Long-term Care Facility (LTCF) Component

Prevention Process Measures Module:
Hand Hygiene Event Reporting
Gown/Gloves Use Event Reporting

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Infection Preventionist
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Overview

- Introduction
- Goals and Benefits of Long-Term Care Facility (LTCF) participation
- Protocol and Definitions
- LTCF Data Collection
  - Prevention Process Measures (PPM) Opportunities
  - Process and Tools
- Reporting
  - Monthly Reporting Plan (MRP)
  - Monthly Summary Data
  - Calculating Adherence Rates
# Key Terms

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>PPM</td>
<td>Prevention Process Measures</td>
</tr>
<tr>
<td>HH</td>
<td>Hand Hygiene</td>
</tr>
<tr>
<td>GG</td>
<td>Gown and Gloves</td>
</tr>
<tr>
<td>HCP</td>
<td>Healthcare Personnel</td>
</tr>
<tr>
<td>LTCF</td>
<td>Long-Term Care Facility</td>
</tr>
<tr>
<td>MRP</td>
<td>Monthly Reporting Plan</td>
</tr>
<tr>
<td>FacWideIn</td>
<td>Facility Wide Inpatient</td>
</tr>
<tr>
<td>HAI</td>
<td>Healthcare-Associated Infections</td>
</tr>
<tr>
<td>HICPAC</td>
<td>Healthcare Infection Control Practices Advisory Committee</td>
</tr>
</tbody>
</table>
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
Introduction

- Prevention Process Measures (PPM) is a surveillance module within NHSN’s LTCF Component, which allows facilities to monitor their adherence to prevention practices
- Reporting Measures: (1) Hand Hygiene (2) Gown and Gloves Use
- Reporting Facility types:
  - Certified skilled nursing facilities/nursing homes (LTC:SKILLNURS)
  - Intermediate/chronic care facilities for the developmentally disabled (LTC:DEVDIS)
  - Assisted living facilities and residential care facilities (LTC:ASSIST)
Prevention Process Measures Reporting Status

Percentage of facilities participating in the **Gown/Gloves Use** Prevention Process Module, NHSN 2017

- **No PPM Reporting**: 2414, 92%
- **PPM Reporting**: 198, 8%

Percentage of facilities participating in the **Hand Hygiene** Prevention Process Module, NHSN 2017

- **No PPM Reporting**: 2368, 91%
- **PPM Reporting**: 244, 9%
Benefits

- Why monitor adherence to prevention process measures in LTCF?
  - Hands and environmental contamination play a vital role in the transmission of bacteria between Healthcare Personnel (HCP) and the residents.
  - Hand Hygiene (HH) is one of the most effective ways to prevent transmission of Healthcare Associated Infections (HAI)
  - Gown/Gloves (GG) used by healthcare personnel can reduce multi-drug resistant organisms transmission (MDRO) among residents and workers
  - Reinforces and supports the CDC and HICPAC approved guidelines for HAI prevention and yields data on the impact of performance improvement efforts.

https://www.cdc.gov/hicpac/recommendations/core-practices.html
World Health Organization
Goals of Prevention Process Measure Event Reporting

- To calculate rates of adherence for HH and/or GG use opportunities among all healthcare personnel (HCP) in a facility
- To provide feedback to HCP on adherence to HH and/or GG use
- To assess the impact of efforts to improve HH and/or GG use practices by HCP over time
Tracking Infections in Long-term Care Facilities

Eliminating infections, many of which are preventable, is a significant way to improve care and decrease costs. CDC’s National Healthcare Safety Network provides long-term care facilities with a customized system to track and a streamlined and systematic way. When facilities track infections, identify problems, and track progress toward stopping infections, at a national level, data entered into NHSN will gauge progress toward national goals.

NHSN’s long-term care component is ideal for trying to understand infections in nursing facilities, chronic care facilities, and assisted living and residential care facilities.

Report Prevention Process Measures - Hand Hygiene, Gloves and Gown Adherence

Resources for NHSN Users Already Enrolled

Click title to open module options

Click to open "resources"

https://www.cdc.gov/nhsn/ltc/index.html
Prevention Process Measures Module
Hand Hygiene

“Stay back, you guys! This stuff has killed 99.99% of our fellow germs!”
Hand Hygiene Protocol

- **LTC Prevention Process Measures Protocol:**
  Hand Hygiene (HH) Adherence is monitored by direct observation of HCP practices in resident care areas throughout the facility
  - LTCF staff other than an infection preventionist can be trained to perform the observations and collect required data elements

- **Data collection definitions:**
  - **Total # Performed:** Total number of observed instances during which staff hand hygiene was warranted and was successfully performed.
  - **Total # Indicated:** Total number of observed instances during which staff hand hygiene was warranted.
Hand Hygiene Definitions

- **Antiseptic Hand wash**
  - Washing hands with water and soap or other detergents containing an antiseptic agent

- **Antiseptic Hand Rub**
  - Applying antiseptic hand-rub product to all surfaces of the hands to reduce the number of organisms present

- **Hand Hygiene**
  - Handwashing, antiseptic hand wash, antiseptic hand rub, or surgical hand antisepsis

- **Handwashing**
  - Washing hands with water and plain (i.e. non-antimicrobial) soap
# Hand Hygiene Opportunities in Long-term Care Facilities

<table>
<thead>
<tr>
<th>Hand Hygiene Opportunity (5 Moments)</th>
<th>Specific Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prior to touching a patient</td>
<td>• Prior to delivering care and other non-invasive treatment</td>
</tr>
<tr>
<td></td>
<td>• Prior to assisting a patient with personal care activities</td>
</tr>
<tr>
<td></td>
<td>• Prior to performing a physical non-invasive exam</td>
</tr>
<tr>
<td>2. Prior to clean/aseptic procedures</td>
<td>• Prior to drawing blood sample from resident finger</td>
</tr>
<tr>
<td></td>
<td>• Prior to performing catheter site care</td>
</tr>
<tr>
<td></td>
<td>• Prior to administering medications</td>
</tr>
<tr>
<td>3. After body fluid exposure risk</td>
<td>• After inserting or removing an invasive medical device</td>
</tr>
<tr>
<td></td>
<td>• After removing any protective material</td>
</tr>
<tr>
<td></td>
<td>• After clearing excreta and other bodily fluid</td>
</tr>
<tr>
<td>4. After touching a patient</td>
<td>• After delivering care and other non-invasive treatment</td>
</tr>
<tr>
<td></td>
<td>• After assisting resident with personal care activities</td>
</tr>
<tr>
<td></td>
<td>• After removing gloves</td>
</tr>
<tr>
<td>5. After touching patient surroundings</td>
<td>• After physical contact with the resident’s immediate environment</td>
</tr>
</tbody>
</table>

Pictures courtesy of [WHO](https://www.who.int) | [WHO 5 Moments posters for Hand Hygiene](https://www.who.int)
Hand Hygiene Event Monitoring Process

- **Numerator:** Hand hygiene performed = Total number of observed contacts during which HCP touched either the resident or inanimate objects in the immediate vicinity of the resident and appropriate hand hygiene was performed

- **Denominator:** Hand hygiene indicated = Total number of observed contacts during which HCP touched either the resident or inanimate objects in the immediate vicinity of the resident and therefore, appropriate hand hygiene was indicated

*Perform at least 30 unannounced observations of HCPs of varied occupation types after contact with residents or inanimate objects in resident’s vicinity each month. No personal identifiers will be collected or reported.*
Prevention Process Measures Module
Gown and Gloves Use
Gown & Gloves Use Definition

- Monitor Gown and Gloves Use by HCP during interactions with residents who are placed in Transmission-based Contact Precautions

- Appropriate gown and gloves use:
  - Donning of both a gown and gloves prior to contact with a resident or inanimate surfaces/objects in vicinity of resident
  - Use of gloves only without a gown would not count as appropriate use when the resident is placed in Contact Precautions
# Opportunities for Gown & Gloves Usage in Long-Term Care Facilities

<table>
<thead>
<tr>
<th>Gown &amp; Gloves</th>
<th>Recommended Best Practices</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image of Gown]</td>
<td>Administering patient care for wound secretions</td>
</tr>
<tr>
<td>![Image of Gloves]</td>
<td>Cleaning an incontinent patient with diarrhea</td>
</tr>
<tr>
<td>![Image of Gown and Gloves]</td>
<td>If a patient is in contact precautions (MRSA and <em>C. difficile</em> are examples of two types of bacteria, which may be spread through contact)</td>
</tr>
<tr>
<td>![Image of Gown and Gloves]</td>
<td>Responding to an emergency where blood is spurting</td>
</tr>
<tr>
<td>![Image of Gown and Gloves]</td>
<td>When handling contaminated items</td>
</tr>
</tbody>
</table>
Gown & Gloves Use Event Monitoring Process

- **Numerator:** Gown and gloves used = Total number observed of HCP donning gown and gloves prior to entering the resident’s room

- **Denominator:** Gown and gloves indicated = Total number observed of HCP doffing gown and gloves upon exiting the resident’s room

*Perform *at least 30* unannounced observations of HCP *during* their interactions with residents who are placed in Transmission-Based Contact Precautions each *month*. 
LTC Prevention Process Measures Module:
Data Collection Process and Tools
Data Collection Process

- **Observations should be discrete**
  - To prevent staff disruption while administering care
  - To prevent data collection from influencing staff performance

- **Try to ensure that observations are as representative as possible of normal practice at the facility:**
  - Observe different staff members on different days and shifts
  - Consider observing during particularly busy times (e.g. shift change), when staff may be less attentive to proper practices

- **Focus on an area of the unit where staff interaction with residents are clearly visible**
  - This may include observation of several staff members
  - In general, hand hygiene should be performed prior to and following direct contact with residents
Required Forms

Prevention Process Measures Monthly Monitoring Form

**Note:** This form is considered a “summary data/denominator form” since data is reported monthly.

- **Hand Hygiene**
  - Numerator = Number of hand hygiene opportunities performed
  - Denominator = Total hand hygiene observations indicated

- **Gown and Gloves Use**
  - Numerator – Number of contacts for which gown/gloves were correctly used
  - Denominator – Total number of contacts for which gown/gloves use was indicated
# Prevention Process Measures Monthly Monitoring Form

**NHSN**  
National Healthcare Safety Network

**Prevention Process Measures Monthly Monitoring for LTCF**

**Form Approved**  
OMB No. 0920-0666  
Exp. Date: 01/31/2021  
www.cdc.gov/nhsn

**Prevention Process Measures**

<table>
<thead>
<tr>
<th>Hand Hygiene</th>
<th>Gown and Gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performed:</strong> _____</td>
<td><strong>Used:</strong> _____</td>
</tr>
<tr>
<td><strong>Indicated:</strong> _____</td>
<td><strong>Indicated:</strong> _____</td>
</tr>
</tbody>
</table>

**Important Note:** Only totals are entered in NHSN

- Monitor for staff Hand Hygiene and/or Gown/Glove opportunities
- For each opportunity observed, indicate whether hand hygiene and/or Gown/Glove adherence was successful.
- Tally each measure:  
  - Numerator = Performed/Used  
  - Denominator = Indicated

See Table of Instructions at: [https://www.cdc.gov/nhsn/ltc/process-measures/index.html](https://www.cdc.gov/nhsn/ltc/process-measures/index.html)
Custom Fields

- Additional data entry fields which users can name (labels) and capture text or numeric data
- User can customize or expand data collected and submitted at your facility using these optional fields
- Must be set-up prior to reporting the data in NHSN (if interested in utilizing this feature)
LTC Prevention Process Measures Module: Reporting
Reporting Requirements

- Facilities must indicate HH and/or GG use surveillance in the *Monthly Reporting Plan (MRP)* for LTCF
  - If a MRP has already been saved, it can be edited to add “HH” and/or “GG”

- We **strongly recommend** surveillance should be reported for at least 6 consecutive months to provide meaningful measures
  - HH surveillance should be performed **facility-wide** and include all types of HCP
  - GG use surveillance should be performed **facility-wide** for all HCP caring for residents placed in Transmission-Based Contact precautions
How to Add Prevention Process Measures to Monthly Reporting Plan for LTCF

1. From the navigation bar, select “Reporting Plan”, then “Add”
   Reporting location is prepopulated to “Facility-wide Inpatient (FacWideIn)"

2. Indicate the month and year data were collected

3. Please chose either “HH” and/or “GG” checkbox under the “Prevention Process Measure Module”

4. Click “Save”
Edit Monthly Reporting Plan

- Plans may be edited to add or remove surveillance selections.
- If event data has already been entered for a selected month, the plan may not be deleted unless the event data is also deleted.
How to Report Prevention Process Measures: Hand Hygiene and Gown/Gloves Summary Data

1. From the navigation bar, select “Summary Data”, then “Add”
2. Reporting location is prepopulated to “Facility-wide Inpatient (FacWideIN)"
3. Indicate the month and year data were collected
4. Report the summary of all of the “HH” and/or “GG” observations:
   - Total # “Performed/Used” (numerator)
   - Total # “Indicated” (denominator)
5. Click “Save”
## View Monthly Summary Data

Mandatory fields marked with.
Fields required for record completion marked with **.

**Facility ID: Angela LTCF Test Facility (39455)**
Month: May
Year: 2027

### Denominators for Long Term Care Locations

<table>
<thead>
<tr>
<th>Location Code</th>
<th>Total Resident Days</th>
<th>Urinary Catheter Days</th>
<th>Report No UTI</th>
<th>New Antibiotic Starts for UTI Treatment</th>
<th>Number of UTI Cultures Ordered</th>
<th>Custom Fields</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
<td>2900</td>
<td>50</td>
<td>✔</td>
<td>✔</td>
<td>✔</td>
<td>Custom Fields</td>
</tr>
</tbody>
</table>

### MRSA & CDI LabID Event Reporting

<table>
<thead>
<tr>
<th>Location Code</th>
<th>Specific Organism Type</th>
<th>MRSA</th>
<th>VRE</th>
<th>CapaB Klebsiella</th>
<th>CRE-Ecoli</th>
<th>CRE-LEnterobacter</th>
<th>CRE-Klebsiella</th>
<th>C-diffile</th>
<th>MDR-Bacteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Prevention Process Measures

<table>
<thead>
<tr>
<th>Location Code</th>
<th>Hand Hygiene</th>
<th>Gown and Gloves</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility-wide Inpatient (FacWIDEIn)</td>
<td>✔ 96</td>
<td>✔ 35</td>
</tr>
</tbody>
</table>

## View Monthly Reporting Plan

Mandatory fields marked with.

**Facility ID: Angela LTCF Test Facility (39455)**
Month: May
Year: 2017

- [ ] No Long Term Care Facility Component Modules Followed this Month

### HA1 Module

- **Facility-wide Inpatient (FacWIDEIn)**

### LabID Event Module

- **Facility-wide Inpatient (FacWIDEIn)**: MRSA/MSSA, MRSA with MSSA
- **Facility-wide Inpatient (FacWIDEIn)**: CRE, CRE-Ecoli, CRE-Enterobacter, CRE-Klebsiella

### Prevention Process Measure Module

- **Facility-wide Inpatient (FacWIDEIn)**
- Hand Hygiene: ✔
- Gown and Gloves Use: ✔
How to Calculate Prevention Process Measures: Hand Hygiene & Gown/Gloves Adherence Rate

Hand Hygiene Adherence Rate = \frac{\text{Total \# of contacts for which HH was performed}}{\text{Total \# of contacts for which HH was indicated}} \times 100

Gown/Gloves Adherence Rate = \frac{\text{Total \# of contacts for which GG were used}}{\text{Total \# of contacts for which GG was indicated}} \times 100

*Data stratified by time (e.g. month, quarter, etc.)*

**Important Note:** NHSN will do the calculations based upon the data submitted.
Prevention Process Measures Analysis Reports

National Healthcare Safety Network
Rate Table for All Gown/Glove Adherence

Example: \[
\frac{230}{300} \times 100 = 76.667
\]

<table>
<thead>
<tr>
<th>location</th>
<th>summaryYM</th>
<th>gG_used</th>
<th>gG_indicated</th>
<th>GG_adhRate</th>
</tr>
</thead>
<tbody>
<tr>
<td>FACWIDEIN</td>
<td>2017M01</td>
<td>230</td>
<td>300</td>
<td>76.667</td>
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<tr>
<td>FACWIDEIN</td>
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<td>42</td>
<td>127</td>
<td>33.071</td>
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<td>FACWIDEIN</td>
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<td>35</td>
<td>36</td>
<td>97.222</td>
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<tr>
<td>FACWIDEIN</td>
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<td>100</td>
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<td>100.000</td>
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<tr>
<td>FACWIDEIN</td>
<td>2017M08</td>
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<tr>
<td>FACWIDEIN</td>
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</table>

National Healthcare Safety Network
Rate Table for All Hand Hygiene Adherence

<table>
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<tr>
<td>FACWIDEIN</td>
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<td>100</td>
<td>122</td>
<td>81.967</td>
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<td>240</td>
<td>61.250</td>
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<td>36</td>
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<tr>
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<td>2017M08</td>
<td>100</td>
<td>100</td>
<td>100.000</td>
</tr>
<tr>
<td>FACWIDEIN</td>
<td>2017M09</td>
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<td>100</td>
<td>100.000</td>
</tr>
<tr>
<td>FACWIDEIN</td>
<td>2018M04</td>
<td>50</td>
<td>50</td>
<td>100.000</td>
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</tbody>
</table>

National Healthcare Safety Network
Line Listing for All Process Measures

<table>
<thead>
<tr>
<th>orgID</th>
<th>summaryYM</th>
<th>location</th>
<th>hh_performed</th>
<th>hh_indicated</th>
<th>gg_used</th>
<th>gg_indicated</th>
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<tbody>
<tr>
<td>39455</td>
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<tr>
<td>39455</td>
<td>2017M09</td>
<td>FACWIDEIN</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>
Let’s Review!

- You can perform monitoring of hand hygiene, or gown and gloves use, or both.

- To get the most from your data:
  - Minimum reporting is six months during a calendar year.
  - Monitoring should include all types of healthcare personnel throughout the entire facility.
  - Must enter a minimum of 30 observations per month for each event.

- LTCF staff can be trained to perform the observations, collect required data elements, and analyze the data (*Staff may include: Professional Nursing Staff, Infection Prevention & Control Staff, LTCF Primary Contact, NHSN Facility Administrator, etc.*)
NHSN Resources

- NHSN Home Page
  - https://www.cdc.gov/nhsn/index.html

- NHSN LTCF Component
  - https://www.cdc.gov/nhsn/ltc/index.html

- LTCF Component Prevention Process Measures Module
  - https://www.cdc.gov/nhsn/ltc/process-measures/index.html

Questions or Need Help? Contact User Support at nhsn@cdc.gov

****All e-mail Inquiries should be sent to nhsn@cdc.gov for triage and delegation****
THANK YOU

For more information, contact CDC
1-800-CDC-INFO (232-4636)

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.