

NHSN AUR Module Reporting for the CMS Medicare Promoting Interoperability (PI) Program

WVHA/WV DHHR OEPS Informational Webinar
December 11, 2023

Objectives

- Provide an overview of the NHSN AUR module reporting requirement for the 2024 Medicare Promoting Interoperability Program
- Learn from Logan Regional Medical Center's implementation of the AU and AR modules from their perspective using Sentri7
- Identify next steps for hospitals
- Provide resources to assist hospitals with implementation of the AUR module

What is the Medicare PI Program?

- Meaningful Use
- Focused on interoperability and improving patient access to health information.
- Updated annually is the Medicare payment setting rules
- Facilities attest to CMS annually that they are meeting the program requirements or have an applicable exemption
 - Attest within the CMS Hospital Quality Reporting (HQR) system – end of February for the prior calendar year
 - For AUR, **NHSN will provide documentation to facilities to use as proof**

Who is eligible for the PI Program?

- Most acute care hospitals
- Critical access hospitals **are** eligible to participate
- Other types of hospitals that provide inpatient care are not included in the CMS PI Program
 - Includes but is not limited to:
 - Inpatient rehab hospitals (IRF)
 - Inpatient psych hospitals (IPF)
 - Long term acute care hospitals (LTCH/LTAC/LTACH)

Addition of AUR Module in the CY 2024 PI Program

- 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 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

Why is this so important?

- AUR is a single measure for the PI program (no partial credit is given).
- A facility must be able to report (attest) they are in active engagement or report “No”.
- Attesting “No” means the facility would not get credit for the AUR measure and would fail to satisfy the Public Health and Clinical Data Exchange Objective
- **Failure to fulfill any of the required measures, including the AUR measure, will result in a score of zero for the Promoting Interoperability Program and may be subject to a negative payment adjustment.**

What is Active Engagement?

Two ways to be in active engagement with NHSN

- Option 1 – Pre-production and validation
 - Registration within NHSN
 - Testing & validation of the CDA files
- Option 2 – Validated data production
 - Registration within NHSN
 - 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)

Am I excluded from reporting this module?

Three exclusions currently

1. Does not have any patients in any patient care location for which data are collected by NHSN during the EHR reporting period;
2. Does not have electronic medication administration records (eMAR)/barcoded medication administration (BCMA) records or an electronic admission discharge transfer (ADT) system during the EHR reporting period;
3. Does not have an electronic laboratory information system (LIS) or electronic ADT system during the EHR reporting period.

Hospitals enter exclusion in the CMS Hospital Quality Reporting (HQR) system & CMS reviews.

More on exclusions

- NHSN can provide guidance but ultimately CMS must decide whether a specific scenario meets exclusion criteria
- Exclusions are submitted at the same time PI Program attestations are submitted (specifically, last day in February each year)
- Hospitals claiming an exclusion on AU or AR would claim an exclusion on the measure as a whole
 - NHSN encourages facilities to report the data you have available
- If the eligible hospital does not have access to results for all eligible organisms as outlined in the AUR Module Protocol, the hospital should claim an exclusion to the AUR Measure (FAQ #11).

When do I have to start reporting?

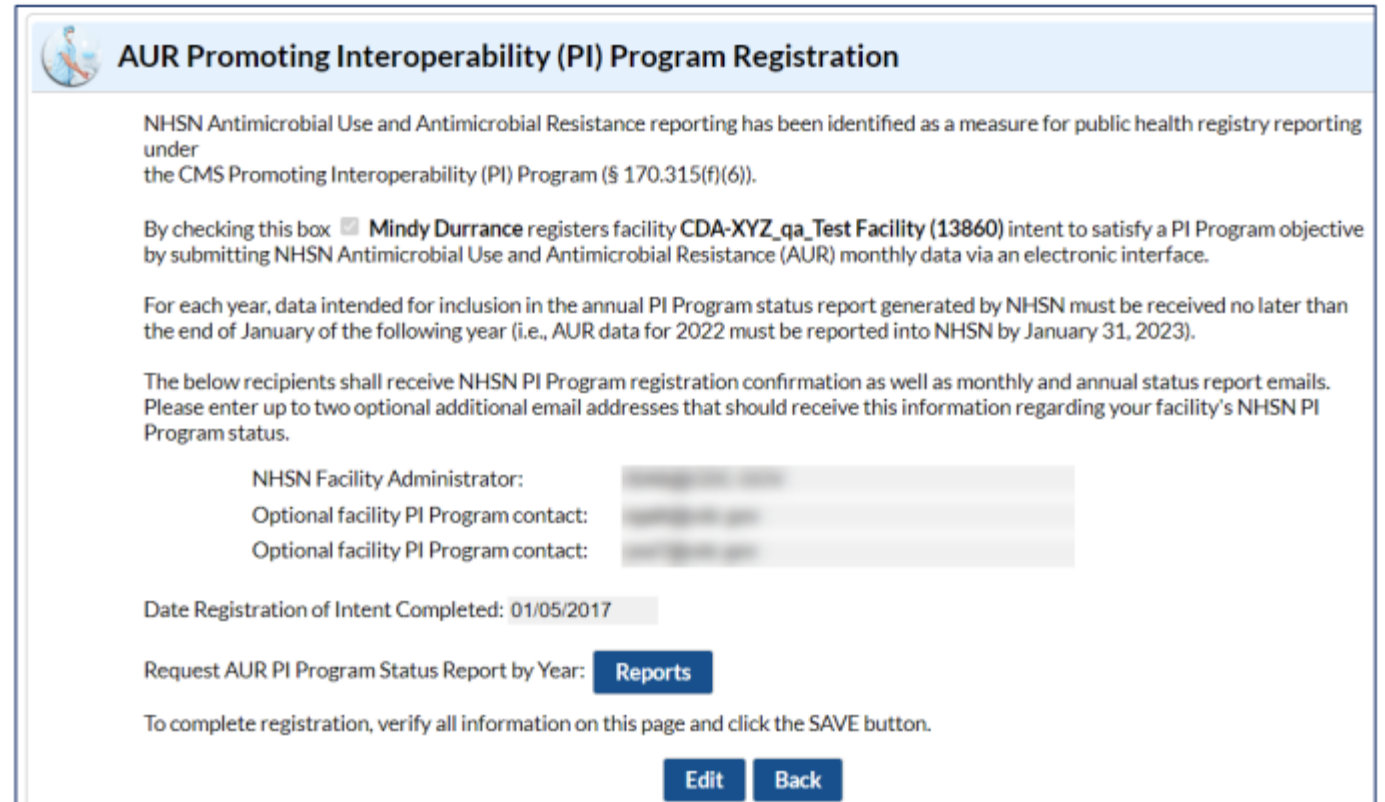
It depends.....

- CY 2023 PI Program – 90 continuous days - bonus points only
- CY 2024 PI Program – 180 **continuous** days – program requirement
- Your start date/deadline will depend on your facility's designated EHR reporting period
 - Facility must use the same 180-day period for **all** CMS PI Program measures
 - AU and AR data must be reported for the same 180 days
- Registration of intent should be completed within 60 days of the start of your EHR reporting period

I know my vendor and EHR reporting period – what do I do next?

Step 1 – Registration of Intent

- Only the NHSN Facility Administrator can complete this step
- Can add up to two additional email addresses to receive the monthly AUR submission reports



AUR Promoting Interoperability (PI) Program Registration

NHSN Antimicrobial Use and Antimicrobial Resistance reporting has been identified as a measure for public health registry reporting under the CMS Promoting Interoperability (PI) Program (§ 170.315(f)(6)).

By checking this box **Mindy Durrance** registers facility **CDA-XYZ_qa_Test Facility (13860)** intent to satisfy a PI Program objective by submitting NHSN Antimicrobial Use and Antimicrobial Resistance (AUR) monthly data via an electronic interface.

For each year, data intended for inclusion in the annual PI Program status report generated by NHSN must be received no later than the end of January of the following year (i.e., AUR data for 2022 must be reported into NHSN by January 31, 2023).

The below recipients shall receive NHSN PI Program registration confirmation as well as monthly and annual status report emails. Please enter up to two optional additional email addresses that should receive this information regarding your facility's NHSN PI Program status.

NHSN Facility Administrator: [Redacted]
Optional facility PI Program contact: [Redacted]
Optional facility PI Program contact: [Redacted]

Date Registration of Intent Completed: 01/05/2017

Request AUR PI Program Status Report by Year: [Reports](#)

To complete registration, verify all information on this page and click the SAVE button.

[Edit](#) [Back](#)

Option 1: Preproduction and Validation for CY 2024

- Registration should be completed within 60 days of the start of the EHR reporting period
 - Note: do not register intent until your test files are ready (or almost ready)
 - Immediately after registering, NHSN sends a request for test files
 - Facilities must respond to this email within 30 days
 - **Failure to respond twice within an EHR reporting period results in the facility NOT meeting the measure**
- NHSN asks that facilities register and submit test files no later than November 1, 2024
 - Allows their team time to process the test files before the attestation deadline

Option 1: Testing and Validation

Step 2 – Testing and Validation of AUR CDA files

- Send three files; 1 test file for each file type:
 - Antimicrobial Use (AU) Summary CDA
 - Antimicrobial Resistance (AR) – Numerator CDA file (AR Event)
 - Antimicrobial Resistance (AR) – Denominator CDA file (AR Summary)
- These will come from your vendor.
- Send to NHSNCDA@cdc.gov

If your facility is already submitting production AU and AR data, you can skip this step.

Option 2: Submission of Production Data

Step 3 – Submission of Production Data

- You will receive an email from NHSN advising that you are ready to send AUR CDAs to production

Subject: NHSN AUR Promoting Interoperability (PI) Program Testing and Validation Completed - Ready to Send AUR CDAs to Production

Your facility's Antimicrobial Use Summary, Antimicrobial Resistance – numerator, and Antimicrobial Resistance - denominator (AUR) test CDAs have passed validation.

You may now send all AUR CDAs to the NHSN production environment.

Monthly AUR submission status reports will be automatically generated and emailed to the facility administrator and optional emails listed on the PI Registration page within your NHSN facility.

- Send production data to NHSN monthly
- NHSN will automatically email the NHSN Facility Administrator and the optional email contact a monthly report outlining data submission status

Month/Year	Antimicrobial Use Summary	Antimicrobial Resistance Events	Antimicrobial Resistance Summary
01/2022	Yes	Yes	Yes
02/2022	Yes	Yes	Yes

What is the deadline for option 2: submitting production data for CY 2024?

- Data should be reported monthly during the EHR reporting period
- NHSN automatically sends status letters the first day of every month
- First annual letter will be sent on February 1 showing the previous year's submissions
 - Submit all relevant AUR data to NHSN no later than January 31, 2025 to be included on the annual report sent to facilities on February 1

Month/Year	Antimicrobial Use Summary	Antimicrobial Resistance Events	Antimicrobial Resistance Summary
01/2022	Yes	Yes	Yes
02/2022	Yes	Yes	Yes



Getting Started with NHSN AU/AR Reporting

Dawn Canterbury and Kathleen White


Logan Regional Medical Center

- We are a 132 bed acute care facility, with an 8 bed Inpatient Rehab Unit.
- We are a Level IV Trauma Center



Registering to Report AU/AR Data in NHSN

- Your NHSN System Administrator needs to go into system select and fill out the AUR Promoting Interoperability (PI) Program Registration, to do this go to Facility on the side bar of NHSN select AUR PI Registration.



AUR Promoting Interoperability (PI) Program Registration

NHSN Antimicrobial Use and Antimicrobial Resistance reporting has been identified as a measure for public health registry reporting under the CMS Promoting Interoperability (PI) Program (§ 170.315(f)(6)).

By checking this box **Dawn Canterbury** registers facility **Logan Regional Medical Center (14649)** intent to satisfy a PI Program objective by submitting NHSN Antimicrobial Use and Antimicrobial Resistance (AUR) monthly data via an electronic interface.

For each year, data intended for inclusion in the annual PI Program status report generated by NHSN must be received no later than the end of January of the following year (i.e., AUR data for 2022 must be reported into NHSN by January 31, 2023).

The below recipients shall receive NHSN PI Program registration confirmation as well as monthly and annual status report emails. Please enter up to two optional additional email addresses that should receive this information regarding your facility's NHSN PI Program status.

NHSN Facility Administrator:	<input type="text" value="DAWN.VANDALL@SCIONHEALTH.COM"/>
Optional facility PI Program contact:	<input type="text" value="kathleen.white@lpnt.net"/>
Optional facility PI Program contact:	<input type="text" value="cindy.fleming@lpnt.net"/>


Date Registration of Intent Completed:

Request AUR PI Program Status Report by Year:

To complete registration, verify all information on this page and click the SAVE button.

Direct Enroll

- NSHN Administrator will then need to under Facility select Direct Enroll. For this portion you will need your facilities ID (one used for NSHN) and then Object Identifier. Every facility has to have an OID (object Identifier) this is assigned by PHINTECH and is unique for each vendor (as our number is unique to Sentri 7) and is needed for the automated reporting.



Direct Enroll

Direct enrollment will allow your facility to send CDA's and CSV's to NSHN via your Health Information Service Provider. Please work with your CDA/CSV IT staff or vendor to obtain the information to complete the enrollment fields and enrollment process.

Facility ID: Object Identifier:

Direct address from which your facility will be sending data. *:
(HISP) Health Information Service Provider name *:
HISP-Technical Point of Contact email *:
Facility-Technical Point of Contact email *:
Status:
Remove Direct CDA/CSV:

Add additional DIRECT addresses

What if I don't have a OID Number

- If you do not have an OID number, and you have software vendor producing CDA files for submission into the NSHN AU/AR option and need a Vendor (Application) OID, you will need to contact the PHINDIR team via email at PHINTech@cdc.gov. On your request you must include the following information in order to process your request.

CC: NHSNCDA@cdc.gov

Body of Email:

- Program: NHSN_PH
- Vendor Name (ie. Sentri 7)
- Requestor First Name
- Requestor Last Name
- Requestor Email Address
- Requestor Phone Number

Then in response to your email you will receive a Vendor (Application) OID.



Once Registered and Have OID Enrolled

- Once you have fully registered to submit data and have your OID number enrolled.
- Mapping of units (beds) should be same for Pharmacy and for Infection Prevention.
- Your NSHN System Administrator will do the monthly reporting plans to include AU/AR reporting for Facewidein and Emergency. Once enrolled your NHSN System Administrator should do your monthly reporting plans after February survey for NSHN is due for the entire year.

Antimicrobial Use and Resistance Module

Locations	Antimicrobial Use	Antimicrobial Resistance
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4TH FLOOR - TELEMETRY	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5TH FLOOR - MED/SURGE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ICU/CCU - LOGAN REGIONAL MEDICAL CENTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>
IMCU - IMCU (INTERMEDIATE CARE UNIT)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
OB - OB	<input checked="" type="checkbox"/>	<input type="checkbox"/>
PEDS - PEDIATRICS	<input checked="" type="checkbox"/>	<input type="checkbox"/>
REHAB - REHAB UNIT	<input checked="" type="checkbox"/>	<input type="checkbox"/>
EMERGENCY - EMERGENCY	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Sentri 7 Pharmacy Set Up



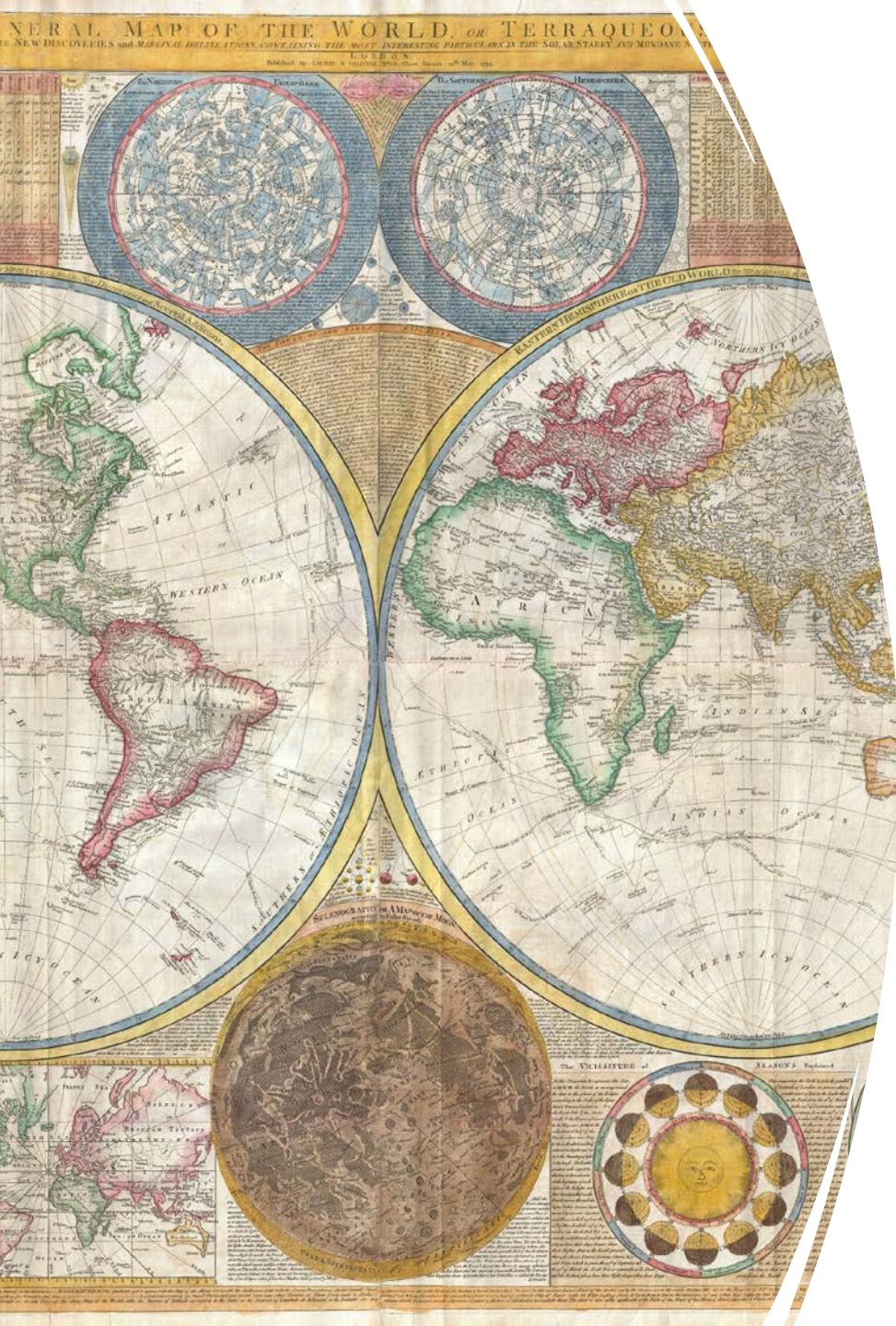
NEW LOCATION

Facility Locations

These locations are used wherever a location field is displayed in a form

Logan Regional Medical Center - Primary

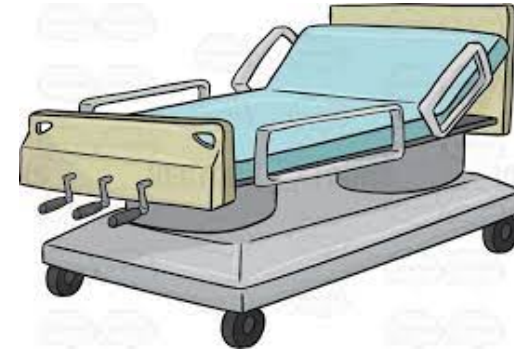
Location Code ^	Description	CDC Description	Matched Locations	LABID	AU	AR
4TH FLOOR	TELEMETRY	Medical Ward	MQ_4N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Data Mapping must be completed

- Organism Names
- Route of Administration
- Susceptibility Result and Test
- Patient Classification- Emergency, Inpatient, Outpatient, Preadmit
 - Values matched to Inpatient will calculate Day Present for AU reports using discharge dates
 - Values matched to anything but inpatient will calculate Days Present to AU reports using discharge dates when possible but will supply an end date when the discharge date is NULL

Obtain patient days
from your EHR



Enter Patient Days

These numbers are used as denominators in your antimicrobial stewardship reports to calculate Days on Therapy.

Enter the denominators for your report

Month	Any Location	All Inpatient	ICU Inpatient	Non-ICU Inpatient	All Outpatient
December 2022	3993	1937	332	1605	2056
January 2023	4087	2070	348	1722	2017

Send report to NHSN- AU REPORT



NATIONAL HEALTHCARE SAFETY NETWORK
ANTIMICROBIAL USE OPTION

Antimicrobial Use Reporting

« 2023

AU Report November 2023 (9 files) Created 12/3/2023				Ready to Send
AU Report October 2023 (9 files) Created 11/8/2023				Accepted 11/8/2023
Admissions FacWideIN: 425 ⓘ Logan Regional Medical Center			SEND REPORT	
Location ^	Days Present	Days of Therapy	Version	Status
4TH FLOOR: Medical Ward	750 ⓘ	📄	2	Accepted 11/8/2023
5TH FLOOR: Medical-Surgical Ward	658 ⓘ	📄	2	Accepted 11/8/2023
EMERGENCY: Emergency Department	2486 ⓘ	📄	2	Accepted 11/8/2023
ICU/CCU: Medical-Surgical Critical Care	386 ⓘ	📄	2	Accepted 11/8/2023
IMCU: Adult Step Down Unit	277 ⓘ	📄	2	Accepted 11/8/2023
OB: Gynecology Ward	91 ⓘ	📄	2	Accepted 11/8/2023
PEDS: Pediatric Medical-Surgical Ward	0 ⓘ	📄	2	Accepted 11/8/2023
REHAB: Rehabilitation Ward (within Hospital)	116 ⓘ	📄	2	Accepted 11/8/2023

Similarly – send the Antimicrobial Resistance Reporting



Antimicrobial Resistance Reporting

2023

Create AR Report For November 2023

AR Report October 2023 Created 12/4/2023

Ready to Send

Logan Regional Medical Center

SEND REPORT

Location	Invasive Events	Non-Invasive Events	Version	Status
ICU/CCU: Medical-Surgical Critical Care	5	1	3	Ready to Send

Days of Therapy reports-graphs

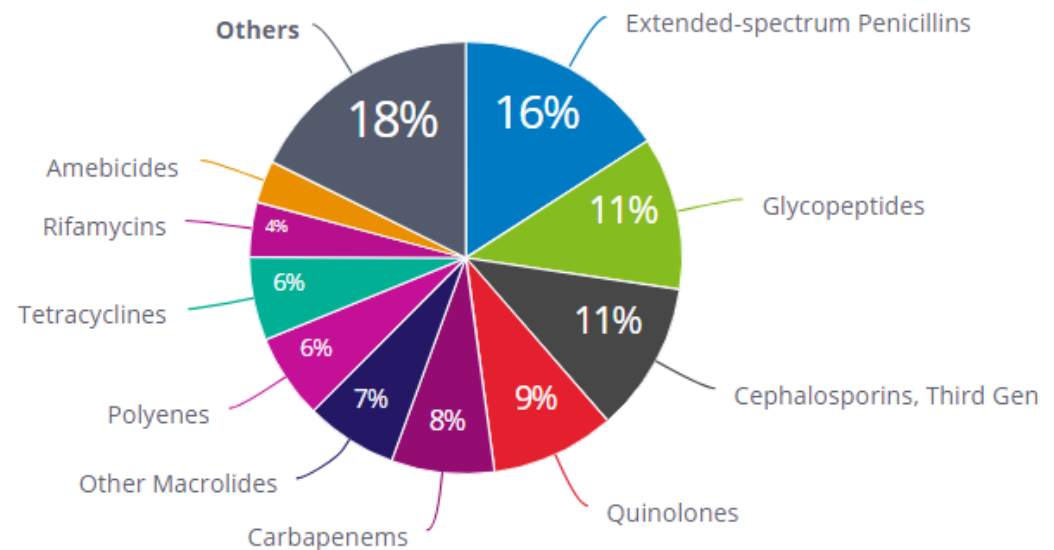
Days of Therapy Parameters

Days of Therapy

Location Source: NHSN Location
Denominator: Days Present

1,150 DOT
per 1000 days

Antimicrobial Use by Class



Antimicrobial Resistance

- Antibiogram can be generated
- Combination susceptibility reports

Combination Susceptibility

Dec 4, 2023 10:02:06 AM

Selected Parameters

Organism: Escherichia coli
Primary Agent: Ampicillin

Estimated Efficacy with Primary Agent



Thank you



So.....where do I start?

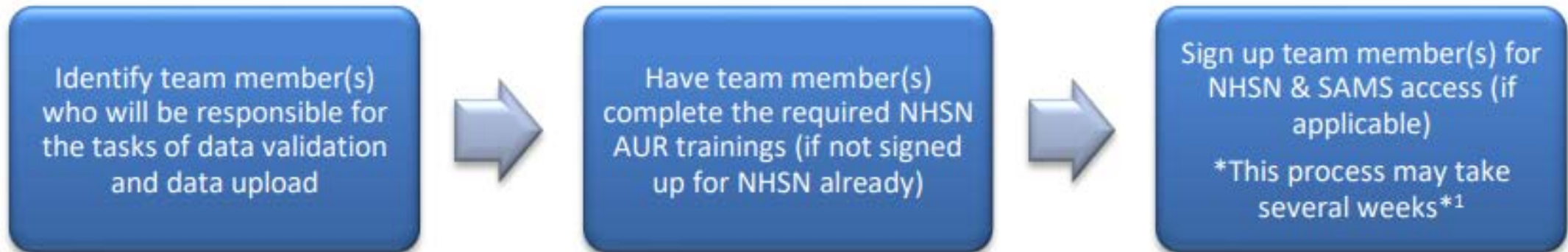
- Medicare Promoting Interoperability Program
 - Do we participate in the PI program?
 - What is your EHR reporting period?
- Are we eligible for the AUR module? Do we have any exclusions?
 - Only CMS can grant an exclusion, but NHSN will work with you
- What is my vendor software situation? Do I need a third party vendor?
 - Certified by ONC? Validated by NHSN?
 - “Homegrown” vendor solutions are possible, but not recommended
- Who is your facility NHSN administrator?
 - When it’s time, they will submit the registration of intent

Identify your team

- AU Option:
 - Pharmacist or physician champions are generally in charge of uploading data, reviewing/validating submitted data, running reports, and analyzing data.
 - Infection preventionists and information technology specialists are team members who can also assist with AUR processes.
- AR Option:
 - Consider the above options or either a microbiologist or clinical laboratory specialist, as they may have more ready access to resistance data than other professionals.
- Consider your own facility's resources in determining which role would be the best fit for these tasks

Make sure everyone who needs access has access to NHSN

If they need SAMS access this takes some time!



The SAMS Partner Portal is the system that will allow you to access the NHSN application.
You will need a SAMS login to use the NHSN AUR module

We're already submitting data to the AUR Module – what do I do?

- Complete the registration within NHSN.
- No need to complete the testing and validation step.
- Facilities in this category can attest to the most advanced stage (option 2)

Questions

- What if our EMR is not compatible with the upload, is there guidance on a manual documentation for the AUR upload?
- Our Paragon system for reporting will be upgraded in April and include required software. When should I register our intent to report with NHSN?
- Would other users of Sentri7 be interested in sharing their experience with AU/AR data submission? Anyone willing to connect offline?

I still have questions....

- Where do I send questions?

To NHSN –

- Some questions may need a more detailed review by the NHSN AUR Team & you may be asked to send them to the team via ServiceNow or NHSN@cdc.gov
- SAMS specific questions can be sent to samshelp@cdc.gov

To CMS –

- Medicare eligible hospitals and critical access hospitals participating in the Medicare Promoting Interoperability Program may contact the CCSQ help desk for assistance at QnetSupport@cms.hhs.gov or 1-866-288-8912.

CMS Resources

CMS. Promoting Interoperability Programs. About the Promoting Interoperability Program. <https://www.cms.gov/medicare/regulations-guidance/promoting-interoperability-programs>

FFY 2023 IPPS Final Rule. Federal Register. <https://www.federalregister.gov/documents/2022/08/10/2022-16472/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the>

FFY 2024 IPPS Final Rule. Federal Register. <https://www.federalregister.gov/documents/2023/08/28/2023-16252/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the>

HQR system: <https://hqr.cms.gov/hqrng/login>

HQR User guide: <https://www.cms.gov/files/document/hqr-user-guide.pdf>

CDC/NHSN. Using the NHSN AUR Module for the CMS Promoting Interoperability Program. Fact Sheet. <https://www.cdc.gov/nhsn/pdfs/cda/PHDI-Facility-Guidance-508.pdf>

NHSN's Promoting Interoperability Program. Program Guidance and Validation. https://www.cdc.gov/nhsn/cdaportal/datainteroperability.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fnhsn%2Fcdaportal%2Fmeaningfuluse.html

AUR Trainings. <https://www.cdc.gov/nhsn/training/patient-safety-component/aur.html>

NHSN Module Website. Antimicrobial Use and Resistance (AUR) Options. <https://www.cdc.gov/nhsn/psc/aur/index.html>

NHSN. Chapter 14: Antimicrobial Use and Resistance (AUR) Module Protocol. <https://www.cdc.gov/nhsn/pdfs/pscmanual/11pscaurcurrent.pdf>

NHSN Vendor's the have Passed the AU/AR SDS Validation

AU - <https://www.cdc.gov/nhsn/cdaportal/sds/au-vendor-list.html>

AR - <https://www.cdc.gov/nhsn/cdaportal/sds/ar-vendor-list.html>

CDC NHSN. NHSN Antimicrobial Use and Resistance (AUR) Module Reporting for the CMS Promoting Interoperability (PI) Program Office Hours. October 30, 2023. <https://www.cdc.gov/nhsn/pdfs/training/2023/AUR-PIP-Office-Hours.pdf>

CDC NHSN AUR FAQs. <https://www.cdc.gov/nhsn/cms/cms-faq-aur.html>

SAMS User Guide for the CDC's SAMS Partner Portal. <https://auth.cdc.gov/sams/SAMSUserGuide.pdf?disp=true>

References

1. CDC. National Center for Emerging and Zoonotic Infectious Diseases. NHSN Antimicrobial Use and Resistance (AUR) Module Reporting for the CMS Promoting Interoperability (PI) Program Office Hours. October 30, 2023. Accessed 12/11/2023 at <https://www.cdc.gov/nhsn/pdfs/training/2023/AUR-PIP-Office-Hours.pdf>
2. CMS. Promoting Interoperability Programs. Accessed 12/11/2023 at <https://www.cms.gov/medicare/regulations-guidance/promoting-interoperability-programs>
3. Washington State Department of Health. National Healthcare and Safety Network's (NHSN) Antibiotic Use and Resistance (AUR) Module: Frequently Asked Questions (FAQs) About Implementation for Hospitals. Updated August 2023. Accessed 12/11/2023 at <https://doh.wa.gov/sites/default/files/2023-06/420-453-NHSNAntibioticUseResistanceFAQ.pdf?uid=64e6260770d08>
4. CDC NHSN. FAQs: AUR Reporting for the CMS Promoting Interoperability Program. Accessed 12/11/2023 at <https://www.cdc.gov/nhsn/cms/cms-faq-aur.html>

Questions?

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