Welcome and Introductions
Meet the Team

Presenters:

Amy Ward, MS, BSN, RN, CIC, FAPIC  
Patient Safety Manager, Alliant Health Solutions

Donald Chitanda, MPH, CIC, LTC-CIP  
Infection Prevention Technical Advisor, Alliant Health Solutions

Paula St. Hill, MPH, A-IPC  
Infection Prevention Technical Advisor, Alliant Health Solutions

Erica Umeakunne, MSN, MPH, APRN, CIC  
Infection Prevention Specialist, Alliant Health Solutions
Amy Ward, MS, BSN, RN, CIC, FAPIC

Patient Safety Manager

Amy is a registered nurse with a diverse background in acute care nursing, microbiology, epidemiology and infection control. She is passionate about leading and mentoring new and future infection preventionists in their career paths and assisting them in reducing healthcare-associated infections across the continuum of care.

Amy enjoys spending time with her family and being outdoors camping, bicycling and running.

Contact: Amy.Ward@AlliantHealth.org
Donald Chitanda, MPH, CIC, LTC-CIP

Infection Prevention Technical Advisor

Donald is a health professional with experience in public health epidemiology and infection prevention. Over the past several years, he worked as an infection preventionist at the hospital- and system-level, where he was part of a task force to ensure the safety of caregivers and patients during the ongoing COVID-19 pandemic. In addition, he was part of and led several projects to reduce hospital-acquired infections utilizing Lean Six Sigma methodologies. He is also trained in ensuring ongoing facility survey readiness for regulatory agencies such as the CMS and The Joint Commission.

Donald enjoys spending time with family and doing outdoor activities.

Contact: Donald.Chitanda@AlliantHealth.org
Paula St. Hill, MPH, A-IPC
Infection Prevention Technical Advisor

Paula is a doctoral student with a diverse background in public health, infection prevention, epidemiology and microbiology. She has always enjoyed public health and identifying ways to improve health outcomes, specifically those related to healthcare-associated infections.

Paula enjoys spending time with her friends and family.

Contact: Paula.StHill@allianthealth.org
Erica Umeakunne, MSN, MPH, APRN, CIC

Infection Prevention Specialist

Erica Umeakunne is an adult-gerontology nurse practitioner and infection preventionist with experience in primary care, critical care, health care administration and public health.

She was previously the interim hospital epidemiology director for a large health care system in Atlanta and a nurse consultant in the Center for Disease Control and Prevention's (CDC) Division of Healthcare Quality Promotion. While at the CDC, she served as an infection prevention and control (IPC) subject matter expert for domestic and international IPC initiatives and emergency responses, including Ebola outbreaks and, most recently, the COVID-19 pandemic.

Erica enjoys reading, traveling, family time, and outdoor activities.

Contact: Erica.Umeakunne@allianthealth.org
Thank You to Our Partners

• Georgia Department of Public Health
• University of Georgia
Objectives

• Provide an update on the state of the COVID-19 pandemic and the end of the Public Health Emergency
• Discuss updates related to long-term care facility (LTCF) reporting requirements
• Introduce enhanced barrier precautions and implications for LTCF infection prevention and control (IPC) programs
• Describe IPC process improvement activities and surveillance approaches
• Introduce the GADPH Infection Control Resource Box
• Share Alliant Health Solutions Resources to support IPC activities
State of the COVID-19 Pandemic: Moving Forward
Objectives

• Provide an update on COVID-19 epidemiology

• Review the updated COVID-19 vaccine recommendations

• Discuss the end of the public health emergency and relevant policies

• Highlight infection prevention and control (IPC) lessons learned and strategies to prevent COVID-19 and other infections in nursing facilities

• Share Alliant Health Solutions resources to support COVID-19 IPC activities
COVID-19 Cases and Deaths

https://covid.cdc.gov/covid-data-tracker/#trends_weeklycases_7daydeathspers100k_00
Wastewater COVID-19 Surveillance

https://covid.cdc.gov/covid-data-tracker/#wastewater-surveillance
Wastewater COVID-19 Surveillance

Current SARS-CoV-2 virus levels by site, Georgia

<table>
<thead>
<tr>
<th>Current virus levels category</th>
<th>Num. sites</th>
<th>% sites</th>
<th>Category change in last 7 days</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Site</td>
<td>3</td>
<td>14</td>
<td>0%</td>
</tr>
<tr>
<td>0% to 19%</td>
<td>3</td>
<td>36</td>
<td>0%</td>
</tr>
<tr>
<td>20% to 39%</td>
<td>11</td>
<td>50</td>
<td>0%</td>
</tr>
<tr>
<td>40% to 59%</td>
<td>0</td>
<td>0</td>
<td>N/A**</td>
</tr>
<tr>
<td>60% to 79%</td>
<td>0</td>
<td>0</td>
<td>N/A**</td>
</tr>
<tr>
<td>80% to 100%</td>
<td>0</td>
<td>0</td>
<td>N/A**</td>
</tr>
</tbody>
</table>

Total sites with current data: 22
Total number of wastewater sampling sites: 26

How is the current SARS-CoV-2 level compared to past levels calculated?

https://covid.cdc.gov/covid-data-tracker/#wastewater-surveillance
Confirmed COVID-19 Cases among Staff and Rate per 1,000 Resident-Weeks in Nursing Homes, by Week — United States

https://www.cdc.gov/nhsn/covid19/ltle-report-overview.html#anchor_1594393306
Weighted and Nowcast Estimates in United States for 2-Week Periods in 1/22/2023 – 5/13/2023

Hover over (or tap in mobile) any lineage of interest to see the amount of uncertainty in that lineage's estimate.

**Weighted Estimates: Variant proportions based on reported genomic sequencing results**

<table>
<thead>
<tr>
<th>Collection date, two-week period ending</th>
<th>% Viral Lineages Among Infections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/19/23</td>
<td>XBB.1.6: 20%</td>
</tr>
<tr>
<td>3/19/23</td>
<td>XBB.1.5: 30%</td>
</tr>
<tr>
<td>4/19/23</td>
<td>XBB.1.5: 20%</td>
</tr>
<tr>
<td>5/19/23</td>
<td>XBB.1.5: 10%</td>
</tr>
</tbody>
</table>

**Nowcast: Model-based projected estimates of variant proportions**

**Nowcast Estimates in United States for 4/30/2023 – 5/13/2023**

<table>
<thead>
<tr>
<th>USA</th>
<th>WHO label</th>
<th>Lineage #</th>
<th>US Class</th>
<th>% Total</th>
<th>85% PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omicron</td>
<td>XBB.1.5</td>
<td>VOC</td>
<td>64.0%</td>
<td>59.1-66.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB.1.16</td>
<td>VOC</td>
<td>14.3%</td>
<td>11.1-18.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB.1.9.1</td>
<td>VOC</td>
<td>9.2%</td>
<td>8.0-10.6%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB.1.9.2</td>
<td>VOC</td>
<td>4.0%</td>
<td>3.2-5.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB.2.3</td>
<td>VOC</td>
<td>3.5%</td>
<td>1.9-6.3%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB.1.5.1</td>
<td>VOC</td>
<td>2.4%</td>
<td>1.9-3.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>FD.2</td>
<td>VOC</td>
<td>1.8%</td>
<td>0.8-4.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BQ.1.1</td>
<td>VOC</td>
<td>0.3%</td>
<td>0.1-0.5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CH.1.1</td>
<td>VOC</td>
<td>0.2%</td>
<td>0.2-0.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>XBB</td>
<td>VOC</td>
<td>0.2%</td>
<td>0.1-0.4%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BQ.1</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.1%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BN.1</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA.5</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA.2.12.1</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA.2</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA.2.75</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BF.7</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BA.5.2.6</td>
<td>VOC</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
</tr>
<tr>
<td>Other*</td>
<td>Other*</td>
<td>0.0%</td>
<td>0.0-0.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Public Health Emergency (PHE)

- Initially declared in January 2020
- Ended May 11, 2023
- Coverage, costs, and payment for COVID-19 testing, treatments and vaccines
- Medicaid coverage and federal match rates
- Telehealth (extended by the Consolidated Appropriations Act until the end of 2024)

National Emergency Declaration

- Issued in March 2020
- Ended May 11, 2023
- Private insurance coverage flexibilities

Emergency Declaration by Health & Human Services

- Initially declared in February 2020
- Allows EUA for medical interventions (vaccines, drugs)
- Stays in effect until terminated by the HHS Secretary; no current end date

COVID-19 Public Health Emergency (PHE): What is NOT Affected

- Access to COVID-19 vaccinations and certain treatments, such as Paxlovid and Lagevrio
- FDA’s EUAs for COVID-19 products (including tests, vaccines, and treatments)
- Major Medicare telehealth flexibilities
- Medicaid telehealth flexibilities
- Process for states to begin eligibility redeterminations for Medicaid
- Access to opioid use disorder treatment

COVID-19 Public Health Emergency (PHE): What IS Affected

- Certain Medicare and Medicaid waivers and broad flexibilities for health care providers
- Coverage for free, over-the-counter COVID-19 testing
- Reporting of COVID-19 laboratory results and (state) immunization data to CDC
- FDA’s ability to detect early shortages of critical devices related to COVID-19
- Public Readiness and Emergency Preparedness (PREP) Act liability protections
- Dispense of controlled substances via telemedicine without an in-person interaction

COVID-19 Emergency Response Transition: Implications for Infection Prevention and Control

- COVID-19 Data
- CDC NHSN COVID-19 Reporting
- COVID-19 Vaccination Requirements
- COVID-19 Infection Prevention & Control (IPC) Practices
CDC Data & Surveillance: Available Data

- COVID-19 Hospital Admissions
- COVID-19 deaths (data source change)
- Emergency Department COVID-19 Visits (weekly)
- COVID-19 test positivity (data source change)
- Wastewater & genomic surveillance
- COVID-19 vaccine administration data (limited)
- Percentage of COVID-19 associated deaths (NEW)
CDC Data Tracking Updates: Removed Data

- National, county-level test positivity data
- National reporting weekly counts of COVID-19 cases and associated deaths
- V-safe tracking system for health check-ins
- COVID-19 community levels (guided non-healthcare settings IPC practices)
- Transmission levels (guided healthcare facility IPC practices)

https://www.cdc.gov/mmwr/volumes/72/wr/mm7219e1.htm?s_cid=mm7219e1_w
Transmission Levels

- Health care settings
- Used on a weekly basis to guide select infection prevention and control actions in a health care setting
- Allows for earlier intervention
- Better protects individuals seeking medical care

COVID-19 Community Levels

- Non-healthcare settings (e.g., assisted living facilities, group homes, retirement communities, congregate settings)
- Help individuals and communities decide which prevention actions to take based on the latest information
- Inform individual- and household-level prevention behaviors and community-level prevention strategies for low, medium, and high COVID-19 community levels
COVID-19 Emergency Response Updates: Vaccination Education & Access Requirements

• CMS implemented an interim final rule in May 2021 that required nursing homes to educate staff and residents on the risks and benefits of COVID-19 vaccination and to offer or assist in accessing COVID-19 vaccination for staff and residents.
  — As this rule did not include an applicability end date, these requirements will not end with the expiration of the PHE.
  — Nursing homes must continue to educate and offer COVID-19 vaccination to staff and residents beyond the end of the PHE as part of the Requirements of Participation through May 21, 2024, or until otherwise specified by CMS.

COVID-19 Emergency Response Updates: Vaccination Mandate for Health Care Personnel

- In November 2021, CMS implemented an interim final rule requiring staff, including volunteers, in most Medicare- and Medicaid-certified settings to complete the primary series of COVID-19 vaccination or be granted an approved exemption to work in or provide services on behalf of the certified setting.

- Federal vaccination mandate for healthcare personnel expired with the PHE on May 11, 2023.

COVID-19 Infection Prevention & Control Guidance Updates

• Updates
  – Admission testing in nursing homes
  – Facility-wide use of source control (masking)
  – Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic

• No updates
  – Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure
  – Strategies to Mitigate Healthcare Personnel Staffing Shortages
## COVID-19 IPC Updates

<table>
<thead>
<tr>
<th>Category</th>
<th>Updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admission Screening</td>
<td>• Admission testing is at the discretion of the facility, no longer guided by Transmission Levels (previous metric)</td>
</tr>
</tbody>
</table>
| Source Control         | • No longer guided by the Transmission Levels (previous metric)  
                          • Healthcare facilities should identify local metrics that could reflect increasing community respiratory viral activity to determine when broader use of source control in the facility might be warranted |
| Staff Screening        | • No change  
                          • Screening testing of asymptomatic HCP is at the discretion of the health care facility.                                         |
| Exposure/Close Contact | • No change  
                          • Asymptomatic patients/residents with close contact with someone with SARS-CoV-2 infection should have a series of three viral tests for SARS-CoV-2 infection. |
| Outbreak Investigations | • No change  
                          • A single new case of SARS-CoV-2 infection in any HCP or resident should be evaluated to determine if others in the facility could have been exposed. |

COVID-19 IPC Practices Continue

- Source control / Respiratory etiquette/ Hand hygiene
- Personal protective equipment (PPE) use (N95 respirator or surgical mask, goggles, etc.)
- Appropriate use of transmission-based precautions
- Early screening, testing, isolation, and work restrictions
- Environmental cleaning and disinfection
- Process to promptly identify & isolate with SAR-CoV-2 infection
- Appropriate vaccinations, therapeutics, and treatments

Infection Prevention and Control Practices

• Continue implementing IPC practices for infectious pathogens, including COVID-19 and other respiratory infections
  • Guideline for Isolation Precautions: Preventing Transmission of Infectious Agents in Health Care Settings
    o Appendix A
• Use personal protective equipment (PPE) appropriately
• Standard precautions always apply
  o Hand Hygiene
  o Source control/ Respiratory hygiene/cough etiquette
  o PPE use based on anticipated exposure to blood/body fluids
  o Safe injection practices
  o Cleaning and disinfection
  o Safe linen handling
• Consult with your state or local public health authorities
CDC COVID-19 Infection Prevention and Control Guidance Updates

- Interim IPC Recommendations for Healthcare Personnel
- Interim Guidance for Managing Healthcare Personnel with Infection or Exposure
- Strategies to Mitigate Healthcare Personnel Staffing Shortages
COVID-19 Transition: IPC Priorities & Lessons Learned
NHSN Reporting: What Now?
Ending of Public Health Emergency (PHE)

• 2020 - CMS published an IFC (CMS-5531-IFC) requiring all LTC facilities to report COVID-19 information using the NHSN (42 CFR 483(g). This requirement was extended through a final rule (CMS-1747-F) and is set to terminate on December 31, 2024. This excludes requirements at § 483.80(g)(1)(viii).

https://www.cdc.gov/nhsn/ltcf/covid19/index.html
https://leadingage.org/phe-will-end-may-11-what-this-means-for-nursing-homes/
### Ending of Public Health Emergency (PHE)

<table>
<thead>
<tr>
<th>Title 42 / Chapter IV / Subchapter G / Part 483 / Subpart B / § 483.80</th>
<th>Previous / Next / Top</th>
</tr>
</thead>
</table>

#### COVID-19 Reporting
Until December 31, 2024, with the exception of the requirements in paragraph (g)(1)(viii) of this section, the facility must do all of the following:

1. Electronically report information about COVID-19 in a standardized format specified by the Secretary. To the extent as required by the Secretary, this report must include the following:
   - Suspected and confirmed COVID-19 infections among residents and staff, including residents previously treated for COVID-19.
   - Total deaths and COVID-19 deaths among residents and staff.
   - Personal protective equipment and hand hygiene supplies in the facility.
   - Ventilator capacity and supplies in the facility.
   - Resident beds and census.
   - Access to COVID-19 testing while the resident is in the facility.
   - Staffing shortages.

2. The COVID-19 vaccine status of residents and staff, including total numbers of residents and staff, numbers of residents and staff vaccinated, numbers of each dose of COVID-19 vaccine received, and COVID-19 vaccination adverse events.

3. Therapeutics administered to residents for treatment of COVID-19.

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https://www.cdc.gov/nhsn/ltc/covid19/index.html
https://leadingage.org/phe-will-end-may-11-what-this-means-for-nursing-homes/
National Healthcare Safety Network (NHSN) Updates: COVID-19 Surveillance Pathways For Data Reporting

The COVID-19 Module Surveillance Pathways will undergo updates in response to the end of the Public Health Emergency, including:

- Reducing vaccination elements to include only up-to-date status for residents with a positive COVID-19 test
- Removal of influenza and staffing and supply shortages data fields
- Removal of deaths in the Staff and Personnel Impact Pathway
- Removal of the therapeutics pathway
- Addition of a new data field, hospitalizations, in the Resident Impact and Facility Capacity Pathway to assess relevant outcome data on residents with a positive COVID-19 test

https://www.cdc.gov/nhsn/ltc/covid19/index.html
Vaccination Status Reporting

- CMS issued an IFC (CMS–3414–IFC) requiring facilities to report the COVID-19 vaccination status of residents and staff through NHSN (§483.80(g)(1)(viii). Through a subsequent rulemaking on November 9, 2021, at CMS-1747-F, the requirement for reporting the COVID-19 vaccine status of residents and staff through NHSN is permanent and will continue indefinitely unless additional regulatory action is taken.

https://www.cdc.gov/nhsn/ltc/covid19/index.html
https://leadingage.org/phe-will-end-may-11-what-this-means-for-nursing-homes/
Changes to Emergency Use Authorization (EUA) regarding COVID-19 Vaccines

• On April 18, 2023, the Food and Drug Administration (FDA) announced changes to its EUA regarding COVID-19 vaccines. Following this announcement, CDC simplified COVID-19 vaccine recommendations.

• For weekly reporting purposes, the changes above do not impact the reporting definitions for the current quarter (data reported for Q2 2023, weeks from March 27-June 25, 2023).
What This Means for Weekly Reporting

• Facilities should continue to report anyone who previously received a primary vaccine series (between December 2020 and April 18, 2023) in questions 2.1 and 2.2.
What This Means for Weekly Reporting

• For the duration of Q2, do not report anyone who was previously unvaccinated and received a single bivalent dose in questions 2.1 or 2.2. Instead, report these individuals in question 3.3.
What This Means for Weekly Reporting

- Continue to report data to the Resident Impact and Facility Capacity pathway for the vaccination status section based on the definitions provided for Q2 2023.
**Current Up-To-Date Definition**

**COVID-19 Vaccination Modules: Key Terms**

Appendix 1a: Decision Tree: Up to Date with COVID-19 Vaccines during the surveillance period of December 26, 2022 – March 26, 2023 and March 27, 2023 – June 25, 2023 for the COVID-19 Vaccination Module.

Facilities can use the following decision tree to help determine up to date vaccination status for the NHSN COVID-19 Vaccination Modules during the reporting period of Quarter 1, 2023 (representing vaccination data for December 26, 2022 – March 26, 2023) and Quarter 2, 2023 (representing vaccination data for March 27, 2023 – June 25, 2023).

**RIFC Pathway**

Appendix 1b: Decision Tree: Up to Date with COVID-19 Vaccines during the surveillance period December 26, 2022 – March 26, 2023 and March 27, 2023 – June 15, 2023 for the Long-Term Care RIFC Pathway.

Long-Term Care Facilities can use the following decision tree to help determine up to date vaccination status for the RIFC Pathway. Please note this refers to reporting data through the NHSN COVID-19 RIFC Pathway for the reporting period of Quarter 1, 2023 (representing data for December 26, 2022 – March 26, 2023) and Quarter 2, 2023 (representing vaccine data for March 27, 2023 – June 25, 2023).
## Examples

<table>
<thead>
<tr>
<th>Example of reporting data for the week of April 17 through April 23, 2023</th>
<th>Is this individual considered up to date with COVID-19 vaccines for Quarter 2 2023?</th>
<th>Where to document when reporting for weeks in Quarter 2 2023</th>
</tr>
</thead>
</table>
| Mary completed her primary COVID-19 vaccine series in May 2021, an original monovalent booster in October 2021, and an updated (bivalent) booster dose on November 3, 2022. | Yes. Mary is considered up to date for weeks during quarter 2 of 2023 since she received the most recent booster dose recommendation (a bivalent booster dose). | **Primary Vaccine Series** 2.2 Any completed Primary COVID-19 vaccine series  
**Boosters** 4. Cumulative number of residents who have received any booster(s) or additional dose(s).  
If Mary is a resident of a long-term care facility also report to:  
4.2 Cumulative number of residents in Question #4 who received two or more booster doses of COVID-19 vaccine  
**Up to Date** 5. Cumulative number of individuals in question #2 who are up to date with COVID-19 vaccines |
## Examples

<table>
<thead>
<tr>
<th>Example of reporting data for the week of April 17- April 23, 2023</th>
<th>Is this individual considered up to date for COVID-19 vaccines for Quarter 2 2023?</th>
<th>Where to document for when reporting for weeks in Quarter 2 2023</th>
</tr>
</thead>
</table>
| Tom completed his primary vaccine series on February 1, 2021 and a booster dose October 2021 but has not received an updated (bivalent) booster dose. | **No.** Tom is not considered up to date with COVID-19 vaccines for weeks during quarter 2 of 2023 since he did not receive the most recent recommended booster dose. **Do not count in question 5** (Cumulative number of individuals in question #2 who are up to date with COVID-19 vaccines). | **Primary Vaccine Series**  
2.2 Any completed Primary COVID-19 vaccine series  
**Boosters**  
4. Cumulative number of residents who have received any booster(s) or additional dose(s).  
If Tom is a resident of a long-term care facility also report to:  
4.1 Cumulative number of residents in Question #4 who have received only one booster dose of COVID-19 vaccine since August 2021 |
Examples

<table>
<thead>
<tr>
<th>Example of reporting data for the week of April 17- April 23, 2023</th>
<th>Is this individual considered up to date for COVID-19 vaccines for Quarter 2 2023?</th>
<th>Where to document for when reporting for weeks in Quarter 2 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jerry never completed an original primary series but received a bivalent dose on 4/20/2023</td>
<td>No – Jerry is not considered up to date when reporting to NHSN for weeks during Quarter 2 of 2023. With the new FDA recommendations, Jerry has received the necessary vaccines to be considered up to date beginning in Quarter 3 2023. However, reporting to NHSN will be completed according to Quarter 2 2023 definitions for the duration of the reporting quarter.</td>
<td>Individuals with other conditions 3.3 Unknown COVID-19 vaccination status</td>
</tr>
</tbody>
</table>
Upcoming NHSN Webinars tentatively scheduled:

June 1, 2023

June 7, 2023

Contact NHSN@cdc.gov for more information
Break
Enhanced Barrier Precautions
Objectives

- Explain antimicrobial resistance and how it occurs
- Describe the burden of multidrug-resistant organisms (MDROs)
- Describe challenges to preventing MDRO transmission in nursing homes
- Define Standard Precautions, Enhanced Barrier Precautions, and Contact Precautions
- Identify which residents and activities meet the criteria for Enhanced Barrier Precautions
- Discuss best practices for implementing Enhanced Barrier Precautions
Antimicrobial Resistance: A Growing Concern

• Antimicrobial resistance happens when germs like bacteria and fungi develop the ability to defeat the drugs designed to kill them; this means the germs are not killed and continue to grow
• Antimicrobial resistance is an urgent global public health threat, associated with nearly five million deaths in 2019
• In the U.S., nearly three million antimicrobial-resistant infections occur each year
  - More than 35,000 die as a result

https://www.cdc.gov/drugresistance/about.html
Antimicrobial Resistance

Bacteria and fungi do not have to be resistant to every antibiotic or antifungal to be dangerous. Resistance to even one antibiotic can mean serious problems. For example:

- Antimicrobial-resistant infections that require the use of second- and third-line treatments can harm patients by causing serious side effects, such as organ failure and prolonged care and recovery, sometimes for months.
- Many medical advances are dependent on the ability to fight infections using antibiotics, including joint replacements, organ transplants, cancer therapy, and the treatment of chronic diseases like diabetes, asthma, and rheumatoid arthritis.
- In some cases, these infections have no treatment options.

If antibiotics and antifungals lose their effectiveness, we lose the ability to treat infections and control these public health threats.

https://www.cdc.gov/drugresistance/about.html
Multi-drug Resistant Organisms (MDROs)

- Multidrug-resistant organisms (MDROs) are continuing to develop and spread in health care settings throughout the United States. Because of this, efforts to prevent MDRO transmission are still needed. In the past, MDROs were identified after lab confirmation. However, research has found that these organisms can spread long before detection.

https://www.cdc.gov/hai/mdro-guides/index.html
# Burden of MDROs in Nursing Homes

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Documented MDRO</th>
<th>Actual MDRO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Homes (n = 14)</td>
<td>17%</td>
<td>58%</td>
</tr>
<tr>
<td>Ventilator-Capable Nursing Homes (n = 4)</td>
<td>20%</td>
<td>76%</td>
</tr>
</tbody>
</table>

Risk Factors for the Development and Colonization of MDROs in Nursing Homes

- Indwelling medical devices (e.g., urinary catheter, PEG tube, tracheostomy/vents, central line)
- Presence of wounds or decubitus ulcers
- Antibiotic use in the prior three months, particularly fluoroquinolones
- Recent hospitalization
- Comorbid medical conditions
- Increased functional dependence
- Prolonged length of stay (increases opportunities for spread)
  - Residing in an LTCF/NH

Challenges with the Detection of MDROs

- Clinical cultures underestimate true prevalence of MDROs
- Most centers are not performing active surveillance to identify asymptomatic, colonized residents
  - Contribute to the reservoir for transmission
- Inadequate communication about individual MDRO history or risk factors between healthcare facilities during care transitions

Characteristics of Novel/Targeted MDROs in Health Care

https://emergency.cdc.gov/coca/ppt/Enhanced-Barrier-Precautions-for-MDRO-Final.pdf-
MDRO Prevention: Novel and Core Strategies

- Hand Hygiene
- Cleaning/disinfection of shared equipment
- Antibiotic Stewardship
- Decolonization (for example, chlorhexidine bathing)
- Improved Inter-facility Communication
- PPE and Precautions
- Environmental cleaning/disinfection

https://emergency.cdc.gov/coca/ppt/Enhanced-Barrier-Precautions-for-MDRO-Final.pdf-
Personal Protective Equipment (PPE) & Precautions

Standard Precautions

Transmission-Based Precautions
Standard Precautions

Standard Precautions are used for all patient care. They’re based on a risk assessment and make use of common or basic knowledge practices and personal protective equipment use that protect health care providers from infection and prevent the spread of infection from patient to patient. Standard precautions include:

• Hand hygiene
• Use of personal protective equipment (e.g., gloves, masks, eyewear)
• Respiratory hygiene/cough etiquette
• Sharps safety (engineering and work practice controls)
• Safe injection practices (i.e., an aseptic technique for parenteral medications)
• Sterile instruments and devices
• Clean and disinfect environmental surfaces

https://www.cdc.gov/oralhealth/infectioncontrol/summary-infection-prevention-practices/standard-precautions.html
Transmission-Based Precautions

- Transmission-Based Precautions are the second tier of basic infection control and are to be used in addition to Standard Precautions for patients who may be infected or colonized with certain infectious agents for which additional precautions are needed to prevent infection transmission.

[Image of signs with guidelines for contact, droplet, and airborne precautions]

https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html
Contact Precautions for MDROs

- Perform hand hygiene
- Gown and gloves upon room entry
- Dedicated equipment
- Private room
- Room restriction

https://www.cdc.gov/infectioncontrol/basics/transmission-based-precautions.html
Enhanced Barrier Precautions (EBP)

- Enhanced Barrier Precautions expand the use of PPE and refer to the use of gowns and gloves during high-contact resident care activities that provide opportunities for the transfer of MDROs to staff hands and clothing.

- MDROs may be indirectly transferred from resident to resident during these high-contact care activities. Nursing home residents with wounds and indwelling medical devices are at especially high risk of both acquisition of and colonization with MDROs.

- The use of gown and gloves for high-contact resident care activities is indicated when Contact Precautions do not otherwise apply for nursing home residents with wounds and/or indwelling medical devices regardless of MDRO colonization and for residents with MDRO infection or colonization.
Enhanced Barrier Precautions

Examples of high-contact resident care activities requiring gown and glove use for Enhanced Barrier Precautions include:

- Dressing
- Bathing/showering
- Transferring
- Providing hygiene
- Changing linens
- Changing briefs or assisting with toileting
- Device care or use: central line, urinary catheter, feeding tube, tracheostomy/ventilator
- Wound care: any skin opening requiring a dressing

In general, gowns and gloves would not be required for resident care activities other than those listed above unless otherwise necessary for adherence to Standard Precautions.

https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html
Resistant Gram-Negative Bacteria (RGNB) Transmission to Gowns and Gloves of HCW During Care of Colonized Residents

- **Highest Risk:**
  - Showering
  - Hygiene
  - Toileting
  - Wound dressing changes

- **Lowest Risk:**
  - Assist feeding
  - Giving meds
  - Glucose monitoring

EBP Implementation

Enhanced Barrier Precautions should be used for all residents with any of the following:

- **Infection or colonization with a novel or targeted MDRO** (as of July 2019) defined as:
  - Pan-resistant organisms
  - Carbapenemase-producing Enterobacteriaceae
  - Carbapenemase-producing *Pseudomonas* spp
  - Carbapenemase-producing *Acinetobacter baumannii*
  - *Candida auris*
- **Wounds and/or indwelling medical devices** (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilator) regardless of MDRO colonization status residing in an at-risk area
- When Contact Precautions do not apply

[https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html](https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html)
Contact Precautions Implementation

• For all residents infected or colonized with a novel or targeted multidrug-resistant organism in specific situations:
  — Presence of acute diarrhea, draining wounds or other sites of secretions or excretions that are unable to be kept covered or contained
  — On units or in facilities where ongoing transmission is documented or suspected

• For infections (e.g., C. difficile, norovirus, scabies) and other conditions where Contact Precautions are recommended
  — See Appendix A – Type and Duration of Precautions Recommended for Selected Infections and Conditions of the CDC Guideline for Isolation Precautions

https://www.cdc.gov/infectioncontrol/guidelines/isolation/appendix/type-duration-precautions.html
Implementation of Both EBP and Contact Precautions

When implementing Contact Precautions or Enhanced Barrier Precautions, it is critical to ensure that staff has an awareness of the facility’s expectations about hand hygiene and gown/glove use, initial and refresher training and access to appropriate supplies. To accomplish this:

• Post clear signage on the door or wall outside of the resident room indicating the type of Precautions and required PPE (e.g., gown and gloves).
• For Enhanced Barrier Precautions, signage should also clearly indicate the high-contact resident care activities that require the use of a gown and gloves.
• Make PPE, including gowns and gloves, available immediately outside of the resident’s room.
• Ensure access to alcohol-based hand rub in every resident room (ideally both inside and outside of the room).
• Position a trash can inside the resident’s room and near the exit for discarding PPE after removal, prior to the exit of the room or before providing care for another resident in the same room.
• Incorporate periodic monitoring and assessment of adherence to determine the need for additional training and education.
• Provide education to residents and visitors.

https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html
Summary of PPE Use and Room Restriction When Caring for Residents in Nursing Homes

<table>
<thead>
<tr>
<th>Precautions</th>
<th>Applies to</th>
<th>PPE used for these situations</th>
<th>Required PPE</th>
<th>Room restriction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Precautions</strong></td>
<td>All residents</td>
<td>Any potential exposure to: Blood, Body fluids, Mucous membranes, Non-intact skin, Potentially contaminated environmental surfaces or equipment</td>
<td>Depending on anticipated exposure: gloves, gown, facemask or eye protection (Change PPE before caring for another resident)</td>
<td>None</td>
</tr>
<tr>
<td><strong>Enhanced Barrier Precautions</strong></td>
<td>All residents with any of the following: Infection or colonization with an MDRO when Contact Precautions do not otherwise apply; Wounds and/or indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilator) regardless of MDRO colonization status</td>
<td>During high-contact resident care activities: Dressing, Bathing/showering, Transferring, Providing hygiene, Changing linen, Changing briefs or assisting with toileting, Device care or use: central line, urinary catheter, feeding tube, tracheostomy/ventilator, Wound care: any skin opening requiring a dressing</td>
<td>Gloves and gown prior to the high-contact care activity (Change PPE before caring for another resident) (Face protection may also be needed if performing activity with risk of splash or spray)</td>
<td>None</td>
</tr>
<tr>
<td><strong>Contact Precautions</strong></td>
<td>All residents infected or colonized with a MDRO in any of the following situations: Presence of acute diarrhea, draining wounds or other sites of secretions or excretions that are unable to be covered or contained; For a limited time period, as determined in consultation with public health authorities, on units or in facilities during the investigation of a suspected or confirmed MDRO outbreak; When otherwise directed by public health authorities. All residents who have another infection (e.g., C. difficile, norovirus, scabies) or condition for which Contact Precautions is recommended in Appendix A (Type and Duration of Precautions Recommended for Selected Infections and Conditions) of the CDC Guideline for Isolation Precautions.</td>
<td>Any room entry</td>
<td>Gloves and gown (doff before room entry, doff before room exit; change before caring for another resident) (Face protection may also be needed if performing activity with risk of splash or spray)</td>
<td>Yes, except for medically necessary care</td>
</tr>
</tbody>
</table>

https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html
# Enhanced Barrier Precautions vs. Contact Precautions

<table>
<thead>
<tr>
<th>Enhanced Barrier Precautions</th>
<th>Contact Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Applies to:</strong></td>
<td><strong>Applies to:</strong></td>
</tr>
<tr>
<td>All residents with any of the following:</td>
<td>All residents infected or colonized with a novel or targeted multidrug-resistant in specific situations:</td>
</tr>
<tr>
<td>- Infection or colonization with a novel or targeted MDRO when Contact Precautions do not apply</td>
<td>- Presence of acute diarrhea, draining wounds or other sites of secretions or excretions that are unable to be covered or contained</td>
</tr>
<tr>
<td>- Wounds and/or indwelling medical devices (e.g., central line, urinary catheter, feeding tube, tracheostomy/ventilator) regardless of MDRO colonization status</td>
<td>- On units or in facilities where ongoing transmission is documented or suspected</td>
</tr>
</tbody>
</table>

Facilities may consider applying Enhanced Barrier Precautions to residents infected or colonized with other epidemiologically-important MDROs based on facility policy.

For infections (e.g., C. difficile, norovirus, scabies) and other conditions where Contact Precautions are recommended.

[https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html](https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html)
### Enhanced Barrier Precautions vs. Contact Precautions (continued)

<table>
<thead>
<tr>
<th>Enhanced Barrier Precautions</th>
<th>Contact Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PPE used for these situations:</strong></td>
<td><strong>PPE used for these situations:</strong></td>
</tr>
<tr>
<td><strong>During high-contact resident care activities:</strong></td>
<td><strong>Any room entry</strong></td>
</tr>
<tr>
<td>• Dressing</td>
<td></td>
</tr>
<tr>
<td>• Bathing/showering</td>
<td></td>
</tr>
<tr>
<td>• Transferring</td>
<td></td>
</tr>
<tr>
<td>• Providing hygiene</td>
<td></td>
</tr>
<tr>
<td>• Changing linens</td>
<td></td>
</tr>
<tr>
<td>• Changing briefs or assisting with toileting</td>
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<td></td>
</tr>
<tr>
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Enhanced Barrier Precautions vs. Contact Precautions (continued)

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<tr>
<th>Enhanced Barrier Precautions</th>
<th>Contact Precautions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applies to:</td>
<td>Applies to:</td>
</tr>
<tr>
<td>• Gloves and gown prior to</td>
<td>• Gloves and gown</td>
</tr>
<tr>
<td>the high-contact care</td>
<td>Note:</td>
</tr>
<tr>
<td>activity</td>
<td>• Includes</td>
</tr>
<tr>
<td></td>
<td>consideration for</td>
</tr>
<tr>
<td></td>
<td>single room or</td>
</tr>
<tr>
<td></td>
<td>cohorting</td>
</tr>
<tr>
<td>Note:</td>
<td>• Includes</td>
</tr>
<tr>
<td>• Does not require single-</td>
<td>restriction of</td>
</tr>
<tr>
<td>room</td>
<td>movement and</td>
</tr>
<tr>
<td>• Does not require</td>
<td>participation in</td>
</tr>
<tr>
<td>restrictions of movement/</td>
<td>group activities</td>
</tr>
<tr>
<td>participation within</td>
<td>within the facility</td>
</tr>
<tr>
<td>facility policy</td>
<td></td>
</tr>
</tbody>
</table>

Note:

https://www.cdc.gov/hai/containment/PPE-Nursing-Homes.html
Hand Hygiene
Hand Hygiene Data

Hand Hygiene Compliance

- Unit A
- Unit B
- Unit C
- Unit D
Hand Hygiene Data

Hand Hygiene Compliance

- Unit A
- Unit B
- Unit C
- Unit D

Jan-22 Feb-22 Mar-22 Apr-22 May-22 Jun-22 Jul-22
Fishbone Diagram Worksheet

Fishbone Diagram Worksheet (allianthealth.org)
• Whiteboard to fill in with audience call outs?
Group Discussion

- Who is responsible for collecting this data?
- What questions do you have about the data?
- How can this data be visualized in a way that will lead to improvement?
- What are some issues/concerns with this data?
- How do you address this?
Findings From Environment of Care Audits

Units A & B were pooling their observations through July (same nurse manager)

Multiple ABHR dispensers empty

Dispensers not widely available

Dispensers are automatic and too much product is dispensed

Staff report product is “sticky”
Hand Hygiene Data
What Are the Next Steps?

- Units A & B were pooling their observations through July (same nurse manager)
- Multiple ABHR dispensers empty
- Dispensers not widely available
- Dispensers are automatic, and too much product is dispensed
- Staff report that product is "sticky"
Group Discussion

- What changed?
- Do you have any questions about this data?
- Is there anything to celebrate?
- Are there any red flags?
Surveillance and Data Analysis
Objectives

• Highlight the importance of surveillance as a tool to inform the facility infection prevention & control (IPC) program
• Describe outcome measures and performance measures in the context of surveillance
• Provide examples of how surveillance can inform IPC risks and interventions
• Demo the Healthcare-associated Infections (HAI) surveillance & Dashboard Tool
• Share tools and resources for IPC surveillance and quality improvement initiatives
Surveillance

- IPs must understand the purpose, methods and definitions of surveillance
- Your “pulse” on the facility
- Must be consistent with regulations, state requirements and evidence-based practice
- Findings should be shared with frontline staff and leadership at the IP or QAPI committee
What Is Surveillance?

- Surveillance is a system that allows for identification, reporting, investigation and control of infectious or communicable diseases and applies to staff, residents, volunteers, visitors or others in the facility.

- It is a necessary component of an effective IP program and the pulse of your facility.
Public Health Surveillance System & LTCFs
Facility infection prevention and control (IPC) surveillance activities are helpful in informing local, state and national efforts to prevent and control infectious diseases.

- True
- False

https://www.cdc.gov/training/publichealth101/surveillance.html
Knowledge Check

Facility infection prevention and control (IPC) surveillance activities are helpful in informing local, state, and national efforts to prevent and control infectious diseases.

- True
- False

https://www.cdc.gov/training/publichealth101/surveillance.html
Surveillance

“...the ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice.” — Field Epidemiology

Active surveillance
- Actively looking for the infection or condition
- Ensures more complete reporting
- Used for specific epidemiologic investigations

Passive surveillance
- Infection found during routine, ongoing data collection
- Often limited by incomplete data or report quality

https://www.cdc.gov/training/publichealth101/surveillance.html
Infection Preventionist Role

• Infection prevention is a specialty and requires specific training and competencies
• **Application of scientific principles and methods for data collection and analysis**
• **Surveillance according to approved definitions and methodologies**
• Reports and presents to appropriate committees (Infection Prevention, Antimicrobial Stewardship, QAPI)
• **Investigates outbreaks and implement prevention efforts**
• **Reports outbreaks of communicable diseases to local health jurisdictions as needed in consultation with administration and medical director**
• Plans and conducts educational programs for staff and residents
• Develops and reviews policies and procedures, monitors for adherence and supports staff and resident safety
• Ensures compliance with local, state and federal standards and regulations for infection prevention
CMS Infection Prevention Standards

- Infection prevention and control program (IPCP) must include, at a minimum:
  - A system for reporting, identifying, reporting, investigating, and controlling infections and communicable diseases
    - All residents, staff, volunteers, visitors, and other individuals providing services
  - Written standards, policies, and procedures
    - System for surveillance
    - Reporting process
    - Standard and transmission-based precautions
    - Isolation appropriateness
  - Circumstances under which the facility must prohibit employees with a communicable disease or skin lesion
  - Hand hygiene procedures

### IPC Program Binder

<table>
<thead>
<tr>
<th>Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP Plan</td>
</tr>
<tr>
<td>Risk Assessment</td>
</tr>
<tr>
<td>TB Risk Assessment</td>
</tr>
<tr>
<td>IP Staff Competencies</td>
</tr>
<tr>
<td>IP/Antimicrobial Stewardship Committee Minutes</td>
</tr>
<tr>
<td><strong>Surveillance Plan &amp; Data</strong></td>
</tr>
<tr>
<td>SMART Goals &amp; Objectives</td>
</tr>
</tbody>
</table>
Surveillance Plan

• Annual infection prevention plans should include a surveillance section describing:
  – Surveillance method (total/targeted/combination)
  – Populations (patient, resident, staff, those with specific risk factors, etc.)
  – Events monitored (UTI, C. diff, etc.)
  – Other high-risk events, such as TST conversions, C. auris, CRE, etc.
  – Regular evaluation to ensure it meets organizational goals and objectives and to ensure methodologies are current
  – Efforts to select event types with standardized and nationally recognized benchmarking data
    • NHSN for HAI data or McGeer Criteria
Surveillance Methods

- Electronic
- House-wide or comprehensive surveillance
- Outbreak surveillance
- Outcome surveillance
- Process surveillance
- Targeted surveillance
Data Collection

- Concurrent versus retrospective
- Data source examples
- Medical records
- Lab reports
- List of admissions with diagnoses
- Patient day reports/census data by unit
- Isolation precautions report/list
- Incident reports
- Observations
- Procedure or activity logs
Surveillance Definitions

- Essential component of an effective infection prevention program
- Defined in the APIC text as “a comprehensive method for measuring outcomes and related processes of care, analyzing the data, and providing information to members of the health care team to assist in improving those outcomes”
- Should be based on sound epidemiological and statistical principles
- When properly collected, surveillance data can be used to improve the quality of care and outcomes
- No matter which criteria are used, it is important that the definitions are accepted by the facility physicians and infection prevention and applied consistently to ensure standardized surveillance is done over time (NHSN versus McGeer criteria)
Clinical Diagnoses & Surveillance Definitions

- **Clinical Diagnoses**
  - Patient or resident specific
  - ALL available diagnostic data considered in a clinical diagnosis, including additional clinical, epidemiological and laboratory data not used for surveillance
  - May be made even when a surveillance definition may not be met

- **Surveillance Definitions**
  - Designed to study and identify trends in a population
  - Allows confidence in the aggregation and analysis of data

https://www.cdc.gov/nhsn/faqs/faqs-miscellaneous.html#q5
Knowledge Check

The facility IP notes identified a single case of COVID-19 illness in a resident on 5/4/2023. The IP initiates an outbreak investigation, per CDC guidance. Testing is initiated for all residents and staff working in Hall A, where the first (index) case was identified.

This is an example of ______ surveillance.

A. Active
B. Passive
C. This is not an example of surveillance
D. I do not know

https://www.cdc.gov/training/publichealth101/surveillance.html
Knowledge Check

The facility IP notes identified a single case of COVID-19 illness in a resident on 5/4/2023. The IP initiates an outbreak investigation, per CDC guidance. Testing is initiated for all residents and staff working in Hall A, where the first (index) case was identified.

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• Actively looking for the infection or condition
• Ensures more complete reporting
• Used for specific epidemiologic investigations

Passive surveillance
• Infection found during routine, ongoing data collection
• Often limited by incomplete data or report quality

https://www.cdc.gov/training/publichealth101/surveillance.html
Knowledge Check

At the end of each week and month, the facility IP reviews all laboratory results for multi-drug resistant organisms, healthcare-associated infections (urinary tract infections, gastrointestinal infections, respiratory infections, wound infections, or bloodstream infections), and any other reportable infections.

This is an example of _____ surveillance.

• Active
• Passive
• This is not an example of surveillance.
• I do not know

https://www.cdc.gov/training/publichealth101/surveillance.html
Knowledge Check

At the end of each week and month, the facility IP reviews all laboratory results for multi-drug resistant organisms, healthcare-associated infections (urinary tract infections, gastrointestinal infections, respiratory infections, wound infections or bloodstream infections), and any other reportable infections.

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https://www.cdc.gov/training/publichealth101/surveillance.html
Why Is Surveillance Important?

- Standardized process to measure and evaluate an outcome
- Helpful tool to identify both risks & potential problems
- Use of surveillance definitions
  - Essential to ensure the same thing is counted
  - To enable meaningful comparison with others
  - To correctly interpret changes over time
  - To identify factors associated with HAIs
  - Identify factors associated with an infection or outbreak
  - To inform infection prevention efforts and targeted interventions
Outcome Surveillance

- CMS Quality Metrics
- Resident care experience/satisfaction
- Healthcare-associated infection surveillance
  - Urinary Tract Infections
  - COVID-19 Infections
  - Multi-drug resistant organisms (MDROs)

Process Surveillance

- Hand hygiene compliance
- Foley catheter care/bundle compliance
- Ventilator-associated pneumonia (VAP) Bundle compliance
- Transmission-based precautions (TBP) compliance
- Cleaning & disinfection
Surveillance in Nursing Homes

National Healthcare Safety Network (NHSN): Patient Safety Module

- Centers for Disease Control & Prevention (CDC)
- Long-term Care Facility (LTCF) Component
  - Multi-drug resistant organisms (MDROs) & *Clostridioides difficile* Infection (CDI)
  - Urinary tract infections (UTIs)
  - Flu vaccination
  - Prevention process measures (hand hygiene, PPE use)
  - COVID-19 data reporting

McGeer Criteria

- Evidence-based, standardized guidance for infection surveillance activities in long-term care facilities (LTCF)
- Designed to define and identify infections for surveillance purposes
- Represented syndromes capture a variety of clinically relevant infections that occur in the LTCF population

---

### Revised McGeer Criteria

- **Definitions for Constitutional Criteria in Residents of LTCFs**
- **Urinary Tract Infections**
- **Skin, Soft Tissues, and Mucosal Infections**
- **Respiratory Infections**
- **Gastrointestinal Infections**
Revised McGeer Criteria: Constitutional Criteria

- Fever
- Changes in white blood cell counts
- Cognitive changes
- Functional decline
Revised McGeer Criteria: Urinary Tract Infections

• Catheter-associated urinary tract infections
  – Indwelling urinary catheters
• UTIs without indwelling catheters
Revised McGeer Criteria: Skin, Soft Tissue, and Mucosal Infections

- Cellulitis, soft tissue, or wound infection
- Scabies
- Fungal oral or perioral and skin infections
- Herpesvirus skin infections
- Conjunctivitis

Revised McGeer Criteria: Respiratory Infections

- Common cold syndrome or pharyngitis
- Influenza-like illness
- Pneumonia
- Lower respiratory tract
  - Bronchitis
  - Tracheobronchitis
- COVID infection

Revised McGeer Criteria: Gastrointestinal (GI) Tract Infections

- Gastroenteritis
- Norovirus gastroenteritis
- Clostridium difficile infection
Revised McGeer Criteria for Infection Surveillance Checklist

Table 1. Constitutional Criteria for Infection

<table>
<thead>
<tr>
<th>Fever</th>
<th>Leukocytosis</th>
<th>Acute Mental Status Change</th>
<th>Acute Functional Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single oral temp &gt;37.8 °C (100 °F), OR Repeated oral temp &gt;37.3 °C (99.5 °F), OR Repeated rectal temp &gt;37.5 °C (99.5 °F), OR Single temp &gt;31.1 °C (88 °F) from baseline from any site</td>
<td>&gt;14,000 WBC / mm³, OR &gt;6% band, OR 20,500 bands / mm³</td>
<td>Acute onset, AIX, Fluctuating course, AIX, Intention, AIX, Either disorganized thinking, OR Stated level of consciousness</td>
<td>8-point increase in baseline ADL score according to the following items: 1. Bed mobility 2. Transfer 3. Locomotion within LTCP 4. Dressing 5. Toilet use 6. Personal hygiene 7. Eating Each scored from 0 (independent) to 4 (total dependence)</td>
</tr>
</tbody>
</table>

Table 2. Urinary Tract Infection (UTI) Surveillance Definitions

<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Criteria</th>
<th>Selected Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>UTI without indwelling catheter</td>
<td>Most fulfill both 1 AND 2. 1. At least one of the following signs or symptom: □ Acute dysuria or pain, swelling, or tenderness of tests, epididymis, or prostate □ Fever or leukocytosis, and 2 of the following: □ Acute costovertebral angle pain or tenderness □ Suprapubic pain □ Gross hematuria □ New or marked increase in incontinence □ New or marked increase in urgency □ New or marked increase in frequency □ If no fever or leukocytosis, then 2 of the following: □ Suprapubic pain □ Gross hematuria □ New or marked increase in incontinence □ New or marked increase in urgency □ New or marked increase in frequency</td>
<td></td>
</tr>
<tr>
<td>2. At least one of the following microbiology criteria</td>
<td>□ 10° clu/ml of no more than 2 species of organisms in a voided urine sample □ 10° clu/ml of any organism(s) in a specimen collected by an indwelling catheter</td>
<td></td>
</tr>
</tbody>
</table>

The following 2 comments apply to both UTI with or without catheter: □ UTI can be diagnosed without localizing symptoms if a blood isolate is the same as the organism isolated from urine and there is no alternate site of infection □ In the absence of a clear alternate source of infection, fever or rigors with a positive urine culture result in the non-catheterized resident or acute confusion in the catheterized resident will often be treated as UTI. However, evidence suggests that most of these episodes are likely not due to infection of a urinary source.

□ Urine specimens for culture should be processed as soon as possible, preferably within 2-4 h □ If urine specimens cannot be processed within 30 min of collection, they should be refrigerated and used for culture within 24 h
Knowledge Check

As part of our IP Plan and Risk Assessment, we conduct targeted surveillance for UTIs and C diff infections.

Mrs. Smith was transferred to our facility on 5/4/2023. She has a history of congestive heart failure, diabetes type II, high blood pressure, and a recent multi-drug resistant Pseudomonas aeruginosa decubitus infection. The staff has been using enhanced barrier precautions since Mrs. Smith’s return from the hospital. However, the night shift nurse reports that Mrs. Smith has had three loose stools within the last eight hours, accompanied by abdominal pain and fever.

Based on this report and the acute changes noted, staff should transition and implement contact precautions.

A. True
B. False
Knowledge Check

Mrs. Smith was transferred to our facility on 4/4/2023. She has a history of congestive heart failure, diabetes type II, high blood pressure, and a recent multi-drug resistant *Pseudomonas aeruginosa* decubitus infection. The staff has been using enhanced barrier precautions since Mrs. Smith’s return from the hospital. However, the night shift nurse reports that Mrs. Smith has had three loose stools within the last eight hours, accompanied by abdominal pain and fever.

Based on this report and the acute changes noted, staff should transition and implement contact precautions.

A. True  
B. False

- ✓ Presence of acute diarrhea  
- ✓ Clinical evaluation indicated to rule out C. diff infection  
- ✓ Contact precautions are INDICATED
Knowledge Check

As part of our IP Plan and Risk Assessment, we conduct targeted surveillance for UTIs and C diff infections.

Mrs. Smith was transferred to our facility on 5/4/2023. She has a history of congestive heart failure, diabetes type II, high blood pressure, and a recent multi-drug resistant Pseudomonas aeruginosa decubitus infection. The staff has been using enhanced barrier precautions since Mrs. Smith’s return from the hospital. However, on 5/19/2023, the night shift nurse reported that Mrs. Smith had had three loose stools within the last eight hours, accompanied by abdominal pain and fever (highest temperature 101.7 °F).

Staff immediately initiated Contact Precautions and sent stool specimens for C diff testing. The C. diff PCR test returned positive. Does this meet the McGeer surveillance criteria for a healthcare-associated C. diff infection?

A. Yes
B. No
Knowledge Check

As part of our IP Plan and Risk Assessment, we conduct targeted surveillance for UTIs and C diff infections.

Mrs. Smith was transferred to our facility on 5/4/2023. She has a history of congestive heart failure, diabetes type II, high blood pressure, and a recent multi-drug resistant Pseudomonas aeruginosa decubitus infection. The staff has been using enhanced barrier precautions since Mrs. Smith’s return from the hospital. However, on 5/19/2023, the night shift nurse reported that Mrs. Smith had had three loose stools within the last eight hours, accompanied by abdominal pain and fever (highest temperature 101.7 °F).

Staff immediately initiated Contact Precautions and sent stool specimens for C diff testing. The C. diff PCR test returned positive. Does this meet the McGeer surveillance criteria for a healthcare-associated C. diff infection?

A. Yes  
B. No  

A. Yes
<table>
<thead>
<tr>
<th>Syndrome</th>
<th>Criteria</th>
<th>Selected Comments*</th>
</tr>
</thead>
</table>
| Gastroenteritis                | **Must fulfill at least 1 criteria.**                                    | • Exclude non-infectious causes of symptoms such as new medications causing diarrhea, nausea, or vomiting or diarrhea resulting from initiation of new enteral feeding  
• Presence of new GI symptoms in a single resident may prompt enhanced surveillance for additional cases  
• In the presence of an outbreak, stool specimens should be sent to confirm the presence of norovirus or other pathogens (e.g., rotavirus, E. coli O157:H7) |
|                               | Diarrhea: 2-3 liquid or watery stools above what is normal for the resident within 24 h |                                                                                  |
|                               | Vomiting: ≥2 episodes in 24 h                                            |                                                                                  |
|                               | Both of the following signs or symptoms                                    |                                                                                  |
|                               | Stool specimen positive for *Escherichia coli* (Salmonella, Shigella, and Campylobacter species, rotavirus) |                                                                                  |
|                               | At least one of the following criteria                                    |                                                                                  |
|                               | Nausea                                                                    |                                                                                  |
|                               | Vomiting                                                                  |                                                                                  |
|                               | Abdominal pain or tenderness                                               |                                                                                  |
|                               | Diarrhea                                                                  |                                                                                  |
| Norovirus gastroenteritis      | **Must fulfill both 1 AND 2.**                                            | • In the absence of lab confirmation, a norovirus gastroenteritis outbreak (≥2 cases in a LTCF) may be assumed if all of the Kaplan Criteria are present:  
• Vomiting in >50% of affected persons  
• A mean or median incubation period of 24-48 h  
• A mean or median duration of illness of 12-56 h, and  
• No bacterial pathogen is identified in stool culture |
|                               | 1. At least one of the following criteria                                  |                                                                                  |
|                               | Diarrhea: 2-3 liquid or watery stools above what is normal for the resident within 24 h |                                                                                  |
|                               | Vomiting: ≥2 episodes in 24 h                                             |                                                                                  |
|                               | 2. A stool specimen positive for norovirus detected by electron microscopy, enzyme immunoassay, or molecular diagnostic testing |                                                                                  |
| Clostridium difficile infection | **Must fulfill 1 AND 2.**                                                 | • Individual previously infected with *C. difficile* may continue to be colonization even after symptoms resolve  
• In the setting of an outbreak of GI infection, individuals could be *C. difficile* toxin positive because of ongoing colonization and also be co-infected with another pathogen. Other surveillance criteria should be used to differentiate between infections in this scenario |
|                               | 1. At least one of the following criteria                                  |                                                                                  |
|                               | Diarrhea: 2-3 liquid or watery stools above what is normal for the resident within 24 h |                                                                                  |
|                               | Presence of toxic megacolon (radiologic finding of abnormal large bowel dilation) |                                                                                  |
|                               | 2. At least one of the following diagnostic criteria                      |                                                                                  |
|                               | Stool sample positive for *C. difficile* toxin A or B, or detection of toxin-producing *C. difficile* by culture or PCR in stool sample |                                                                                  |
|                               | Pseudomembranous colitis identified in endoscopic exam, surgery, or histopathologic exam of biopsy specimen |                                                                                  |

* Knowledge Check  
✓ Diarrhea  
✓ Detection of toxin-producing *C. difficile* by PCR in stool sample  

* Refer to original article (Stone ND, et al. Infect Control Hosp Epidemiol 2012;33:965-77) for full comments
HAI Surveillance and Dashboard

- AHS HAI Surveillance & Dashboard Tool
  - Track and visualize healthcare-associated infections (HAIs)
    - Respiratory tract infections
    - Urinary tract infections
    - Gastrointestinal tract infections
    - Skin and soft tissue infections
    - Multi-drug resistant organisms (MDRO)
  - Track hand Hygiene Compliance
    - Facility-wide
    - Healthcare personnel type
    - Unit or area specific
  - Modifiable spreadsheet (with automated formulas) designed to support nursing facility infection prevention and control (IPC) surveillance
    - Line lists
    - Data tables
    - Graphs

https://quality.allianthealth.org/media_library/ahs-hai-surveillance-dashboard-tool/
# Outcome Surveillance: HAI Data

## FY2023 (Jan-Dec 2022)

<table>
<thead>
<tr>
<th>Facility-wide HAI</th>
<th>January</th>
<th>February</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>August</th>
<th>September</th>
<th>October</th>
<th>November</th>
<th>December</th>
<th>FYTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Infections (RTIs, UTIs, GIs, SSTIs)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>10</td>
<td>15</td>
<td>12</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>68</td>
</tr>
<tr>
<td>Resident Days</td>
<td>1000</td>
<td>1250</td>
<td>950</td>
<td>1150</td>
<td>1300</td>
<td>1400</td>
<td>1250</td>
<td>900</td>
<td>1100</td>
<td>1225</td>
<td>1300</td>
<td>1000</td>
<td>13825</td>
</tr>
<tr>
<td>HAI Rate (per 1000 resident days)</td>
<td>1.00</td>
<td>1.60</td>
<td>3.16</td>
<td>3.48</td>
<td>3.85</td>
<td>4.29</td>
<td>8.00</td>
<td>16.67</td>
<td>10.91</td>
<td>4.90</td>
<td>2.31</td>
<td>1.00</td>
<td>4.92</td>
</tr>
<tr>
<td>Mean (Average) Rate (per 1000 resident days) from previous year</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>

## Healthcare-associated Infections (HAI) FY2022

![Bar Chart: Healthcare-associated Infections (HAI) FY2022](image-url)
Outcome Surveillance: HAI Data
# HAI Dashboard: Surveillance Terms & Descriptions

<table>
<thead>
<tr>
<th>Surveillance Term</th>
<th>Definition</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Location</td>
<td>The resident’s designated or assigned area while receiving care at the facility</td>
<td></td>
</tr>
<tr>
<td>FY</td>
<td>Fiscal Year</td>
<td></td>
</tr>
<tr>
<td>Gastrointestinal (GI) tract infection</td>
<td>Includes infection definitions for (A) gastroenteritis, (B) norovirus gastroenteritis, and (C) C. difficile infection</td>
<td>McGeer Criteria (Link)</td>
</tr>
<tr>
<td>HAI Dashboard</td>
<td>Provides a high-level summary overview of the selected infections in the facility through graphs and tables</td>
<td></td>
</tr>
<tr>
<td>HAI Rate (per 1000 resident days)</td>
<td>(Number of healthcare-associated infections + total resident days for the specified time period) × 1000</td>
<td></td>
</tr>
<tr>
<td>Hand Hygiene (HH) compliance</td>
<td>(Total number of compliant HH observations performed/number of opportunities to HH perform) × 100</td>
<td></td>
</tr>
<tr>
<td>Healthcare-associated infections (HAI)</td>
<td>Healthcare-associated infections (HAIs) are infections people get while they are receiving health care for another condition. HAIs can happen in any health care facility, including hospitals, ambulatory surgical centers, end-stage renal disease facilities, and long-term care facilities. Bacteria, fungi, viruses, or other, less common pathogens can cause HAIs.</td>
<td><a href="https://www.hhs.gov/olao/topics/health-care-associated-infections/index.html">https://www.hhs.gov/olao/topics/health-care-associated-infections/index.html</a></td>
</tr>
<tr>
<td>Indwelling urinary catheter</td>
<td>A drainage tube that is inserted into the urinary bladder through the urethra, is left in place, and is connected to a collection system; also called a Foley catheter. <em>Straight in-and-out catheters are not considered as indwelling urinary catheters.</em></td>
<td><a href="https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf">https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf</a></td>
</tr>
<tr>
<td>Indwelling urinary catheter utilization ratio</td>
<td>The indwelling urinary catheter utilization ratio is calculated by dividing the number of urinary catheter days by the number of patient days. This ratio is useful for the purposes of tracking indwelling urinary catheter use over shorter periods of time and for internal trend analyses.</td>
<td><a href="https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf">https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf</a></td>
</tr>
<tr>
<td>Linear (Trendline)</td>
<td>Provides a visual representation of the direction of your healthcare-associated infections, specifically if it is increasing or decreasing at a steady rate.</td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>Average number of infections from the previous year (calculation: sum of all infections ÷ 12)</td>
<td></td>
</tr>
<tr>
<td>Multi-drug resistant organism (MDRO)</td>
<td>Microorganisms, predominantly bacteria, that are resistant to one or more classes of antimicrobial agents. Examples include Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant Enterococcus (VRE), certain gram negative bacteria, including those producing extended spectrum beta-lactamases (ESBLs) and others that are resistant to multiple classes of antimicrobial agents.</td>
<td><a href="https://www.cdc.gov/infectioncontrol/guideline/MDRO/background.html">https://www.cdc.gov/infectioncontrol/guideline/MDRO/background.html</a></td>
</tr>
<tr>
<td>Rate (per 1000 resident days)</td>
<td>(Number of the specified infection + total resident days for the specified time period) × 1000</td>
<td><a href="https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf">https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf</a></td>
</tr>
<tr>
<td>Resident days</td>
<td>A daily count of the number of residents in a long-term care facility location during a time period. To calculate resident days, for each day of the month, at the same time each day; record the number of residents. At the end of the month, add the total daily counts.</td>
<td><a href="https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf">https://www.cdc.gov/nhsn/pdfs/ltc/ltcf-manual-508.pdf</a></td>
</tr>
</tbody>
</table>
IPC Surveillance: Resources & Training

- https://quality.allianthealth.org/topic/infection-control/
  - HAI Surveillance
    - HAI Dashboard & Surveillance Tool
    - Revised McGeer Criteria Surveillance Checklist Tool
    - HAI Dashboard & Surveillance Tool Instructional Video
- https://www.cdc.gov/hai/prevent/tap.html
- https://www.cdc.gov/infectioncontrol/training/strive.html#anchor_1561121533
- https://www.cdc.gov/infectioncontrol/index.html
- https://www.cdc.gov/longtermcare/training.html
IP Resource Box
Resource Boxes Are on the Way!

- CDC Grant
- Partnership with UGA and Alliant
- Resource Needs Recognized via DPH HAI Team ICARs
Infection Prevention Toolkit

• All Assisted Living Facilities and Personal Care Homes with 25 or more beds will receive one box.

• Resource boxes contain the following:
  – APIC Long-term Care Text
  – Quick Reference for Microbes
  – Glo Germ Kits
  – Resources and Tools
Respiratory Protection Program

• UGA will lead a respiratory protection program training for 2,200 Georgia LTCFs.
  • 368 SNFs
  • 295 assisted living facilities
  • 155 personal care homes with 25 or more beds,
  • 280 hospice facilities
  • 1,095 community living arrangements
Questions?
Alliant Health Solutions Resources

Strike & Support Team Office Hours

Office Hours for SRF and MD's:
- Click here to register – November 16, 2022 at 11 a.m. ET
- Click here to register – December 14, 2022 at 11 a.m. ET

Office Hours for Non-SRF:
- Click here to register – November 16, 2022 at 1 p.m. ET
- Click here to register – December 14, 2022 at 1 p.m. ET

Hand Hygiene
Handsfree the Fibro Way – English Handsfree the Fibro Way – Spanish Handsfree the Fibro Way – French Handsfree the Fibro Way – Portuguese Frequently Asked Questions – Alcohol Based Hand Rub

Catheter Associated Urinary Tract Infection (CAUTI)
CAUTI Care Assessment Tool
Urinary Catheter Quick Observation Tool
CDC-NSFAC Guidelines for Prevention of CAUTI 2019
APIC Toolkit for Reducing CAUTI in HIndaloe
CDC TIP CAUTI Implementation Guide

Showing More

Infection Control Resources


https://quality.allianthealth.org/topic/infection-control/
Thank You for Your Time!
Contact the AHS Patient Safety Team

Patientsafety@allianthealth.org

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Infection Prevention Specialist
Erica.Umeakunne@AlliantHealth.org
Save the Date

SNF and Medical Directors Office Hours:
June 23, 2023 | 11 a.m. ET

ALF and PCH
May 26, 2023 | 11 a.m. ET
June 30, 2023 | 11 a.m. ET
Thanks Again…

- Georgia Department of Public Health
- University of Georgia