Spring 2024 NHSN Vendor Webinar

April 22, 2024

Agenda

- Introduction
- FHIR Implementation Updates
- General NHSN Release Overview
- Release Updates
- Long Term Care Facility Component (LTC) AU Module
- SDOH: Race, Ethnicity, Language, Interpreter
- AUR Module Updates
- NHSN Pre-Production Test Site (NPPT)
- Miscellaneous
- Q&A

Introduction

Andrea Benin

Mission of CDC's Division of Healthcare Quality Promotion (DHQP)

To protect patients; protect healthcare personnel; and promote safety, quality, and value in both national and international healthcare delivery systems.

Image by David Mark from Pixabay

NHSN: Transforming from current state to future state

Manual data collection & entry

Data manually submitted via NHSN webform

Manual event determination with electronic data transfer

Electronic data submitted using CDA

Computer-assisted

*Electronic data submitted using FHIR; selected data can be user-confirmed**

Hands-free, automated

Electronic data submitted using FHIR; fully automated

*Some measures will have additional format options for submitting data (e.g., CSV)
CDA: Clinical Document Architecture

NHSN FY2024 Priorities

- **NHSN Cloud Migration**
- **Fully Automated Digital Measures (FHIR)**
- **Terminology Modernization**
- **Expand NHSN's Health Equity Research Portfolio**
- **Antimicrobial Use and Resistance (AUR) Reporting**

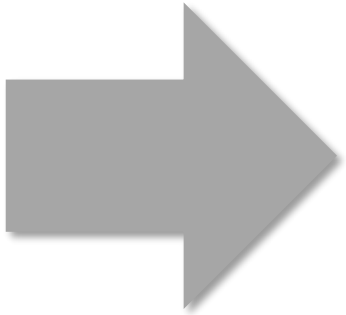
FHIR Implementation Updates

Andrea Benin

NHSN Digital Quality Measures (dQMs) to Drive Patient Safety

Fully-automated, digital quality measures based on standards, measurement science, and clinical science with rigorous benchmarking and appropriate risk-adjustment used to drive patient-safety

Manual and Semi-Automated Measures



Digital Quality Measures

Benefits of Digital Quality Measures

- ✓ *Reduce time* for data collection
- ✓ Provide *patient-level* data for risk adjustment and stratification
- ✓ *Remove* potential *biases* due to different interpretations
- ✓ *Adjust* measures quickly in response to changes in practices

New Digital Quality Measures in Implementation

- CLABSI
- CAUTI
- VAE
- pedVAE
- SSI
- MDRO/CDI
- AUR
- Hospital COVID, Flu
- Nursing Hours

Glycemic control: hypoglycemia and hyperglycemia

- Respiratory pathogen surveillance
- Healthcare facility-onset, antibiotic-treated *C. difficile* infection
- Hospital-onset bacteremia and fungemia
- Healthcare-associated VTE
- Adult sepsis

AUR: antimicrobial use and resistance; CDI: *Clostridioides difficile* infection; CAUTI: catheter-associated urinary tract infection; CLABSI: central line-associated bloodstream infection; MDRO: multi-drug resistant organism; SSI: surgical site infection; VAE: ventilator-associated event; pedVAE: pediatric VAE

NHSNCoLab

A formal, funded collaboration between NHSN and selected U.S. healthcare facilities to test, pilot, and validate new NHSN dQMs and data exchange approaches

Site	Site Name	EHR Vendor*	Measures	Site Leads
1	Billings Clinic	Oracle/Cerner	Glycemic Control	Randy Thompson, MD Lisa Ranes, RD, LN, CDCES
2	Geisinger	Epic	CDI/HOB, RPS	Mark Shelly, MD
3	HCA Healthcare	Meditech, Allscripts, Oracle/Cerner	CDI/HOB, Glycemic Control	Kenneth Sands, MD, MPH William Gregg, MD, MS, MPH
4	Mass General Brigham	Epic	Sepsis	Sayon Dutta, MD, MPH Chanu Rhee, MD, MPH
5	Michigan Medicine	Epic	Glycemic Control, CDI/HOB, HA-VTE	Michael Lanham, MD
6	Nebraska Medicine	Epic	Glycemic Control	Andjela Drincic, MD Ron Carson
7	University of California, Davis Medical Center	Epic	Glycemic Control	Greg Maynard, MD, MS, MHM Yauheni Solad, MD, MHS, MBA
8	University of North Carolina Hospitals	Epic	CDI/HOB, RPS	Lisa Stancill, MPH
9	University of Oklahoma Health Sciences Center	Epic	HA-VTE	Aaron Wendelboe, PhD Justin Dvorak, PhD
10	University of Rochester Medical Center	Epic	CDI/HOB	Brenda Tesini, MD
11	Yale New Haven Health	Epic	Glycemic Control	Hyung Paek, MD, MSEE

*Abbreviations: CDI/HOB = Hospital-onset, antibiotic-treated C. difficile infection (CDI) / Hospital–onset bacteremia/fungemia (HOB), HA-VTE= Healthcare-associated venous thromboembolism *Listing of EHR vendors does not imply endorsement by the vendors.*

www.cdc.gov/nhsn/nhsncolab

CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives, Protecting People™

National Healthcare Safety Network (NHSN)

NHSNCoLab

Print

Open All | Close All

Ushering in a new era of NHSN data modernization, innovation, and collaboration for public health surveillance.

About NHSNCoLab

The NHSN Collaborative, or NHSNCoLab, is a collaboration between public and private stakeholders to test, pilot, implement, and validate new National Healthcare Safety Network (NHSN) healthcare surveillance measures and approaches in alignment with CDC's Data Modernization Initiative.

The program established a committed network of CDC's healthcare partners with institutional agreements in place to increase the efficiency and effectiveness of collaboration.

This collaboration will inform new NHSN measures and approaches to healthcare event data collection, assessing the feasibility and validity of new NHSN surveillance concepts that support patient safety, quality reporting, national benchmarking, and public health preparedness and response.

NHSN FHIR dQMs in Development & Implementation

- Hyperglycemia
- Neonatal late-onset sepsis/meningitis
- Opioid-related harm
- Acute kidney injury
- Medication-related bleeding
- Antibiotic use
- Antibiotic-associated adverse events

- Respiratory pathogen surveillance
- Adult sepsis
- Healthcare-associated VTE

- Medication-related hypoglycemia
- Healthcare facility-onset, antibiotic-treated *Clostridioides difficile* infection
- Hospital-onset bacteremia and fungemia

- Medication-related hypoglycemia
- Healthcare facility-onset, antibiotic-treated *Clostridioides difficile* infection
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General NHSN Release Overview

Pamela Crayon

NHSN Release Schedule Overview

- **Continuing one major release at the end of the year**
  - Changes included:
    - Protocol changes
    - Transition to new CDA versions due to protocol changes
    - Effective January 1st of each year
- **Minor releases**
  - Occurring on an 8–12-week basis as needed
  - May include:
    - New Component/Module
    - Minor change requests
    - Defect resolutions
    - Infrastructure maintenance and support
  - Users notified via message alert when logging into NHSN

2024 NHSN Release Roadmap for Vendors

February 1 12.0.1	April 6 12.1.0	June 29 12.2.0	September 21 12.3.0	December 14 13.0.0
Cloud Migration	Gender Identity and Sex at Birth (Optional) BV: Adding PRCPC Codes to Monthly Denominators	Implement R4D2.2 IG for Patient Safety - BSI Option - MDRO Summary Implement R4D2.2 IG for Dialysis - Event Option - Denominators	LTC AU Module (CDA Manual and Direct Import only) NEO LOS/MEN (CDA Manual Import) Implement R4D2.2 IG for Patient Safety - Summary Reports, Procedures Implement R4D3 IG for Patient Safety - AR Option, AU Option	Annual Survey Updates Annual Code Updates Gender Identity and Sex at Birth (Required) AU SAAR Rebaseline

Starting in 2024, NHSN will be deploying CDA updates in the NPPT environment with the different releases to give the vendors time to develop and test throughout the year. The effective date in production will be January 1, 2025.

Release Updates

Hamna Baig

Release 12.1 – April 6, 2024

- **Gender Identity and Sex at Birth (Optional)**
  - CR3768: CDA submission as optional effective April 6, 2024
- **CR4400 (Biovigilance):** Pathogen Reduced CRYO Fibrinogen Complex codes have been added for import via CDA for the monthly denominators. This was implemented with the R3D1.1 Implementation Guide (IG).
- **CR4634 (Dialysis):** The question/field, Access Used for Dialysis at the Time of the Event, will display as required for DIAL events dated 1/1/2025 and forward. This field will be available to send in the CDA effective January 1, 2025.

Future Release 12.2 – June 29, 2024

- **Implement R4D2.2 IG**
  - DIAL: Event Option: CR4110 - Manual Import, CR4111 – Direct Import
  - DIAL: Denominators: CR4425 – Manual Import, CR4599 – Direct Import
  - PS: Bloodstream Infection (BSI) Option: CR4096 – Manual Import, CR4097 – Direct Import
- **MDRO Summary: Implement R4D2 IG for FACWIDEOUT and other Location Types**
  - Implemented R4-D2 IG version for PS: MDRO Summary for FACWIDEIN only in R11.6 to allow the IPF/IRF questions to be submitted via CDA effective 1/1/2024.
  - Excluded provisions for sending FACWIDEOUT and other location types.
    - Workaround for submission options until R12.2:
      - Continue using the previous version R3D3 IG (if possible).
      - Clear alerts via manual entry within the NHSN application.

Future Release 12.3 – September 21, 2024

- **Implement R4D2.2 IG**
  - NEO: Late Onset Sepsis/Meningitis: CR4044 - Manual Import
  - PS: Procedures Option: CR4108 – Manual Import, CR4109 - Direct Import
  - PS: SSI Option: CR4098 – Manual Import, CR4099 - Direct Import
- **Update Patient Safety Component AUR Module CDAs to use R4D3 IG**
- **Long Term Care Facility Component (LTC) AU Module**

Future Release 13.0 – Effective January 1, 2025

- **Implement R1D1.2 IG**
  - LTC: LabID Option: CR4601 – Manual Import, CR4602 – Direct Import
- **Implement R4D2.2 IG**
  - PS: UTI Option: CR4100 – Manual Import, CR4101 – Direct Import
  - PS: VAE Option: CR4102 – Manual Import, CR4103 – Direct Import
  - PS: LabID Option: CR4106 – Manual Import, CR4107 – Direct Import
- **Gender Identity and Sex at Birth (Required)**
  - CR4127: CDA submission as required will be effective January 1, 2025

Long Term Care Facility Component (LTC) AU Module

Molly Stillions

LTC AU Module

- **Comparative to acute care reporting**
  - Resident-level characteristics, AU and census data
  - Will allow submission of antimicrobial orders or administrations
  - Clinical Document Architecture (CDA), no manual reporting
  - Monthly submission
- **HL7 Balloted Implementation Guide in publication process**
- **Pilot opportunities open Q3 2024**
- **Anticipated public release Q4 2024**

Social Determinant of Health (SDOH): Race, Ethnicity, and Language (REaLI)

Henrietta Smith

NHSN Social Determinants of Health Webpage

National Healthcare Safety Network (NHSN)

CDC > NHSN Home

- NHSN Home
- NHSN Login
- About NHSN
- Enroll Facility Here
- CMS Requirements
- Change NHSN Facility Admin
- Resources by Facility
- Patient Safety Component
- Long-term Care Facility Component
- Dialysis Component
- Biovigilance Component
- Healthcare Personnel Safety Component (HPS)
- Neonatal Component
- Outpatient Procedure Component
- NHSNCoLab
- **NHSN and Social Determinants of Health**
- NHSN Reports

NHSN and Social Determinants of Health

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Division of Healthcare Quality and Promotion

Mission

To protect patients, healthcare personnel and to promote safety, quality, and value in both national and international healthcare delivery systems.

Surveillance Branch

Vision

To protect lives by leading the nation's trusted surveillance system for healthcare.

Mission

- To use rigorous science for real-time data and surveillance to protect patients, protect healthcare personnel and to promote safety, quality, and value in healthcare.
- To lead the nation's efforts to identify and respond to emerging and persisting threats across healthcare with best-in-class data automation and user interfaces.

NHSN Focus on Race, Ethnicity, Language, and Interpreter Use Data to Address Health Disparities

Underlying racial and ethnic inequities and system barriers for other language speakers significantly affect health outcomes. However, few studies have systematically addressed these factors and their impact on hospital and long-term care facility (LTCF) acquired infections. Similarly, few studies have addressed these factors and their impact on COVID-19, influenza, and respiratory syncytial virus (RSV) vaccination uptake by healthcare workers and LTCF residents.

Race, ethnicity, language, and interpreter (REaLI) data fields already exist in most electronic medical record systems. There are rapidly evolving requirements on the horizon to collect these essential data elements. By looking at traditional race and ethnicity categories, and diving deeper into population sub-groups who speak languages other than English, more specific and actionable differences in infection risk and vaccine uptake may be identified.

In order to better understand the impacts and interactions of REaLI data on hospital and LTCF associated infections, as well as COVID-19, influenza, and RSV vaccination uptake by healthcare workers and LTCF residents, we are taking steps

https://www.cdc.gov/nhsn/sdoh/index.html

Change in Implementation Timeline

Protocol Updates

NHSN to Require Reporting of Race, Ethnicity and Language (REaL) Data

Race and ethnicity data fields have long been included in the NHSN application as 'optional' data fields, but these data are seldom reported. The lack of these data significantly limits our understanding of how factors like race and ethnicity influence healthcare associated infections and vaccine uptake for influenza, COVID-19, and respiratory syncytial virus (RSV) vaccine by healthcare workers and long-term care facility residents. In order to advance our knowledge of the impacts and interactions of these factors, the NHSN Team is taking the following steps to improve the collection of these data using widely accepted standards for the transfer of clinical and administrative health data (such as Health Level Seven International (HL7).

- First, the value sets (selection options) for race and ethnicity are being updated. This means a larger and more standardized list of race categories and ethnic groups will be available to choose from in the NHSN application. The updated race and ethnicity value sets will be available in Fall 2024.
- Second, we will expand beyond race and ethnicity and will dive deeper into population sub-groups who speak languages other than English. This expansion includes the addition of data fields such as primary language and need for an interpreter. The language data fields will also be available in Fall 2024.
- Third, responding to the data fields of race, ethnicity, primary language, and need for an interpreter will be required across all NHSN components and facility-types starting in 2025.

The NHSN Team is taking action to collect and standardize REaL data to improve our understanding of how these factors impact infection burden and vaccine uptake. Findings from analyses of these data can be used to inform action for hospitals, long-term care facilities, and state and local public health systems. Stay tuned over the next several months for more information about REaL data collection.

Our timeline has changed due to the Office of Management and Budget's new race and ethnicity standard.

Addition of Interpreter Used in this Encounter

NHSN
NATIONAL HEALTHCARE SAFETY NETWORK

Form Approved
OMB No.0920-0666
Exp. Date:12/31/2026
www.cdc.gov/nhsn

REaLI Data Fields MOCK-up
Pneumonia (PNEU)

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*required for saving **required for completion

Facility ID:	Event #:
*Patient ID:	Social Security #:
Secondary ID:	Medicare #:
Patient Name, Last:	First: Middle:
*Gender: F M Other	*Date of Birth:
Sex at Birth: F M Unknown	Gender Identity (Specify):
Ethnicity (Specify):	Race (Specify):
Language: (Specify)	Interpreter Needed: Y/N
Preferred: Y/N	Interpreter Used in this Encounter: Y/N
	If Yes, what was used?
	If No, why?
*Event Type: PNEU	*Date of Event:
Post-procedure PNEU: Yes No	Date of Procedure:
NHSN Procedure Code:	ICD-10-PCS or CPT Procedure Code:
*MDRO Infection Surveillance:	

AUR Module Updates:
Previous Application Updates – Release 12.1

Amy Webb

R1 AR Event fixed

- **R1 AR Event files were failing to upload**
  - Mainly used for CMS Promoting Interoperability (PI) Program testing

Validation errors

File Name: AR_Numerator.xml

Facility ID	Event Type	Event Date	CDA File Name	setId	*setId Already Exists in the Database	CDA Processing Date/Time Stamp
Reason for failure:						
33617	AR	11/22/2017	AR_Numerator.xml	2.16.840.1.114222.4.3.2.2.1.261.1.2.1-2-AB128973302-Blood-AB128973302-14385002-20171101	No	12/Mar/2024 11:17:27 EDT
	1.1	AR IgVersion does not match to a valid version.				

Done

AUR Module Updates:
Upcoming Releases – Release 12.2

Update AR Event to apply schema validations

- **Identified MIC values included in R3 AR Event files that violate schema rules (e.g., “NR”)**
  - File is passing into NHSN production despite schema errors shown in the Lantana validator
- **Fix will enforce schema validation on R3 AR Event files and cause nonconformant files to fail to upload into NHSN**

Update display name for IMICILRE

- **Updating display name for IMICILRE to more accurately reflect susceptibility test**
  - Old: IMICILRE – Imipenem-relebactam with Cilastatin
  - New: IMICILRE – Imipenem-relebactam
- **No changes needed to CDA**
- **Will update IDM – AR AST 2024**
- **Will update display name in the application**

AUR Module Updates:
Upcoming Releases – Release 12.3

Update AUR CDAs to use R4D3 IG

- **AU Summary, AR Summary and AR Event will all be updated to use R4D3 IG <u>effective January 1, 2025</u>**
- **AR Event is the only CDA with major changes**
  - Due to inclusion in the CMS PI Program, ONC has asked AU and AR CDAs use the same IG version so we're also updating AU and AR Summaries to R4D3
- **Plan to implement in 12.3 September release to allow for testing**

R4D3 AU Summary Updates

- **No major format updates**
- **May have TemplateID updates**
- **Update to route of administration value set**
  - Moving to SNOMED values for digestive and respiratory routes

R4D3 AR Summary Updates

- **No major updates when moving to R4D3**
- **May have templateID updates**

R4D3 AR Event Updates

- **May have templateID updates**
- **Removing Staph aureus-specific requirement for PCR mec and PBP2a tests**
- **Adding section for gene & protein identification tests**
  - Requests for reporting culture independent diagnostic tests (CIDT)
  - Working on value set currently (~30 terms)
    - Will use LOINC terms
    - Examples: Bacterial carbapenem resistance blaKPC gene, Bacterial carbapenem resistance blaNDM gene, Bacterial carbapenem resistance blaIMP gene

R4D3 AR Event Updates – CIDT

- **Gene/protein test will be included in the AR Event CDA file if conducted**
  - Will not be tied to specific organisms (e.g., S. aureus for mecA gene)
  - Include as many gene/protein tests as were conducted by the lab
- **Result value set using Snomed:**
  - Detected
  - Not detected
  - Indeterminate
  - Invalid

R4D3 AR Event Updates – CIDT continued

- **No changes to regular antimicrobial susceptibility test requirements (i.e., drug panels)**
  - No plans to add/remove drugs from panels

AUR Module 2025 Changes – Release 13.0

Update to AU Option Drugs

- **Effective January 1, 2025**
- **Add: Cefepime/Enmetazobactam, Ceftobiprole Medocaril**
- **Remove: reviewing data now**
  - Will announce drugs to remove in the fall

Update to AR Option Pathogens

- **Effective January 1, 2025**
- **Tentatively plan to:**
  - Add Candida genus & all Candida species
  - Add Group A Streptococcus
- **Plan to refresh Pathogen Roll-up Workbook**

Update to AR Option Specimen Types

- **Effective January 1, 2025**
- **Tentatively plan to add skin, soft tissue, and wound as eligible specimen types**
  - Working on value set

Protocol updates not affecting CDA files

- **Plan to allow Candida isolates without antimicrobial susceptibility testing to be reported**
  - Report all drugs in panel as “Not Tested”
- **Will require an update in your AR Event determination logic**
  - Candida is only group that is eligible even if susceptibility testing is not performed

AUR Module Updates:
AR and AU Synthetic Data Set

Updated SDS web service links

- **AU SDS:**
  - https://nhsnpilot.ng.techlab.cdc.gov/AUValidation-Production/home.html
- **AR Event SDS:**
  - https://nhsnpilot.ng.techlab.cdc.gov/ARValidation-Numerator/home.html
- **AR Denominator SDS:**
  - https://nhsnpilot.ng.techlab.cdc.gov/ARValidation-Denominator/home.html

AU SDS Release 5.0

- **Plan to update the AU SDS to v5.0**
- **Includes changes to bring the dataset up to current standards**
  - Uses 2023 dates, required drugs/codes, and updates to the admissions counting logic to match AR SDS
- **Vendors will be expected to revalidate using AU SDS v5.0 prior to January 2025**
- **We'll send out an email once it's been posted.**

AR SDS Release 1.6

- **Plan to release after AU SDS 5.0**
- **Re-validation with AR SDS 1.6 is optional**
- **Includes updated dim_wardmapping to test transfers to ineligible inpatient locations**

AUR Module Updates:
CMS Promoting Interoperability (PI) Program Requirement

AUR Module data are required 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 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

https://www.cms.gov/regulations-and-guidance/legislation/ehrincentiveprograms

Two ways to be in active engagement with NHSN

- **Option 1 – Pre-production and validation**
  - Registration within NHSN
  - Working on testing & validation of the CDA files
- **Option 2 – Validated data production**
  - Registration within NHSN
  - Submitting production AU & AR files to NHSN
    - CY 2024 – 180 continuous days of AUR data submission
      - Also known as: EHR Reporting Period
- **Note: Beginning in CY 2024, facilities can only spend one calendar year in Option 1 (pre-production and validation)**

Option 1 – Testing and validation of AUR CDA files

- **1 test file for each file type:**
  - AU
  - AR Event (numerator)
  - AR Denominator
- **Facilities send to NHSNCDA@cdc.gov**
- **Please let your facilities know if you have test files to provide them**

> NHSN invites your facility to begin the testing and validation stage. Please send the following test CDAs to the nhsncda@cdc.gov mailbox:
>
> 1. Antimicrobial Use Summary CDA
> 2. Antimicrobial Resistance - Numerator CDA (aka AR Event)
> 3. Antimicrobial Resistance - Denominator CDA (aka AR Summary)

We need your help!

- **Please help facilities find the files they can use for this step**
  - Test files
  - Production files
- **Make sure facilities know where each file type can be generated within your software**
  - Facilities often miss AR Summary files or location-specific AU files
- **Include display names and comments if possible**

Most common reasons for failed files

- **TemplateIDs are missing in the header**
- **Required extensions are missing from templateIDs**
- **Facility OID in file does not match facility in NHSN**
  - Or facility does not have OID in NHSN
  - Or facility OID has replaced other OIDs (find+replace gone wrong?)
- **Sending summary data for the current month**

Production data must be submitted by January 31, 2025

- **Facilities should report monthly during their EHR Reporting Period**
- **NHSN automatically sends out status letters on the first day of every month**
- **Final annual summary letter sent out on February 1 showing 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
[illegible]	[illegible]	[illegible]	[illegible]

Example timeline for Option 2

- **Facility B designates July 1 – December 31 as their 180-day EHR reporting period**
- **Must register intent to submit AUR data within NHSN by August 31**
  - CMS specifications: complete registration within 60 days of the start of EHR reporting period
- **Must report production AUR data to NHSN for July – December on an ongoing basis**
  - NHSN recommends sending the month's data within 30 days of the completion of the month
  - **Make sure December 2024 AUR data are submitted by January 31, 2025**

Three exclusions currently

- **Do not have any patients in any patient care location for which data are collected by NHSN during the EHR reporting period; or**
- **Do not have eMAR/BCMA records or an electronic ADT system during the EHR reporting period; or**
- **Do not have an electronic LIS or electronic ADT system during the EHR reporting period**

Notes on exclusions

- **NHSN can provide guidance but ultimately CMS must decide whether a specific scenario meets exclusion criteria**
  - Reported in CMS HQR system
  - Exclusions are submitted during the HQR open period (January 1 – last day in February)
- **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

HQR system: https://hqr.cms.gov/hqrng/login
HQR User guide: https://www.cms.gov/files/document/hqr-user-guide.pdf

Notes on exclusions continued

- **If the eligible hospital does not have access to discrete results for all eligible organisms as outlined in the AUR Module Protocol, the hospital may claim an exclusion to the AUR Measure**
  - Claim the exclusion that's closest to the hospital's situation

- **Important point is interoperable access to available data**

Exclusion examples

1. **Example: If *Candida* isolates are sent out for identification and/or antimicrobial susceptibility testing (AST) and return to the facility via PDF or fax, then the facility does not have interoperable data and should claim the exclusion.**

2. **Example: If *Candida* isolates cannot be speciated then those isolates are not eligible for AR Option reporting. Facility should not claim PI Program exclusion.**

3. **Example: If *Candida* isolates are speciated but do not have AST performed, then those isolates are not eligible for AR Option reporting. Facility should not claim PI Program exclusion.**

AUR-specific PI Program resources

- https://www.cdc.gov/nhsn/cms/ach.html

Antimicrobial Use and Resistance

Operational Guidance for reporting AUR data – August 2023 [PDF – 239 KB]

AUR Module Reporting for the CMS Promoting Interoperability Program – March 2023

- YouTube
- Slide set [PDF – 3 MB]
- Slide set – En Español [PDF – 2 MB]

FAQs: AUR Reporting for the CMS Promoting Interoperability Program – October 2023

Promoting Interoperability – Guidance for Facilities – March 2023 [PDF – 250 KB]

Promoting Interoperability – Guidance for Facilities – March 2023 – En Español [PDF – 358 KB]

Office Hours: AUR Module Reporting for the CMS Promoting Interoperability Program – Spring 2024 [PDF – 1 MB]

AUR Module Updates: Data Quality Outreach

AUR Module Data Reports

- **AR Option Data Report**
  - Provide summaries of SRIR and pSIR distributions, incidence and prevalence, and antibiogram data for select organisms
  - 2022 AR Option Data Report currently in progress
- **AU Option Data Report**
  - Provide summaries of SAAR distributions and percentages of use within SAAR antimicrobial agent categories in adult, pediatric, and neonatal locations since 2019
  - 2023 AU Option Data Report currently in progress

AUR Module Data Reports: https://www.cdc.gov/nhsn/datastat/aur-reports.html

AU SAAR Re-Baseline Plans

- **Early 2024:**
  - Met with subject-matter experts and began prep work
  - AU data quality review; AUR Team will perform outreach to facilities
- **Summer 2024:**
  - Begin modeling work
  - Calendar year 2023 will be used as the baseline year
  - Plan to assess data for SAARs for new location types and potentially revised drugs within SAAR categories

Outreach plan

- **We will send a summary of the outreach, including text sent to facilities, to all vendors sending AUR data**
- **Complete 2 rounds of outreach for each issue with 3-4 weeks between the rounds**

2023 AU Option Outreach

- **Plan to perform data quality outreach for issues typically excluded from AU Option Data Report to give facilities a chance to correct them by 6/30/2024**
- **Outreach to include:**
  - Incompatible routes for specific drugs
  - Antimicrobial days of therapy > days present
  - Duplicate values across COLIST/COL and AMPBLIC/AMPHOT
  - All drugs NA for a location/month

2023 AR Option Outreach

- **Plan to perform outreach to gain insight and allow facilities to make updates with their vendor for 2023/2024 if needed**
- **Outreach to include:**
  - Admission status variable on AR Events

NHSN Pre-Production Test Site (NPPT)

Hamna Baig

NHSN Pre-Production Test Site

- Copy of the NHSN development environment
- Includes Analysis and Reporting (A&R) functionality
- Does not include DIRECT CDA Automation or Groups
- No SAMS credentials required
- To enroll – complete form found at https://www.cdc.gov/nhsn/cdaportal/datavalidation/toolsandtestsites.html
- Send completed form to the nhsncda@cdc.gov mailbox

NHSN Pre-Production Test Site (NPPT) cont.

- **V12.1.0 is current environment**
  - Reminder: Read “Important Message” at login
- **Blast email will be sent out when NPPT is upgraded to new version**
- **Report any issues you find to the nhsncda@cdc.gov mailbox**

Miscellaneous

Sylvia Shuler

CDA Mailbox moves to ServiceNow

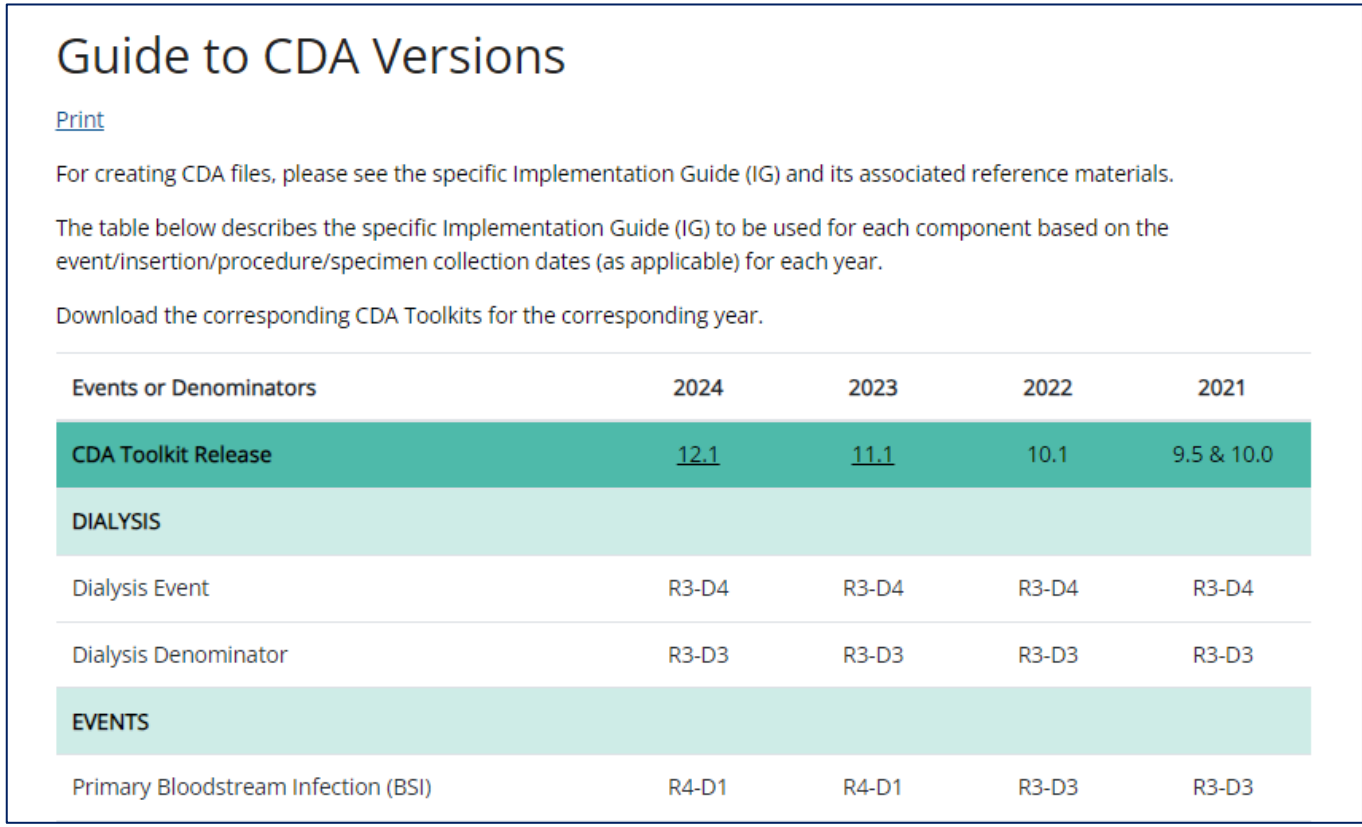
- **Cannot accept .zip files; will be stripped**
  - Please send individual .xml if possible
- **You can still email NHSNCDA@cdc.gov and NHSN@cdc.gov**
  - No need to have SAMS access to create a ticket within ServiceNow
- **Response will come from cdcservicedesk@cdc.gov**
  - Make sure this email address will not be blocked
- **Make sure to add NHSNCDA@cdc.gov or NHSN@cdc.gov in the To line**
  - ServiceNow does not generate a ticket if the mailbox is in the CC line

DIRECT CDA Automation Updates

- **~77 direct addresses and > 9,500 facilities sending via DIRECT**
- **DIRECT**
  - Batch submission process
  - No immediate reply
  - Turnaround time based on volume of messages in the queue
- **New to implement DIRECT?**
  - DIRECT toolkit on the NHSN website http://www.cdc.gov/nhsn/cdaportal/importingdata.html#DIRECTProtocol
  - Contact NHSNCDA@cdc.gov for any questions or to set up an onboarding discussion

CDA Version Support

- **CDA support:** https://www.cdc.gov/nhsn/cdaportal/index.html
- **Toolkits:** https://www.cdc.gov/nhsn/cdaportal/toolkits.html
- **Guide to CDA versions:** https://www.cdc.gov/nhsn/cdaportal/toolkits/guidetocdaversions.html



Guide to CDA Versions

Print

For creating CDA files, please see the specific Implementation Guide (IG) and its associated reference materials.

The table below describes the specific Implementation Guide (IG) to be used for each component based on the event/insertion/procedure/specimen collection dates (as applicable) for each year.

Download the corresponding CDA Toolkits for the corresponding year.

Events or Denominators	2024	2023	2022	2021
CDA Toolkit Release	12.1	11.1	10.1	9.5 & 10.0
DIALYSIS				
Dialysis Event	R3-D4	R3-D4	R3-D4	R3-D4
Dialysis Denominator	R3-D3	R3-D3	R3-D3	R3-D3
EVENTS				
Primary Bloodstream Infection (BSI)	R4-D1	R4-D1	R3-D3	R3-D3

CDA Version Support (continued)

- **Implementers can also use the HL7 GitHub website for latest IG Guides**
- **HL7 GitHub site (https://github.com/HL7/cda-hai) also includes:**
  - XML
  - Related files
  - Schematron
  - CDA Schema
  - Samples
  - Stylesheet

Helpful NHSN Resources

- **NHSN Newsletter: https://www.cdc.gov/nhsn/newsletters/index.html**
- **Release Notes and Communication Updates: https://www.cdc.gov/nhsn/commup/index.html**
- **CDA Webinars: https://www.cdc.gov/nhsn/cdaportal/webinars.html**

NHSN Reminders

- **Welcome feedback**
- **Offer individual vendor conference calls**
- **Make sure you are on the NHSNCDA email distribution list**
- **Visit the CDA Submission Support Portal (CSSP): https://www.cdc.gov/nhsn/cdaportal/index.html**

CDA Submission Support Portal (CSSP)

Toolkits, FAQs, webinars and resources for testing and validation for CDA implementers.

Additional Vendor Engagement Opportunities

- **1-1 meetings with NHSN**
  - Opportunity to ask questions, receive updates and dive deeper into discussions around specific topics
  - Send a request to NHSNCDA@cdc.gov to schedule
- **Additional training options and communication channels coming soon!**

Thank you!

Questions?

NHSNCDA@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.