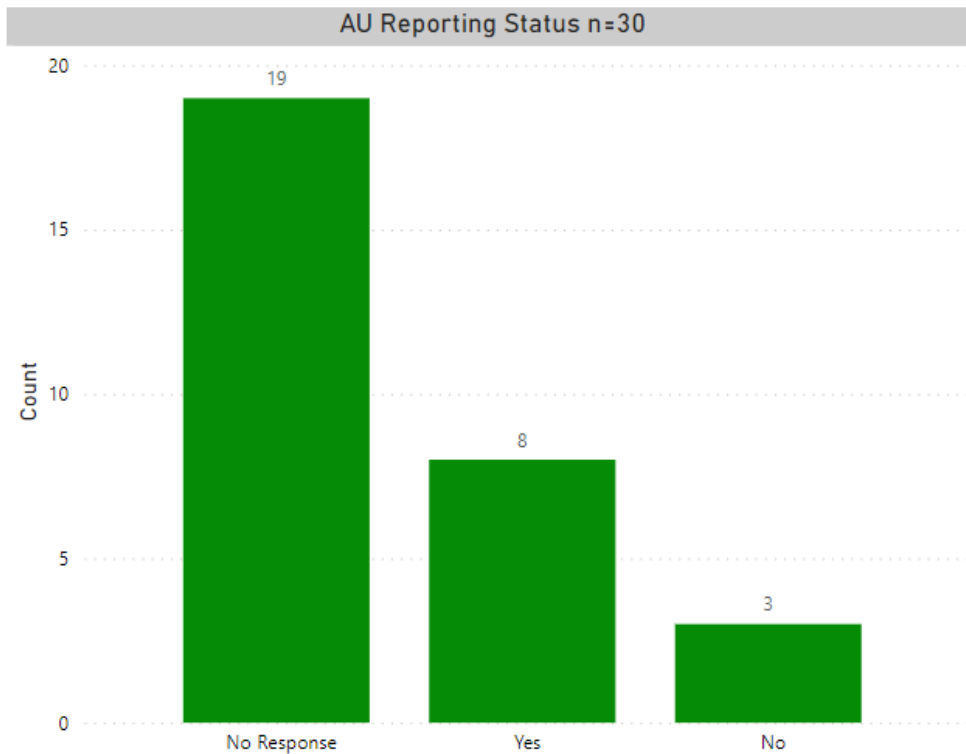
Thank you,
The NHSN AUR Team
Division of Healthcare Quality Promotion
National Center for Emerging and Zoonotic Infectious Diseases
Centers for Disease Control and Prevention
Email: nhsn@cdc.gov
Website: www.cdc.gov/nhsn/

Registration link: https://cdc.zoomgov.com/webinar/register/WN_ZMgWvgwxR8Sn3uz_sC6eng

NHSN AU/AR Survey Analysis

Clarissa Najera, MPH, MBA – Antimicrobial Stewardship Epidemiologist II

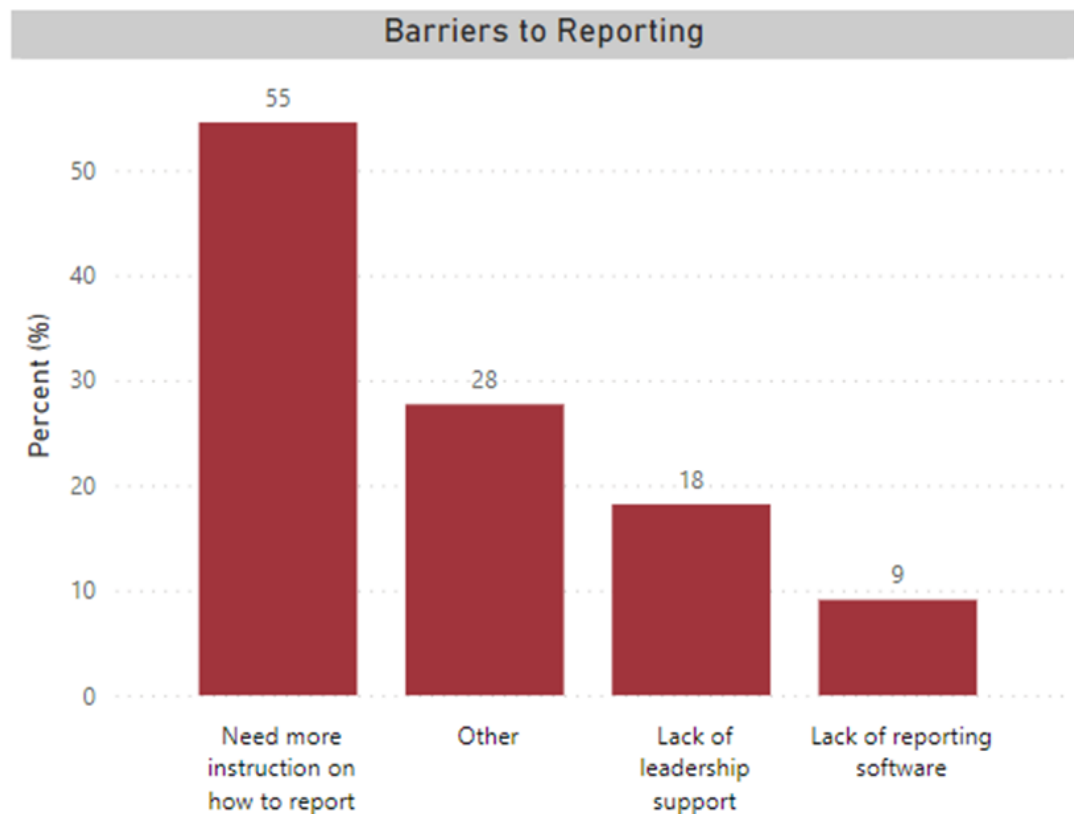
★ Are you currently reporting to NHSN Antimicrobial Use (AU)/ Antimicrobial Resistance (AR) Module?



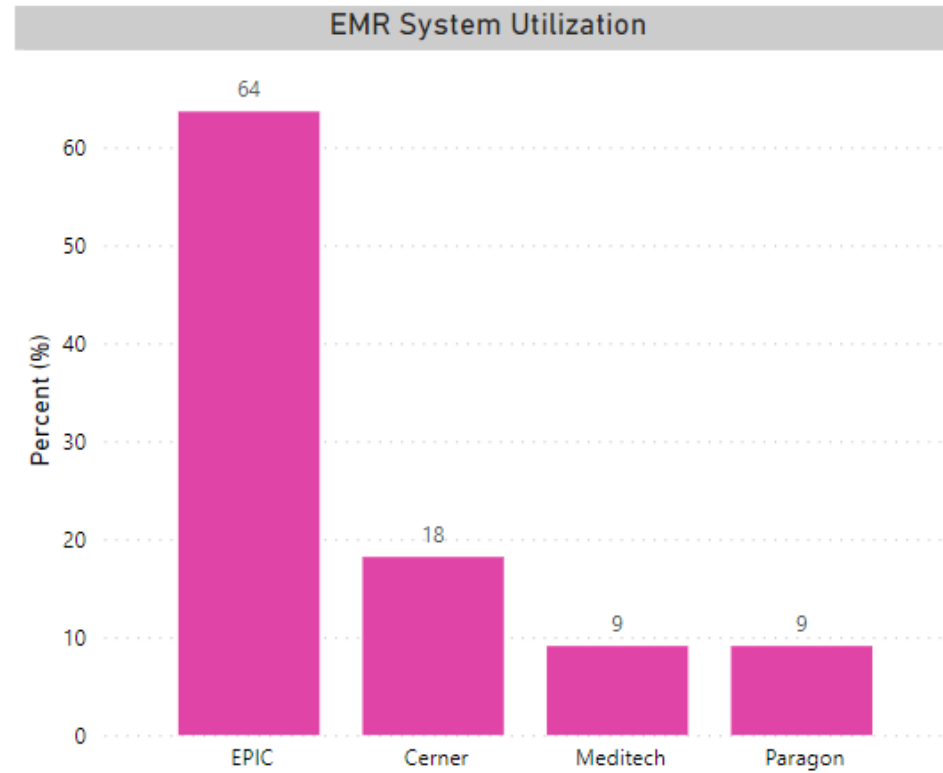


What are the barriers to NHSN AU/AR reporting your facility is currently facing? Select all that apply.

- Other barriers include:
 - Time and lack of knowledge
 - Data mapping integrity



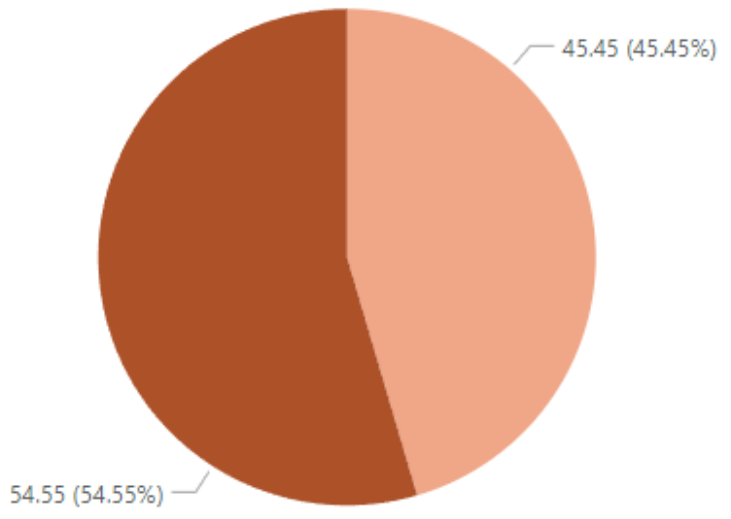
★ What EMR system are you currently using?



★ Which options are your hospital planning on completing for the NHSN CMS 2024 cycle year? Select all that apply.

NHSN CMS 2024 Cycle Option Reporting Plans

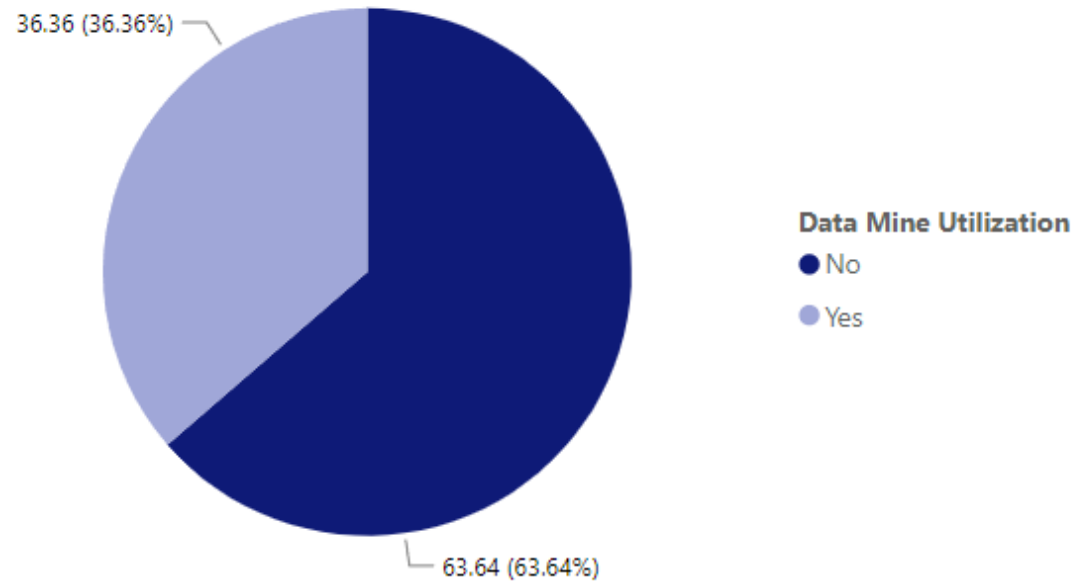
- NHSN CMS 2024 cycle options**
- Option 1
 - Option 2





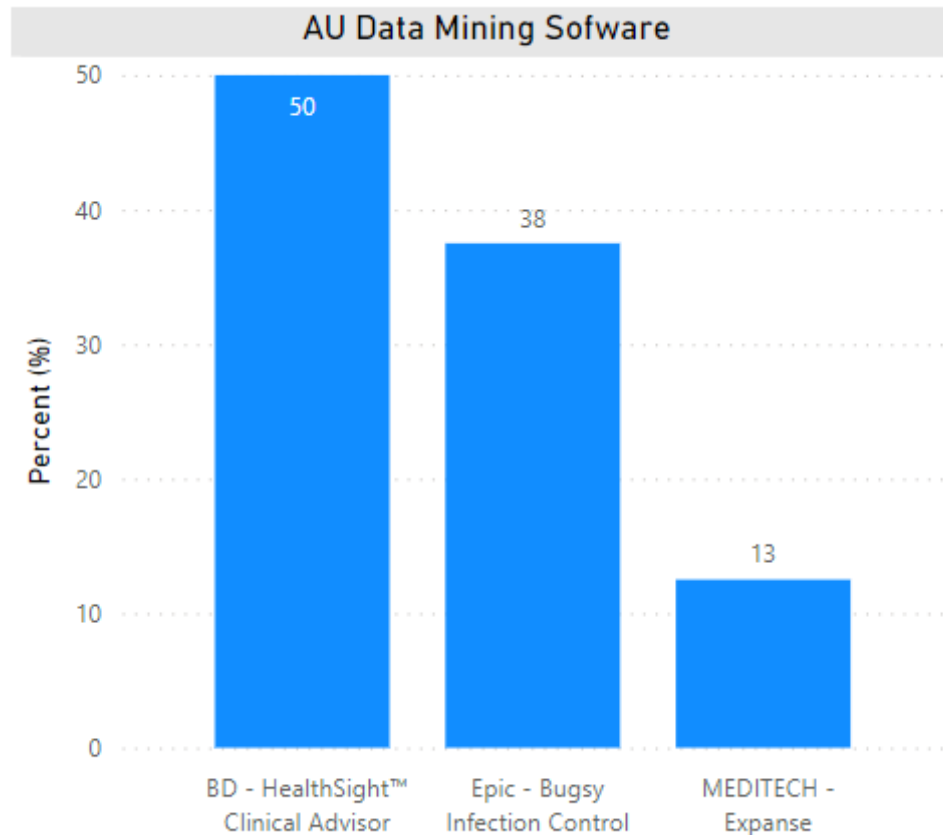
Are you (or will you be) using a synthetic data set (SDS) validated software vendor to produce clinical document architecture (CDA) files for submission into NHSN AU/AR module?

Synthetic Data Set (SDS) Validated Software Utilization



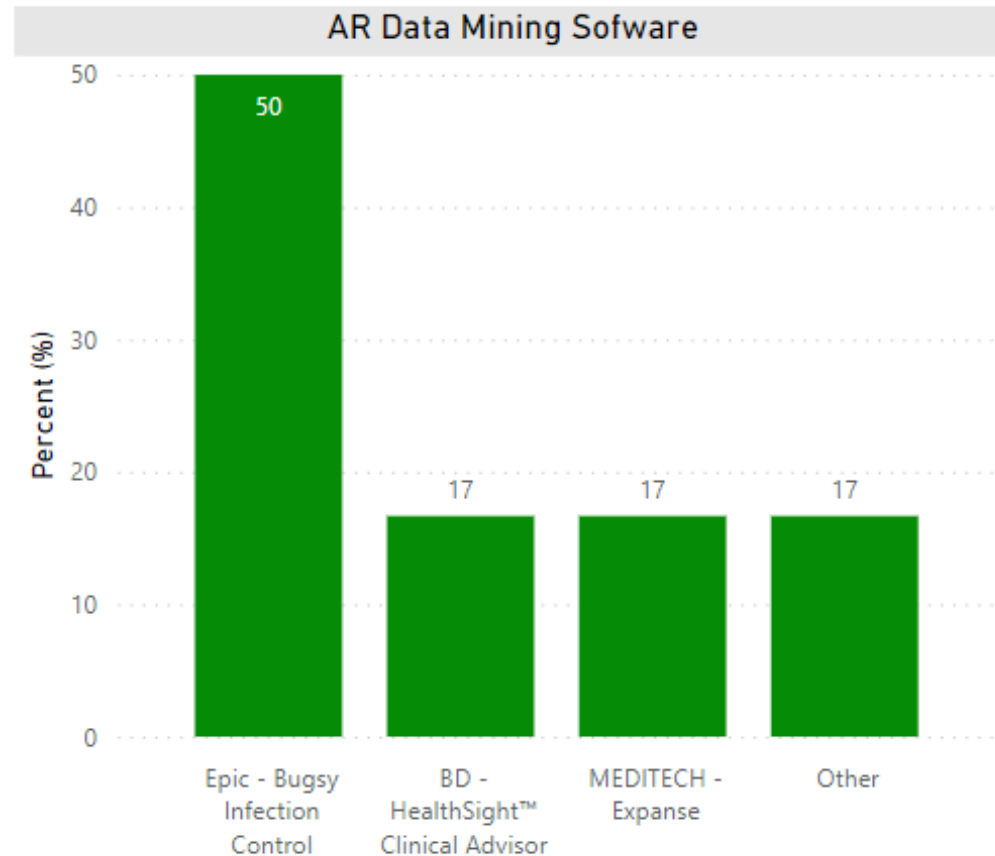


What software vendor to produce CDA files for submission into the NHSN AU Option does (or will) your site use? Select all that apply if using more than one.







What software vendor to produce CDA files for submission into the NHSN AR Option does (or will) your site use? Select all that apply if using more than one.



Let's Discuss!

- 
- 
- Q/A
 - Where are you generally in this process?
 - Those using or signed up with software vendors, How is it going?
 - Who is leading this effort in your facilities (IP vs. IT vs. AS Champions, etc.)?
 - Is facility leadership engaged?
 - Challenges and Triumphs on AUR module?
 - Are the CDC tools/resources helpful?



Gathering Feedback

- Cadence for future calls
- Quarterly Facility Reports
- Support from State and Local DOH

★ U.S. Antibiotic Awareness Week

- CDPH will be participating in a social media blast sharing pictures and hashtags to spread awareness on Linked In, X (formerly Twitter), IG, and Facebook.
- November 18th to 24th, 2023, local partners will illuminate structures in a vibrant purple hue and use our hashtags on signage as part of the USAAW Go Purple Campaign
- November 20th, 2023, the Blue Cross Blue Shield building at 300 E Randolph St, Chicago, IL 60601 will feature the message "BE ANTIBIOTIC AWARE" on its renowned tower facing Lake Shore Drive
- We encourage you to incorporate the hashtags #CDPH, #AntimicrobialResistance, #USAAW23, or #PurpleforAR in your social media posts to help raise awareness.



Thank You

<https://www.chicagohan.org/sign-up>



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