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

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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.

Available Components:

- Biovigilance Component
- Dialysis Component
- Healthcare Personnel Safety Component
- Long Term Care Facility Component
- Patient Safety Component
- Outpatient Procedure Component (Planned)
- Neonatal Component (Planned)

CDC: Collects, analyzes, summarizes, and provides data on healthcare associated infections (HAIs), other adverse healthcare events, antimicrobial use and resistance, adherence to prevention practices, and use of antimicrobial stewardship programs.
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
     - 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](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!

Long-term Care Facility Component

Healthcare-associated Infections (HAI) Module
  - Urinary Tract 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? *

- Enzyme immunoassay (EIA) for toxin
- Cell cytotoxicity neutralization assay
- 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)
- GDH plus EIA for toxin, followed by NAAT for discrepant results
- Toxigenic culture (*C. difficile* culture followed by detection of toxins)
- Other (specify)

- Based on practices of diagnostic laboratory in which **most** 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*

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- 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*

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- Toxigenic culture (*C. difficile* culture followed by detection of toxins)
- Other (specify)

- 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

Remember to SAVE your edits
LTCF CHECKLIST for NHSN Participation

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- Add additional users to the NHSN application, *if applicable.*
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

<table>
<thead>
<tr>
<th>CDC Location Label</th>
<th>NHSN Healthcare Service Location Code</th>
<th>CDC Location Code</th>
<th>Location Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpatient Hospice Unit</td>
<td>1254-2</td>
<td>IN:NONACUTE:LTCF:HSP</td>
<td>A unit or designed area which provides palliative and supportive care services to individuals diagnosed with life limiting (terminal) conditions.</td>
</tr>
<tr>
<td>Dementia Unit</td>
<td>1255-9</td>
<td>IN:NONACUTE:LTCF:DEM</td>
<td>A unit or designed area which provides specialized care for individuals diagnosed with dementia or related conditions, including Alzheimer’s disease.</td>
</tr>
<tr>
<td>Psychiatric Unit</td>
<td>1256-7</td>
<td>IN:NONACUTE:LTCF:REHAB</td>
<td>A unit or designated area which provides specialized care for individuals diagnosed with psychiatric or behavioral disorders.</td>
</tr>
</tbody>
</table>
## Location Mapping:
### CDC Location Codes and Descriptions, (cont.)

<table>
<thead>
<tr>
<th>CDC Location Label</th>
<th>NHSN Healthcare Service Location Code</th>
<th>CDC Location Code</th>
<th>Location Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled Nursing/Short Term Rehabilitation</td>
<td>1257-5</td>
<td>IN:NONACUTE:LTCF:REHAB</td>
<td>A unit or designated area which primarily provides short term (&lt;90 days), medical, skilled nursing or rehabilitation services to individuals requiring restorative care following recent hospitalization.</td>
</tr>
<tr>
<td>General Nursing Unit</td>
<td>1258-3</td>
<td>IN:NONACUTE:LTCF:GEN</td>
<td>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 (&gt;90 days) support</td>
</tr>
<tr>
<td>Ventilator Dependent Unit</td>
<td>1259-1</td>
<td>IN:NONACUTE:LTCF:VEN</td>
<td>A unit or designated area which provides nursing and respiratory care to individuals who require mechanical ventilation.</td>
</tr>
</tbody>
</table>
| 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

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.
- Press the Clear button to start over with a new form.

Mandatory fields to “Add” or “Edit” a record marked with *

- Your Code *
- Your Label *
- CDC Location Description *
- Status *: Active
- Bed Size: A bed size greater than zero is required for most Inpatient locations.

Option to Find or Add 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 or 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.
- Press the Clear button to start over with a new form.

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

Your Code*: 1 SOUTH
Your Label*: GENERAL
CDC Location Description*: LTCF General Nursing Unit
Status*: Active
Bed Size*: 29 A bed size greater than zero is required for most inpatient locations.

Selections are facility specific. “Your Code” & “Your Label” best describe how units are identified in your facility.
Locations: ADD

Select **CDC Location Description** that best describes the resident population in the unit.

For a description of CDC locations for LTCFs, visit the CDC Locations document under Supporting Materials: https://www.cdc.gov/nhsn/pdfs/pscmanual/15locationsdescriptions_current.pdf *(beginning on page 28)*
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 or 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.
- Press the Clear button to start over with a new form.

Mandatory fields to “Add” or “Edit” a record marked with *

Your Code #: 1 SOUTH
Your Label #: GENERAL
CDC Location Description #: LTFC General Nursing Unit
Status #: Active
Bed Size #: 29 A bed size greater than zero is required for most inpatient locations.
Locations: FIND/DEACTIVATE

Click "find" to view all locations that have been set-up

Deactivate
LTCF CHECKLIST for NHSN Participation

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- Enter denominator data for each month under surveillance.
- Data quality checks-resolve “Alerts”, *if applicable.*
- Add additional users to the NHSN application, *if applicable.*
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 before 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.

![Warning](image)

*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.

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

<table>
<thead>
<tr>
<th>HAI Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility ID: Angela LTCF Test Facility (ID 39455)</td>
</tr>
<tr>
<td>Month: April</td>
</tr>
<tr>
<td>Year: 2018</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Locations</th>
<th>UTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
<td>✓</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LabID Event Module</th>
</tr>
</thead>
<tbody>
<tr>
<td>Locations</td>
</tr>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
</tr>
<tr>
<td>Specific Organism Type</td>
</tr>
<tr>
<td>CDI - C. difficile</td>
</tr>
<tr>
<td>MRSA - MRSA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Locations</th>
<th>Hand Hygiene</th>
<th>Gown and Gloves Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
LT CF CHECKLIST for NHSN Participation

✓ Complete the *NHSN Annual Facility Survey* between January 1 and March 1 each year.

✓ Add/verify that LT CF 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 denominator data for each month under surveillance.

☐ Data quality checks-resolve “Alerts”, *if applicable.*

☐ Add additional users to the NHSN application, *if applicable.*
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

Monthly Summary Page
Pre-populates based on facility selections in the Monthly Reporting Plan
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  ✔️
B. MRSA and CDI LabID Events
C. CDI and all MDRO LabID events
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

2. 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: [https://www.cdc.gov/nhsn/ltc/cdiff-mrsa/index.html](https://www.cdc.gov/nhsn/ltc/cdiff-mrsa/index.html)
LTCF CHECKLIST for NHSN Participation

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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.
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✓ Enter denominator data for each month under surveillance.

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☐ Add additional users to the NHSN application, *if applicable.*
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

Tip: use first initial and last name ex. aanttila

User must use same email address for SAMS registration!
### ADD NHSN User
**Assign and Save Rights**

<table>
<thead>
<tr>
<th>Rights</th>
<th>Patient Safety</th>
<th>Healthcare Personnel Safety</th>
<th>Biovigilance</th>
<th>Long Term Care</th>
<th>Dialysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Rights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Analyze Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Add, Edit, Delete</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>View Data</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customize Rights</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **User ID:** MANTTILA (ID 238556)
- **Fac:** Angela LTCF Test Facility

[Buttons: Advanced, Effective Rights, Save, Back]
Log-out of the NHSN application before closing your browser
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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)