

IP 101

Class 3: Introduction to NHSN- The Essentials

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Syllabus

- Introduction/overview
- Reporting components
- How to:
 - Manage account
 - Navigate network
 - Enter and use data
 - Run reports

Introduction

- Secure, web-based surveillance application
 - Collect and use data
- **Components:** Patient Safety, Long-term Care Facility, Outpatient Dialysis, Healthcare Personnel Safety, Biovigilance, Outpatient Procedure, and Neonatal

Patient Safety Component (PSC)

- Device-Associated
 - CLABSI, CLIP, CAUTI, PedVAE, VAE, VAP,
- Procedure-Associated
 - SSI
- Antimicrobial Use and Resistance (AUR)
- Multidrug-Resistant Organism & *Clostridioides difficile*
- Hospital Coronavirus Disease (COVID) Data

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National Healthcare Safety Network (NHSN)

Kentucky Department for Public Health

Division of Epidemiology & Health Planning

Infectious Disease Branch

Healthcare Associated Infection/Antibiotic Resistance Program



Outline



NHSN overview



Account/Facility Management

- Types of NHSN users
- Adding and removing users
- Updating/editing facility information
- Adding/changing CCN
- Adding/inactivating locations
- Monthly Reporting Plans (MRP)



Modes for data entry/submission



Basics of running reports

- Data set generation (DSG)
- Modifying reports
- Exporting
- Examples of common reports

Objectives

- 🛡️ Understand the NHSN application, including its purpose, structure, and key functionalities
- 🛡️ Effectively identify and handle various user profiles, including adding and removing users as necessary
- 🛡️ Ensure accurate and up-to-date facility information by managing locations and adding/updating CCN as needed
- 🛡️ Develop and implement MRPs
- 🛡️ Outline the modes for data entry and submission
- 🛡️ Understand how datasets are generated and how to effectively run and modify common reports

NHSN Overview



What is NHSN?

- 🛡️ A secure, internet-based surveillance system maintained by the Centers for Disease Control and Prevention (CDC).
- 🛡️ The most widely used healthcare-associated infection (HAI) tracking system in the United States, providing data to identify problem areas, measure progress, and develop effective prevention strategies.

<https://www.cdc.gov/nhsn/about-nhsn/index.html>

30,000 Ft. View of NHSN in Kentucky



8,236 Active NHSN Users
among all Facility Types



557 Facilities Submitting
Data to NHSN



Since 2015, **84,715** Events
have been entered into NHSN



Since 2015, **56,225** COLO
and HYST procedures have
been entered into NHSN



Since 2015, **14,107**
pathogens have been
entered into NHSN.

Objectives of NHSN

-  **Surveillance:** Collect and analyze data on HAIs, antimicrobial use, and resistance.
-  **Prevention:** Guide infection prevention efforts in healthcare settings.
-  **Compliance:** Assist healthcare facilities in complying with local, state, and federal reporting requirements, including those mandated by the Centers for Medicare & Medicaid Services (CMS).
-  **Research:** Support research and educational activities to advance the science of infection control and prevention.

Components of NHSN

- 🛡️ NHSN comprises several components tailored to different healthcare settings and surveillance needs.



<https://www.cdc.gov/nhsn/about-nhsn/index.html>

Data Utilization

NHSN data can be used for:

-  **Infection Tracking:** Identifying and tracking HAIs to enhance infection control practices.
-  **Benchmarking:** Comparing facility performance to national standards and similar institutions.
-  **Public Health Reporting:** Facilitating mandatory reporting to health departments and CMS.
-  **Quality Improvement:** Supporting data-driven quality improvement initiatives.

<https://www.cdc.gov/nhsn/about-nhsn/index.html>

Benefits of Participation and Engagement

-  **Improved Patient Safety:** Enhances the ability to detect, report, and respond to HAIs.
-  **Regulatory Compliance:** Helps meet state and federal reporting requirements.
-  **Data-Driven Decisions:** Facilitates informed decision-making to improve healthcare quality.
-  **Research Support:** Contributes to national research efforts to develop better infection prevention strategies.

<https://www.cdc.gov/nhsn/about-nhsn/index.html>

Account and Facility Management

Types of NHSN Users

Facility Administrator (FA)

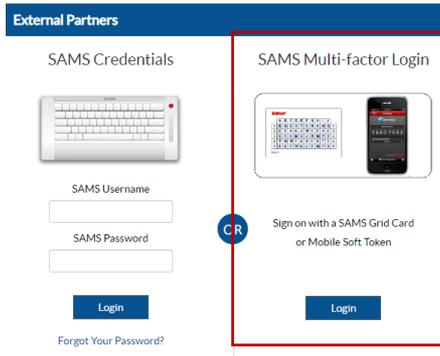
- The person enrolling the facility in NHSN
- Only person who can activate additional components for a facility
- Has add/edit/delete rights to facility data, users, and users' access
- Has authority to nominate/join groups for data sharing
- Only person who can re-assign the role of NHSN Facility Administrator to another user
- There is only one NHSN Facility Administrator per facility

User

- Rights are determined by NHSN Facility Administrator: view data, data entry, and data analysis
- May be given administrative rights
- Each facility should have **at least two NHSN users** (including one with NHSN Facility Administrator rights)

How to Add a New User in NHSN

1. The NHSN Facility Administrator or user with Administrative Rights will log into SAMS at <https://sams.cdc.gov/> to access NHSN.
2. On the left-hand navigation panel of the NHSN homepage - near the bottom of the screen, select → Users → Add.



External Partners

SAMS Credentials

SAMS Multi-factor Login

SAMS Username

SAMS Password

Login

Forgot Your Password?

CR

Sign on with a SAMS Grid Card or Mobile Soft Token

Login

Detailed description: This screenshot shows the SAMS login interface. On the left, under 'SAMS Credentials', there are input fields for 'SAMS Username' and 'SAMS Password', a 'Login' button, and a link for 'Forgot Your Password?'. On the right, under 'SAMS Multi-factor Login', there is an image of a grid card and a mobile soft token, a 'CR' icon, and a 'Login' button. A red box highlights the 'SAMS Multi-factor Login' section.



SAMS secure access management services

Menu

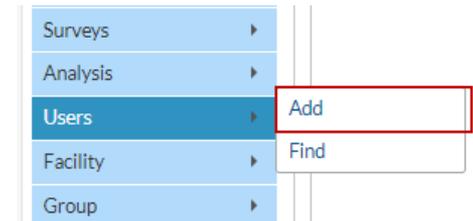
- My Profile
- Manage Mobile Soft Token & Grid Card

My Applications

National Healthcare Safety Network System

- NHSN Reporting *

Detailed description: This screenshot shows the SAMS dashboard. At the top is the SAMS logo and the text 'secure access management services'. Below this is a 'Menu' section with two items: 'My Profile' and 'Manage Mobile Soft Token & Grid Card'. To the right is a 'My Applications' section with one item: 'National Healthcare Safety Network System'. Underneath this is a list of applications, with 'NHSN Reporting *' highlighted by a mouse cursor.



Surveys

Analysis

Users

Facility

Group

Add

Find

Detailed description: This screenshot shows the NHSN navigation menu. It consists of a vertical list of items: 'Surveys', 'Analysis', 'Users', 'Facility', and 'Group'. To the right of this list is a secondary menu with two items: 'Add' and 'Find'. A red box highlights the 'Add' button.

How to Add a New User in NHSN Cont.

1. When the Add User screen appears, complete all the required fields marked with*.
2. Create a username (ex. first initial and last name - CBryant)
 - Can have up to 32 characters or numbers
 - Cannot be an email address
 - Cannot contain any special characters (i.e. %, \$,&, etc.)
3. IMPORTANT: The email address entered **must** be the same one used to request their SAMS invitation.
4. Click “Save”

The screenshot shows the 'Add User' form in NHSN. The form is titled 'Add User' and includes a header with a globe icon. Below the header, it states 'Mandatory fields marked with *'. The form contains the following fields:

- User ID: CBRYANT (with a note: 'Up to 32 letters and/or numbers, no spaces or special characters')
- Prefix: (empty)
- First Name: Clay
- Middle Name: (empty)
- Last Name: Bryant
- Title: (empty)
- User Active: Y - Yes (dropdown menu)
- User Type: (dropdown menu)
- Antimicrobial Use Option Contact: Yes
- Antimicrobial Resistance Option Contact: Yes
- Phone Number: 123-456-1000
- Fax Number: (empty)
- E-mail Address: cbryant@kdpghosp.com
- Address, line 1: (empty)
- Address, line 2: (empty)
- Address, line 3: (empty)
- City: (empty)
- State: (dropdown menu)
- County: (dropdown menu)
- Zip Code: (empty)
- Home Phone Number: (empty)
- Beeper: (empty)

At the bottom right of the form, there are two buttons: 'Save' and 'Back'. The 'Save' button is highlighted with a red box.

How to Add a New User in NHSN Cont.

- 1. Once the user has been created, you must assign user rights by selecting the access boxes and click "Save".

Add User Rights

User CBRYANT (ID 831967) saved successfully. Please add rights for the new user.

User ID: CBRYANT (ID 831967)

Fac: KDPH Hospital (Test Facility)

Facility List:

Rights	Patient Safety	Healthcare Personnel Safety	Biovigilance	Long Term Care Facility	Dialysis	Outpatient Procedure	Neonatal	
Administrator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
All Rights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Analyze Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Add, Edit, Delete	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
View Data	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Staff/Visitor - Add, Edit, Delete				<input type="checkbox"/>				
Staff/Visitor - View				<input type="checkbox"/>				
Customize Rights	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Advanced

[Effective Rights](#) [Save](#) [Back](#)

Updating Existing Users

1. Go to Users → Find
2. Click “Find”, User Information is not required to be entered to return users.
3. Click on the user (Name) you would like to update.



User ID:
First Name:
Middle Name:
Last Name:
Phone Number:
E-mail Address:

Page 1 of 1 100 View 1 - 9 of 9

Deactivate	Name	Title	User ID	User Type	Active	AU Option Contact	AR Option Contact
<input checked="" type="checkbox"/>	Bryant, Clay		CBRYANT		Y	N	N

Page 1 of 1 100 View 1 - 9 of 9

Updating Existing Users Cont.

4. Click “Edit” on the View User Screen.
5. Edit/Update user information as needed.
6. Click “Save” once complete

✔ User CBRYANT (ID 831967) saved successfully.

User ID *: CBRYANT Up to 32 letters and/or numbers, no spaces or special characters

Prefix:

First Name *: Clay

Middle Name:

Last Name *: Bryant

Title:

User Active *: Y - Yes

User Type:

Antimicrobial Use Option Contact: Yes

Antimicrobial Resistance Option Contact: Yes

Phone Number *: 123-456-1000

Fax Number:

E-mail Address *: CBRYANT@KDPHHOSP.COM

Address, line 1:

Address, line 2:

Address, line 3:

City:

State:

County:

Zip Code:

Home Phone Number:

Beeper:

How to Remove Users in NHSN

1. Follow same steps outlined in slide 12 on accessing NHSN.
2. Instead of clicking “add” you will click “find”
3. Once the User List screen appears, select the user you would like to remove and “Click” Deactivate.



✓ UserCBRYANT (ID 831967) deactivated successfully.

A screenshot of the NHSN User List table. The table has columns: Name, Title, User ID, User Type, Active, AU Option Contact, and AR Option Contact. The first row is highlighted in blue and contains the name 'Bryant, Clay', User ID 'CBRYANT', and Active status 'Y'. A red box highlights the 'Deactivate' button in the top left corner of the table. The table also shows pagination information: Page 1 of 1, 100 items per page, and View 1 - 9 of 9.

Deactivate	Name	Title	User ID	User Type	Active	AU Option Contact	AR Option Contact
<input checked="" type="checkbox"/>	Bryant, Clay		CBRYANT		Y	N	N

Reassigning the Facility Administrator (FA)

The previous FA left the facility; how do I reassign the FA role? (The FA has departed without changing without reassigning the role)

- 🛡️ NHSN now has a new process for reassigning the NHSN FA role. This process is now streamlined by using a web-based form which can be accessed here: <https://www.cdc.gov/nhsn/facadmin/index.html>.
- 🛡️ Change request can take up to 5 business days to be verified and completed.

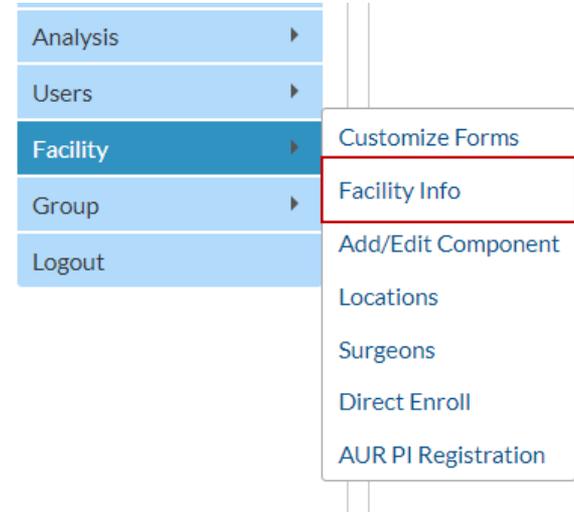
Reassigning the Facility Administrator (FA) Cont.

The current FA is still here, but we need to update that role; how do I reassign the FA role?

🛡️ It is important to be **proactive** about the FA role. If you know the current administrator is leaving, they must reassign the role before departing the facility.

To reassign the FA role, the *current* FA completes the following steps:

1. Go to Facility → Facility Info



Reassigning the Facility Administrator (FA) Cont.

2. Scroll to the bottom of the Facility Info page to the “Contact Information” section.
3. Select the Reassign button in the rightmost column.

Contact Information

	Contact Type	Contact Name	Phone No.+ext	Email	Action
Edit	Facility Administrator	Bryant, George	123-123-4567	GEORGE.BRYANT@KY.GOV	Reassign
Edit	Healthcare Personnel Primary Contact	Bryant, George	123-123-4567	GEORGE.BRYANT@KY.GOV	Reassign
Edit	Microbiology Laboratory Director/Supervisor	Bryant, George	123-123-4567	GEORGE.BRYANT@KY.GOV	Reassign
Edit	Patient Safety Primary Contact	Bryant, George	123-123-4567	GEORGE.BRYANT@KY.GOV	Reassign

Reassigning the Facility Administrator (FA) Cont.

3. A Users Reassign List pop-up window will appear. Click on the user you would like to designate Facility Administrator. The row will appear yellow. Select the blue Reassign button at the bottom of the window.

Users Reassign List

Name	Title	User ID	User Type	Active	AU Option Contact
Bryant, George		GCB7		Y	N

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Page 1 of 1 | 10

Add User Reassign Close

Updating Facility Information

1. Go to Facility → Facility Info
2. Update Information As needed (e.g., Phone, Facility Location).
3. Click “Update” at the bottom of the screen

 This organization has been successfully updated.

Facility Information

Facility ID: 91343

AHA ID:

CMS Certification Number (CCN): 101000 [Edit CCN](#)

Effective Date of CCN: 01/01/2015 2015Q1

VA Station Code:

Object Identifier:

Facility name:

Address, line 1:

Address, line 2:

Address, line 3:

City:

State:

County:

Zip Code: Zip Code Ext.:

Phone: Ext.:

Fax:

Use Latitude and Longitude

Latitude: Longitude:

Facility:

Facility type:

Was this facility operational in the year prior to NHCN enrollment (i.e., last year)? *: Yes No

Will this facility report COVID data separately for one (or more) facility-within-facility using the same OrgID and CCN?
Before making a selection, please review the facility-within-facility guidance

Facility-within-facility Description: Facility-within-facility refers to units/ floors/ wings of a hospital or facility that are currently reporting COVID-19 hospital data independent of the facility in which these units/ floors/ wings are housed. These units/ floors/ wings have the same CCN and the same NHCN OrgID as the facility in which they are housed. This question applies only to facility-within-facility scenarios for COVID-19 hospital data.



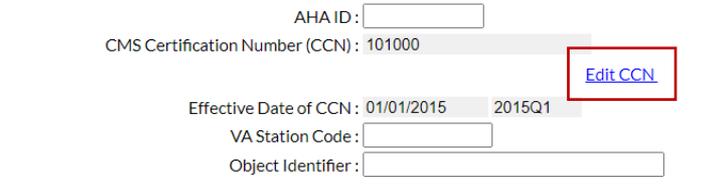
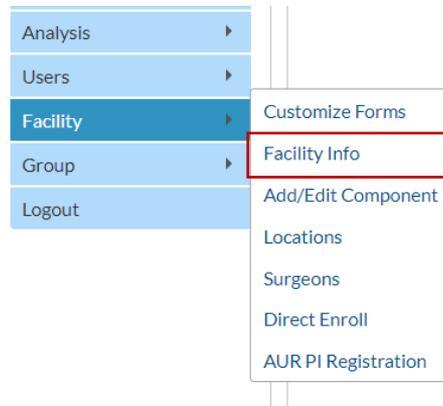
Please verify if the marker on the map matches the physical address of your facility or not. If not update the address fields and then click the "Update Map" button to refresh. If the location is still incorrect, please find the coordinates ([see this instructions](#)) and fill in the "Latitude" and "Longitude" fields manually, and then click the "Update Map" button to verify.

Changing a CMS CCN within NHSN

-  If a facility/location is newly certified or changes ownership, it is important to add/update the CMS Certification Number (CCN) within NHSN so that NHSN can provide the appropriate data to CMS.
-  Important Notes Regarding the CCN:
 - If the new CCN is effective in the middle of a quarter, NHSN will use the CCN with the most recent effective date to send that quarter's data to CMS.
 - CCNs cannot be entered with a future effective date so please wait until the official effective date to enter the new CCN into NHSN.

Changing a CMS CCN within NHSN Cont.

1. Go to Facility → Facility Info
2. On the Edit Facility Information screen, click the Edit CCN link next to the CCN field in the upper right corner of the screen.



A screenshot of the 'Edit Facility Information' screen. It contains several input fields: AHA ID, CMS Certification Number (CCN) (with value 101000), Effective Date of CCN (with values 01/01/2015 and 2015Q1), VA Station Code, and Object Identifier. A blue 'Edit CCN' link is highlighted with a red box next to the CCN field.

Changing a CMS CCN within NHSN Cont.

4. On the Edit CCN Records pop up, click the grey Add Row button to add a row for the new CCN.
5. Enter the new CCN and Effective Date in the appropriate boxes. The Effective Reporting Quarter will automatically populate after the Effective Date is entered.
6. Click “Save”

Edit CCN Records

-To edit an existing CCN, make corrections and SAVE.
-To add a newly assigned CCN, Add Row, enter CCN and Effective Date, and SAVE.

Delete	CCN	Effective Date	Effective Reporting Quarter	Acknowledge CCN
<input type="checkbox"/>	101000	01/01/2015	2015Q1	N/A
<input type="button" value="Add Row"/>				

NOTE: The CCN Effective Date is used by NHSN to determine which data should be shared with CMS for a given reporting deadline. Your facility's CCN Effective Date should be the date the facility first received the CCN from CMS. Your facility's data will be shared with CMS from the CCN Effective Date moving forward.

Edit CCN Records

-To edit an existing CCN, make corrections and SAVE.
-To add a newly assigned CCN, Add Row, enter CCN and Effective Date, and SAVE.

Alert

CCN saved successfully.

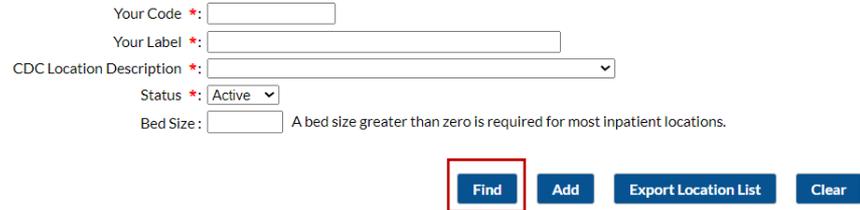
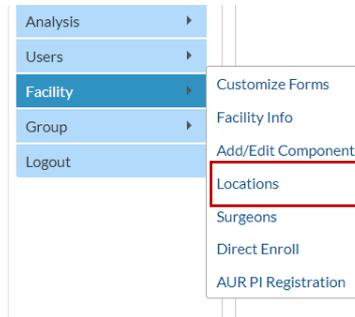
Delete	CCN	Effective Date	Effective Reporting Quarter	Acknowledge CCN
<input type="checkbox"/>	101000			N/A
<input type="checkbox"/>	111000			N/A
<input type="button" value="Add Row"/>				

NOTE: The CCN Effective Date is used by NHSN to determine which data should be shared with CMS for a given reporting deadline. Your facility's CCN Effective Date should be the date the facility first received the CCN from CMS. Your facility's data will be shared with CMS from the CCN Effective Date moving forward.

Changing CCN for CMS Licensed Location

If your facility has a CMS licensed IPF and/or IRF, the following steps outline how to edit/update the CCN.

1. Go to Facility → Locations
2. Click “Find” (*Ensure Status is Active*)

A screenshot of a form used for finding a location. The form contains the following fields and controls:

- 'Your Code *': A text input field.
- 'Your Label *': A text input field.
- 'CDC Location Description *': A dropdown menu.
- 'Status *': A dropdown menu with 'Active' selected.
- 'Bed Size *': A text input field, followed by the text 'A bed size greater than zero is required for most inpatient locations.'

At the bottom right of the form, there are four buttons: 'Find', 'Add', 'Export Location List', and 'Clear'. The 'Find' button is highlighted with a red rectangular box.

Changing CCN for CMS Licensed Location Cont.

- Under “Location Table” click on the location you would like to edit/update the CCN where applicable.
- Click “Edit IPF/IRF CCN”

Location Table

[Display All](#) [Print Location List](#)

Status	Your Code	Your Label	CDC Description	CDC Code	NHSHL7 Code	Bed Size
Active	BHEALTH	CMS BHEALTH	Behavioral Health/Psych Ward	IN-ACUTE:WARD:BHV	1051-2	12
Active	ED	EMERGENCY DEPARTMENT	Emergency Department	OUT:ACUTE:ED	1108-0	25
Active	NICU1	NICU	Neonatal Critical Care (Level IV)	IN-ACUTE:CC:NURS_IV	1269-0	10
Active	OBS	24-HR OBSERVATION	24-Hour Observation Area	OUT:ACUTE:WARD	1162-7	10
Active	REHAB	CMS REHAB	Rehabilitation Ward (within Hospital)	IN-ACUTE:WARD:REHAB	1070-2	10
Active	T1-LDR-W	T1-LABOR AND DELIVERY WARD	Labor and Delivery Ward	IN-ACUTE:WARD:LD	1058-7	10
Active	T1-MCCC	T1-MEDICAL CARDIAC CRITICAL CARE	Medical Cardiac Critical Care	IN-ACUTE:CC:C	1028-0	6
Active	T1-MICU	T1-MEDICAL ICU	Medical Critical Care	IN-ACUTE:CC:M	1027-2	12
Active	T1-MS	T1-MEDICAL-SURGICAL WARD	Medical-Surgical Ward	IN-ACUTE:WARD:MS	1061-1	12
Active	T1-MS-CC	T1-MEDICAL-SURGICAL CRITICAL CARE	Medical-Surgical Critical Care	IN-ACUTE:CC:MS	1029-8	15

Your Code *:

Your Label *:

CDC Location Description *:

Is this location a CMS IPF unit within a hospital? *:

If Yes, specify the IPF CCN (will have an M, S, SA, SB, SC, SD or SE in the 3rd position) *: Effective Date of IPF CCN: 05/11/2023 2023Q2 [Edit IPF CCN](#)

Status *:

Bed Size *: A bed size greater than zero is required for most inpatient locations.

Changing CCN for CMS Licensed Location Cont.

4. On the Edit CCN Records pop up, click the grey Add Row button to add a row for the new CCN.
5. Enter the new CCN and Effective Date in the appropriate boxes. The Effective Reporting Quarter will automatically populate after the Effective Date is entered.
6. Click “Save”

Edit CCN Records

-To edit an existing CCN, make corrections and SAVE.
-To add a newly assigned CCN, make corrections and SAVE.

Delete	IPF CCN	Effective Date	Effective Reporting Quarter	Acknowledge CCN
<input type="checkbox"/>	00S0000		2023Q2	N/A
<input type="checkbox"/>	10S1000		2024Q2	N/A

Alert
CCN saved successfully.

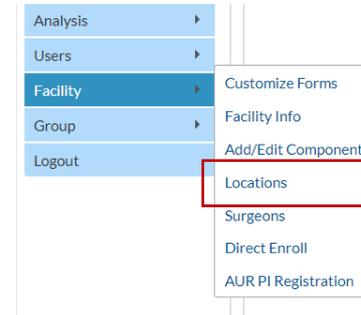
OK

NOTE: The CCN Effective Date is used by NHSN to determine which data should be shared with CMS for a given reporting deadline. Your location's CCN Effective Date should be the date when the location first received the CCN from CMS. Your location's data will be shared with CMS from the CCN Effective Date moving forward.

Save Close

Adding (Mapping) Locations

1. Go to Facility → Locations
2. On the Locations screen enter the following:
 - Your Code - A code to identify your location at your facility; e.g., T1-ICU
 - Your Label – A description of your code; e.g., Tower 1 – ICU
 - CDC Location Description – CDC Location descriptions can be found in Chapter 15 of the NHSN PSC Manual.
 - Status – Select ‘Active’ to enable this location for reporting.
 - Bed size – Enter the number of beds, and bassinets if applicable, set-up and staffed.
3. Click “Add” to add the location



 The location 'TOWER 1 - ICU' has been successfully added.

Your Code *:

Your Label *:

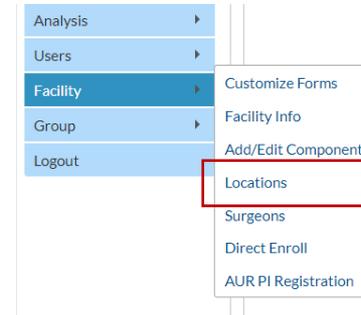
CDC Location Description *:

Status *:

Bed Size *: A bed size greater than zero is required for most inpatient locations.

Inactivating Locations

1. Go to Facility → Locations
2. On the Locations screen click “Find”
3. Under the “Location Table” select the location you would like to remove.
4. Click the “Status” drop down and change Active to Inactive.
5. Click “Save”



✓ The location '24-HR OBSERVATION' has been successfully updated.

Your Code *:

Your Label *:

CDC Location Description *:

Status *:

Bed Size: A bed size greater than zero is required for most inpatient locations.

Monthly Reporting Plans (MRP)

- 🛡️ Indicates to CDC which Patient Safety Component surveillance modules your facility intends to use (e.g., device-associated, procedure-associated, MDRO, etc.)
 - You will specify which months your facility will be doing surveillance
- 🛡️ MRPs needs to be added for every month of a given year.
 - You can add up to one year of MRPs in advance (i.e., 12 months).
- 🛡️ Data entered in NHSN may represent either "in-plan" or "off-plan" surveillance.
- 🛡️ Facilities must identify and enter a monthly plan to indicate the module(s) that will be monitored **in-plan** (i.e., off-plan surveillance is not included in MRPs).

MRP: In-Plan Surveillance

- 🛡️ “In-plan” surveillance means that the facility has committed to following the NHSN surveillance protocol, in its entirety, for each type of event reported within each module.
- 🛡️ **Only** “in-plan” surveillance data are submitted to CMS in accordance with CMS’s Quality Reporting Programs and included in NHSN annual reports or other NHSN publications.

MRP: Off-Plan Surveillance

- 🛡️ “Off-plan” surveillance is surveillance that is done because a facility has decided to track a particular event for internal use only.
- 🛡️ A facility makes no commitment to follow the NHSN protocol for “off-plan” events.
- 🛡️ Data included in “off-plan” surveillance are **not** included in CMS Quality Reporting Programs, NHSN annual reports, or other NHSN publications.

Note: AU/AR data cannot be added “off-plan”.

Example:

- KDPH hospital would like to conduct surveillance on central line insertion practices (CLIP) for all ICU locations.
- KDPH hospital would like to conduct surveillance on ventilator associated events (VAE) for all ICU locations.
- KDPH hospital would like to conduct surveillance for CABG procedures.

Adding MRP

After signing into SAMS/NHSN application:

1. Click “Reporting Plan” from the left navigation menu and select “Add”.
2. Select “Monthly Reporting Plan” from the drop-down field. Click “Continue”.
3. Select the Month and Year from the drop-down field.
4. Navigate through each module adding the location and type of surveillance/event where applicable.
 - To add additional locations, click “Add Row”.
 - To copy from previous month, click “Copy from Previous Month”.
5. Click “Save” once complete.

Important Reminders

- 🛡️ The MRP must be completed for every month for which data are entered into NHSN.
- 🛡️ The MRP should reflect reporting requirements (for example, local, state, or CMS mandates) when applicable to the facility.
- 🛡️ Facilities who have not completed their Annual Survey will **not** be able to add MRPs for that year past February.



Alert

A Hospital Survey for the year 2023 must be complete before a Plan can be entered. Please have a user with administrative rights (e.g., the NHSN Facility Administrator) at your facility enter the survey.

OK

Device-Associated Module

Device-Associated Module

Locations	CLABSI	VAE	CAUTI	CLIP	PedVAP	PedVAE
T1-MICU - T1-MEDICAL ICU	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T1-MCCC - T1-MEDICAL CARDIAC CRITICAL CARE	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2-MED - T2-MEDICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2-MS - T2- MEDICAL-SURGICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2-PED_MS - T2-PEDIATRIC MEDICAL-SURGICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2-NCC - T2-NEONATAL CRITICAL CARE (LEVEL II/III)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T1-P MS CC - T1-PEDIATRIC MEDICAL-SURGICAL CRITICAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T1-LDR_W - T1-LABOR AND DELIVERY WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
T2-POSTPAR - T2-POSTPARTUM WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- Should include all locations/units where patients are housed overnight and from which denominator data (specifically inpatient locations) will be collected (i.e., central line days, patient days etc.).
- If inpatient locations are not included:
 - Will impact data sent to CMS for hospital quality reporting.
 - Will impact locations included in select analytic reports (i.e., SIR/SUR reports)
- CLIP data can be collected in any patient care location where central lines are placed, including EDs and 24-hr observation locations.

Procedure-Associated Module

Procedure-Associated Module

	Procedures	SSI
	COLO - Colon surgery	IN: <input checked="" type="checkbox"/> OUT: <input type="checkbox"/>
	HYST - Abdominal hysterectomy	IN: <input checked="" type="checkbox"/> OUT: <input checked="" type="checkbox"/>

- Include procedure codes for those NHSN operative procedure for which data about selected procedure-associated events and procedure level denominator data will be collected.
- Select “IN” to only include inpatient procedures (i.e., admission and discharge date are on different calendar days).
- Select “OUT” to include outpatient procedures (i.e., admit and discharge date are on same calendar day).

Antimicrobial Use and Resistance Module

Antimicrobial Use and Resistance Module

Locations	Antimicrobial Use	Antimicrobial Resistance
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
T1-MCCC - T1-MEDICAL CARDIAC CRITICAL CARE	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T2-MED - T2-MEDICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T2-MS - T2- MEDICAL-SURGICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T2-PED_MS - T2-PEDIATRIC MEDICAL-SURGICAL WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T2-NCC - T2-NEONATAL CRITICAL CARE (LEVEL II/III)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T1-P MS CC - T1-PEDIATRIC MEDICAL-SURGICAL CRITICAL	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T1-LDR_W - T1-LABOR AND DELIVERY WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
T2-POSTPAR - T2-POSTPARTUM WARD	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ED - EMERGENCY DEPARTMENT	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OBS - 24-HR OBSERVATION	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- AU and AR data cannot be submitted “off-plan”.

AU Specifics:

- NHSN **strongly encourages** the submission of AU data from all NHSN-defined inpatient locations, FacWideIN, and select outpatient acute care settings.

AR Specifics:

- Select FacWideIN and check the AR box to submit AR Option data for inpatient locations. **Do not** list individual inpatient locations in the AR Option plan.
- If applicable, select outpatient location types (specifically EDs and 24-hour Observation Area) and check the AR box to submit for that specific outpatient location.

Multi-Drug Resistant Organism Module

Multi-Drug Resistant Organism Module

Locations					Specific Organism Type				
FACWIDEIN - Facility-wide Inpatient (FacWIDEIn)					MRSA - MRSA				
Process and Outcome Measures									
Infection Surveillance	AST-Timing	AST-Eligible	Incidence	Prevalence	Lab ID Event All Specimens	Lab ID Event Blood Specimens Only	HH	GG	
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
ED - EMERGENCY DEPARTMENT					MRSA - MRSA				
Process and Outcome Measures									
Infection Surveillance	AST-Timing	AST-Eligible	Incidence	Prevalence	Lab ID Event All Specimens	Lab ID Event Blood Specimens Only	HH	GG	
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
OBS - 24-HR OBSERVATION					MRSA - MRSA				
Process and Outcome Measures									
Infection Surveillance	AST-Timing	AST-Eligible	Incidence	Prevalence	Lab ID Event All Specimens	Lab ID Event Blood Specimens Only	HH	GG	
<input type="checkbox"/>			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- LabID Events can be monitored at the Overall facility-wide level for inpatient areas (FacWideIN), and/or at the overall facility-wide level for outpatient areas (FacWideOUT).
- If FacWideIN is selected, the system will auto-populate additional rows to include location level surveillance for each outpatient emergency department (ED) and 24- hour observation (OBS) location that has been mapped in NHSN for your facility.

Quick Tip

- When adding your MPR, you can use the option “Copy from Previous Month”. By clicking this option, it will copy the information entered for that module in the previous month.

Device-Associated Module

Locations		CLABSI	VAE	CAUTI	CLIP	PedVAP	PedVAE
	<input type="text"/>	<input type="checkbox"/>					

- Reminder: You can add MRPs for the entire year in advance if you would like. Keep in mind that if you add future MRPs to make sure locations and modules the respective month are accurate.

Modes for Data Entry

Option for reporting data in NHSN

There are three modes for NHSN reporting:

1. Manual data entry (i.e., webform)

*CSV Files

2. Clinical Data Architecture (CDA)

3. DIRECT CDA Automation (*not discussed in this presentation*)

Manual Data Entry

- 🛡️ Refers to users manually inputting data directly into NHSN via webform entry.
- 🛡️ This option allows for data submission for one facility at a time.

What data can be reported into NHSN via Manual Data Entry?

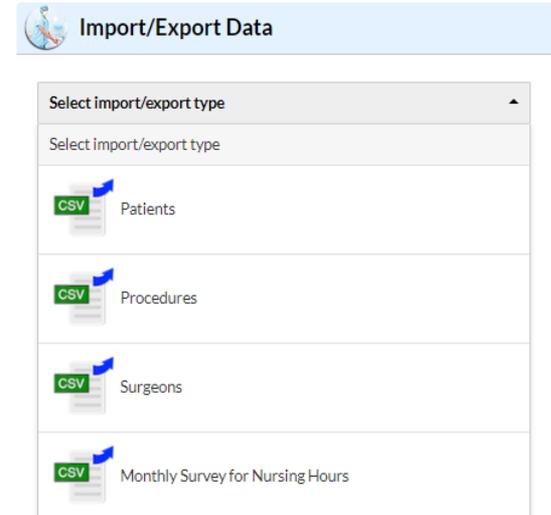
- Patient, event, and procedure level data
- Surgeons
- Summary Data (i.e., Device Associated and MDRO/CDI Denominator data)
- COVID-19 hospital data (Pathway Data Reporting)
- Surveys
- * AUR data **cannot** be submitted via manual data entry.

CSV File Upload

- 🛡️ NHSN allows importation of **select** data into NHSN via ASCII comma delimited text files form (CSV).
- 🛡️ This option allows for data submission for one facility at a time.

What data can be reported into NHSN via CSV?

- Patients, procedure, and surgeon data
 - COVID-19 hospital data
 - Monthly survey for nursing hours
- * AUR data **cannot** be submitted via CSV



Clinical Data Architecture (CDA)

What is a CDA?

- A document markup standard that specifies the structure and semantics of a clinical document.
- File format that allows a single facility's data to be imported electronically into NHSN.
 - The data in the file must include all required elements for the particular report form (e.g., BSI, SSI, or UTI).

Clinical Data Architecture (CDA) Cont.

How is CDA use for NHSN Reporting?

- Facilities interested in importing data into NHSN rather than entering it manually have the option to work with a CDA vendor to create CDA files.
- The CDA vendor develops software that extracts NHSN data from the facility's EHR to create valid CDA files.
- CDA files are created, exported from EHR, zipped, and then imported into NHSN.

Clinical Data Architecture (CDA) Cont.

What data can be reported to NHSN using CDA import?

- Device Associated event data (e.g., BSI, UTI)
- Procedures and Procedure Associated event data (e.g., SSI)
- Summary Data (i.e., Device Associated and MDRO/CDI Denominator data)
- Antimicrobial Use and Resistance option data

The screenshot shows a web interface titled "Import/Export Data". It features a dropdown menu labeled "Select import/export type" with a list of options. The options are: "Patients", "Procedures", "Surgeons", "Monthly Survey for Nursing Hours", "Events, Summary Data, Procedure Denominators", and "SSI events (requires link to procedure)". Each option has a small icon to its left: a green "CSV" icon for the first four and a red "CDA" icon for the last two. A red rectangular box highlights the last two options.

Select import/export type
CSV Patients
CSV Procedures
CSV Surgeons
CSV Monthly Survey for Nursing Hours
CDA Events, Summary Data, Procedure Denominators
CDA SSI events (requires link to procedure)

Clinical Data Architecture (CDA) Cont.

Important Considerations with CDA file submission

- Users uploading CDA files must have “Administrator” rights in order to upload all CDA types.
- All records imported must fall within a previously entered monthly reporting plan.
 - No off-plan data can be imported using CDA
- All location entries must be made in NHSN prior to the first CDA import.
- Each SSI record must be linked to its procedure.
 - SSI denominator should be uploaded prior to SSI events.

Analytics: The Basics

Steps to Running a Report in NSHN

1. Generate Data Set
2. Select the report type (e.g., SIR, SUR, Line List, TAP, etc.)
3. Modify Report (as needed)
4. Run/Export Report

Generating Data Sets

- Generating data sets is the first step to performing analysis in NHSN.
- PROCESS** will freeze your NHSN data at a specific point in time and copy those data into defined data sets.
- Data sets are user-specific; therefore, each user in NHSN who wishes to analyze data must generate data sets.

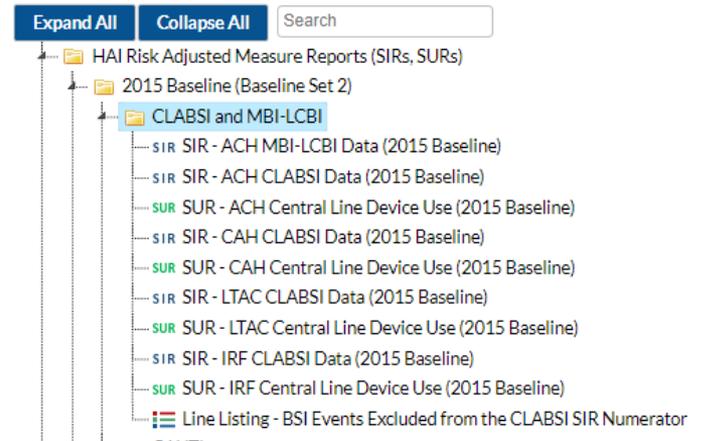
The screenshot displays the 'Reporting Data Sets' interface. At the top, there is a green header bar with the text 'Reporting Data Sets'. Below this, on the left, is an icon of a server rack with a gear and a circular arrow. To the right of the icon is a form titled 'Include data for the following time period:'. The form has two columns: 'Beginning' and 'Ending'. Under 'Beginning', there is a date input field containing '01/2024' and a small calendar icon. Under 'Ending', there is a date input field containing '05/2024' and a small calendar icon. To the right of these fields is a blue button labeled 'Clear Time Period'. Below the form is a blue button labeled 'Generate Reporting Data Sets'. To the right of this button is a yellow box containing the text: 'Last Generated: May 26, 2024 9:41 AM to include data beginning 01/2024 and ending 05/2024'.

Selecting Report Type

🛡️ Analysis Reports include 10 primary folder types, within each primary folder are subfolders (2) and within the last subfolder are report options.

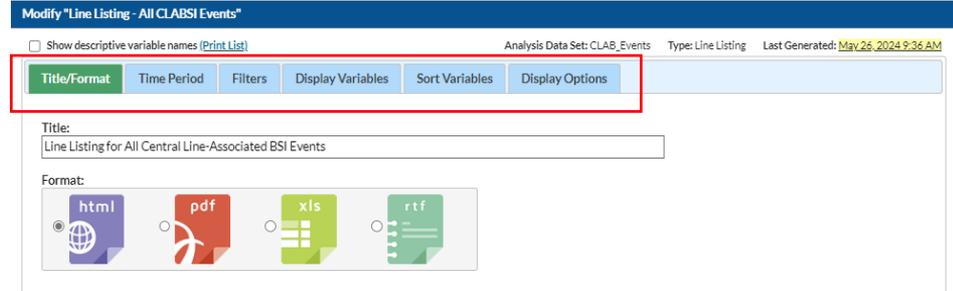
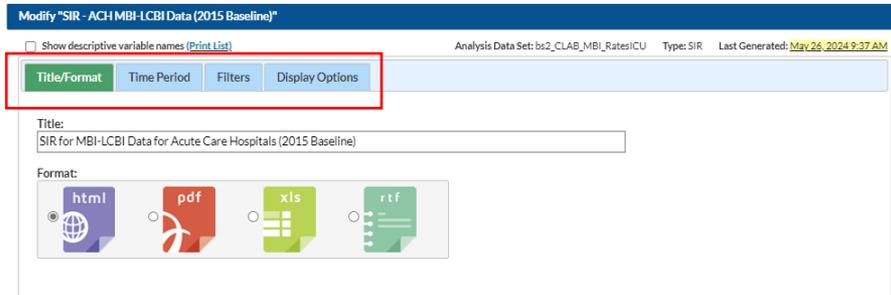
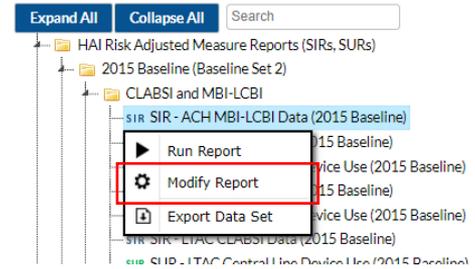
🛡️ Before selecting a report, consider the following:

- Purpose of the report
- Data elements needed
- Comparative benchmarks
- Regulatory compliance
- Format



Modifying Reports

🛡️ Important: Report modifications differ between report types (e.g., SIR Reports vs. Line Listings)



**Will discuss more on modifying reports in live demo*

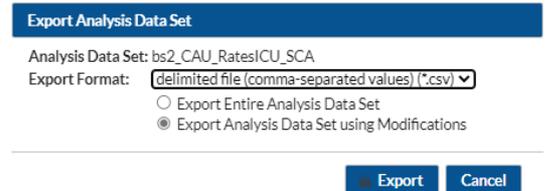
Exporting Reports



Will run the report based on the format selected under “Title/Format” (i.e., html, pdf, xlsx.)

Will Save the report modifications as a Custom Analysis Report

Will export the dataset as a csv or other format using the modification outlined. Additionally, there is the option to export the entire dataset (*Will include all data within the dates of the most recent generated dataset*).



Live Demonstration – NHSN Analysis

Commonly used Reports:

- SIR/SUR Reports
- Line Listing
- CMS Reports

Thank you.

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Assignments

- Review NHSN Patient Safety Component Manual
 - [2024 NHSN Patient Safety Component Manual \(cdc.gov\)](https://www.cdc.gov/nhsn/patient-safety-component-manual-2024)
- Utilize KDPH NHSN webinars for in-depth data entry information
- Set up NHSN/SAMS account

CLASS 4: Surveillance

- **July 17, 1-3pm:** [Register Here](#)
- **This class will cover:**
 - Elements of an effective surveillance program
 - Infections to include
 - NHSN surveillance
 - Applying definitions: MRSA, C. diff, CAUTI, CLABSI, SSI
 - Data entry