



“Preparing For Noro Season: An Epi and Lab Perspective”

NCDHHS Enterics Team
and
NC State Lab of Public Health
October 9, 2025



OBJECTIVES

Introduction

What makes a norovirus outbreak and
what should I do?

DATA: Why Completeness Matters

New for 2025-26 Season

Key Required Data Points

SLPH Noro Season Updates

INTRODUCTIONS

State Enterics Team

State Lab of Public Health
Team





WHEN IS NOROVIRUS AN OUTBREAK?

- When you see nausea, vomiting and/or diarrhea **levels** that are **above the norm**.

WHAT SHOULD YOU DO?

1

2

3

4

5



WHAT SHOULD YOU DO?

1

Recommend
control measures
to apply

2

3

4

5

WHAT SHOULD YOU DO?

1

Recommend
control measures
to apply

2

Report in
RedCap

3

4

5



WHAT SHOULD YOU DO?

1

Recommend control measures to apply

2

Report in RedCap

3

Attempt to **collect specimens**

4

5



WHAT SHOULD YOU DO?

1

Recommend control measures to apply

2

Report in RedCap

3

Attempt to collect specimens

4

Update NCEDSS outbreak event

5



WHAT SHOULD YOU DO?

1

Recommend control measures to apply

2

Report in RedCap

3

Attempt to collect specimens

4

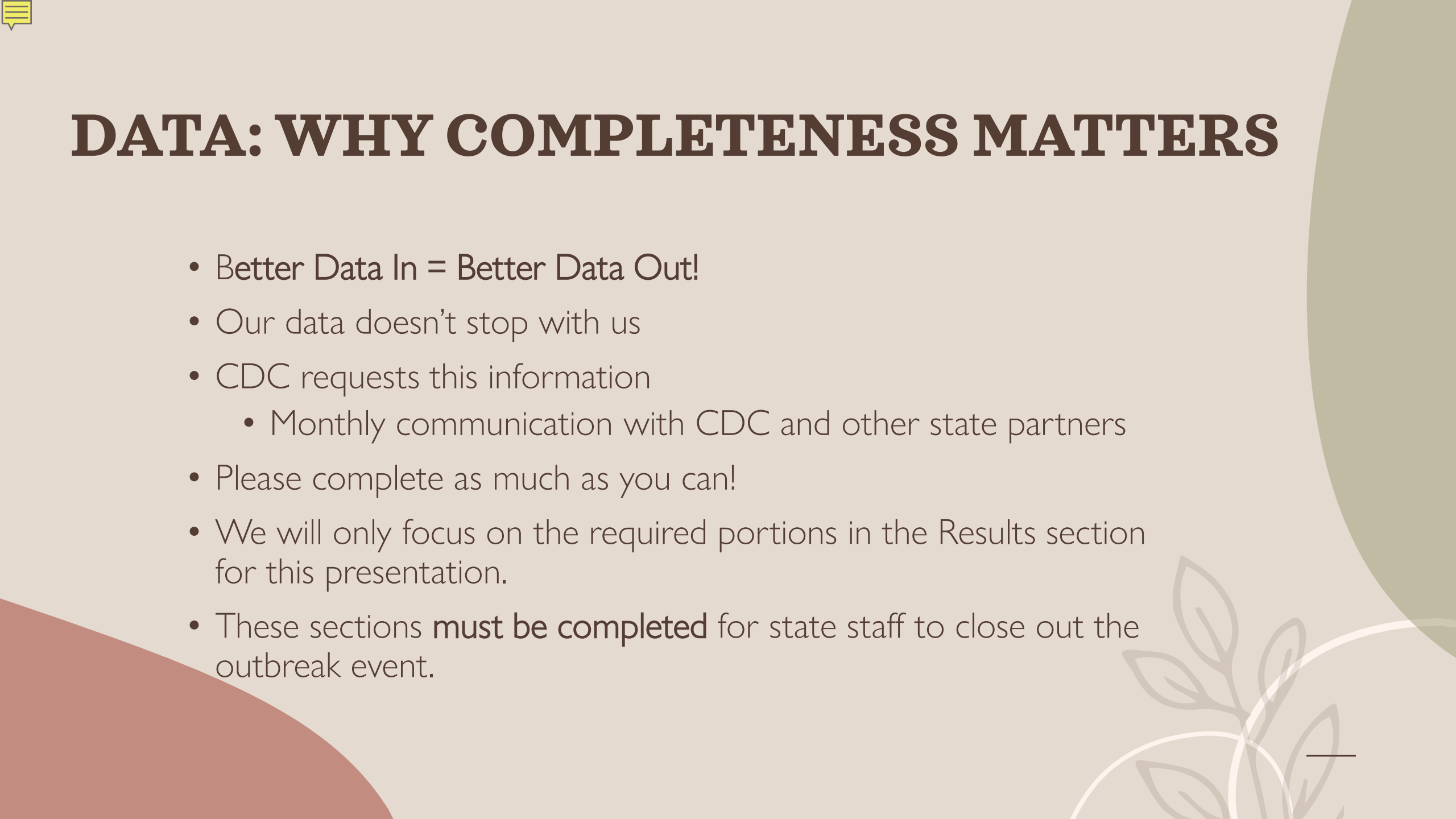
Update NCEDSS outbreak event

5

Submit NCEDSS outbreak event after 2 incubation periods pass without new cases



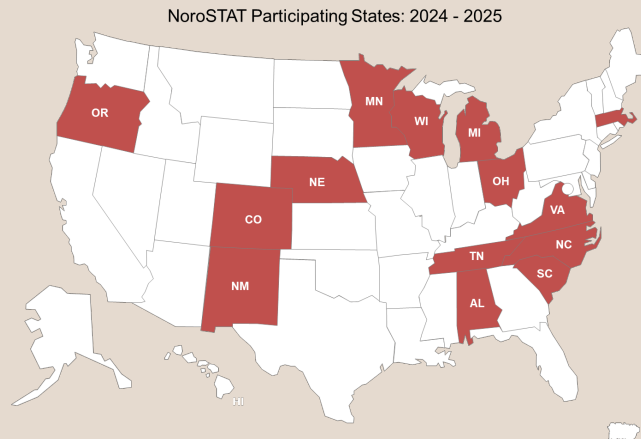
DATA: WHY COMPLETENESS MATTERS

- Better Data In = Better Data Out!
 - Our data doesn't stop with us
 - CDC requests this information
 - Monthly communication with CDC and other state partners
 - Please complete as much as you can!
 - We will only focus on the required portions in the Results section for this presentation.
 - These sections **must be completed** for state staff to close out the outbreak event.
- 

DATA: WHY COMPLETENESS MATTERS

NoroSTAT

- Network of state health departments that work with CDC to provide near real-time reporting and monitoring of norovirus outbreak activity
- Data are used to track current norovirus activity, better understand outbreaks, and make recommendations to prevent future outbreaks.



National coverage

AP

WORLD U.S. POLITICS SPORTS ENTERTAINMENT BUSINESS SCIENCE FACT CHECK ODDITIES MORE

LIVE: Oct. 7 anniversary LIVE: Pam Bondi hearing Nobel Prize AMD stock 'Rush' reunion tour

HEALTH

Norovirus cases are surging in parts of the US, CDC data shows

abc NEWS

Live Video Shows Shop

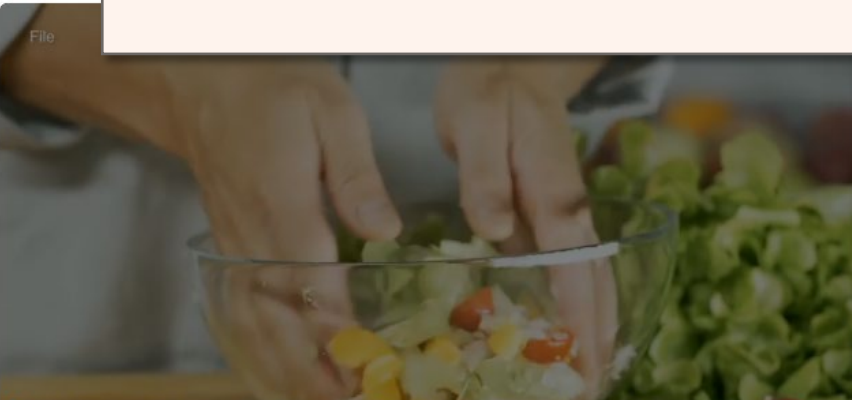
SOURCE: <https://abcnews.go.com/Health/norovirus-cases-rise-us/story?id=117138204>

LHD --> State --> CDC --> Media

Norovirus: What you need to know

More than 9 million people in the U.S. get sick with norovirus each year.

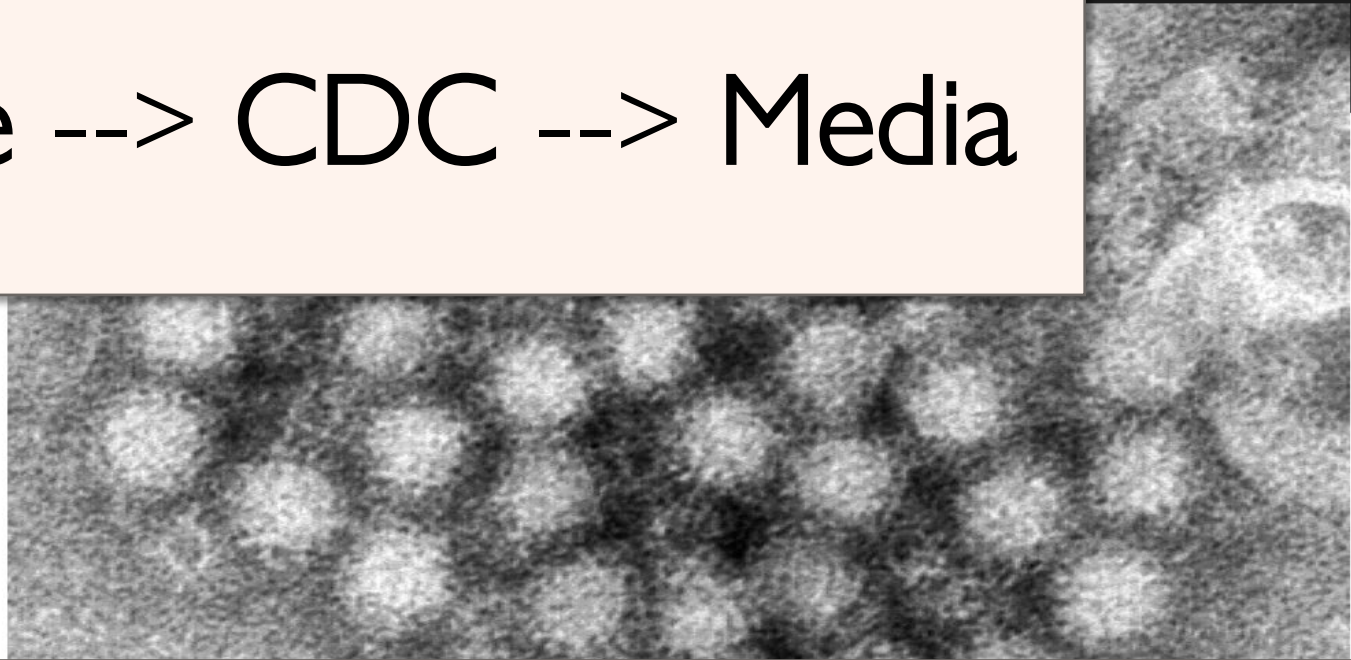
By [Mary Kekel](#)
December 27, 2019



THE VIRUS CAN BE CAUGHT THROUGH DIRECT CONTACT WITH AN INFECTED PERSON, CONTAMINATED FOOD, WATER OR SURFACES.

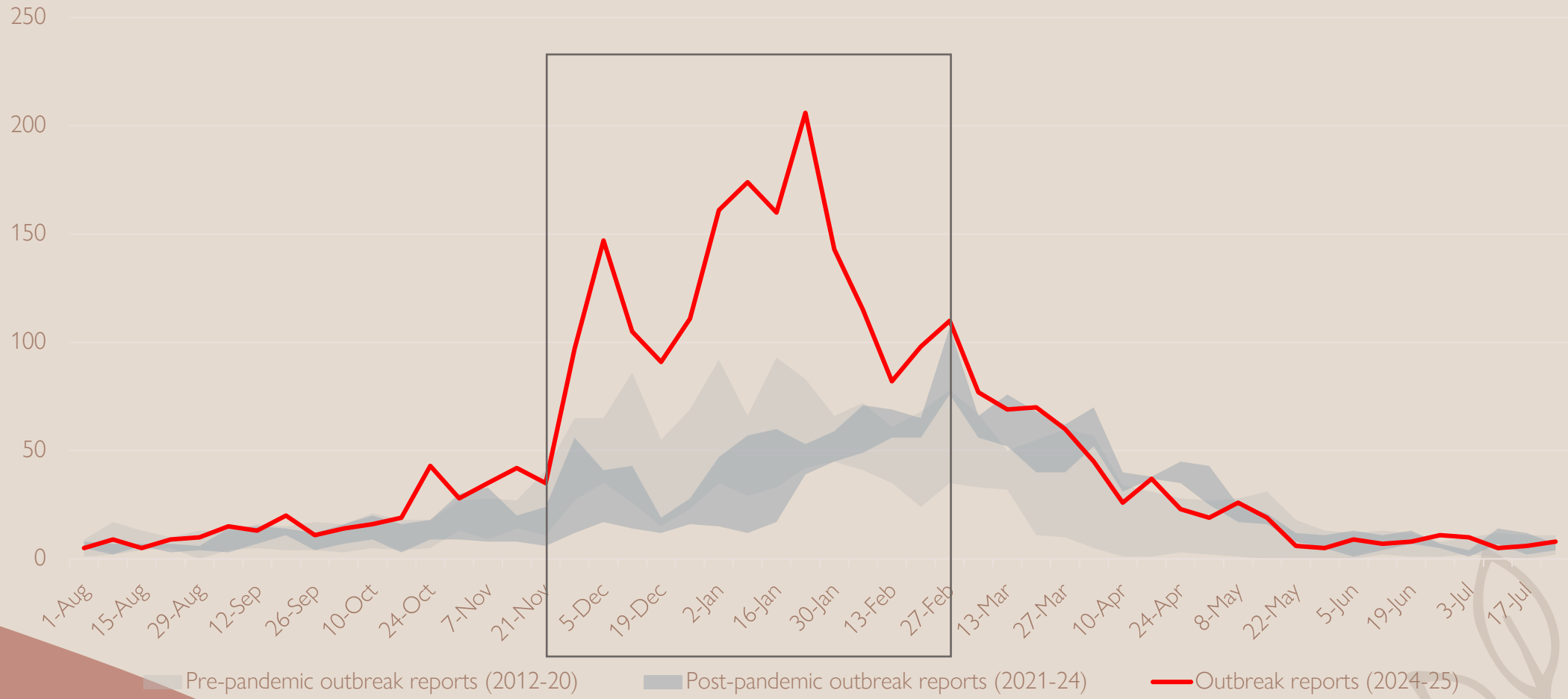
0:15 / 1:43

What is norovirus? The highly contagious illness has recently been linked to several outbreaks across the U.S.



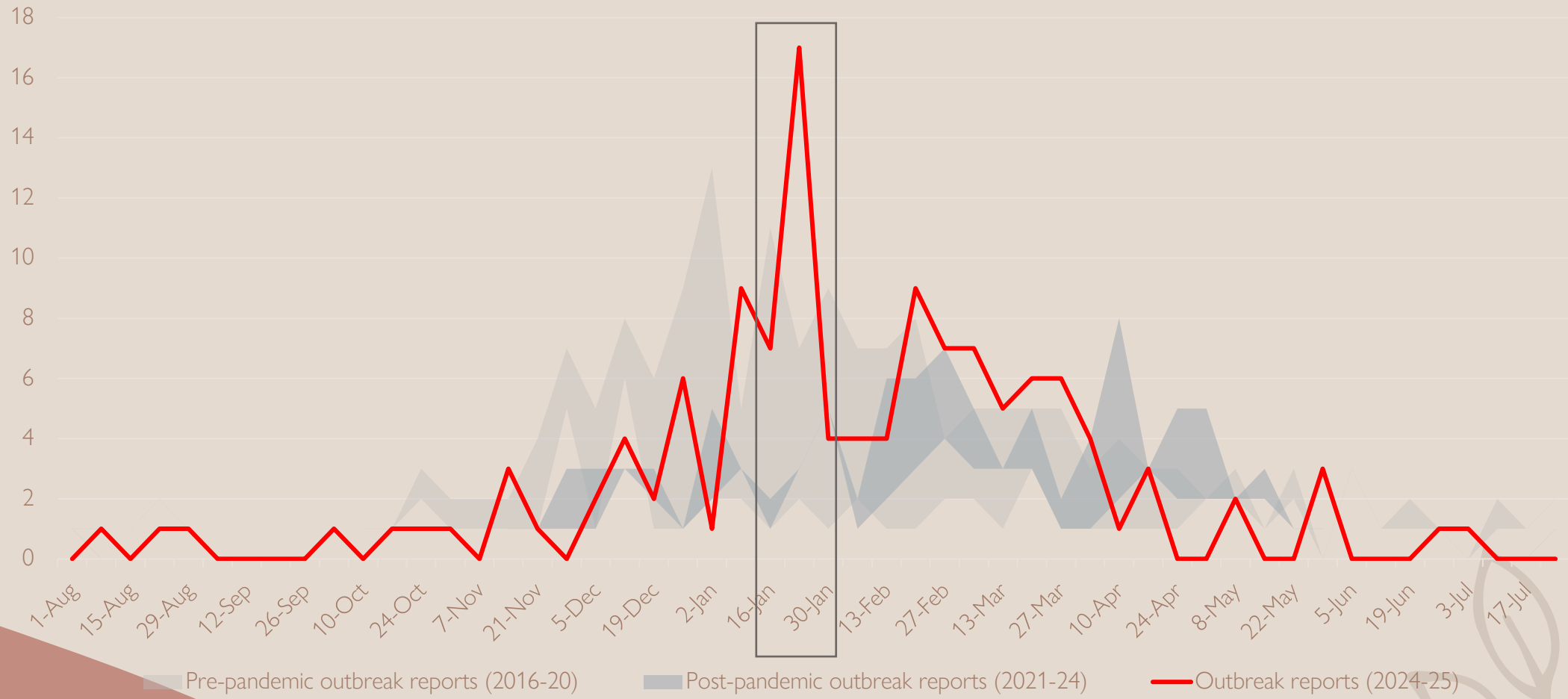
SOURCE: <https://apnews.com/article/norovirus-outbreak-stomach-virus-78e4a5f3c55d0af68f0c9e115c2369e5>

National Picture



Graph recreated using CDC data: <https://www.cdc.gov/norovirus/php/reporting/norostat-data.html>

North Carolina Picture



Graph recreated using CDC data: <https://www.cdc.gov/norovirus/php/reporting/norostat-data.html>

Outbreak Results Tab

Event Data

Lab Results

Concerns

Tasks

Additional Question Packages

Event Properties

Event History

Question Packages

| Question Package | ↕ Last Update |
|-------------------|---------------|
| 1. Administrative | 04/07/2025 |
| 2. Reporting | 03/18/2025 |
| 3. Response | 09/23/2025 |
| 4. Results | 04/07/2025 |

OUTBREAK RESULTS TAB

This tab tells your story!

- How many were ill? Symptoms? Tested? Hospitalized? Died?
- Date of illness onset
- Duration of illness
- Suspected transmission mode: person to person vs foodborne ?

Complete all available information/sections to include the denominator data (can be estimates ; xx ill/ xx total)

RESULTS TAB: OUTBREAK SUMMARY

Outbreak Summary

| | |
|--|--------------------------------------|
| Date of illness onset for the first case 03/06/2025 | 1 st & last illness onset |
| Date of illness onset for last case 04/01/2025 | |
| Counties affected Mecklenburg County | Counties affected |
| Number of cases from this county. [] | |
| Were any out-of-state cases identified? Unknown | |
| In what geographical location was the source case most likely exposed In NC | |
| Specify county Mecklenburg County | |
| Is the outbreak healthcare associated Yes | |
| Type of outbreak Gastrointestinal (GI) | |
| Suspected transmission mode (primary) Person to person | Transmission mode |
| Suspected transmission mode (secondary - if applicable) [] | |
| Average duration of illness 2 | |
| Average duration of illness units <input type="radio"/> Hours <input checked="" type="radio"/> Days | |

CASE COUNTS

Magnitude of Illness

Severity

| | | Counts |
|--|--|--|
| Enter the total number for each of the categories below: | | |
| Residents/Students/Patrons | Faculty/Staff/Employees | Total |
| In facility / setting | In facility / setting | Total In facility / setting |
| <input type="text" value="13"/> | <input type="text" value="29"/> | <input type="text" value="42"/> |
| Exposed | Exposed | Total Exposed |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Number of cases | Number of cases | Total number of cases |
| <input type="text"/> | <input type="text"/> | <input type="text" value="42"/> |
| Investigated / interviewed | Investigated / interviewed | Total Investigated / interviewed |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Visited primary care, FQHC, or urgent care provider | Visited primary care, FQHC, or urgent care provider | Total Visited primary care, FQHC, or urgent care provider |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Visited ER | Visited ER | Total Visited ER |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Hospitalized | Hospitalized | Total Hospitalized |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Died | Died | Total Died |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Vaccinated before outbreak began | Vaccinated before outbreak began | Total vaccinated before outbreak began |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Vaccinated in response to outbreak | Vaccinated in response to outbreak | Total vaccinated in response to outbreak |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Received post-exposure prophylaxis in response to outbreak | Received post-exposure prophylaxis in response to outbreak | Total received post-exposure prophylaxis in response to outbreak |
| <input type="text"/> | <input type="text"/> | <input type="text"/> |

LABORATORY METHODS

Laboratory Methods

Is the outbreak laboratory confirmed?
Yes

Confirmed outbreak?

Select test microscopy performed

Culture

PCR
Yes

Noro testing is always from PCR

Number of persons tested (if known)

Number of persons positive (if known)

IgM

Antigen Detection (e.g., rapid flu, EIA)

Microscopic Observation

Serotyping/subtyping

PFGE

Other

Total number people tested

Total number of people positive

Laboratory testing comments

Please note how many specimens were forwarded to SLPH in this section

Please make sure these sections (outlined in red) are complete.



STARTING '25-'26 SEASON

01

Enteric events and outbreaks not completed, **will be returned**

02

We recognize that time is precious and staffing short (we have the same problem!)

03

Enteric diseases are second in volume only to STI's

•Your help is **greatly needed and appreciated!**

04

Incomplete data causes a huge burden

What are the barriers?

05

State will be closing OB events sooner to ensure better data

ADDITIONAL KEY REQUIRED DATA POINTS

- Administration Trail Specific Requirements:
 - We **must** have your **name** and **contact number** in your county block (Authorized Reporter)

The screenshot shows a web form with the following sections:

- Date Assigned-Reassigned**: A date input field with a calendar icon and an "Add New" button.
- Group**: A text input field with a note: "(You cannot change your group selection unless you clear this entry by erasing the Date Assigned)".
- Reason**: A dropdown menu with the selected option "Outbreak Assigned to LHD".
- Authorized Reporter**: A text input field, highlighted with a red box.
- Phone number**: A text input field, highlighted with a red box.

COMPLETING THE DISPOSITION

Final disposition section (at the bottom of the page):

Final Outbreak Information

Final outbreak disposition (select one disposition only)

- Outbreak: causative agent identified
- Outbreak: causative agent suspected
- Outbreak: no causative agent identified
- Exposure site in NC; cases out-of-state
- Not an outbreak

National Outbreak Reporting System (NORS) Information

Final Outbreak Information

Final outbreak disposition (select one disposition only)

Outbreak: causative agent suspected

Primary pathogen/disease suspected

Norovirus

Other

Date outbreak closed in NC EDSS

mm/dd/yyyy

Date outbreak event closed in NC EDSS

Enter the date the OB was over
2 incubation periods from the last case

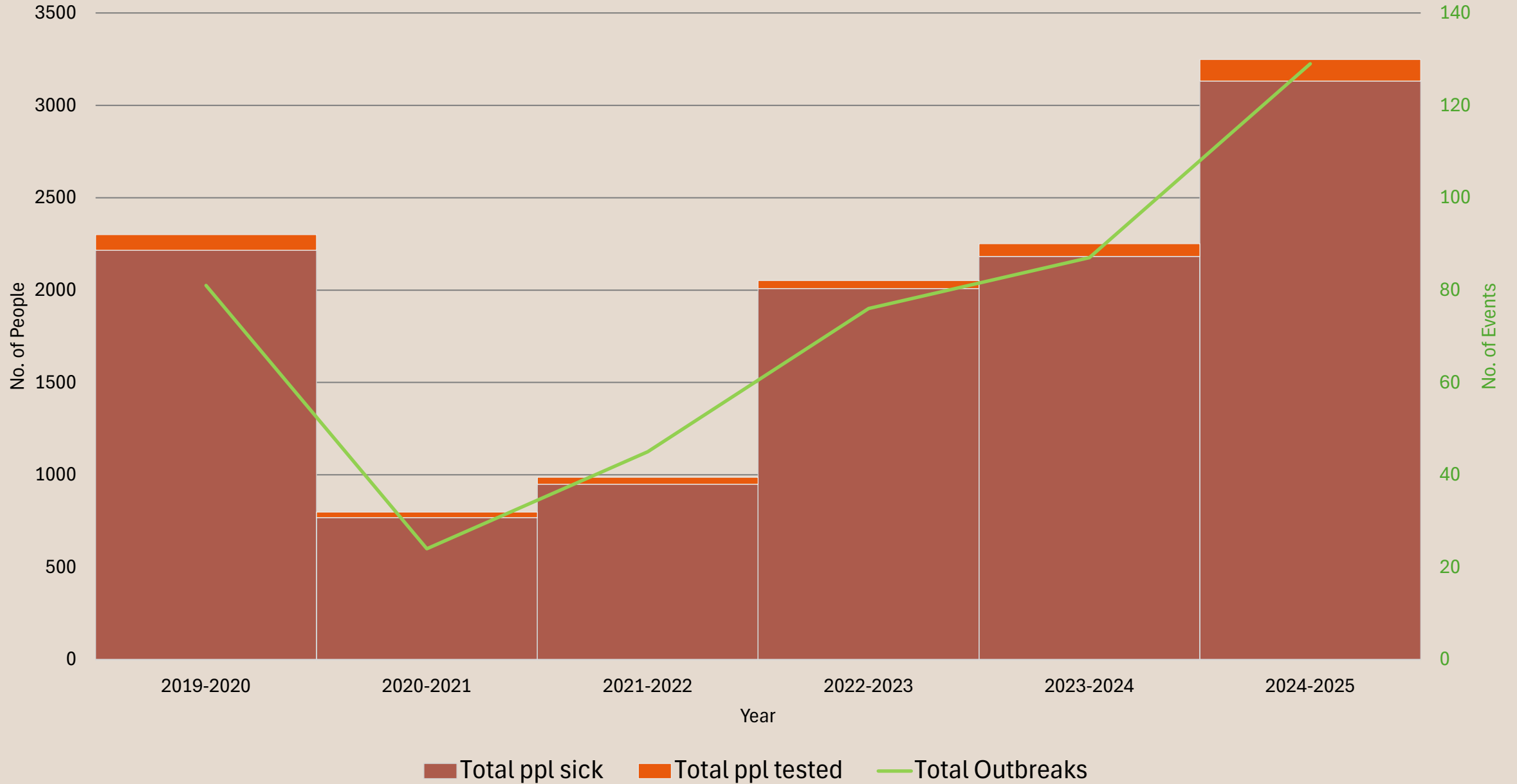


**SUMMARY OF 2024-2025
NORS SEASON DATA**

2024-2025 Noro Outbreak Characteristics

| Noro Outbreak Characteristics | 2024-2025 | 5-year average |
|--|-----------|----------------|
| Total Outbreaks (event) | 129 | 63 |
| Hospitalized (event) | 40 | 25 |
| Deaths (event) | 1 | 1 |
| Outbreak size (ppl) | 20 | 21 |
| Transmission Setting (event, median # ppl) | | |
| LTCF | 93 (24) | 45 (25) |
| College/University | 4 (18) | 1 (41) |
| School K-12 | 5 (17) | 5 (44) |
| Childcare | 2 (14) | 3 (27) |
| Community | 19 (14) | 6 (34) |
| Hospital | 5 (6) | 3 (18) |
| Unknown | 1 (8) | 1 (8) |

Increase in Annual Reported Norovirus Outbreak Events and Testing, 2019-2025





THANK YOU!

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Enhanced norovirus surveillance in North Carolina
NCSLPH

Why do we need norovirus specimens?

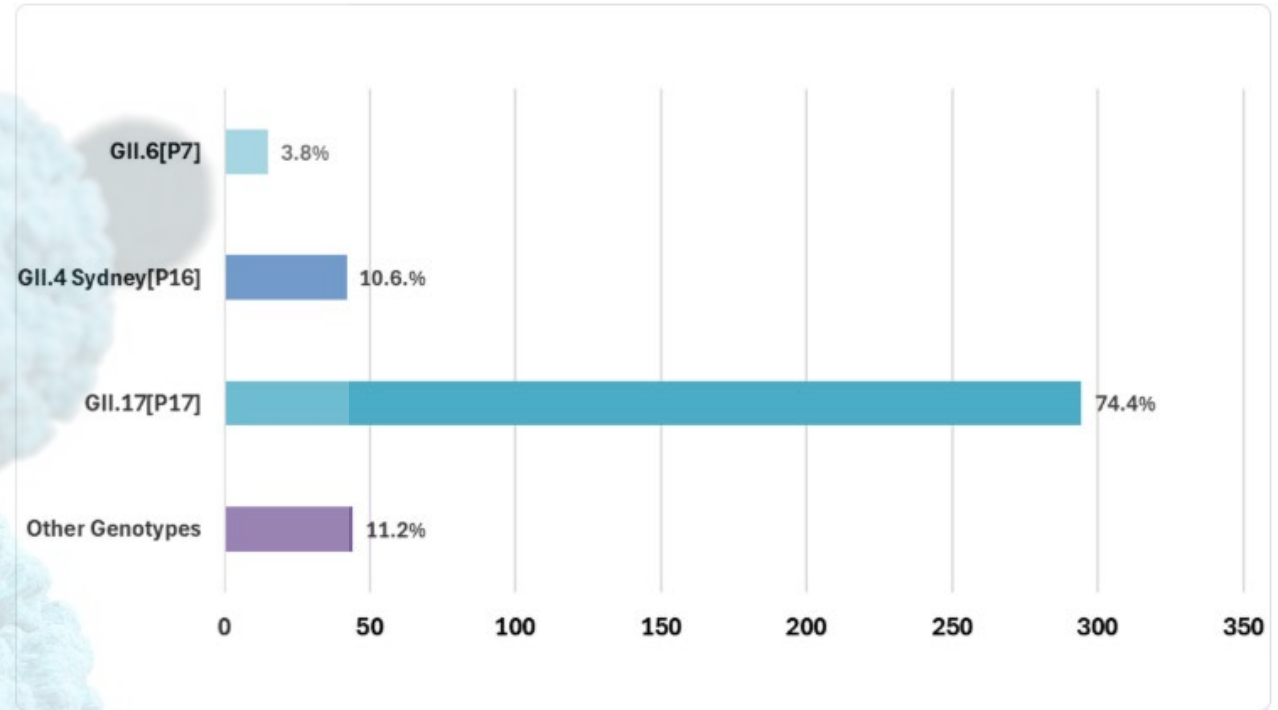
Why is norovirus submission important?

10 norovirus genogroups and GI and GII cause most infections in humans.

- Norovirus testing allows for strain identification and characterization.
- Overlapping norovirus strain information with the outbreak characteristics allows us to assess:
 - Strain-specific norovirus outbreak characteristics
 - Differences between current and previous years' outbreak characteristics
 - The impact of new strains on outbreak frequency and severity
 - Specimens (in conjunction with epi data) identify changes in norovirus epidemiology

Enhances norovirus surveillance in North Carolina

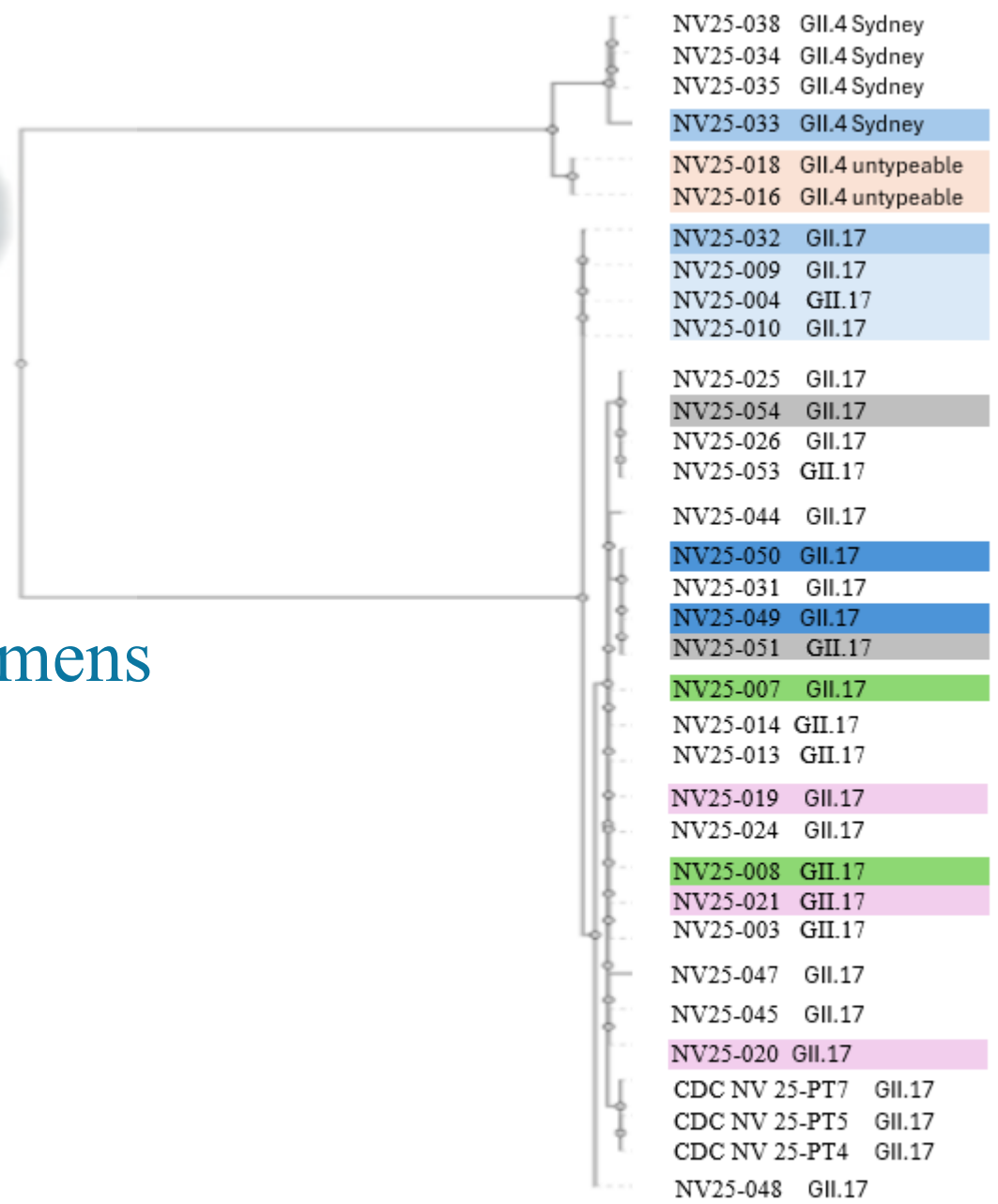
September 2024-August 2025 CDC CaliciNet



| Genotype | Number of Outbreaks |
|-------------------|---------------------|
| GII.17[P17] | 294 |
| GII.4 Sydney[P16] | 42 |
| GII.6[P7] | 15 |
| Other Genotypes | 44 |

* Other genotypes include GI.1[P1], GI.2[P2], GI.3[P3], GI.3[P13], GI.5[P5], GI.6[P11], GI.7[P7], GII.2[P16], GII.3[P12], GII.4 San Francisco[P31], GII.7[P7], GII.8[P8], GII.9 [7] GII.10[P16], and GII.21[P21].

Winter/Spring 2025 norovirus specimens



Outbreak specimens are grouped with the same color

Enhanced norovirus surveillance in North Carolina

For a suspected norovirus outbreak:

- Report suspected outbreak to the Communicable Disease Branch (CDB) epidemiologists (919-733-3419).
- Please collect and submit 3-5 stools for norovirus testing at the NCSLPH to confirm the outbreak.
- Specimens can be collected within 72 hours (3 days) after symptoms resolves.
- Stool specimens must be received at the NCSLPH within 7 days of collection.
- Testing will be performed within 72 hours (3 days) of receipt.
- Results will be sent to the LHD contact and the NCDHHS Enterics Team.
- No individual results will be provided. The results will be ratio of positive to negative results. For example, 3 of 5 positive for norovirus RNA.

Enhanced norovirus surveillance in North Carolina



The NCSLPH will provide:

- A norovirus kit containing collection supplies for 5 stool submissions
- A shipping container
- FREE transport of specimens to the NCSLPH from local health departments, health care facilities, and long-term care facilities

Enhanced norovirus surveillance in North Carolina

Requisition form DHHS-3390

- ❖ Complete form with required information
- ❖ Please provide outbreak facility name and point of contact

ENTERIC BACTERIOLOGY (ENTEROBACTERIALES)

N.C. Department of Health and Human Services
 State Laboratory of Public Health
 4312 District Drive
 Raleigh, NC 27607

Lab Use Only

 Acceptance Criteria Not Met
 Inappropriate temperature
 Specimen too old
 Incomplete labeling/form
 Specimen inappropriate/damaged
 Date: ___/___/___ Initials: _____

Please Give All Information Requested

Attach Printed Label Below

| | | | | | |
|---|---------------------|---|--------------------------------------|---|---------------|
| Patient Information | Last Name | | | | |
| | First Name | MI | | | |
| | Maiden Name/Surname | | | | |
| | Address/Attention: | | | | |
| | Street Address: | | Address 2: | City: | |
| | State: | Zip Code: | County Code: | County Name: | Phone Number: |
| Insurance ID Number: (if applicable) | | | Medicaid Number (if applicable): | | |
| Medical Record Number: | | Date of Birth: ___/___/___ | | | |
| Sex: <input type="radio"/> Male <input type="radio"/> Transgender M2F <input type="radio"/> Female <input type="radio"/> Transgender F2M <input type="radio"/> Unknown <input type="radio"/> Transgender Unknown <input type="radio"/> Ambiguous | | Race (mark all that apply): <input type="checkbox"/> White <input type="checkbox"/> American Indian/ <input type="checkbox"/> Black Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Native Hawaiian/ <input type="checkbox"/> Unknown Pacific Isles | | Ethnicity: <input type="checkbox"/> Hispanic or Latino Origin <input type="checkbox"/> Non-Hispanic <input type="checkbox"/> Unknown | |
| EIN: | | Submitter (Facility) Name: | | | |
| Address: | | Address 2: | City: | | |
| State: | | Zip Code: | County Name: | | |
| Phone Number: | | Email Address: | Fax Number: | | |
| Ordering Provider NPI: | | Ordering Provider First and Last Name: | | | |
| Collection Date: ___/___/___ | | Collection Time: 24 Hr ___:___ Time | Reason for Testing (ICD-10 Dx Code): | | |
| Specimen Type: <input type="checkbox"/> Reference isolate <input type="checkbox"/> Clinical (primary patient specimen for culture) CIDT (culture-independent diagnostic test) <input type="checkbox"/> Yes <input type="checkbox"/> No | | Specimen Source: <input type="checkbox"/> Stool <input type="checkbox"/> Rectal Swab <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Wound Site: _____ <input type="checkbox"/> Other: _____ | | | |
| CIDT additional information: Please attach copy of CIDT report and identify method used below: <input type="checkbox"/> BioFire® <input checked="" type="checkbox"/> BD MAX® <input type="checkbox"/> Luminex xTAG® <input type="checkbox"/> LDT (lab developed test) <input type="checkbox"/> Verigene® <input type="checkbox"/> Other: _____ | | Microbiology Test request/ Pathogen(s) identified: <input type="checkbox"/> Enteric pathogens (includes all below) <input type="checkbox"/> Aeromonas only <input type="checkbox"/> Campylobacter only <input type="checkbox"/> E. coli 0157/ STEC only <input type="checkbox"/> Salmonella only <input type="checkbox"/> Shigella only <input type="checkbox"/> Yersinia only <input type="checkbox"/> Vibrio only Unusual reference isolate identification: <input type="checkbox"/> Glucose fermenting Gram-negative rod ARLN Test Request: <input type="checkbox"/> ARLN Panel Molecular Test request/ Pathogen(s) identified: <input type="checkbox"/> Norovirus (outbreak-associated) | | | |
| Epi Please complete if applicable: Foreign or domestic travel? Where? _____ Suspect foodborne? Food handler? _____ Daycare? _____ | | | | | |

DHHS 3390 (Revised 08/2024) For more information, refer to website at <https://alph.dph.ncdhhs.gov/>

In this section please provide the outbreak facility name and a point of contact.

Enhanced norovirus surveillance in North Carolina

Norovirus kits or ETM in biobags can be requested by emailing slph.norovirus@dhhs.nc.gov

If norovirus kit or EMT is needed the next day, please submit email request by 11AM. Supplies will be sent for next day FedEx delivery.

Information needed to be provided in request includes:

- ❖ Has outbreak been reported to DPH CD Branch Epidemiologist on call?
- ❖ The contact person's phone number and email address.
- ❖ The physical address of where the shipment is going.

Enhanced norovirus surveillance in North Carolina

Shipping specimens to the NCSLPH

Norovirus specimens must be kept at 2-8°C

DOA Medical Courier

- Free
- Refrigeration on board
- Daily drop offs to SLPH
- Specimens are required to be packed as directed for “Keep Refrigerated” specimens in the “DOA Medical Courier Packaging and Shipping Guidance” found at <https://slph.dph.ncdhhs.gov/>

FedEX

- Free
- NCSLPH-supplied shipping label
 - FedEX shipping labels can be requested by emailing slph.norovirus@dhhs.nc.gov

Enhanced norovirus surveillance in North Carolina

Information needed to be provided in email request for FedEx label includes:

- ❖ The contact person's phone number and email where the shipment will be picked up by FedEx.
- ❖ The physical address of where the shipment is being picked up
- ❖ If facility does not have a regular FedEx pick-up time, please provide a pick-up time and the pick-up will be scheduled.
- ❖ The FedEx label will be emailed back to the requestor's email.

Enhanced norovirus surveillance in North Carolina

Submit specimens from suspect norovirus outbreaks to the NCSLPH for testing.

Why to submit: -Norovirus testing allows for strain identification and characterization

What to submit: -Submit 3-5 specimens for testing.

When to submit: -Collect specimens up to 72 hours after symptoms stop
-Specimens must be received at the NCSLPH within 7 days of collection

How to submit: -Ship specimens FREE to NCSLPH via DOA Medical Courier or FedEx
-Request norovirus kit (collection and shipping materials) by emailing slph.norovirus@dhhs.nc.gov
-Request FedEx shipping label by emailing slph.norovirus@dhhs.nc.gov

What results are reported: -Results will be sent via email to the LHD contact and the NCDHHS Enterics Team.
-No individual patient results will be provided.
- Results will be provide within 3 business days of receipt

Enhanced norovirus surveillance in North Carolina

For additional information about NC's enhanced norovirus surveillance program contact the NCSLPH at slph.norovirus@dhhs.nc.gov or NCDHHS Enterics Team at enterics@dhhs.nc.gov

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