

Wisconsin HAI Long-Term Care Education Series

December 5, 2024



WISCONSIN DEPARTMENT
of HEALTH SERVICES

Agenda

- Announcement
- Gastrointestinal outbreaks in long-term care.

Feedback Requested



We invite you to complete the [ATARI survey](#) by December 13.



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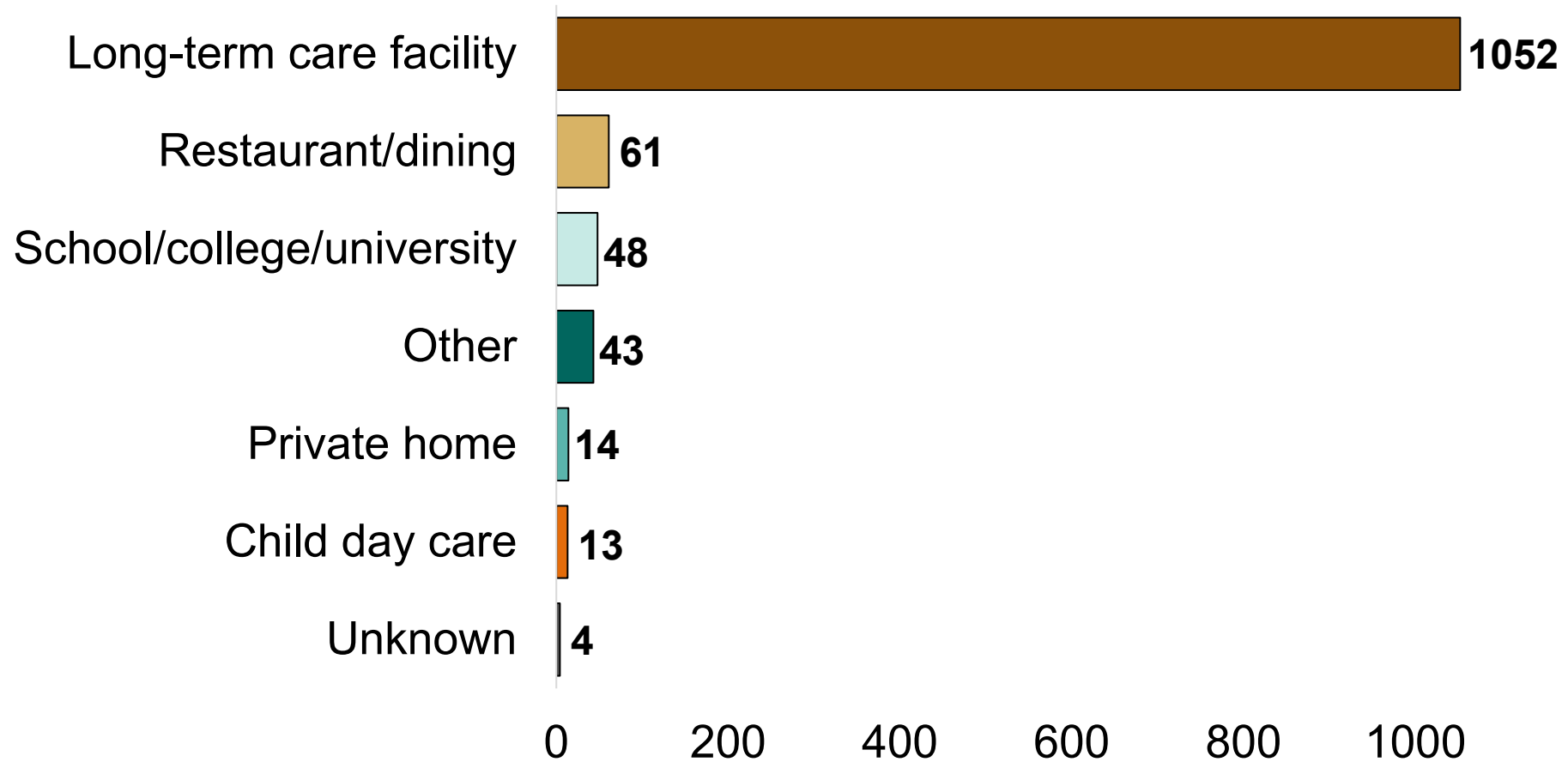
Prevention and control of acute gastroenteritis outbreaks

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December 2024

Outline

- Background
- Outbreak preparation
- Outbreak identification and response initiation
- Outbreak management

Background



Viral acute gastroenteritis outbreaks by exposure setting

Wisconsin, Jan. 2017 – Mar. 2023

Norovirus

- Most common cause of enteric illness
- Member of the *Caliciviridae* family
 - Non-enveloped viruses = harder to “kill”
 - Soap and water most effective for hand hygiene
 - Bleach solution most effective for disinfecting surfaces
 - Interpret EPA’s list of norovirus-effective products with caution

CDC (2011). Updated norovirus outbreak management and disease prevention guidelines. *Morbidity and Mortality Weekly Report (MMWR) Recommendations and Reports*, 60(RR-3), 1–18.

History of Norovirus

- 1929: “Winter vomiting syndrome” first described
- 1968: Identified as cause of outbreak in Norwalk, Ohio
- Late 1980s: Received national attention due to large cruise ship outbreaks
- 1990s: Use of molecular diagnostics became more widespread

Clinical Picture

- Median incubation: about 29 to 33 hours (1.2 to 1.4 days)
- Illness duration: 1 to 3 days (can be longer in older adults)
- Symptoms: non-bloody diarrhea, vomiting, abdominal pain, low-grade fever
- Self-limiting illness
- **Not the flu**

Devasia, T., Lopman, B., Leon, J., & Handel, A. (2015). Association of host, agent and environment characteristics and the duration of incubation and symptomatic periods of norovirus gastroenteritis. *Epidemiology and infection*, 143(11), 2308–2314.

Treatment

- There is no vaccine.
- There are no norovirus-specific antiviral medications.
- Severe illness is possible in elderly individuals.
- Deaths have been reported in association with outbreaks.

Viral Shedding

- Humans are the only known reservoir.
- Virus is shed in feces and vomitus.
- Shedding can begin 24 hours before symptoms.
- Shedding can last for weeks.
- About one-third of infections are asymptomatic.

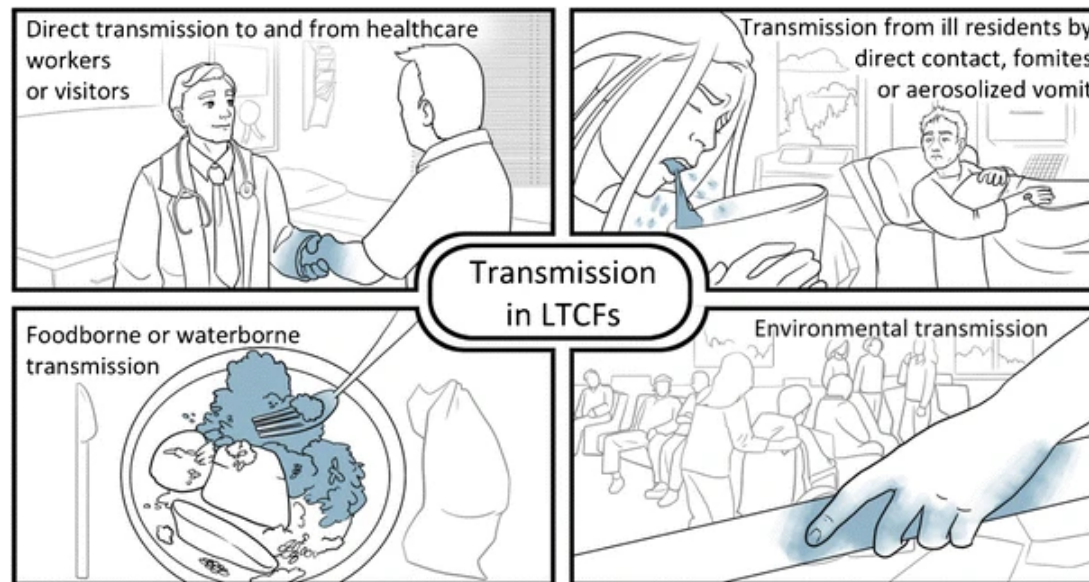
Transfer of Norovirus

- **There are up to 10,000,000 norovirus particles per gram of feces.**
- Infectious dose can include as few as 10 virus particles.
- Norovirus can be transferred from contaminated fingers to up to seven surfaces.

Barker, J., Vipond, I. B., & Bloomfield, S. F. (2004). Effects of cleaning and disinfection in reducing the spread of Norovirus contamination via environmental surfaces. *Journal of hospital infection*, 58(1), 42-49.

Transmission

- Person-to-person
 - Fecal-oral
 - Aerosolized vomitus
- Environmental
 - Foodborne
 - Waterborne



Chen, Y., Hall, A. J., & Kirk, M. D. (2017). Norovirus Disease in Older Adults Living in Long-Term Care Facilities: Strategies for Management. *Current geriatrics reports*, 6(1), 26–33.

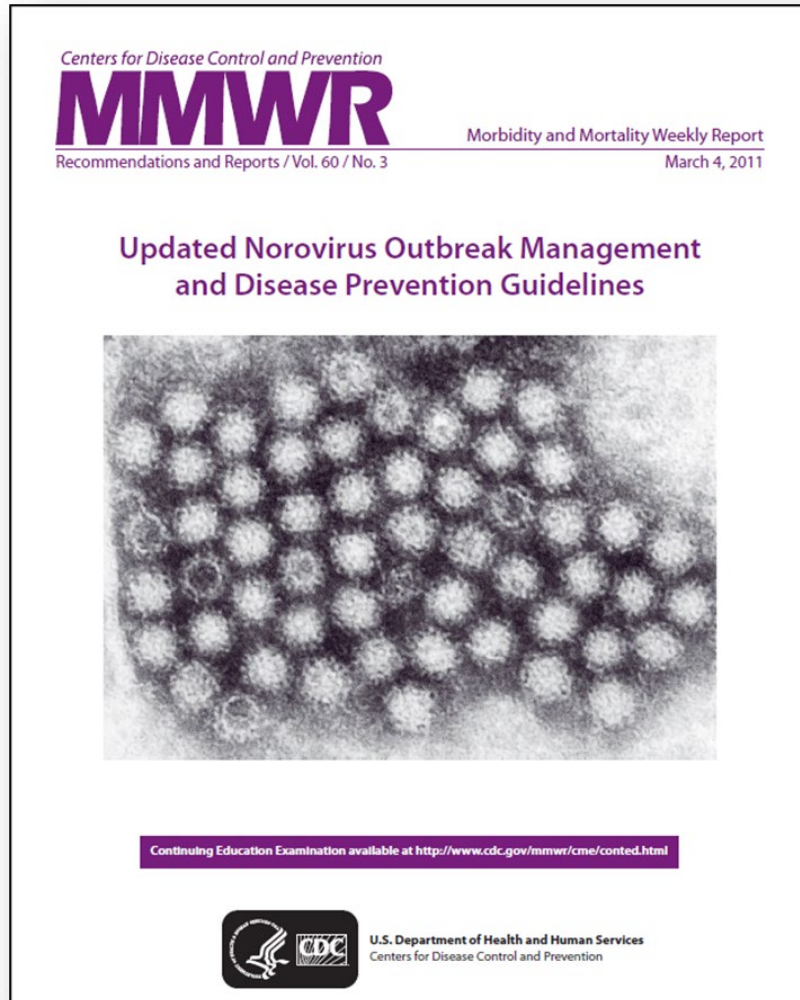
GI Outbreak Preparation

Preparing for Outbreaks



Be familiar with guidelines and resources:
Wisconsin Division of Public Health (DPH)/ Division of Quality Assurance (DQA): [Prevention and Control Recommendations For Viral Gastroenteritis Outbreaks in Wisconsin Long-Term Care Facilities \(LTCF\)](#)

Preparing for Outbreaks



Be familiar with guidelines and resources:

[Centers for Disease Control and Prevention \(CDC\)](#)

[MMWR: Updated Norovirus management and Disease Prevention Guidelines](#)

Preparing for Outbreaks

GUIDELINE FOR THE PREVENTION AND CONTROL OF NOROVIRUS GASTROENTERITIS OUTBREAKS IN HEALTHCARE SETTINGS

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Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings

1

Be familiar with guidelines and resources:

[CDC: Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings](#)

Preparing for Outbreaks

Be familiar with guidelines and resources:

- [DHS Norovirus fact sheet](#)
- [DHS handwashing fact sheet](#)
- [CDC norovirus cleaning instructions](#)

NOROVIRUS

Norovirus is a virus that causes vomiting, diarrhea, and abdominal cramping. Norovirus is often incorrectly referred to as "the stomach flu," however, norovirus (like its cousin, influenza) is not related to the flu (influenza), which causes respiratory symptoms. Norovirus causes approximately 20 million illnesses each year in the United States. Anyone can get norovirus infections and become sick. There are many different types of noroviruses, having a norovirus infection once does not mean you will not get it again during your lifetime.

How is it spread?

- The virus is found in the stool or vomit of someone infected with norovirus from the time symptoms start until at least 48 hours after symptoms end, and probably longer.
- The virus can be on a person's hands and spread to others, which is why handwashing is important.
- It can be spread by eating food or drink that has been contaminated with norovirus, as well as touching objects with norovirus on them (e.g., shaking hands with an infected person, touching a doorknob that has norovirus on it) and then touching your mouth.
- Norovirus can survive on surfaces for 48 days or longer.

What are the signs and symptoms?

Symptoms usually begin 12-48 hours after becoming infected with the virus and can include:

Common symptoms:	Occasional symptoms:
• Vomiting (more common in children)	• Low-grade fever
• Watery, non-bloody diarrhea	• Headache
• Stomach cramps	• Fatigue
	• Chills

What are the treatment options?

- There is no treatment for norovirus, people usually recover on their own 2-3 days after symptoms start.
- Drinking plenty of liquids is important to replace fluid loss and to make sure the body does not become dehydrated.

How can it be prevented?

- Handwashing is the most important step to prevent the spread of norovirus. It is essential to wash hands after using the restroom and before handling food.
- Anyone with diarrhea or vomiting should stay home from work or school until symptoms are gone in order to prevent spreading norovirus to others.
- People with diarrhea who are vomiting should not handle food, work in or attend day care centers or school, or take care of patients in a health care facility until 48 hours after their symptoms are gone.
- No vaccine is available to prevent norovirus infections.

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12/15/2016

WASH YOUR HANDS!

- 1. Wet** your hands with clean, running water (warm or cold), and apply soap.
- 2. Lather** your hands by rubbing them together with the soap. Be sure to lather the backs of your hands, between your fingers, and under your nails.
- 3. Scrub** your hands for at least 20 seconds. Need a timer? Hum the "Happy Birthday" song from beginning to end twice.
- 4. Rinse** your hands well under clean, running water. Let the water run back into the sink, not down to your elbows.
- 5. Dry** your hands using a clean towel or air dry them.

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#48174310/2016

Clean-up and Disinfection for Norovirus ("Stomach Bug")

THESE DIRECTIONS SHOULD BE USED TO RESPOND TO ANY VOMITING OR DIARRHEA ACCIDENT. Note: Anything that has been in contact with vomit and diarrhea should be discarded or disinfected.

1. Clean up

- Remove vomit or diarrhea right away!
 - Wearing protective clothing, such as disposable gloves, apron and/or mask, wipe up vomit or diarrhea with paper towels.
 - Use only white paper towels or other absorbent material on carpets and upholstery to absorb liquid. Do not vacuum material, pick up using paper towels.
 - Dispose of used paper towels in a plastic bag or other disposal bin.
- Use soapy water to wash surfaces that contacted vomit or diarrhea and all nearby high-touch surfaces, such as door knobs and toilet handles.
- Rinse thoroughly with plain water.
- Wipe dry with paper towels.

DON'T STOP HERE: BLEACH CAN REMAIN ON SURFACES EVEN AFTER CLEANING!

2. Disinfect surfaces by applying a chlorine bleach solution

Disinfecting may be preferable to carpet and upholstery. Chlorine bleach disinfects germs more effectively than this. Always handle an item with the appropriate hand protection (gloves or double gloves) against materials. Do not touch, smell, or drink from the bleach solution you are using.

3. Prepare a chlorine bleach solution

Make bleach solutions fresh daily, keep out of reach of children, never mix bleach solution with other cleaners.

IF HARD SURFACES ARE AFFECTED:
 3/4 CUP CHLORINE BLEACH + 1 GALLON WATER

IF CLOTHING OR OTHER FABRICS ARE AFFECTED:
 1/2 CUP CHLORINE BLEACH + 1 GALLON WATER

Leave surfaces wet for at least 5 minutes.
 Rinse all surfaces intended for food or mouth contact with plain water before use.

4. Wash your hands thoroughly with soap and water

Wash solution may not be effective against norovirus.

Scientific reports from the U.S. Centers for Disease Control and Prevention (CDC) helped to develop this protocol. For more information on norovirus prevention, consult the [http://www.cdc.gov/norovirus/prevention](#) website.

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Preparing for Outbreaks

Be familiar with guidelines and resources:

- Reporting and Managing AGE Outbreaks in WEDSS (Long-Term Care Facilities)
- This and other info can be found on the [Enterics SharePoint site](#)



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Reporting and Managing AGE Outbreaks in WEDSS (Long-Term Care Facilities)

This document provides step-by-step instructions on how to report outbreaks of acute gastroenteritis (AGE) in long-term care facilities (LTCFs) using the **WEDSS platform**. It also provides answers to frequently asked questions. **This guide is specific to AGE outbreaks happening in LTCFs.**

Preparing for Outbreaks

Have requisition forms and **non-expired** stool kits on hand

- Requisition forms from the Wisconsin State Laboratory of Hygiene (2017 version)
- Stool kits: Kit # 10 (Cary-Blair)
- Call WSLH customer service line for forms and stool kits, as well as questions about shipping and courier service: **800-862-1013**

Outbreak Identification and Response Initiation

When to Suspect an Outbreak?

- **An outbreak is based on symptoms, not on stool testing or “official” diagnoses.**
- **Do not wait for testing to report an outbreak or to start a response.**
- Suspect an outbreak when three or more residents **and/or** staff experience vomiting and/or diarrhea within a 72-hour period and have geographic commonality.



Clinical Features of Viral GI Illness

- Sudden onset of vomiting and/or diarrhea, which may also include:
 - Headache
 - Fever
 - Chills
 - Abdominal cramps
- Common viral GI pathogens include norovirus, rotavirus, and sapovirus.



Ways to Detect an Outbreak

- Maintain line lists of ill residents and staff.
- Review and track 24-hour logs for individuals with GI illness.
- Plot ill residents on a facility map to identify clusters.



Surveillance Considerations

- Early reporting of acute gastroenteritis (AGE) is key.
- Ideally staff can monitor for and report GI illness year-round.
- Communication between staff on different shifts is essential.
- Each facility should have a surveillance mechanism in place that will monitor for GI illness.



Initiation of an Outbreak Response

- Notify local or tribal health department (LTHD) and facility administration when an outbreak is suspected.
- The outbreak notification should include:
 - Number of ill residents and staff
 - Onset dates
 - Signs and symptoms of the illness
 - Any laboratory tests completed or pending



Facility Responsibilities

- Report suspected outbreaks to LTHD.
- Create an outbreak management plan.
- Implement control measures when needed.
- Reach out to LTHD for assistance when needed.



LTHD Responsibilities

- Report outbreaks to DPH.
- Serve as resource to the facility and assist when needed.
- Facilitate fee-exempt stool testing.



LTHD Responsibilities

- Reporting outbreaks to DHS
 - For long-term care facility AGE outbreaks, please create a new acute gastroenteritis outbreak record in WEDSS as soon as possible after notification
 - **Required if the outbreak has 5 or more ill**
 - Optional if 3 or 4 ill
 - An email or phone call is not required for LTCF AGE outbreaks, however, please call or email if there are any questions or concerns



DPH Responsibilities

- Report outbreaks to CDC.
- Provide recommendations.
- Provide technical assistance to LHD regarding outbreak management.
- Manage state-wide surveillance.



Staff-Only Outbreaks

- The goal: determine if there is transmission within the facility.
- In outbreaks with only staff ill, consider the following:
 - Did ill staff work within 50 hours of becoming ill?
 - Do ill staff members have sick family members at home?
 - Do ill staff members work in the same areas or have contact with the same residents?



Outbreak Management

Preparing a Line List

- Log of symptomatic residents and staff in the facility
- Tool to track illness within the facility during the outbreak
- Should be used as a resource for:
 - Identifying an outbreak
 - Managing an outbreak
 - Identifying when an outbreak is over
 - Confirming when restrictions can be lifted



Line List Considerations

- Ensure all patients who submitted lab specimens are listed
- Only include GI illnesses
- Maintain a line list in real time
- Fill in key pieces of information:
 - Onset and well dates
 - Symptoms
 - Hospitalization, death data



Staff Management

- Staff should be excluded from work duties until free of diarrhea and vomiting for **at least** 48 hours.
- Use soap and water for hand hygiene.
- Maintain the same staff to resident assignments if possible.
- Limit staff from moving between affected and unaffected units.
- Staff from the affected unit should deliver food to their residents.



Resident Management

- Restrict ill residents' activities until **at least** 48 hours after they are well.
- Evaluate the need to cancel communal meals and group activities.
- Ensure health care providers managing a symptomatic resident are aware.
- Discourage sharing of personal food supplies during the outbreak.



Restriction of New Admissions

- Upon recognition of an outbreak, consider restricting new admissions.
- If the outbreak is confined, consider admissions to only unaffected areas.
- Restriction of new admissions should be considered until 48 hours after resolution of symptoms in the last case.



Readmissions

- The facility should consider the readmission of ill residents.
- The appropriate infection control measures should be implemented.
- The facility should inform the resident and resident's provider of the outbreak.



Cleaning and Disinfection

- **Increase frequency of both**
- **Always clean surfaces before disinfecting**
 - Any organic material left on surfaces will decrease effectiveness
- Use chlorine bleach at a concentration at 3500 ppm (3/4 cup per gallon of water)
- Clean from low contamination to high contamination areas
- Consider steam cleaning where contamination has occurred on non-bleachable surfaces
- Ensure cleaning staff is aware of the outbreak



Laboratory testing for norovirus

- Fee-exempt testing at the Wisconsin State Laboratory of Hygiene (WSLH)
 - Outbreak must have at least 5 ill residents and/or staff
- Test method: RT- PCR test (not a culture)
 - Viral sequencing to determine circulating strains of norovirus
 - Kit #10 (culture and sensitivity)
 - Refrigerate and ship with an ice pack
- Bacterial culture not routinely run on viral GI outbreaks



Who and How Many to Test?

- Usually three kits
- Collect timely and representative samples
- Focus on individuals with active illness
- Test to confirm the etiology of outbreak, not to determine if an outbreak is occurring



Termination of an Outbreak Response

- Maintain ill residents on contact precautions until 48 hour asymptomatic
- Maintain heightened surveillance for 7-10 days after the last ill person became asymptomatic
- Send a final line list to the LTHD



Questions welcome!

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For any questions about enteric or waterborne diseases or outbreaks, feel free to contact our unit's shared inbox at DHSDPHEnterics@dhs.wisconsin.gov
608-267-7143

Questions?

Thank you!



HAI Prevention Program Contacts



Email: dhswhaipreventionprogram@dhs.wisconsin.gov



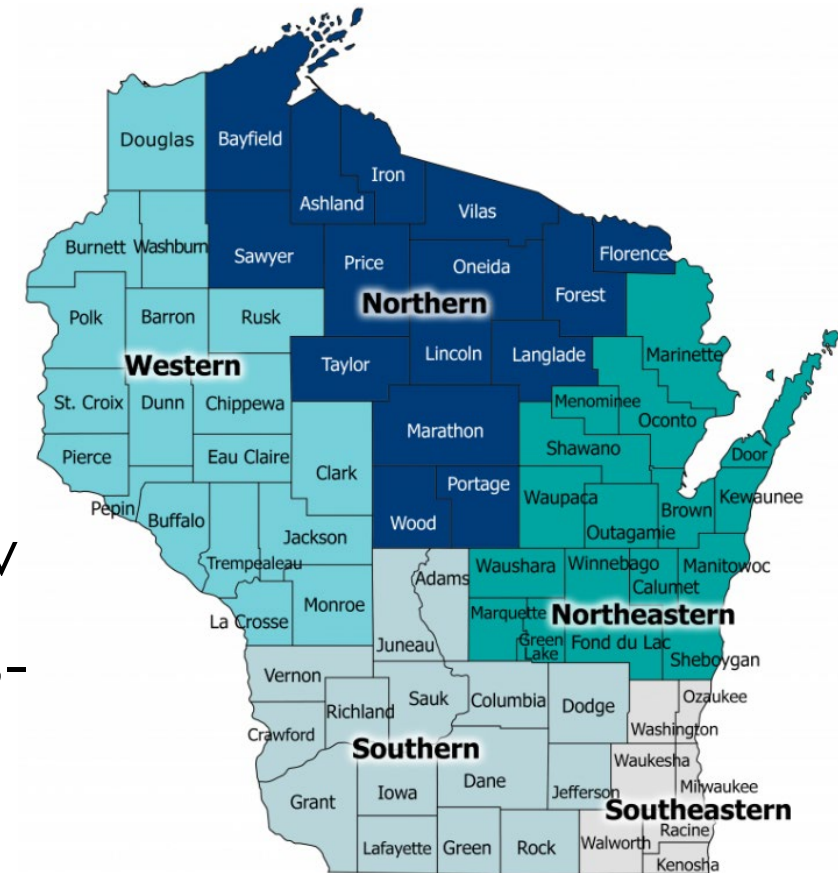
Phone: 608-267-7711



Website: www.dhs.wisconsin.gov/hai/contacts.htm

Regional Infection Preventionists

- **Western Region:** Nikki Mueller, MLS(ASCP)CM, MBA, CIC, Phone: 608-628-4464
- **Northern Region:** Anna Marciniak, MLS(ASCP), CIC, Phone: 608-590-2980
- **Northeastern Region:** Tess Hendricks, BS, MLS, CIC, Phone: 608-338-9071
- **Southeastern Region:**
DHSWIHAIPreventionProgram@dhs.wisconsin.gov
- **Southern Region:** Paula Pintar, MSN, RN, ACNS-BC, CIC, FAPIC, Phone: 608-471-0499



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Kit](#)[Multidrug-Resistant Organisms](#)[Precautions](#)[HAI Data](#)[National Healthcare Safety
Network](#)[Antimicrobial Stewardship](#)

HAI Infection Prevention Education webpage

HAI Infection Prevention Education

The resources below are intended to connect health care facility infection preventionists (IP) with education materials to support their role in preventing, detecting, and responding to healthcare-associated infections (HAI).

IPs play an essential role in facility infection prevention policy development, surveillance, and risk assessment. IPs also serve as a resource to other staff and programs within their facilities.

In addition to the state in-person trainings and online references below, there are a number of links to trusted education resources, including the CDC (Centers for Disease Prevention and Control), the CMS (Centers for Medicare and Medicaid Services), and the Association for Professionals in Infection Control and Epidemiology (APIC).

Monthly webinars for IPs

Long-Term Care Education Series

The Long-Term Care (LTC) Education Series provides education presentations on topics that include infection prevention, HAIs, antibiotic stewardship, disease surveillance, and outbreak response for staff at skilled nursing facilities, assisted living facilities, local health departments, and other LTC stakeholders. Each session features a new, timely topic presented by the Department of Health Services (DHS) program staff, HAI infection preventionists, partner organizations, or other external subject matter experts.

The LTC Education Series is a monthly webinar series, typically held the fourth Thursday of each month. Register for the [LTC Education Series](#).

[Session recordings](#)

IP Lunch and Learn

The IP Lunch and Learn is a webinar series that gives IPs from all care settings the opportunity to come together to discuss introductory infection prevention and control (IPC) topics, as well as share information, network, and ask questions. Each session focuses on a different basic IPC topic area and includes a brief overview with resources and time for attendees to ask questions and share tips and tricks. IPs newer to their role will especially benefit from the information shared.

The IP Lunch and Learn is typically held the second Tuesday of each month. Register for the [IP lunch and learn webinar series](#).

Upcoming HAI Education Session

Date: January 23, 2025

Topic: Infection Control Risk Assessments and Surveillance



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