



WISCONSIN DEPARTMENT
of HEALTH SERVICES

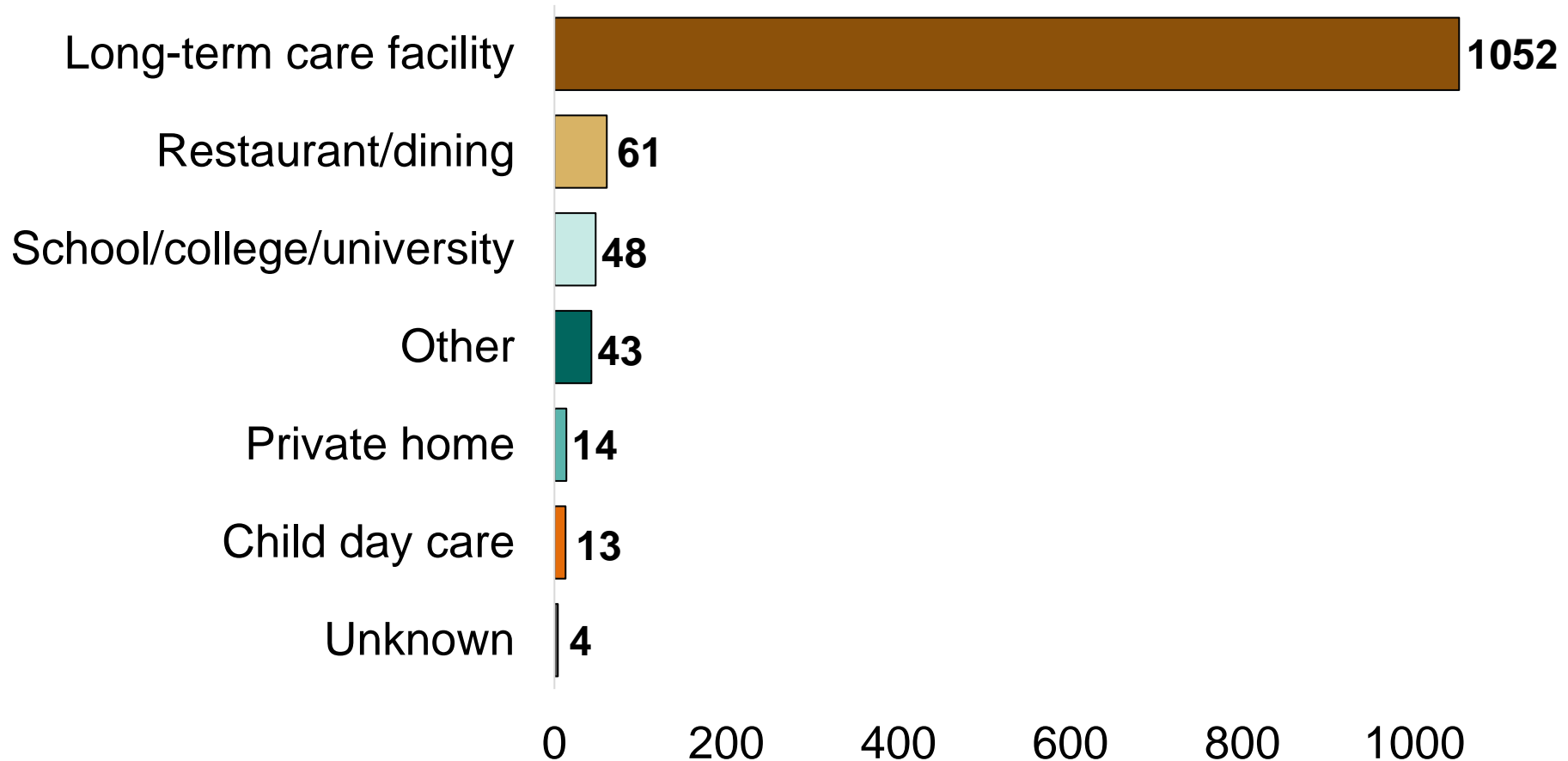
Prevention and control of acute gastroenteritis outbreaks

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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.

Clinical picture

- Median incubation: 1.2 days (about 29 hours)
- 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**

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.

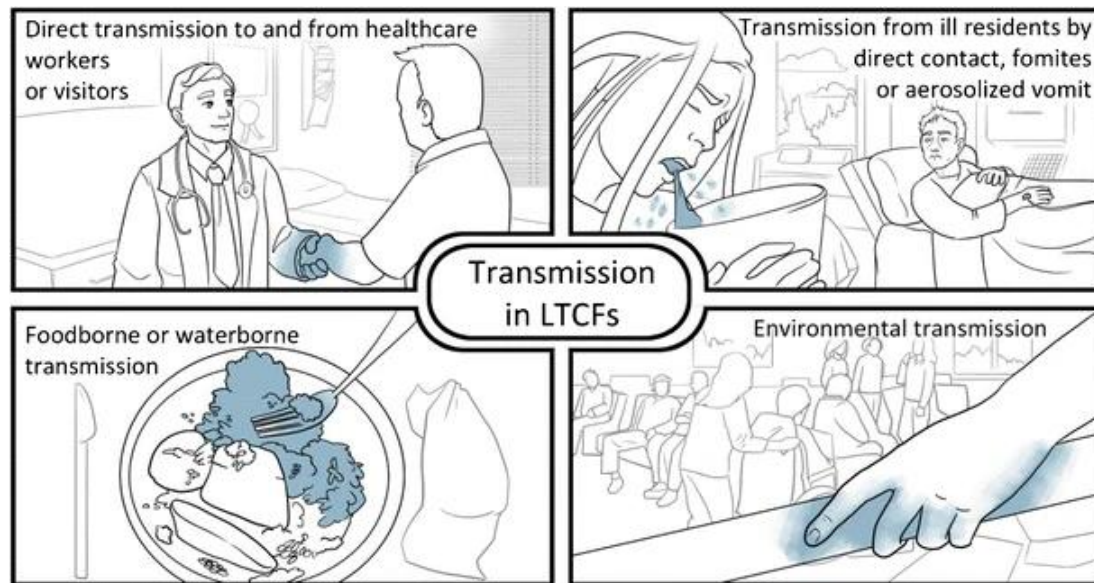
Transfer of norovirus

- **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.

Journal of Hospital Infection (2004) Barker, et al.

Transmission

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



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

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:

- 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 **unexpired** 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.



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.



Facility responsibilities

- Report suspected outbreaks to LHD.
- Create an outbreak management plan.
- Implement control measures when needed.
- Reach out to your LHD 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 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 LTHD regarding outbreak management.
- Manage state-wide surveillance.



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



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.



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.



Restriction of new admissions

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



Cleaning and disinfection

- **Increase frequency of cleaning and disinfection**
- **Always clean surfaces before disinfecting**
 - Any organic material left on surfaces will decrease effectiveness
- **Use chlorine bleach** at a concentration of 3500 ppm (3/4 cup per gallon of water)
- Clean from low contamination to high contamination areas



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
 - Determines circulating strains of norovirus
- Focus on individuals with active illness **or** recently recovered
- Testing is to confirm 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
- Facilities should send a final line list to the LTHD



Questions welcome!

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For any questions about enteric or
waterborne diseases or outbreaks, contact
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