

# Tracking Infections in Long-term Care Facilities (LTCFs) Using the National Healthcare Safety Network (NHSN) Overview

Angela Anttila, PhD, MSN, NP-C, CIC Nurse Epidemiologist July 16, 2018

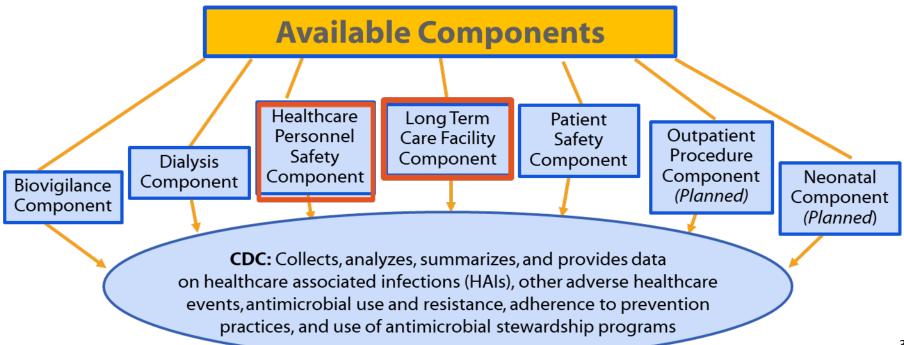
# In this session, we will...



- Define the National Healthcare Safety Network (NHSN) and the different Components and Modules available for Long-term Care Facilities (LTCFs).
- Describe how NHSN supports LTCFs and infection surveillance activities.
- Discuss steps in the "CHECKLIST" for participating in the NHSN.

# CDC's National Healthcare Safety Network (NHSN)

Healthcare facilities: (1) Enroll in the NHSN, (2) complete an annual survey describing facility characteristics and practices; (3) submit process and outcome data manually or electronically to one or more NHSN Components; and (4) use facility level data and NHSN benchmarks for analysis and action



# **NHSN Components Available for LTCFs**

- LTCFs can enroll and report in the following:
  - 1. Long-term Care Facility Component
    - To track resident infections
    - To track staff adherence with hand hygiene and gown/glove use
  - 2. Healthcare Personnel Safety Component
    - Healthcare Personnel Vaccination Module
      - To track staff influenza vaccination
      - For more information about Healthcare Personnel Safety:
        - » https://www.cdc.gov/nhsn/ltc/vaccination/index.html

# **NHSN Long-term Care Facility Component**

- NHSN reporting option specifically for LTCFs
- Standardizes surveillance definitions
- >3,200 facilities have enrolled since its launch in Sept 2012





# NHSN Long-term Care Facility Component Manual New in 2018!

CDC

#### The National Healthcare Safety Network (NHSN)

Long Term Care Facility Component Tracking Infections in Long-term Care Facilities

https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf

Division of Healthcare Quality Promotion National Center for Emerging and Zoonotic Infectious Diseases Atlanta, GA, USA

# **Long-term Care Facility Component**

Healthcareassociated Infections (HAI) Module

UrinaryTract
Infections
(UTI)

Laboratory-Identified (LabID) Event Module

> Multi-drug Resistant Organisms (MDRO)

Clostridium
difficile Infection
(CDI)

**Prevention Process Measures Module** 

Hand Hygiene

Gowns/Gloves

# Facilities Eligible for Enrolling in NHSN LTCF Component

- Certified skilled nursing facilities (SNF) and nursing homes (NH)
- Intermediate/chronic care facilities for the developmentally disabled
- Assisted living facilities and residential care facilities

**Note:** Currently limited to Prevention Process Measures Module

# LTCF CHECKLIST for NHSN Participation

- □ Complete the NHSN Annual Facility Survey between January 1 and March 1 each year.
- Add/verify that LTCF resident care locations are mapped in NHSN (performed during initial set-up and if change in location).
- □ Complete the NHSN Monthly Reporting Plan (MRP) for each month facility will submit data to the NHSN.
- □ Identify and submit resident level HAI UTI and/or LabID event data to the NHSN. This step is dependent on which modules a facility is participating during the month.
- Enter monthly summary data for each month under surveillance.
- □ Data quality checks-resolve "Alerts", if applicable.
- Add additional users to the NHSN application, *if applicable*.

# NHSN Forms and Instructions for Completion

- Include required data collection elements
- Customizable
- Available on NHSN website:



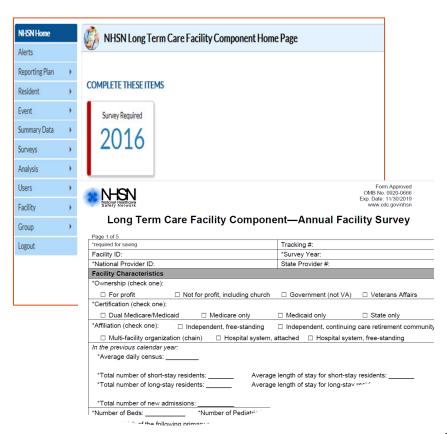
https://www.cdc.gov/nhsn/ltc/index.html



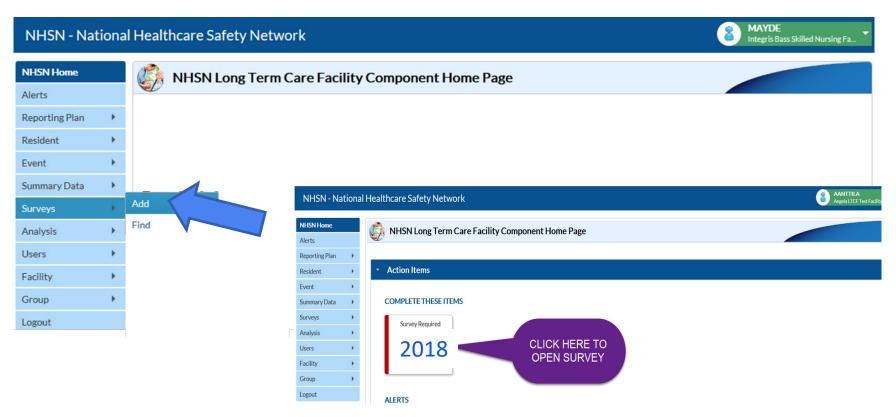
# **ANNUAL FACILITY SURVEY**

# **Annual Facility Survey**

- Complete between January 1 and March 1 every year.
- Most survey questions are based on facility characteristics and practices during the *previous* calendar year.
- Recommend collecting all required information using NHSN paper form.
  - Accuracy is important-responses in the annual survey may be used for risk adjustment of data.



# **ADD Annual Facility Survey**



# Annual Survey: Primary Testing Method for *C. difficile*

#### Facility Microbiology Laboratory Practices

3. What is the primary testing method for C. difficile used most often by your facility's laboratory or the outside laboratory where your facility's testing is performed? *	
O Enzyme immunoassay (EIA) for toxin	
O Cell cytotoxicity neutralization assay	
O Nucleic acid amplification test (NAAT) (e.g., PCR, LAMP)	
O NAAT plus EIA, if NAAT positive (2-step algorithm)	
O Glutamate dehydrogenase (GDH) antigen plus EIA for toxin (2-step algorithm)	
○ GDH plus NAAT (2-step algorithm)	
O GDH plus EIA for toxin, followed by NAAT for discrepant results	
O Toxigenic culture (C. difficile culture followed by detection of toxins)	
Other (specify)	

- Based on practices of diagnostic laboratory in which <u>most</u> resident specimens are sent
- Contact diagnostic laboratory to identify the primary diagnostic testing method used to identify C. difficile

# Uncommon Testing Methods for *C. difficile*

- 3. What is the primary testing method for C. difficile used most often by your facility's laboratory or the outside laboratory where your facility's testing is performed? \*
  - Enzyme immunoassay (EIA) for toxin
  - O Cell cytotoxicity neutralization assay
  - O Nucleic acid amplification test (NAAT) (e.g., PCR, LAMP)
  - NAAT plus EIA, if NAAT positive (2-step algorithm)
  - Glutamate dehydrogenase (GDH) antigen plus EIA for toxin (2-step algorithm)
  - GDH plus NAAT (2-step algorithm)
  - OGDH plus EIA for toxin, followed by NAAT for discrepant results
  - O Toxigenic culture (C. difficile culture followed by detection of toxins)
  - Other (specify)
- Verify with diagnostic lab before selecting cell cytotoxicity neutralization assay or toxigenic culture
- Send questions to nhsn@cdc.gov

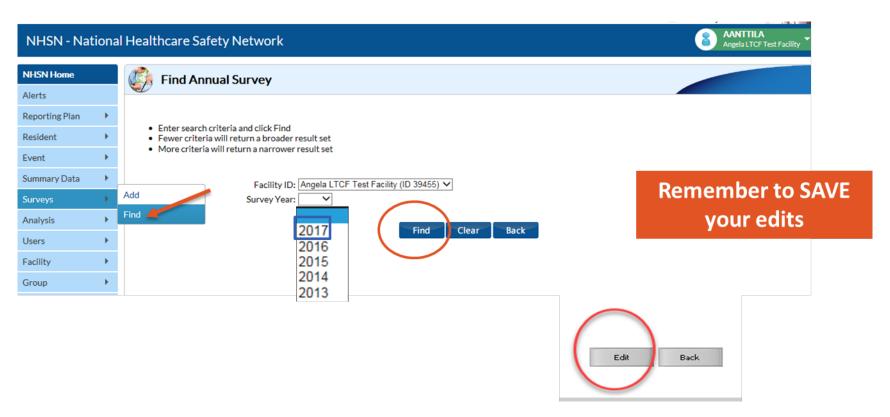
# Uncommon Testing Methods for *C. difficile*

Other (specify)

3. What is the primary testing method for <i>C. difficile</i> used most often by your facility's laboratory or the outside laboratory where your facility's testing is performed? *
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O Toxigenic culture (C. difficile culture followed by detection of toxins)

- Most testing methods can be categorized accurately by selecting from the options provided
- 'Other' should **not** be used to name specific laboratories, reference laboratories, or the brand names of *C. difficile* tests

# **EDIT Annual Facility Survey**



# LTCF CHECKLIST for NHSN Participation

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# **LOCATIONS**

### Locations

- Most LTCFs have different physical locations where residents reside and receive care within the building
  - These locations might be known as units, wards, floors, neighborhoods, pod, etc.
- Each resident care location in your facility should be mapped to a CDC location code/description
  - This provides information about the type of residents or care services in that place.
- Nursing homes/skilled nursing facility units located within a hospital that have a CCN that is different from the hospital must be enrolled as a separate NHSN Facility within the LTCF Component

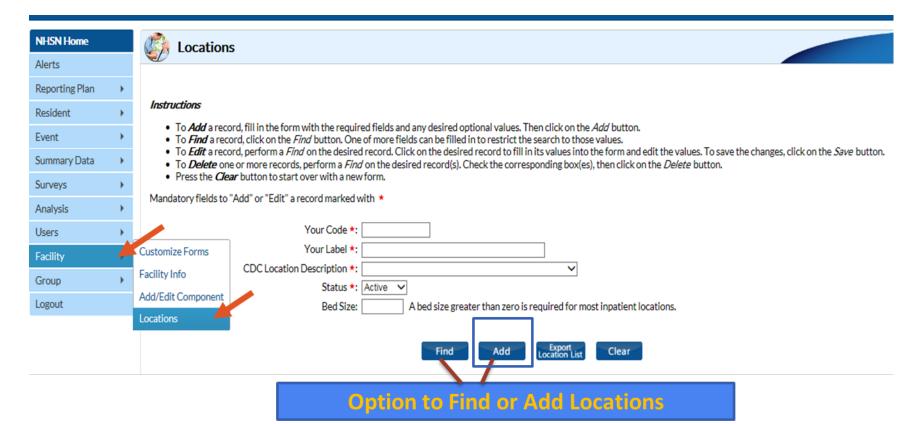
# Location Mapping: CDC Location Codes and Descriptions

CDC Location Label	NHSN Healthcare Service Location Code	CDC Location Code	Location Description
Inpatient Hospice Unit	1254-2	IN:NONACUTE:LTCF:HSP	A unit or designed area which provides palliative and supportive care services to individuals diagnosed with life limiting (terminal) conditions.
Dementia Unit	1255-9	IN:NONACUTE:LTCF:DEM	A unit or designed area which provides specialized care for individuals diagnosed with dementia or related conditions, including Alzheimer's disease.
Psychiatric Unit	1256-7	IN:NONACUTE:LTCF: REHAB	A unit or designated area which provides specialized care for individuals diagnosed with psychiatric or behavioral disorders.

# Location Mapping: CDC Location Codes and Descriptions, (cont.)

CDC Location Label	NHSN Healthcare Service Location Code	CDC Location Code	Location Description
Skilled Nursing/ Short Term Rehabilitation	1257-5	IN:NONACUTE:LTCF: REHAB	A unit or designated area which primarily provides short term (<90 days), medical, skilled nursing or rehabilitation services to individuals requiring restorative care following recent hospitalization.
General Nursing Unit	1258-3	IN:NONACUTE:LTCF:GEN	A unit or designated area which primarily provides nursing, rehabilitative or custodial services to individuals with varying levels of chronic conditions or disability requiring long term (>90 days) support
Ventilator Dependent Unit	1259-1	IN:NONACUTE:LTCF:VEN	A unit or designated area which provides nursing and respiratory care to individuals who require mechanical ventilation.
Bariatric Unit	1260-9	IN:NONACUTE:LTCF:BAR	A unit or designated area which provides specializing care for individuals who are preparing for or have undergone bariatric surgery.

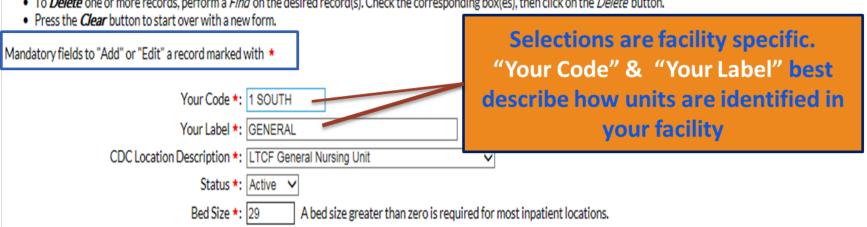
### **Locations**



### Locations: ADD

#### Instructions

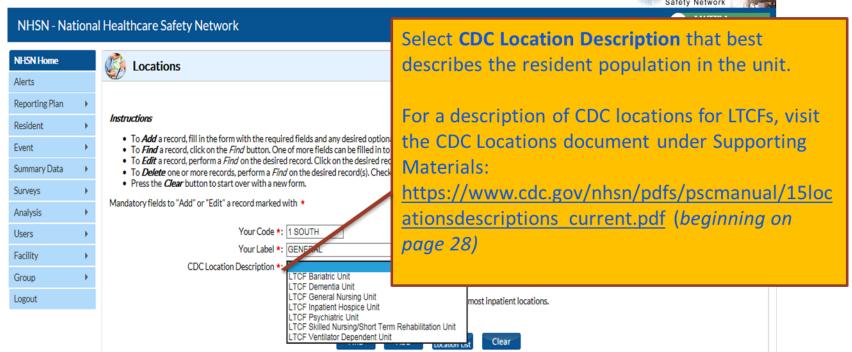
- To Add a record, fill in the form with the required fields and any desired optional values. Then click on the Add button.
- To Find a record, click on the Find button. One of more fields can be filled in to restrict the search to those values.
- To Edit a record, perform a Find on the desired record. Click on the desired record to fill in its values into the form and edit the values. To save the changes, click on the Save button.
- To Delete one or more records, perform a Find on the desired record(s). Check the corresponding box(es), then click on the Delete button.



### **Locations: ADD**





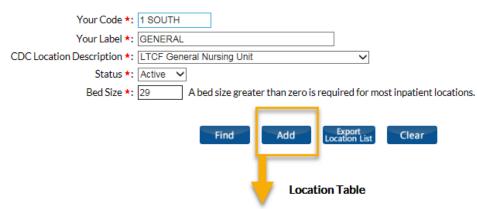


### **Locations: ADD**

#### Instructions

- To Add a record, fill in the form with the required fields and any desired optional values. Then click on the Add button.
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- To Delete one or more records, perform a Find on the desired record(s). Check the corresponding box(es), then click on the Delete button.
- Press the Clear button to start over with a new form.

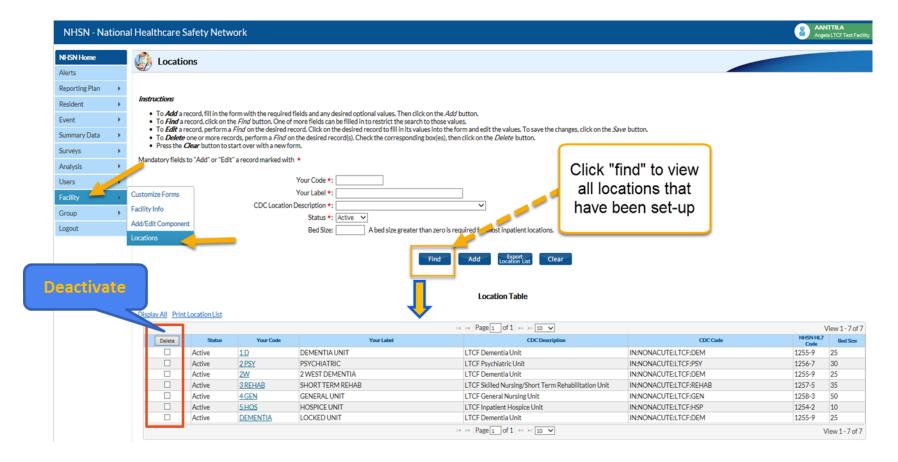
Mandatory fields to "Add" or "Edit" a record marked with \*



#### Display All Print Location List

Page 1 of 1   →   10 V View 1-1 of 1							
Delete	Status	Your Code	Your Label	CDC Description	CDC Code	NHSN HL7 Code	Bed Size
	Active	1SOUTH	GENERAL	LTCF General Nursing Unit	IN:NONACUTE:LTCF:GEN	1258-3	29
View1-1 of 1							

# **Locations: FIND/DEACTIVATE**



# LTCF CHECKLIST for NHSN Participation

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## **NHSN MONTHLY REPORTING PLAN**

# **Monthly Reporting Plan**

- Informs CDC-NHSN which module(s) and events a facility is following during a given month.
- The Plan also informs CDC which data can be used for aggregate data analyses.
- A facility must enter a Plan for every month in which surveillance and data submissions will occur.
  - A plan must be in place <u>before</u> events can be entered into NHSN.

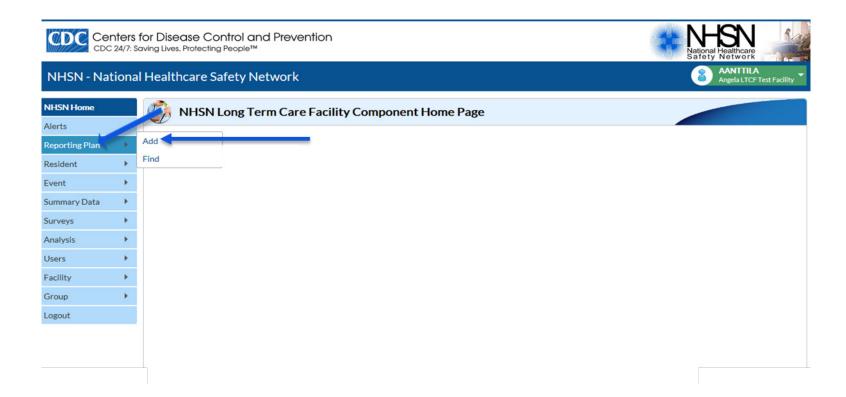


# Monthly Reporting Plan, continued

- A facility may complete plans for up to one calendar year in advance.
- A plan may be edited at any time to add or remove surveillance options, including retrospectively.
  - Surveillance options can only be deleted if **no** event or summary data has been entered for that event type and month.

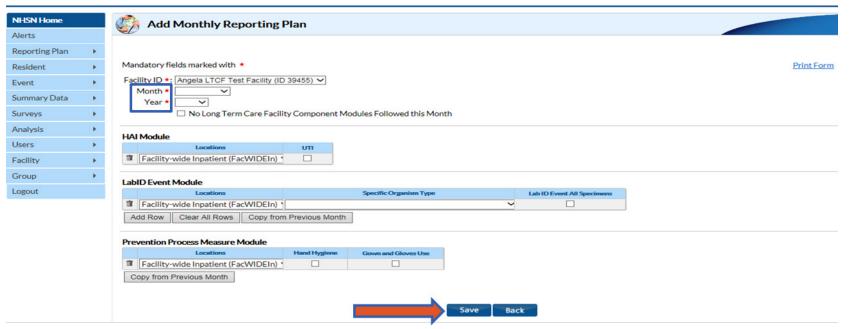


# **ADD Monthly Reporting Plan for LTCF**



# **Monthly Reporting Plan for LTCF**

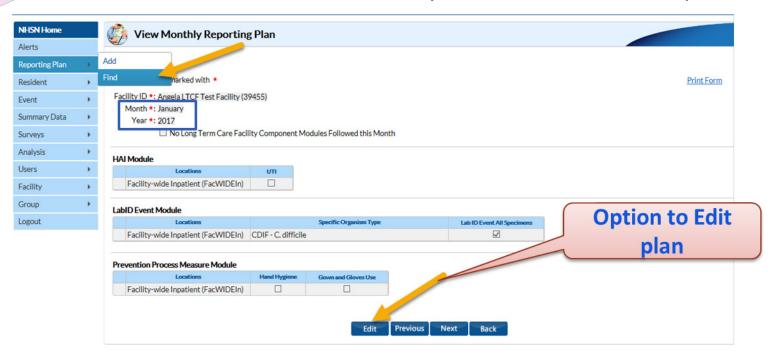
- **→** Three Surveillance Modules:
  - 1. HAI for urinary tract infection (UTI) events
  - 2. LabID Event for *C. difficile;* multi-drug resistant organisms
  - 3. Prevention Process Measures for hand hygiene; gown and glove use adherence



# **EDIT Monthly Reporting Plan**

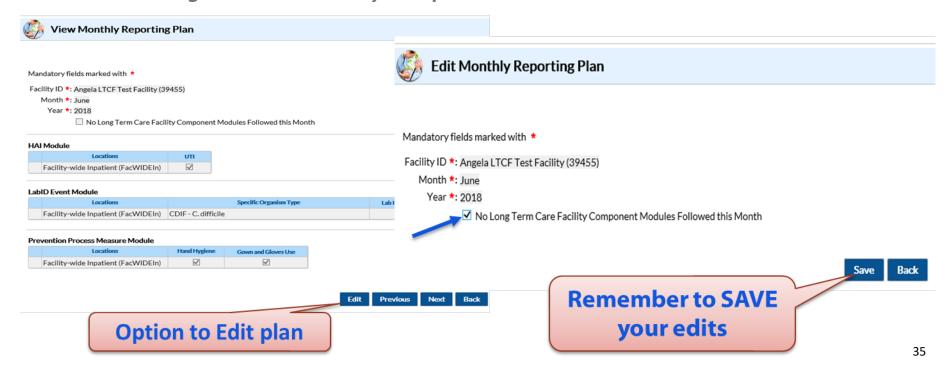
Plans may be edited to add or remove surveillance selections.

If event or summary data has already been entered for a selected month, associated module/event selections may not be deleted from the plan.

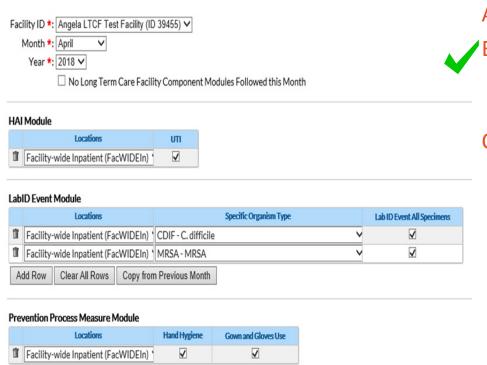


# **EDIT Monthly Reporting Plan, continued**

- ✓ There is not an option to delete a previously saved Monthly Reporting Plan.
- ✓ Instead, edit the applicable plan and put a checkmark in the box"No Long Term Care Facility Component Modules Followed this Month"



# Knowledge Check 1: Based on this reporting plan, what modules and events will this facility report for April, 2018?



- A. UTI only
  - UTI, LabID (CDI and MRSA), and Prevention Process Measures (hand hygiene and gown/glove use)
- C. All Modules, all events

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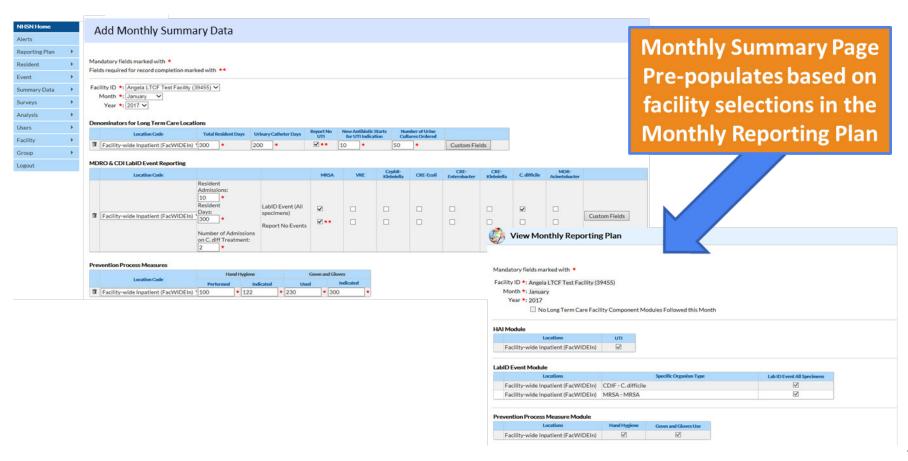
## **MONTHLY SUMMARY-DENOMINATOR DATA**

## **Submitting Monthly Summary Data to NHSN**

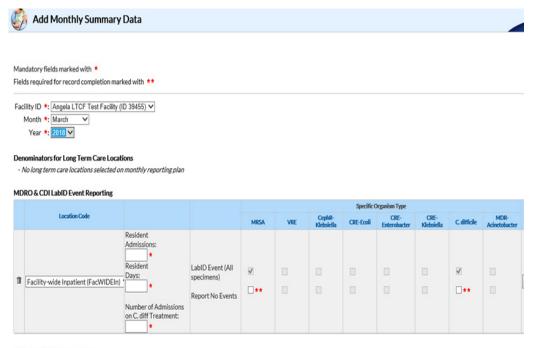
- Referred to as denominator data
- At the end of the month, enter monthly total denominator data into the NHSN application
  - Unless otherwise stated, best practice is to have monthly events and summary data complete by the end of the following month
  - Example: have June data submitted by the end of July
- Locate 'Summary Data' on left-hand navigation Bar, and then 'ADD'



## **Submitting Monthly Summary Data in NHSN**



**Knowledge Check 2:** Based on the below Monthly Summary Data, what modules and events did the facility commit to participate on the Monthly Reporting Plan for March, 2018?



- A. All modules, all events
- MRSA and CDI LabID Events
- C. CDI and all MDRO LabID events

Prevention Process Measures

No long term care locations selected on monthly reporting plan

## **Collecting Monthly Summary Data**

- 1. CDC 57.139: MDRO and CDI LabID Event Reporting Monthly summary Data for LTCF
  - Resembles Summary Data page in the NHSN application
  - Specific to LabID Event reporting (CDI and/or MDRO)
  - Total counts only
- CDC 57.142: Denominators for LTCF
  - Optional worksheet for the month to collect MDRO, CDI, and/or UTI denominator data
  - Daily counts that must be summed at the end of the month

Forms and Table of Instructions (TOIs) available under *Data*Collection Forms at: <a href="https://www.cdc.gov/nhsn/ltc/cdiff-mrsa/index.html">https://www.cdc.gov/nhsn/ltc/cdiff-mrsa/index.html</a>

#### MDRO and CDI LabID Event Reporting Monthly Summary Data for LTCF

Page 1 of 1			,		•						
*required for saving **conditionally required based upon monitoring selection in Monthly Reporting Plan											
Facility ID #:	*Month:			*Year:	*Location Code:						
*Resident Days:	*	Resident	Admissions:		**Number of Admissions on C. diff Treatment:						
LabID Event Reporting											
Specific Organism Type	MRSA	VRE	CephR- Klebsiella	CRE- E. coli	CRE- Enterobacter	CRE- Klebsiella	MDR- Acinetobacter	C.difficile			
LabID Event (All specimens)											
Report No Events											
Custom Fields (Optional)											
Label	abel										
Data	Data										

National Safety	-ISN Healthcarp Natwork	De	enominator	rs for LTCI	E	Form Approved OMB No. 0920-0666 (p. Date: 11/30/2019 www.edc.gov/nhsn
Page 1 of	1					*required for saving
Facility ID:		*Location Code:			*Month:	*Year:
Date	*Number of residents	*Number of residents with a urinary catheter	*New antibiotic starts for UTI indication	*Number of urine cultures ordered	*Number of admissions	Number of admissions on C. diff treatment
1						
2						
3						
4						
5						
6						

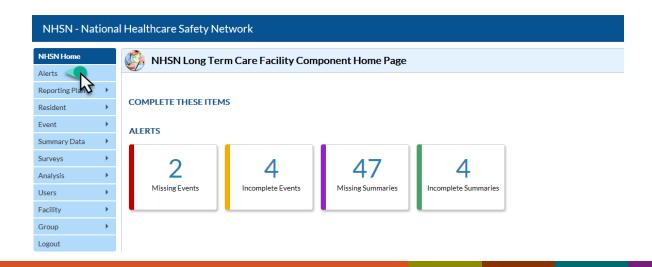
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## **DATA QUALITY CHECK-RESOLVE ALERTS**

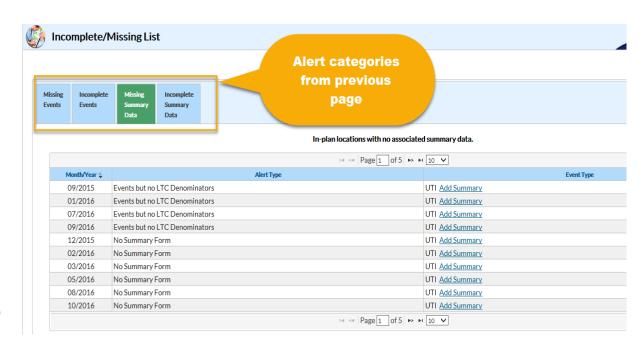
#### **Alerts**

- Data quality checks in the NHSN application that remind users of incomplete or missing in-plan data.
- Before using the analysis function, make sure to clear all (relevant) alerts.
- Found on the Home Page, or by clicking on the 'Alerts' tab on the sidebar.



### **Alerts**

- When an alert category is selected all occurrences will be listed on a separate page for selection
- Each occurrence
   will need to be
   resolved in order
   for alert category to
   clear



## LTCF CHECKLIST for NHSN Participation

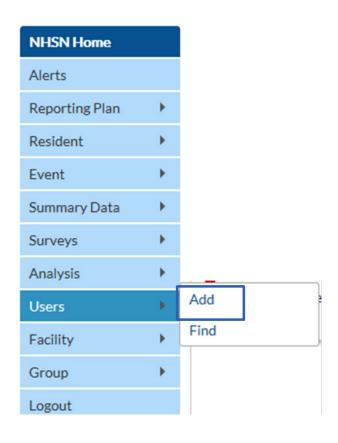
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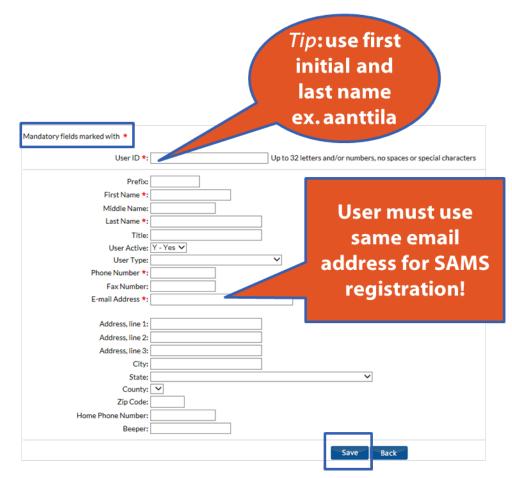
## **ADD NHSN USERS**

#### **ADD NHSN Users**

- The NHSN Facility Administrator has option to add additional users to access NHSN data.
- It is recommended that each facility have at least two NHSN users.
- The NHSN Facility Administrator assigns rights to each user
  - enable users to view, add, edit, delete, analyze NHSN data
- Once a new user is added, an email is automatically sent to the email address entered with instructions for registering with SAMS (required).

### **ADD NHSN Users**

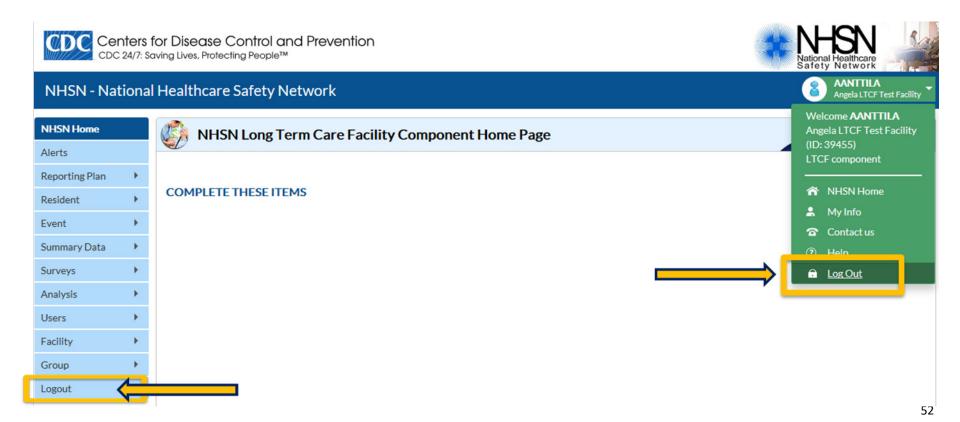




# ADD NHSN User Assign and Save Rights

User ID: MANTTILA (ID 238556) Fac: Angela LTCF Test Facility Facility List: Rights Patient Safety **Healthcare Personnel Safety** Biovigilance Long Term Care Dialysis Administrator All Rights Analyze Data Add, Edit, Delete View Data Advanced Customize Rights Effective Rights Save Back

## Log-out of the NHSN application before closing your browser



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## What's New for 2018

## **2018 LTCF Component Updates:**

- Social security number is now optional when entering an event
- Water management program questions added to annual facility survey
- NHSN agreement to participate updated language and consent process for NHSN enrollment
- E.g. and i.e. replaced with "for example" and "specifically" throughout protocols
- New resources
  - First addition of LTCF Component Manual
  - Frequently Asked Questions
  - Analysis guidance documents

## **2018 LTCF Component Updates:**

#### **Analysis Updates**

- Business rules added to improve denominator reporting accuracy
  - Users are not able to save the Monthly Summary report with 0 resident days
- Pop-up alerts to improve accuracy of submitted data
- New analysis report
  - Custom field variable (Advanced folder)

## **LTCF Home Page**

Related Links

2018 7 [PDF - 1M]

7 [PDF - 874K]

[PDF - 8M]

[PDF - 6M]

Component Manual

