

Ask an IP

Learning and Communication Series

Norovirus Outbreak Control in Skilled Nursing Facilities (SNFs)

Acute Communicable Disease Control Program
Los Angeles County Department of Public Health



Disclosures

There is no commercial support for today's call

Neither the speakers nor planners for today's call have disclosed any financial interests related to the content of the meeting

This call is meant for healthcare facilities and is off the record and reporters should log off now

Housekeeping

- **Microphones** are disabled. For questions, please use the chat.
- **Cameras:** please keep them turned off during the presentation.
- **Recording:** the presentation is being recorded and will be posted on the Ask an IP Website within 1 week following the session.
- We will not review COVID-19 guidelines (including CDPH AFLs) during these sessions. To review the LAC DPH SNF COVID-19 Guidance (last updated on 05/31/2023), please visit the link below.
 - **Link to Guidance:**
 - <http://publichealth.lacounty.gov/acd/ncorona2019/healthfacilities>



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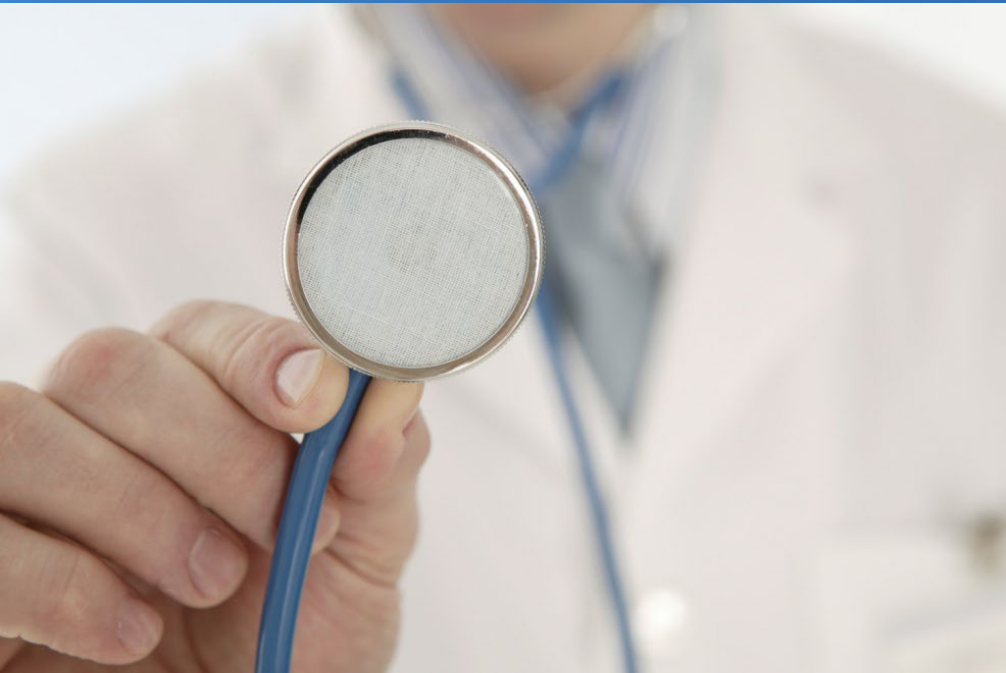
Contact Us: LACSNF@ph.lacounty.gov

Ask an IP Website:

<http://publichealth.lacounty.gov/acd/AskAnIPProgram/index.htm>

Objectives

- Deliver a comprehensive overview of norovirus, covering its symptoms, transmission, prevention, and impact on public health.
- Outline key strategies for managing a norovirus outbreak, including prevention, containment, and response protocols.
- Foster discussion among LA County Skilled Nursing Facilities about infection control practices.

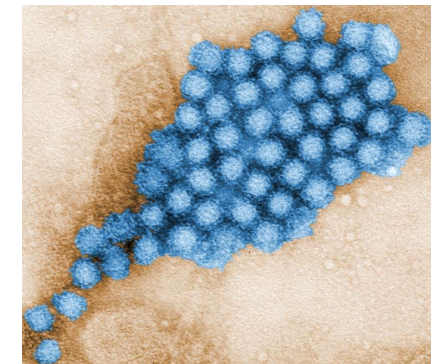


Norovirus Basics



Facts about Norovirus

- They are small, round viruses.
- They cause swelling of the stomach and intestines (gastroenteritis– GI).
- Other names commonly used are winter vomiting, stomach flu and food poisoning.



Background

- The #1 cause of acute GI cases in the U.S.
 - 19 to 21 million cases annually
 - 109, 000 hospitalizations
- Occurs year round with peak activity during winter months.
- Norovirus outbreaks have been linked to:
 - Healthcare settings: acute and subacute
 - Cruise ships
 - Casinos
 - Prisons
 - Any congregate living facility or group living environments such as camps, dorms, assisted care for the elderly

Norovirus in Healthcare Facilities

- Most common reported settings of GI outbreaks in the U.S.
- Outbreaks pose risk to patients, healthcare personnel, and the efficient delivery of healthcare services.
- Illness from norovirus infection can be severe in the elderly and lead to hospitalization.



The Symptoms of Norovirus

In adults, children and babies:

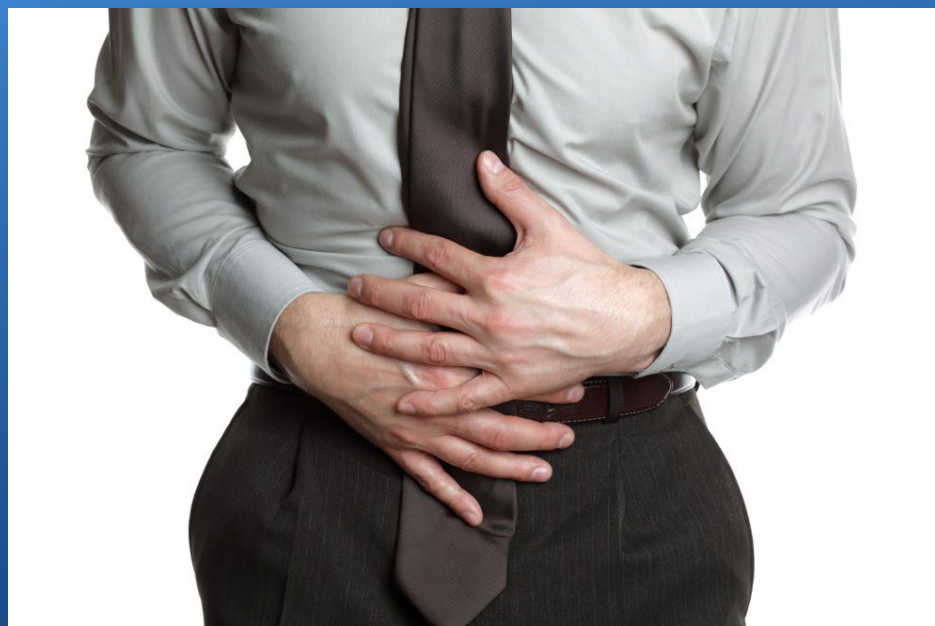
- Nausea
- Vomiting
- Diarrhea
- Stomach cramping

Additional symptoms may include:

- Low-grade fever
- Chills
- Headache
- Muscle aches
- Tiredness

Characteristics of Infection

- Symptoms occur 12 to 48 hours after exposure.
- Sudden onset of symptoms.
 - More vomiting in children
 - Most people experience both diarrhea and vomiting
- Duration of major symptoms is 1 to 3 days.
- Infection may occur with no symptoms.
- Viral shedding can last longer – up to 3 weeks.
- Complete recovery – no long-term effects.



Who is Affected?



Vulnerability

- Anyone can become infected.
- No long-lasting immunity due to many strains.
 - Infection may recur throughout one's life.



Norovirus in the Elderly

- Prolonged symptoms.
 - Diarrhea may lead to fecal incontinence.
- Fevers – mainly due to dehydration.
- Increased number of hospitalizations.





Norovirus Outlook in Los Angeles County

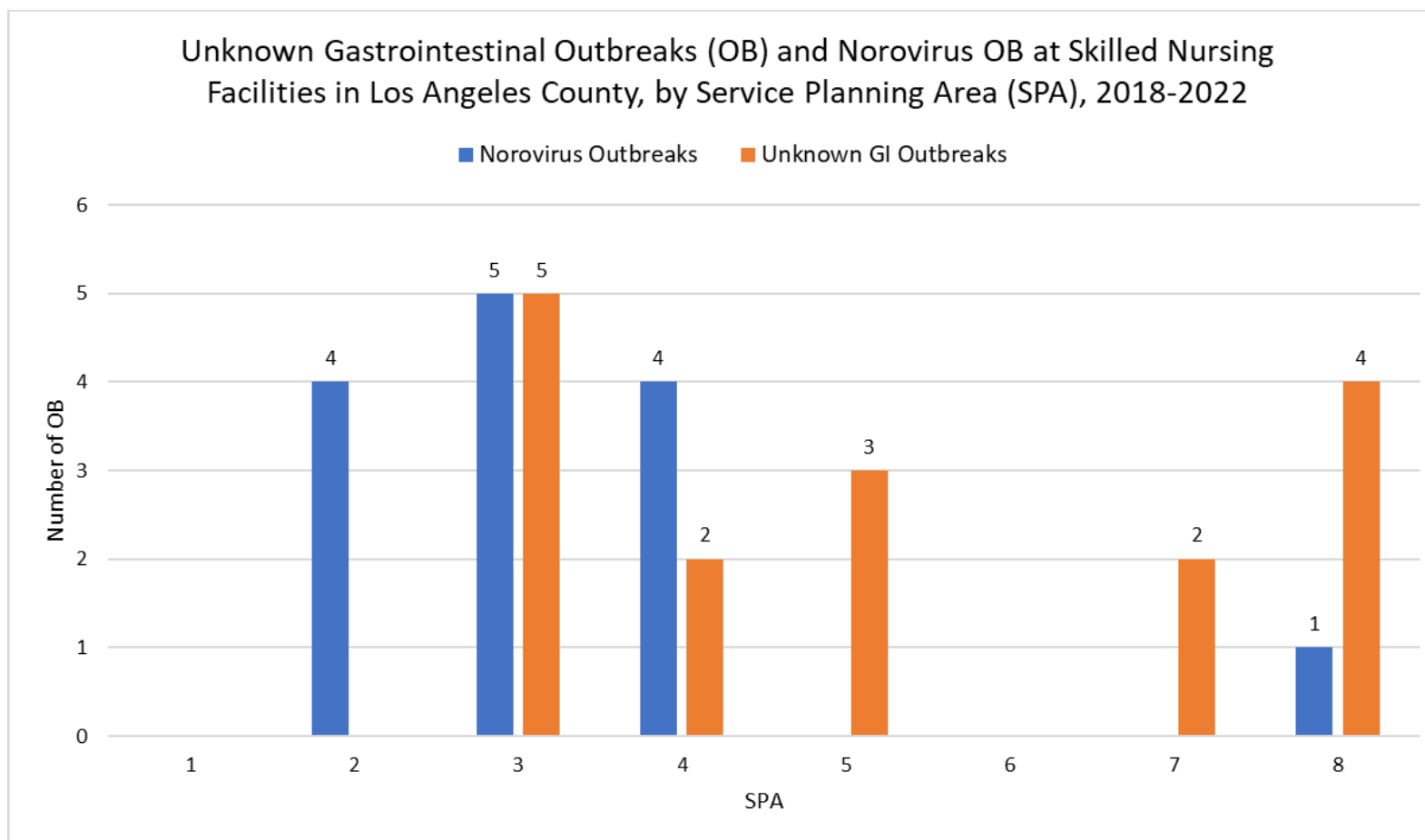




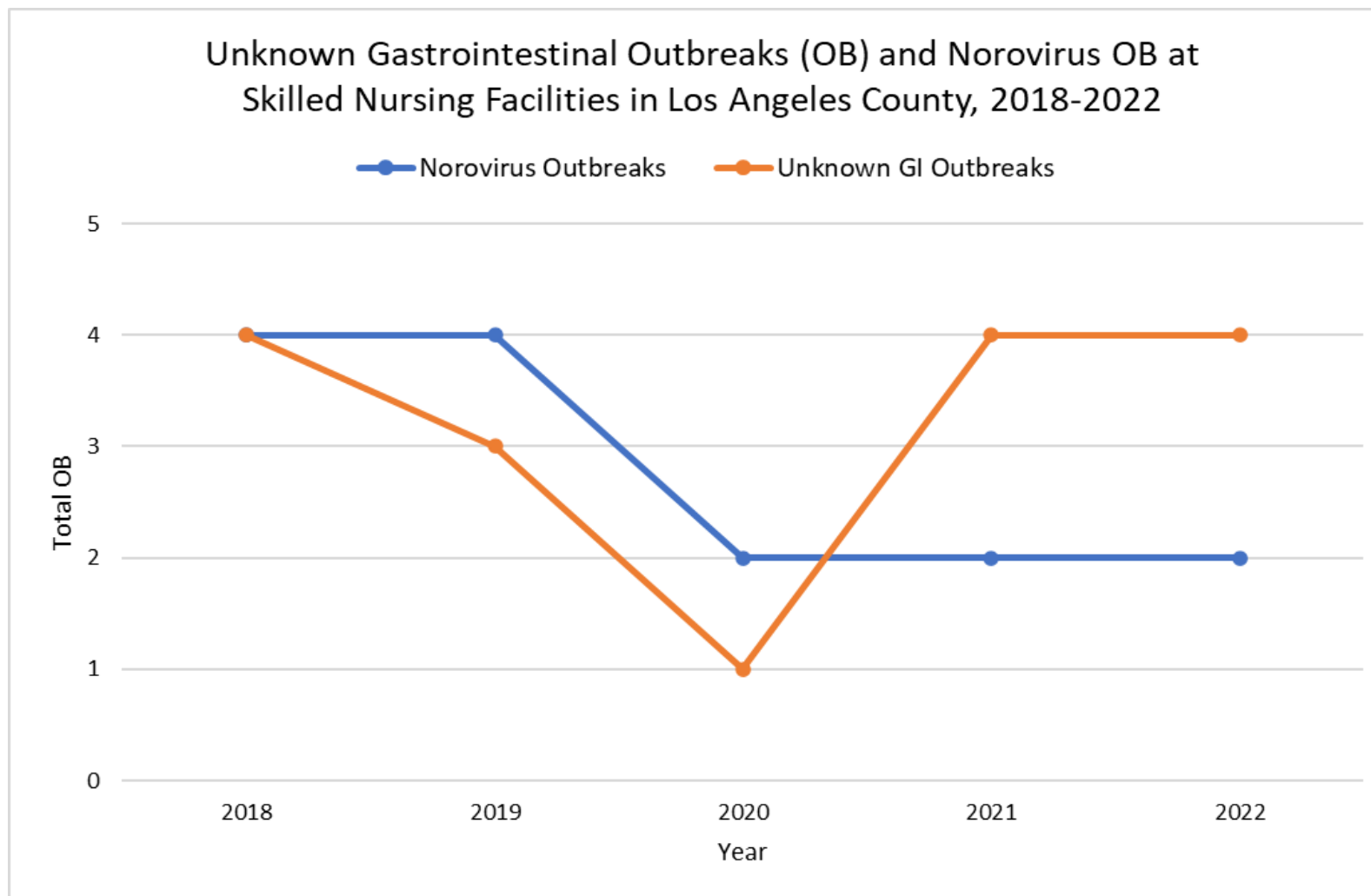
Norovirus in Los Angeles County

- Most norovirus outbreaks in LAC have occurred at Skilled Nursing Facilities (SNFs).
- Service Planning Area (SPA) 3 has had the most GI outbreaks in recent years.
- Many cases go unreported.

Norovirus & GI OB by SPA



Norovirus & Unknown GI OBs by Year



Annual Breakdown

Year	Unknown GI		Norovirus	
	Outbreaks	Cases	Outbreaks	Cases
2018	4	50	4	94
2019	3	40	4	125
2020	1	40	2	78
2021	4	94	2	28
2022	4	33	2	39



Diagnosis





How Norovirus is Diagnosed

- In Los Angeles County, norovirus is detected in stool using reverse transcription polymerase chain reaction (RT PCR).
- Requires fresh (unfrozen) stool.
- Stool should be obtained from ill individuals.
 - Ideally within 24-48 hours post-onset
 - Must be kept refrigerated
 - Kaplan criteria is used as means for diagnosis

Diagnosis

- Test is used for **confirmation of outbreak only.**
 - Individual results will **NOT** be released.
- Testing requires at least 3 specimens per outbreak.
 - The H-3021 lab request form
 - Must be coordinated through Public Health



Clinical Criteria

- Kaplan's Criteria- developed in 1982 when norovirus testing was not as accessible as now.
- Criteria used to classify gastroenteritis outbreaks (OB) due to norovirus (NV).
 - Vomiting in more than half of affected persons
 - Mean (or median) incubation period of 24-48 hours
 - Mean (or median) duration of illness of 12-60 hours
 - No bacterial pathogen in stool culture
- Sensitivity of correctly identifying a NV OB: 68%
- Specificity 99% correctly saying OB not due to NV



Current Public Health Activities in Norovirus Outbreak Management

- Countywide surveillance for outbreaks.
- Polymerase chain reaction (PCR) based testing at Public Health Laboratory.
 - Noro specimens provided to California Department of Public Health to calcinet.

Current Public Health Activities in Norovirus Outbreak Management

- Outbreak investigation and control measures:
 - Community Field Services (CFS)
 - Public Health nurse is the main contact
 - ACDC can collaborate with the investigation, but all communication goes through the nurse
 - Ensure norovirus prevention guidelines are followed
 - Assess need for facility closure to new admissions
- Web-based educational materials available at Acute Communicable Disease Control (ACDC) web site.
- Collaboration with ACDC Foodborne Team when norovirus is implicated in food handlers.



Treatment



How Norovirus is Treated

- Antibiotics **don't work**
- No antivirals
- No vaccine
- Drink fluids to prevent dehydration





True or False?

Prescription antibiotic medication **is not** recommended for the treatment of norovirus.



True or False?

Prescription antibiotic medication is not recommended for the treatment of norovirus.

TRUE



Prevention





How Norovirus spreads

- Highly contagious
- Person-to-person
 - Found in the stool (feces) or vomit of infected people.
 - Transferred to food, water or surfaces by the hands of infected people.
 - People are contagious when they have symptoms and up to 3 days after recovery.



Airborne vs. Aerosolized

- Norovirus is **not** airborne – it cannot be spread through coughing or sneezing like the flu.
- Can become aerosolized through forceful vomiting.
- Infectious particles can stay in the air for as long as 120 minutes after vomiting.

How You Can Prevent the Spread of Norovirus

- Wash your hands **frequently** with warm, soapy water for 20 seconds.
- Wash your hands after using the bathroom, changing diapers and before preparing foods.
- Do not rely on hand sanitizers alone to prevent norovirus infection.





It's Not Just the Hands

- Increase frequency of cleaning of unit, bathroom and toilet.
- Immediately wash clothing or linens that may be contaminated.
- Disinfect any shared equipment.
- Clean carpets or furnishings with hot water and detergent or steam clean.
- Dispose of any food that may have been contaminated by staff or residents.

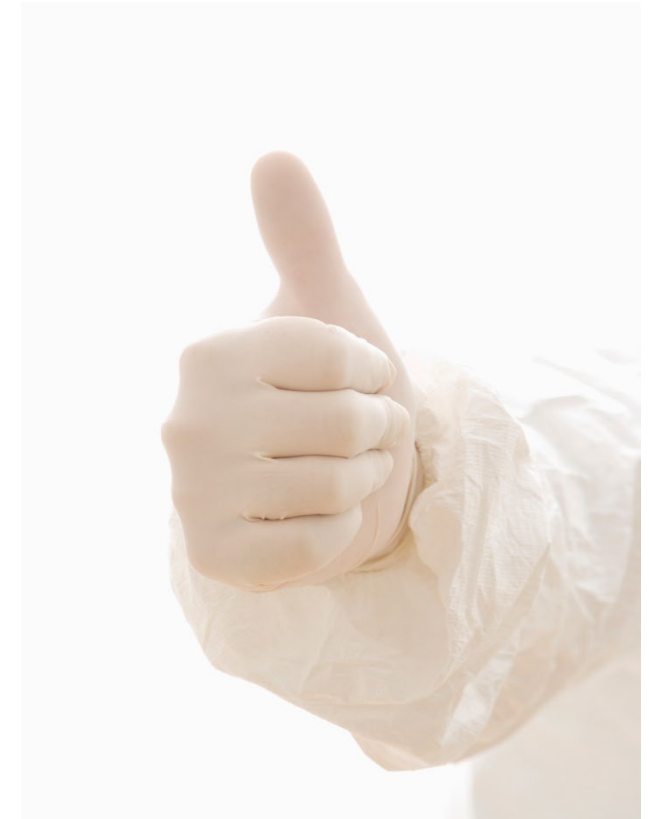
Environmental Cleaning

- Clean up vomit and fecal spillages promptly.
 - Wear a gown, mask, and gloves during outbreak season.
- Flush any vomit and/or stool in the toilet and disinfect the area.
- Double-clean using EPA approved disinfectants or a fresh solution of sodium hypochlorite (EPA List G, for norovirus specifically)
 - Chlorine bleach to water ratio should follow manufacturer's instructions for use and should be mixture should be discarded within 24 hrs.



Wear PPE

- Gloves required for all patient/environmental contact.
- Long sleeved gown required for all patient/environmental contact.
- Hand washing after all patient/environmental contact and glove removal.



Key IPC Reminders

- Staff should know about patient's norovirus infection and use appropriate precautions.
- Gowns and gloves should be used when in contact with an infected patient or contaminated environment.
- Nonessential staff should not enter affected areas.





Roles of Public Health Department

- Perform a site visit.
- Review the facility's policies and procedures.
- Ensure that the facility is following the appropriate infection control guidelines.
- Determine the source of the outbreak.

Roles for Skilled Nursing Facility/ Direct Patient Care Staff

- Key infection control activities:
 - Rapid identification and isolation of suspected cases
 - Staff cohorting
 - Consider if your staff works at other locations or handles food
 - Communicate the presence of suspected cases to management and DPH
 - Promote increased adherence to hand hygiene
 - Enhance environmental cleaning and disinfection
- Promptly initiate investigations:
 - Collection of clinical and epidemiological information with line lists
 - Obtain clinical samples



Surveillance

- Use a “line list” to track symptomatic staff and patients.
- Suggested line list items:
 - Case (staff/patient) identifier
 - Case location
 - Symptoms
 - Outcome / Date of Resolution
 - Diagnostics submitted

A Collaborative Project

- **LAC Community Field Services (CFS)**
 - “boots on the ground”
- **LAC - DPH Acute Communicable Disease Control (ACDC)**
 - Epidemiologic Support and Surveillance
- **LAC - DPH Laboratory**
 - diagnostic testing
- **LAC – DPH Health Education**
 - Norovirus education “tool kit”
- **Health Facilities Inspection Division**



Review



Gastroenteritis Outbreak Scenario

What would your actions be?

- It is Friday morning, 2 residents in adjoining rooms become abruptly ill with vomiting and loose stools, without fever.
- 7 additional residents, in the same wing but several doors down, started to vomit between 3PM-5PM.
- By Saturday at 5 PM, one CNA must leave work due to vomiting.
- **What are your next actions?**

Actions to consider

- Summarize the situation
- Consider: what is the incubation period between cases?
- Where are the cases located?
- What should you tell you direct patient care staff?
- What infection control procedures would you carry out?
- What cleaning recommendations would you recommend to your cleaning staff?
- Who would you call to report?
- What other actions would you consider?

It's a norovirus outbreak!

- The Situation:
 - 9 residents w/ abrupt onset of n/v and one CNA w/ n/v on one wing
- Incubation period between cases- approximately 36 hours.
- Suspect- Norovirus Outbreak!
- Direct care staff- go home and don't come back to work until symptom free for least 48 hours.
 - Alert direct patient care and cleaning staff that has contact with patient's rooms, bathroom facilities, high touch surfaces that they may come down w/ NV infection.
 - Collect specimens for laboratory confirmation.



It's a norovirus outbreak!

- Institute contact precautions.
- Call the LAC Public Health Department to report this outbreak as well as the Health Facilities Inspection Division.
- Start line list for patients and staff with symptom onset, symptoms, facility location.
- Advise cleaning staff to enhance cleaning and disinfection of all surfaces:
 - Bleach for cleaning and disinfection.
 - Emphasize high touch surfaces.
 - Cleaning staff should wear mask and gown and gloves .



Review of Recommended Steps for Prevention

- Wash your hands frequently with warm, soapy water for at least 20 seconds
- Immediately clean vomit and fecal spillages with EPA approved disinfectants or a fresh solution of sodium hypochlorite
- Immediately report norovirus cases at your facility to DPH
- Practice good hygiene habits:
 - Keep your hands clean
 - Wear protective gear when in contact with patients (long sleeved gowns and gloves)
 - Keep all surfaces clean
 - Wash all linens and curtains



For More Information

- **CDPH:**
 - <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/Norovirus.aspx>
- **LACDPH:**
 - <http://www.ph.lacounty.gov/acd/Norovirus.htm>
 - Public Health Lab Test Request Form:
<http://www.publichealth.lacounty.gov/lab/docs/H-3021%20Test%20Request%20Form.pdf>
- **CDC:**
 - <https://www.cdc.gov/norovirus/index.html>



LAC DPH Project Firstline Training

*We will **still continue to offer trainings**, starting again in August 2023.*

General Infection Prevention & Control Trainings Topics:

- Recognizing Risk & How do Germs Make People Sick
- Environmental & Body Reservoirs
- Source Control & Hand Hygiene
- PPE: Introduction to PPE & Eye Protection
- PPE: Gloves & Gowns
- PPE: N95 Respirators
- Environmental Cleaning & Disinfection

COVID-19 Focused Trainings Topics:

- Basic Science of Viruses
- Virus Strains & Asymptomatic Spread
- How COVID-19 Spreads

For more information, please visit our website:

ProjectFirstlineLACounty.com

To register for Project Firstline training, use your smartphone's camera or QR scan app and scan this QR on the right:





Questions?

Disclaimer: Recording has now stopped. The Q&A will not be recorded.





Questions

LACSNF@ph.lacounty.gov



Our next Ask an IP Session will be on
August 9, 2023!





THANK YOU!

