WISCONSIN DEPARTMENT of HEALTH SERVICES

Wisconsin HAI Long-Term Care Education Series

May 27, 2021

Today's Agenda

- GI Illness and Outbreaks in LTCFs
  - **Jordan Mason**, Supervisor, Enteric and Waterborne Diseases Unit, COVID-19 Outbreaks Team, Division of Public Health, Wisconsin Department of Health Services
  - **Beth Ellinger**, Infection Preventionist, Bureau of Communicable Diseases, Division of Public Health, Wisconsin Department of Health Services
- Respiratory Viruses in Wisconsin
  - **Tom Haupt**, Respiratory Disease Epidemiologist, Bureau of Communicable Diseases, Division of Public Health, Wisconsin Department of Health Services
- COVID-19 Guidance Update in LTCFs
  - **Ashlie Dowdell**, Director, Healthcare-Associated Infections Prevention Program, Division of Public Health, Wisconsin Department of Health Services

WISCONSIN DEPARTMENT of HEALTH SERVICES

Acute Gastroenteritis (AGE) Outbreaks and Infection Prevention in Long-Term Care Facilities

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Supervisor, Enteric and Waterborne Diseases Unit

Beth Ellinger, MS, MPH, CIC
Infection Preventionist, Healthcare-Associated Infections (HAI) Prevention Program

Outline

- Background
- Surveillance
- Outbreak preparation
- Outbreak identification
- Outbreak management

Background

Norovirus

- Most common cause of enteric illness
- Member of the *Caliciviridae* family
- Formerly known as:
  - Norwalk virus
  - Snow mountain virus
  - Winter vomiting disease
  - Small round structured virus (SRSV)

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 the large cruise ships outbreaks

1990s: Use of molecular diagnostics became more widespread

Clinical Picture

- Incubation: 24–48 hours (10–50 hours)
- Duration: 12–60 hours
- Symptoms: vomiting, non-bloody diarrhea, nausea, abdominal pain, low-grade fever
  - Self-limiting illness
  - Not “the flu”

Transmission

- Person-to-person
  - Direct fecal-oral
  - Ingestion of virus in aerosolized vomitus
- Foodborne
- Environment
- Waterborne

Viral Shedding

- Reservoir: humans
- Shed in stool and vomitus
- Shedding may begin 24 hours before symptoms and last for 2–3 weeks
- Peak shedding: four days after exposure
- No symptoms in a third of infections

Transfer of Norovirus

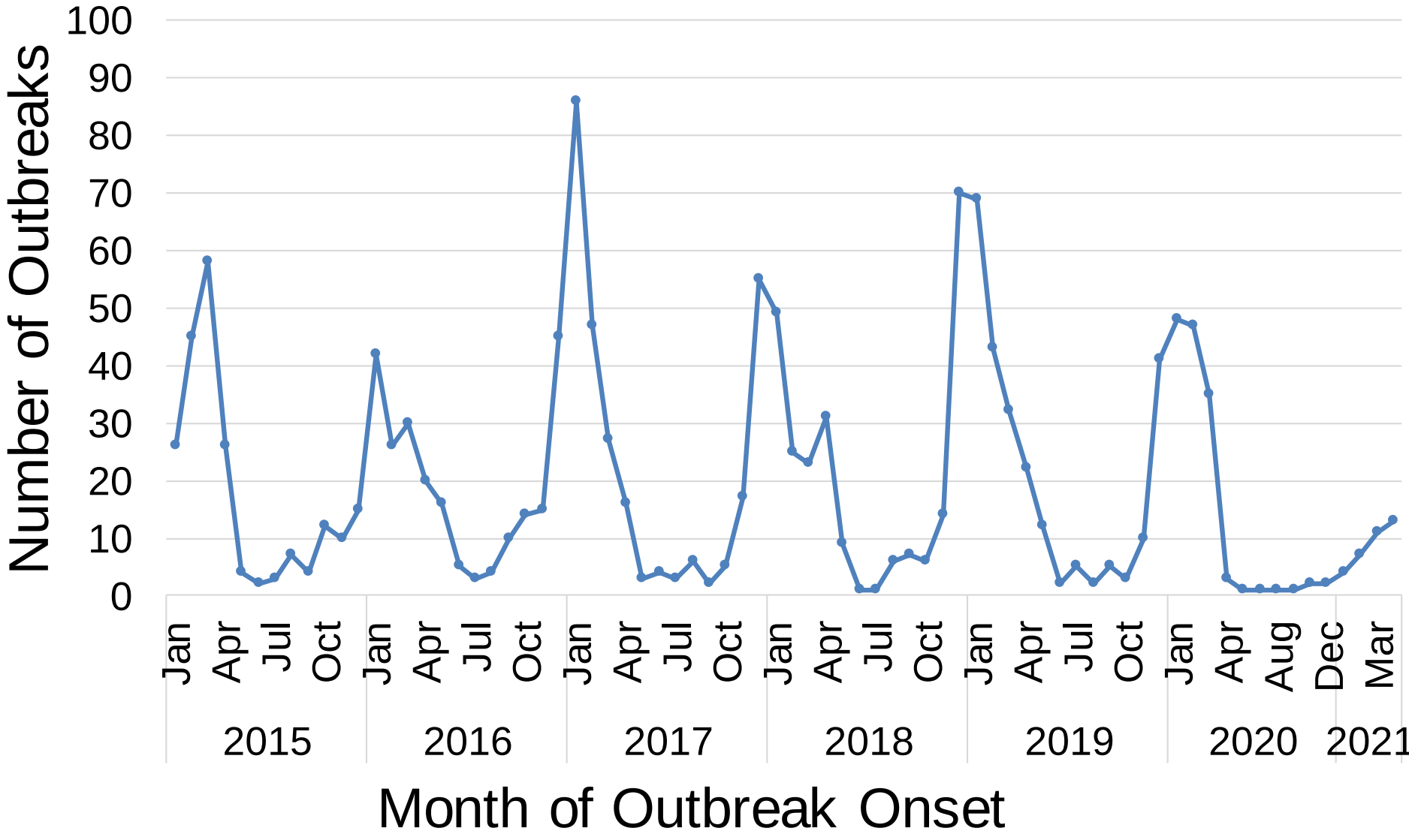
- Infectious dose as low as 10 viral particles
- Shed in feces with up to 10,000,000 viral particles per gram
- Transferred from contaminated fingers to up to seven surfaces

Treatment

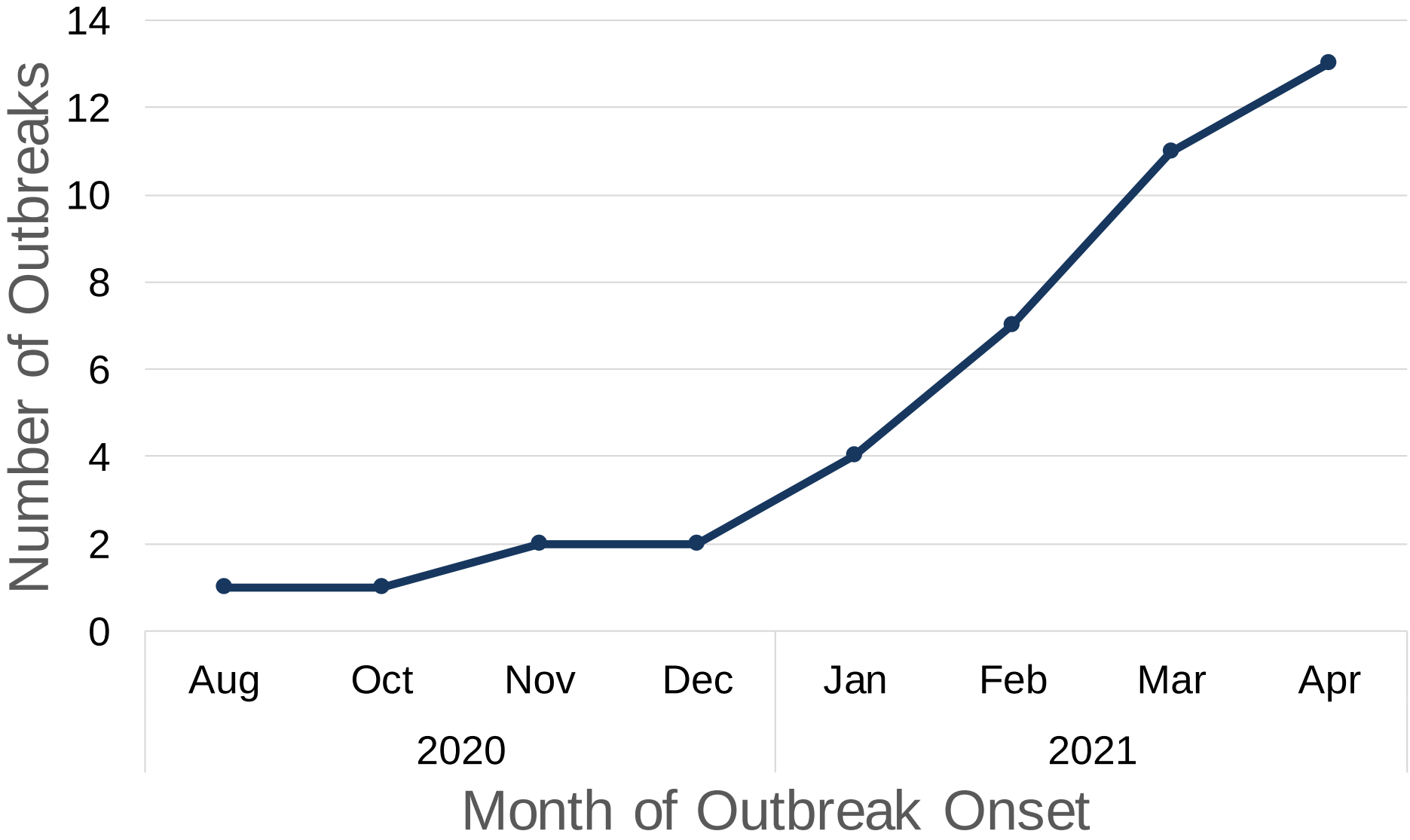
- No vaccine.
- No antivirals.
- Approximately 10% of cases seek medical attention.
  - Severe dehydration
  - Elderly individuals
- Deaths have been reported.

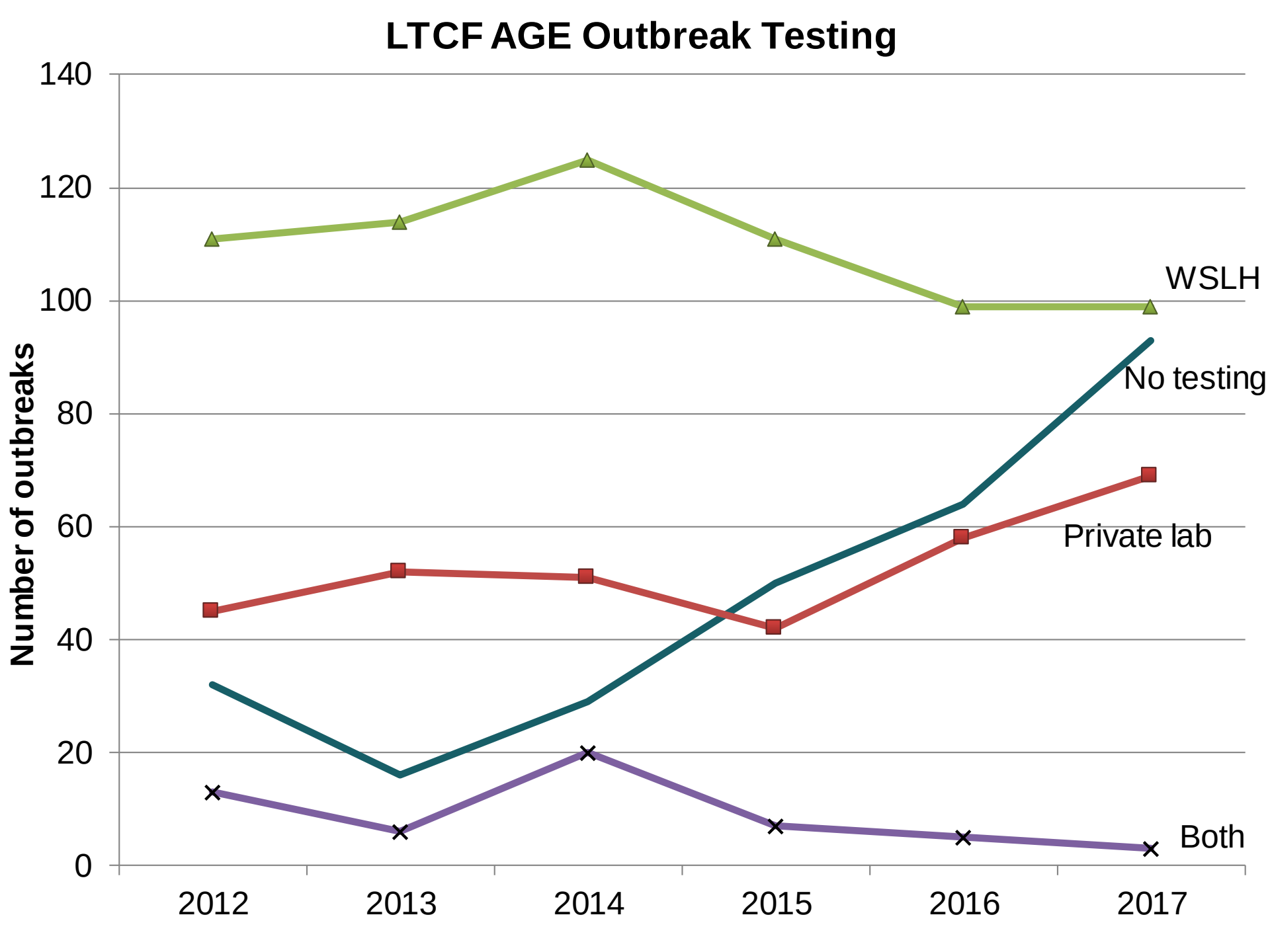
Surveillance

LTCF AGE Outbreaks, 2015-2021



LTCF AGE Outbreaks, 2020-2021




LTCF AGE Outbreak Testing
Number of outbreaks
140
120
100
80
60
40
20
0
2012
2013
2014
2015
2016
2017
WSLH
No testing
Private lab
Both

AGE Outbreak Preparation

RECOMMENDATIONS FOR PREVENTION AND CONTROL OF ACUTE GASTROENTERITIS OUTBREAKS IN WISCONSIN LONG-TERM CARE FACILITIES

Wisconsin Department of Health Services
Division of Public Health | Division of Quality Assurance
December 2017
P-00653

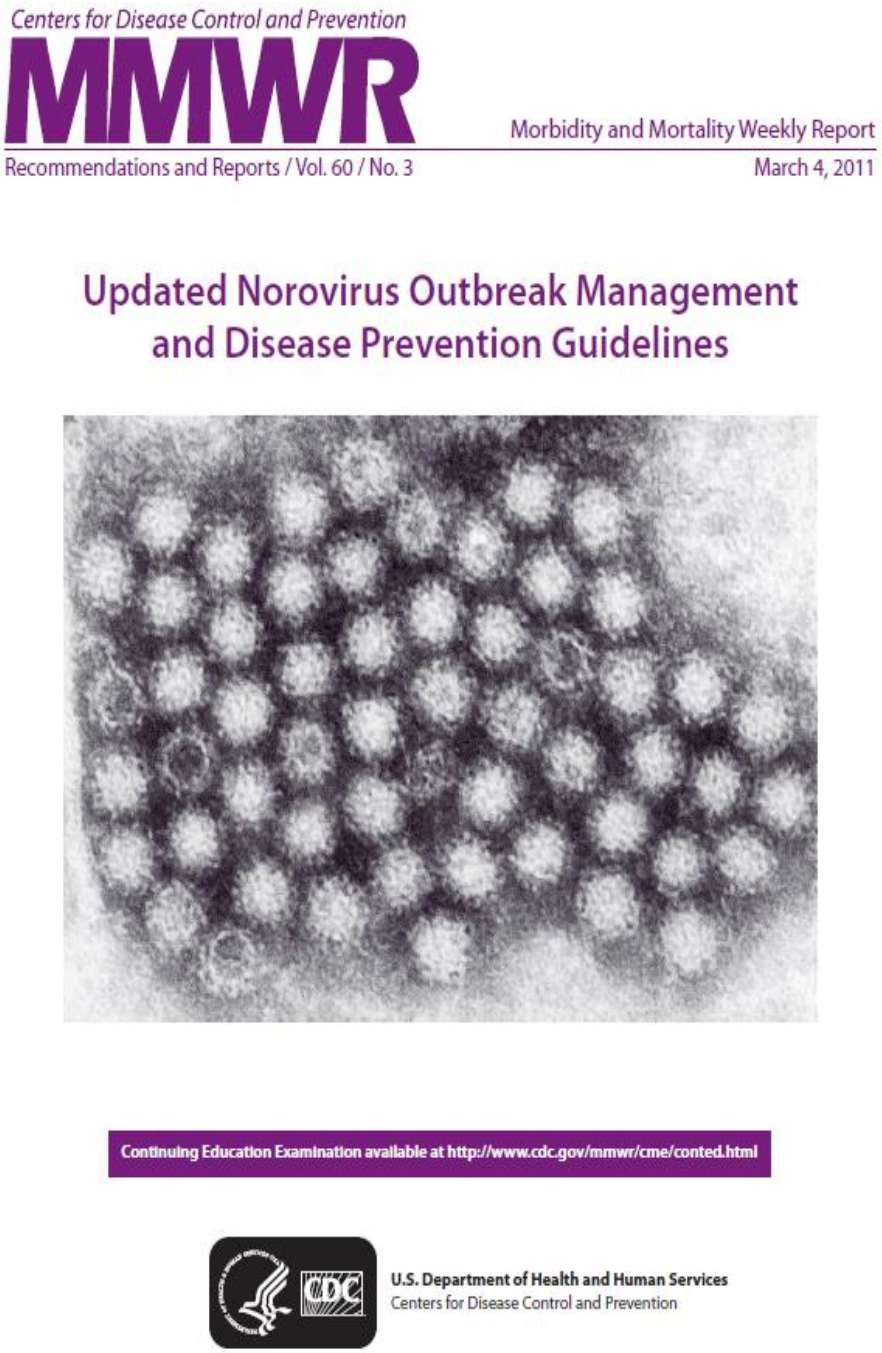
Division of Public Health (DPH) and Division of Quality Assurance (DQA):

Recommendations for Prevention and Control of Acute Gastroenteritis Outbreaks in Wisconsin Long-Term Care Facilities (LTCFs)

https://www.dhs.wisconsin.gov/publications/p0/p00653.pdf

Guidelines

- Released December 2017
- Includes:
  - Management and cleaning checklist
  - Data sheet with surveillance summary data
  - Additional resources (fact sheets and signage)
  - Recommendations to address frequent questions



Preparing

Centers for Disease Control and Prevention (CDC) MMWR:

Updated Norovirus Management and Disease Prevention Guidelines

https://www.cdc.gov/mmwr/preview/mmwrhtml/rr6003a1.htm

Preparing

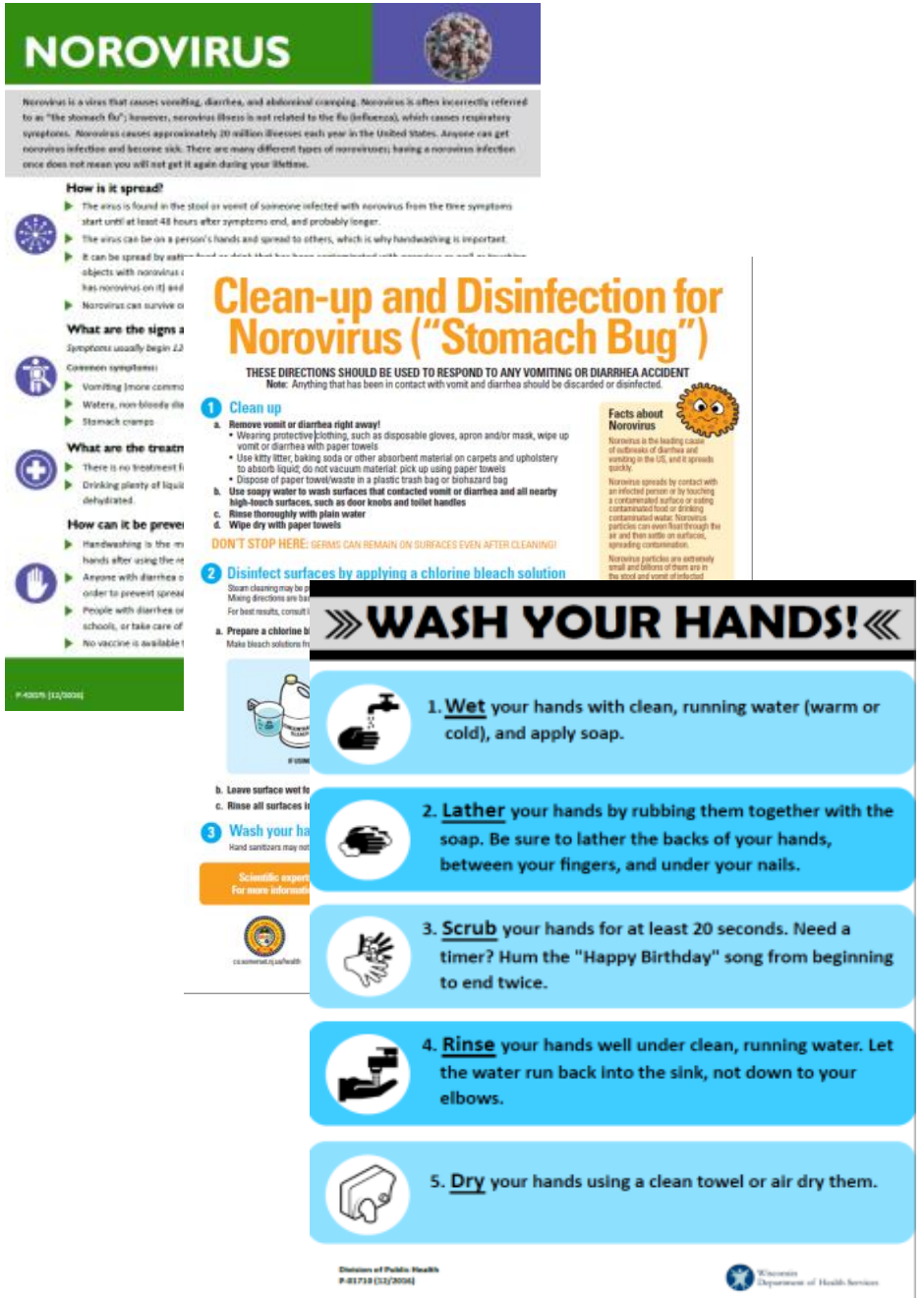
CDC: Guideline for the Prevention and Control of Norovirus Gastroenteritis Outbreaks in Healthcare Settings

Preparing

DHS Norovirus fact sheet

DHS handwashing fact sheet

CDC Norovirus cleaning instructions



Outbreak Identification

When to Suspect an Outbreak

- **Suspect** outbreak: **three** or more residents or staff experience vomiting and/or diarrhea within a 72-hour period and have geographic commonality
- Based on symptomology, not on clinical diagnoses
- Example: three residents with symptoms of vomiting, on the same wing, with illness onsets within two days

Clinical Features of AGE

Sudden onset of vomiting and/or diarrhea as well as:

- Headache
- Fever/chills
- Abdominal cramps

Common Viral GI Pathogens

- Norovirus
- Rotavirus
- Sapovirus

Surveillance Considerations

- Monitor all staff for AGE year-round.
- Communication between care staff on different shifts is essential.
- Early reporting of AGE is key.
- Have a surveillance mechanism in place to monitor for AGE.

Ways to Detect an Outbreak

- Notify the local/tribal health department (LTHD) and facility administration when an outbreak is suspected.
- 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 the LTHD.
- Follow their outbreak management plan.
- Implement control measures when needed.
- Reach out to the LTHD for assistance when needed.

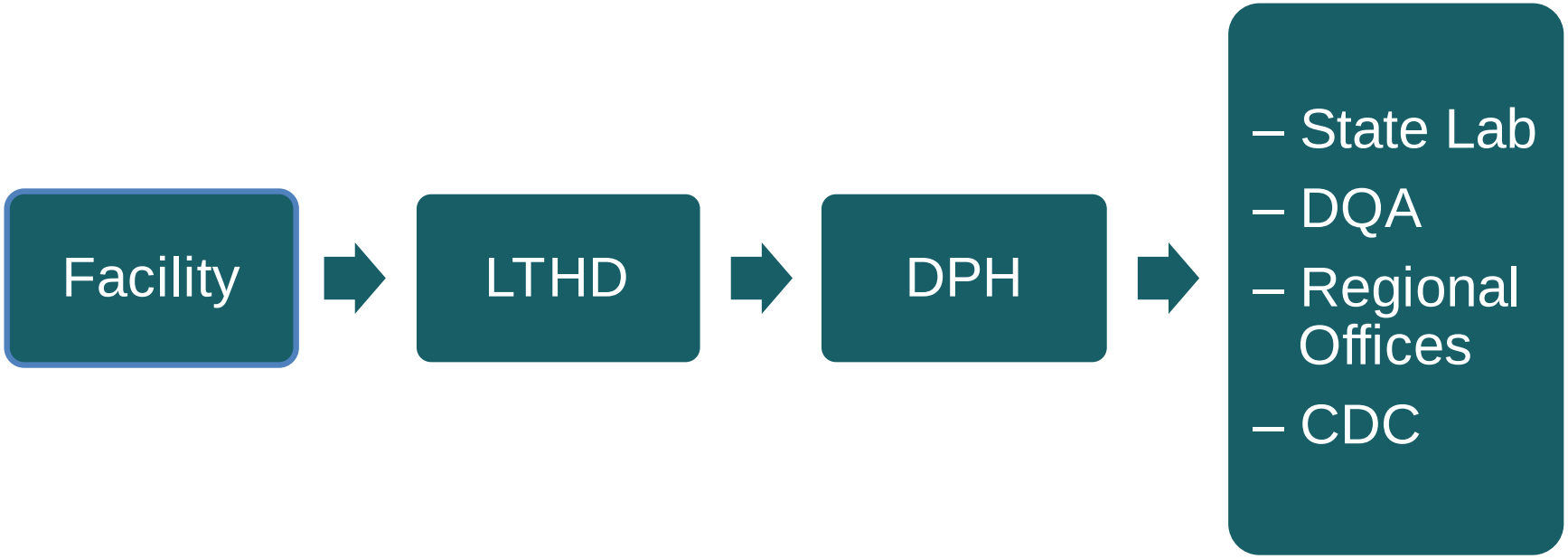
LTHD Responsibilities

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

DPH Responsibilities

- Report outbreaks to the CDC.
- Provide recommendations.
- Provide technical assistance to the LTHD and facility regarding outbreak management.
- Manage statewide surveillance.

Public Health Notification



Staff-Only Outbreaks

- In outbreaks with only ill staff, 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 care for the same residents?
- The goal is to determine if there is transmission within the facility.

Laboratory Testing for Norovirus

- Fee-exempt testing at the Wisconsin State Laboratory of Hygiene (WSLH)
- Authorized when **five or more** are ill
- 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

Who and How Many to Test

- Use three kits (the usual number recommended).
- Collect timely and representative samples.
- Focus on residents with active illness.
- Test to confirm the etiology of the outbreak, not to confirm each patient.

Infection Prevention

Considerations

- GI illnesses can be caused by many organisms and present with similar symptoms.
- In acute and long-term care, the most likely illnesses to consider are:
  - Norovirus.
  - *C. difficile*.
  - COVID-19.

Norovirus Infection Prevention

https://www.cdc.gov/norovirus/downloads/stop-norovirus.pdf

Cohorting and Isolation

- Contact precautions (gloves and gown for **all** encounters)
- Private room with bathroom
- Roommates (gowns and gloves changed between residents)

Cohorting and Isolation Considerations

- Cohorting staff
- Halting new admissions
- Pausing activities and communal dining

Norovirus Isolation Duration

- Until 48 hours after resolution of symptoms
- Specified by LTHD due to facility outbreak status

https://www.cdc.gov/infectioncontrol/pdf/contact-precautions-sign-P.pdf

Norovirus Hand Hygiene

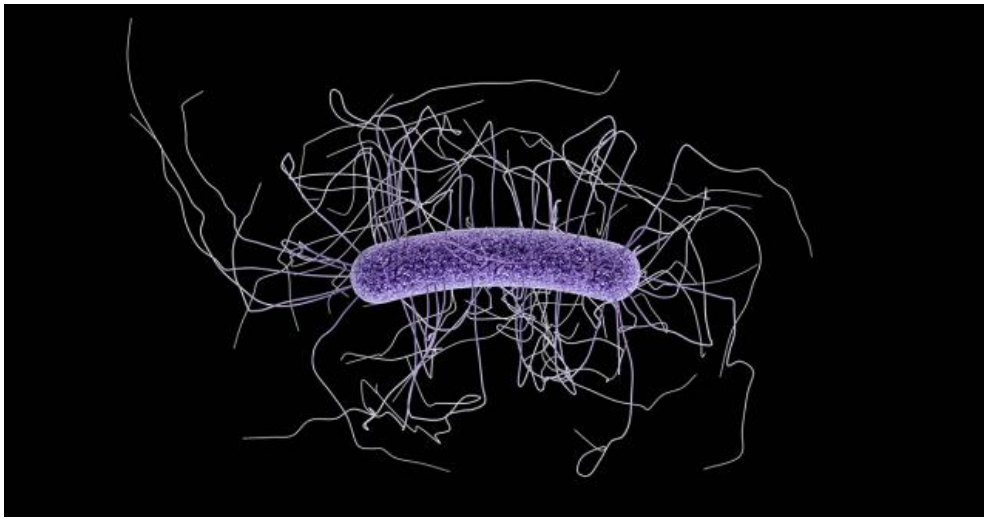
- Health care personnel (HCP) should perform hand hygiene with soap and water.
- Alcohol-based hand rub is not effective against Norovirus particles.
- Post signage throughout affected unit or facility to encourage proper hand hygiene.
- Educate residents and visitors on proper hand hygiene.

Environmental Cleaning and Disinfection

- Increase frequency in resident care areas and on high-touch surfaces.
- Use disinfectants on the EPA list of approved products for Norovirus.
- Clean and disinfect shared equipment between residents.
- Clean and disinfect common areas and staff-only areas, including breakrooms, locker rooms, and meeting areas.

Employee Health Policies

- Develop and adhere to policies for HCP with symptoms of GI illness.
- Exclude ill staff from work for a minimum of 48 hours after resolution of symptoms.
- Reinforce proper hand hygiene before and after resident contact.
- Develop plans for cohorting staff during an outbreak.



Clostridioides difficile (C. diff)

C. diff Epidemiology

- Spore-forming, anaerobic Gram positive bacteria
- Common cause of acute diarrhea in hospitals and LTCFs
- Main symptoms: watery diarrhea, fever, loss of appetite, nausea and abdominal pain or tenderness
- Associated with antibiotic use

C. Diff Epidemiology

- Test for *C. difficile* when residents have diarrhea while taking antibiotics or after taking them.
- *C. diff* is shed in feces. Any surface, device, or material (such as commodes, bathtubs, etc.) that becomes contaminated with feces could serve as a reservoir for *C. diff* spores.
- Spores can be transferred to residents via the hands of HCP who have touched a contaminated surface or item.

C. diff Risk Groups

- Antibiotic exposure
- GI surgery or manipulation
- Serious underlying medical conditions
- Long hospital stays
- Immune-compromised
- Advanced age

Cohorting and Isolation

- Contact precautions (gloves and gown for **all** encounters)
- Private room with bathroom
- Resident cohorting

C. diff Duration of Isolation

- Cessation of diarrhea
  - People with *C. diff* can continue to shed after diarrhea ceases, so consider extending contact precautions for several days after symptom resolution.
- Completion of *C. diff* treatment
- Recommendation of infectious disease physician

C. diff Hand Hygiene

- HCP should perform hand hygiene with soap and water.
- *C. diff* spores are resistant to the drying effects of alcohol.
- Provide education on proper hand hygiene.
- If an entire unit is affected, post signage throughout the unit to remind residents, staff and visitors about the hand hygiene requirement.

Environmental Cleaning and Disinfection

- Increase frequency in resident care areas and high-touch surfaces.
- Use a disinfectant listed on the EPA list of approved products for *C. diff* (sporicidal).
- Clean and disinfect shared equipment between resident uses.
- Include common and staff areas during facility outbreaks.

Employee Health Policies

- Develop and adhere to policies for HCP who have symptoms of GI illness.
- Exclude ill staff from work for a minimum of 48 hours after resolution of symptoms or based on an employee's *C. diff* infection (CDI) treatment plan from their provider.
- Reinforce proper hand hygiene before and after resident contact.

COVID-19

- Consider COVID-19 testing based on symptoms.
- Place residents in proper transmission-based precautions.
- Communicate to LTHD and other partners.

Considerations for Decision Making

- Did the illness present suddenly with incapacitating vomiting?
- Are other residents or staff ill?
- Is the resident taking or was recently on antibiotics?
- Did the resident recently have a GI procedure?

Considerations for Decision Making

- Was the resident recently exposed to COVID-19?
- Consider resident medical history.
- Consult with medical director.
- What is the disease transmission in the community?

Summary

- Contact precautions (gown and gloves)
- Proper testing
- Hand hygiene
- Environmental cleaning and disinfection
- Employee health policies
- Communication: LTHD, staff, residents, environmental services, and visitors

Questions?

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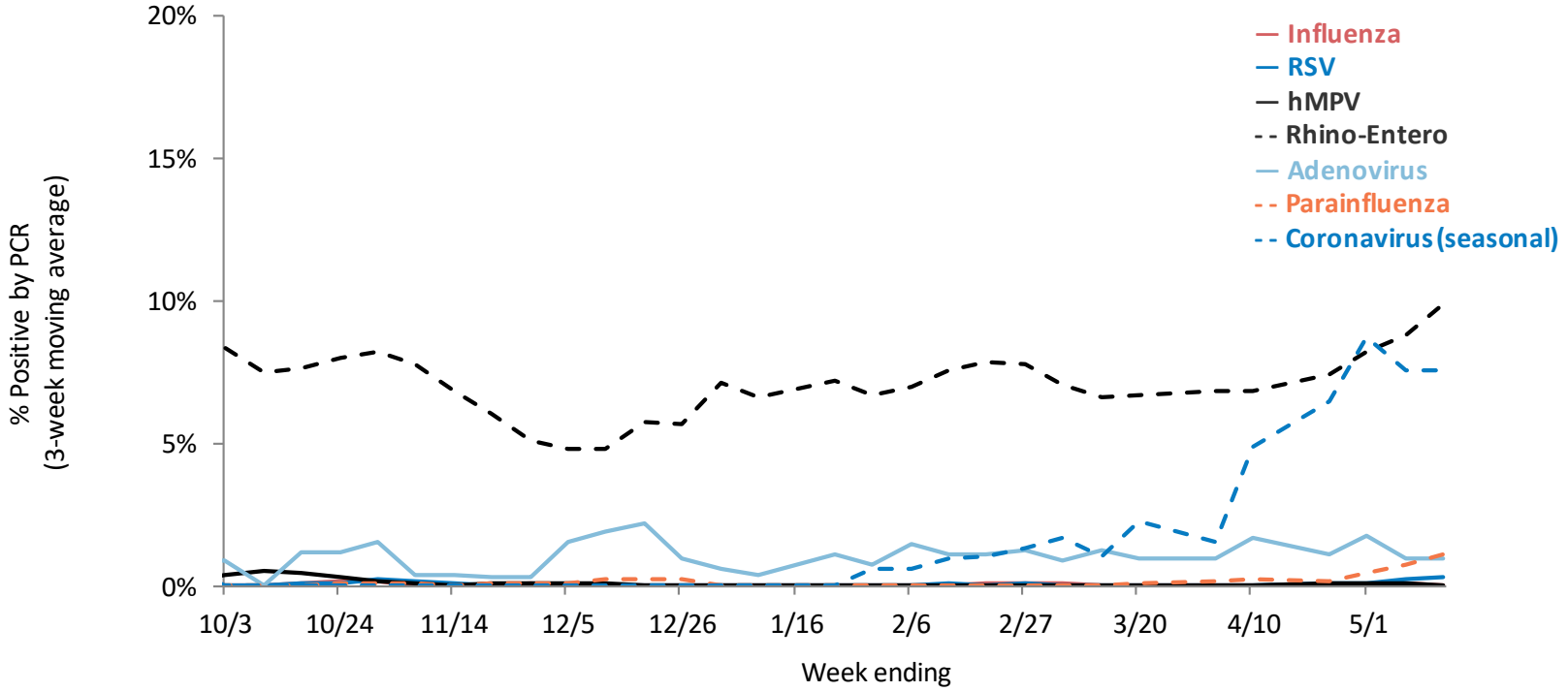
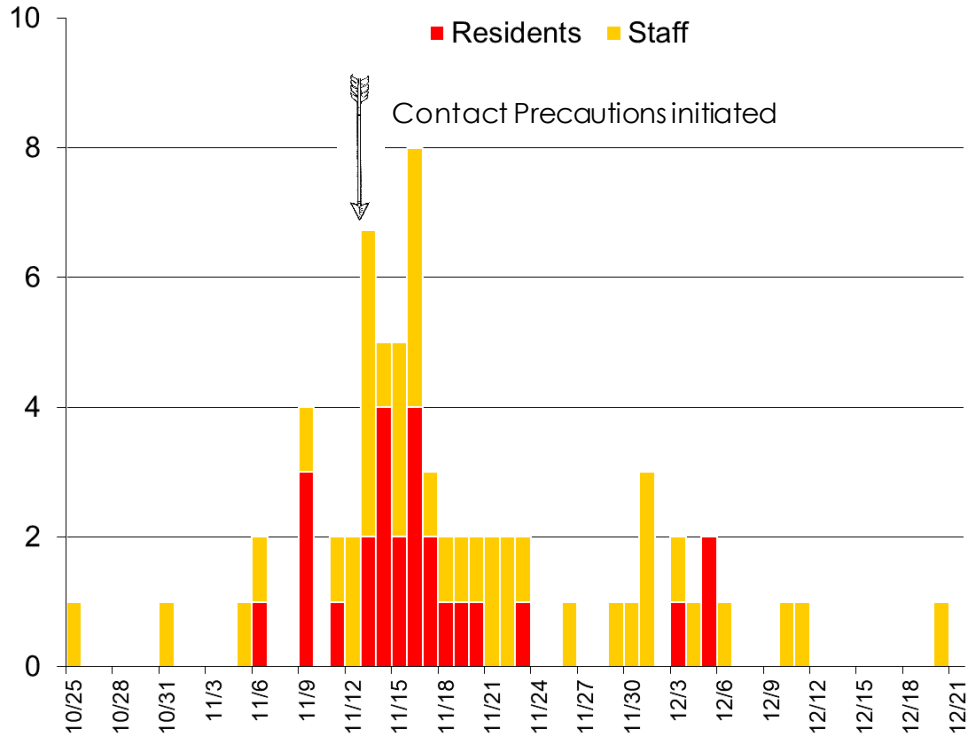
Respiratory Viruses in Wisconsin

Tom Haupt

Current status of respiratory viruses circulating in WI



Example: 2010 Outbreak of Coronavirus OC43 in a WI Long-term Care Facility



- 40 of 50 residents became ill
- 63 total cases (staff and residents)
- 5 fatalities

Take-away Messages

- Many viruses other than SARS-2 (COVID) can cause severe respiratory illness
  and outbreaks especially in a congregate setting
- Testing only for SARS-2 and Influenza will not assure an accurate identification of
  the etiology of the illnesses
- Testing for viruses other than SARS-2 is essential to assure proper infection
  control precautions are implemented
  - Multiplex testing is the best method
  - In outbreak situations testing can be tested at the WSLH free of charge
- Seasonal coronaviruses now circulating in Wisconsin can not be identified using the SARS-2 test methods (NL63, 229E, HKU1, OC43)
  - Seasonal coronaviruses are NOT variants of SARS-2 (COVID) virus
- SARS-2 vaccine is not effective against seasonal coronaviruses

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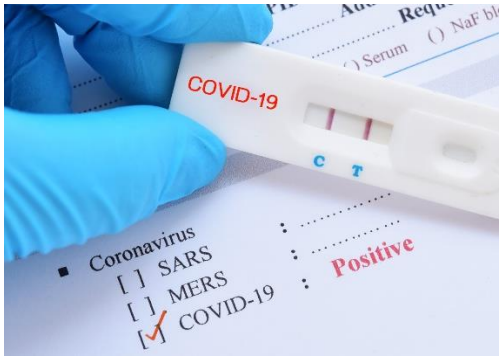
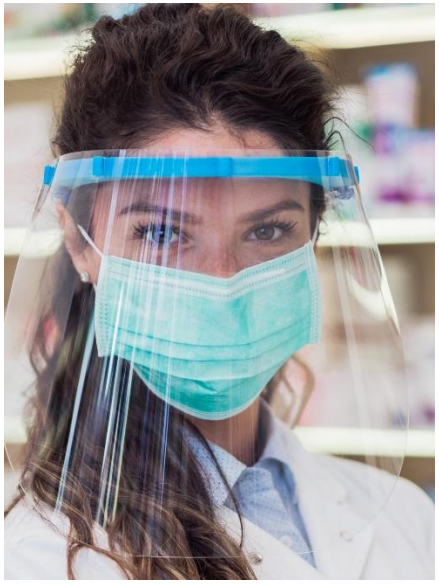
Guidance Updates for Fully Vaccinated Individuals in Health Care Settings

Ashlie Dowdell





YOU STOP THE SPREAD

Where is the balance?

Focus Areas

- Visitation
- Communal activities
  - Staff
  - Residents
- Work restrictions and quarantine
- Testing
- Personal protective equipment (PPE)

https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-after-vaccination.html

Visitation

- Promote indoor and outdoor visitation.
  - Utilize guidance from the Centers for Medicare and Medicaid Services (CMS) and the Department of Health Services (DHS).
  - Adjust when resident vaccination rates are less than 70%.
- Limit residents in quarantine and isolation to compassionate care visits.

Considerations

- Visitors do not need to prove vaccination status.
- Facilities can ask visitors about their vaccination status as part of entrance education and guidance on source control or PPE use.
- Facilities still need to screen visitors for symptoms and exclude accordingly.
- Facilities need to offer wide visit availability, including weekends and nights.

Communal Activities: Residents

- Internal activities and dining
  - Assess group makeup of HCP and residents.
- Outside excursions
  - Consider risks and infection control mitigation.
- Visits to the homes of family or friends
  - Follow community guidance.

Communal Activities: HCP

- Staff-only areas
  - Break rooms
  - Meetings
- Source control vs. PPE
- Eye protection

Considerations

Balance patient/resident and HCP privacy with application of guidance

What infection prevention and control practices are recommended when planning for and allowing communal activities?

Determining the vaccination status of patients/residents/HCP at the time of the activity might be challenging and might be subject to local regulations. When determining vaccination status, the privacy of the patient/resident/HCP should be maintained (e.g., not asked in front of other patients/residents/HCP). For example, when planning for group activities or communal dining, facilities might consider having patients/residents sign up in advance so their vaccination status can be confirmed and seating assigned. **If vaccination status cannot be determined, the safest practice is for all participants to follow all recommended infection prevention and control practices including maintaining physical distancing and wearing source control.**

Considerations

- Any unvaccinated individual (resident or staff) taking part in an activity means that all participants should use source control, and the unvaccinated individual should physically distance.
- Roommates with different vaccination statuses may use different practices in their room than when outside it.

Work Restriction and Quarantine

- HCP
  - Higher-risk exposures test twice at set intervals, but do not quarantine
  - Travel recommendations
- Residents
  - Quarantine following prolonged close contact regardless of vaccination status
  - New admission and readmission quarantine no longer required for fully vaccinated residents

Testing

- Symptomatic and outbreak testing
- Routine staff testing
  - Fully vaccinated vs. unvaccinated
- Fully vaccinated, asymptomatic exposure testing
  - HCP: higher-risk exposures test twice (immediately and 5–7 days post-exposure) without quarantine
  - Residents: prolonged close contact triggers the same two tests with quarantine
- Hospital pre-admission and pre-procedure screening

Exposure Risk Assessment

- Involve occupational health when possible
- Workplace
  - PPE worn? Type of care provided? Source control?
- Travel
- Community
  - Household exposures, especially children

Exposure	Personal Protective Equipment Used
HCP who had prolonged[1] close contact[2] with a patient, visitor, or HCP with confirmed SARS-CoV-2 infection[3]	• HCP not wearing a respirator or facemask[4] • HCP not wearing eye protection if the person with SARS-CoV-2 infection was not wearing a cloth mask or facemask • HCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure[1]

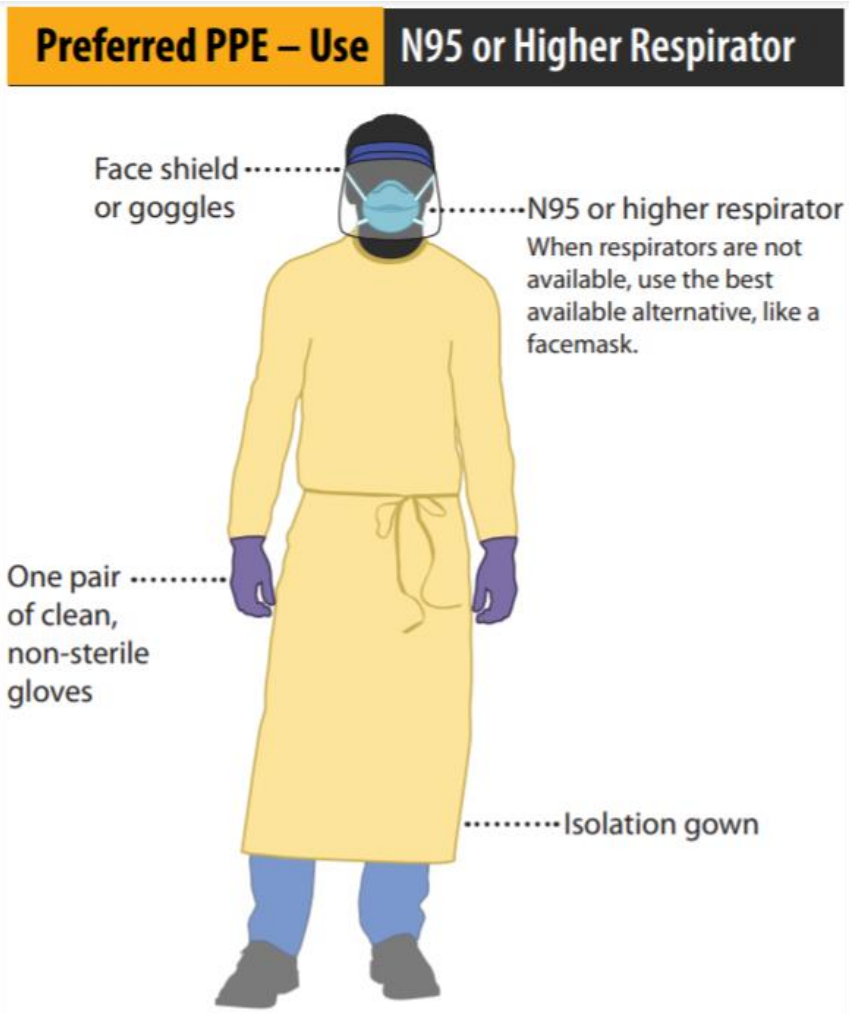
https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html

Considerations

- Difference in exposure quarantine for HCP and residents
- Fully vaccinated symptomatic residents and HCP
- Positive COVID tests outside the 90-days post-infection = outbreak

PPE: No Changes

- Generally wear source control at all times with limited exceptions
- Universal PPE (mask and eye protection) for patient/resident care
- Full PPE for COVID quarantine and isolation rooms
- N95s for aerosol-generating procedures



https://www.cdc.gov/coronavirus/2019-ncov/downloads/COVID-19_PPE_illustrations-p.pdf

Eye Protection

- All settings
- Areas of moderate to high community transmission
- Patient/resident care

https://covid.cdc.gov/covid-data-tracker/#county-view

Vaccination

+

Risk

IPC Practices

Evidence

Questions?

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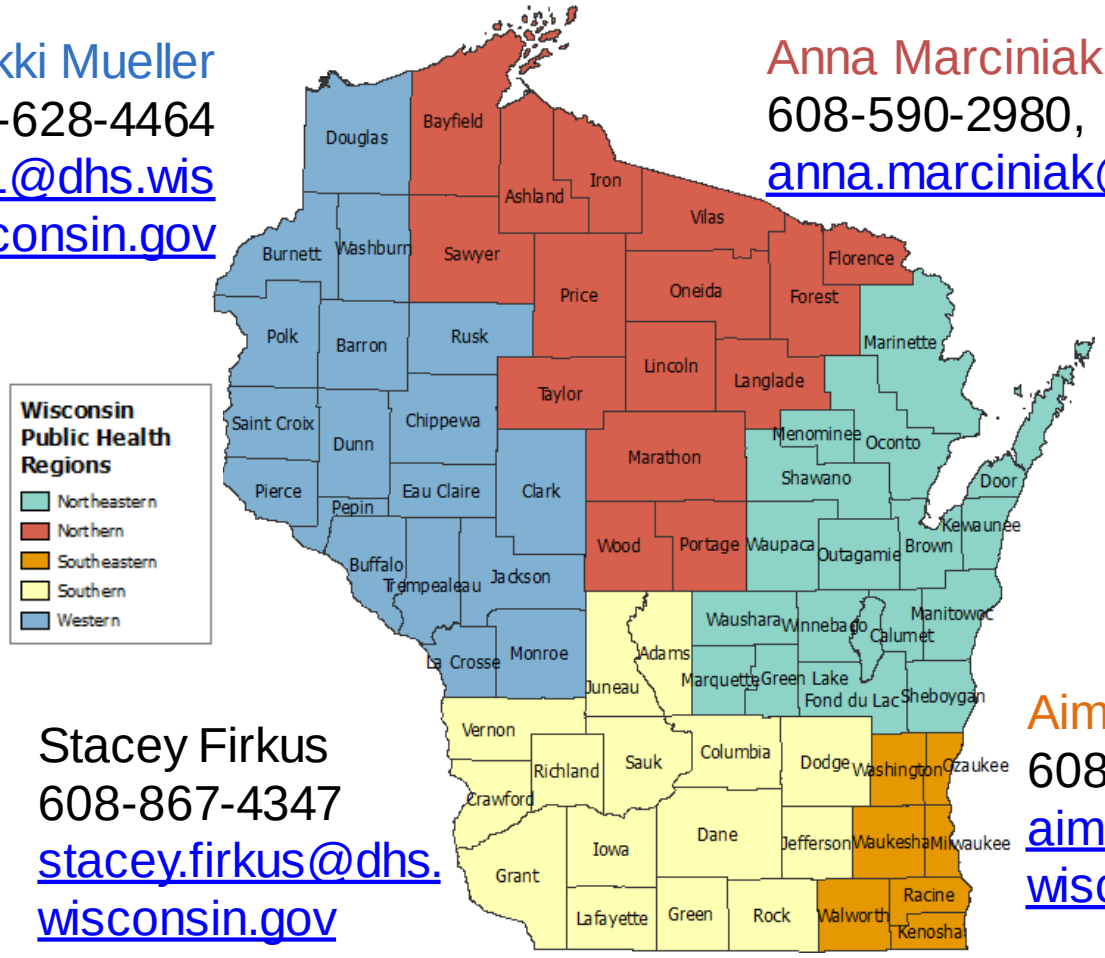

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https://www.dhs.wisconsin.gov/hai/ip-education.htm

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Upcoming LTC Education Session

Thursday, June 24, 2021
Hand Hygiene: More Than Just Soap and Water