TIP SHEET for Noro-like Outbreaks in Non-Food Establishment Settings

This guidance is intended for facility-based gastrointestinal (GI) illness outbreaks that are suspected or confirmed by laboratory testing to be norovirus (e.g., noro-like).

- **Disease:** Norovirus is the predominant cause of acute gastroenteritis in the United States. Symptoms include abrupt onset of vomiting, diarrhea, abdominal cramps, and nausea that lasts 1 to 3 days. Hospitalization is rarely required by individuals with norovirus infection.

- **Transmission and Incubation Period:** Norovirus is transmitted via fecal-oral or vomitus-oral routes. Transmission can occur directly via person-to-person spread, or indirectly by swallowing contaminated food or water, or having contact with contaminated surfaces then touching the mouth. Infected individuals remain infectious while symptomatic and for at least three days after their symptoms resolve. Norovirus is not transmitted by animals. Symptoms begin 12 to 48 hours after exposure.

Individual case investigation guidance can be found in the [Norovirus Tip Sheet](#) on MAVEN Help.

**Noro-like outbreak definition:** An increase in gastrointestinal illness (e.g., diarrhea, vomiting, nausea) above what is expected, by facility, regarding place and time resulting from a common exposure that is either suspected or laboratory-confirmed to be caused by norovirus.

### Reporting

In accordance with [105CMR300](#), illnesses believed to be part of a suspected or confirmed outbreak are immediately reportable to the Local Board of Health (LBOH) where the facility is located or to MDPH.

- Norovirus outbreaks associated with healthcare facilities (long term care, hospital, etc.) can be reported directly by the facility through the completion of the [MDPH Gastrointestinal Illness Healthcare Cluster Reporting Form](#).
  - Submission of this form creates a GI Illness outbreak event in MAVEN.
  - New outbreak events will not go into any LBOH workflows. An MDPH epidemiologist will notify you of any new GI Illness outbreak events in your jurisdiction.
  - Outbreaks in your jurisdiction can be identified at any point in time by running the [LBOH Cluster Linelist Report](#).

- Norovirus outbreaks associated with other non-food establishments such as daycares, schools, shelters, etc. should be reported by phone or other means to the LBOH where the facility is located or to MDPH. The information collected should be documented in a MAVEN outbreak event.

- Norovirus outbreaks associated with food establishments (restaurants, catered events, etc.) warrant the creation of a [MAVEN foodborne illnesses complaint (FBI) event](#), followed by a call to the Division of Epidemiology (617) 983-6800 or Food Protection Program (617) 983-6712.

### Document in MAVEN

If needed, create a MAVEN outbreak event:

- From the Dashboard, select “Create Cluster/Outbreak/Aggregate Event” from the left-hand menu.
- Name outbreak using Cluster Naming Conventions: **FACILITYTYPE_FACILITYNAME_TOWN**
- If there are two or more lab-confirmed norovirus cases associated with the facility, select “Calicivirus/Norovirus” as the Event. Otherwise, use “GI Illness Cluster” if norovirus is suspected but has not been confirmed by laboratory testing.

Ensure all required fields are completed in the following MAVEN Question Packages (QPs):

<table>
<thead>
<tr>
<th>GI Illness QP</th>
<th>Number of clients(^1)</th>
<th>Total in facility, Number ill</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of staff</td>
<td>Total in facility, Number ill, Number ill food handlers</td>
<td></td>
</tr>
<tr>
<td>Number of wings/units</td>
<td>Total in facility, Number ill, Number ill food handlers</td>
<td></td>
</tr>
<tr>
<td>Illness information</td>
<td>First and last onset date, Symptoms</td>
<td></td>
</tr>
</tbody>
</table>

| Standard QP                          | Facility information    | Exposure setting name and type |

\(^1\)Clients can refer to residents, patients, students, or attendees based on type of facility.
The following steps can be completed by reviewing reported illness information and calling the facility.

### Goal 1: Rule out a point source outbreak

Most noro-like, facility-based outbreaks are the result of person-to-person transmission (propagated source). This means the outbreak starts with one or two people ill, and due to inadequate handwashing and cleaning, in conjunction with how infectious norovirus is, additional people get sick.

<table>
<thead>
<tr>
<th>Point Source Outbreak</th>
<th>Propagated Source Outbreak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who</td>
<td>Mostly clients, may include some kitchen staff</td>
</tr>
<tr>
<td>What</td>
<td>Most individuals have a shared meal or event exposure</td>
</tr>
<tr>
<td>Where</td>
<td>Illnesses spread across units/floors of the facility</td>
</tr>
<tr>
<td>When</td>
<td>Illness onsets occur within one incubation period (24 hours) of each other</td>
</tr>
<tr>
<td>How</td>
<td>Foodborne transmission → create a Foodborne Illness Complaint</td>
</tr>
</tbody>
</table>

Clients can refer to residents, patients, students, or attendees based on type of facility.

### Investigate

- Encourage stool testing of ill individuals to identify outbreak etiology.
- Link individual lab-confirmed cases to the MAVEN outbreak event.
- In the absence of stool testing, or prior to availability of stool test results, use the following epidemiologic and clinical criteria to identify if outbreak is likely caused by norovirus:

  **Kaplan Criteria**
  1. Mean/median illness duration of 12-60 hours,
  2. Mean/median incubation period of 24-48 hours,
  3. More than 50% of people with vomiting, and
  4. No enteric bacteria found

  **Lively Criteria**
  1. Greater proportion of cases with vomiting than fever,
  2. Bloody diarrhea in <10% of cases, and
  3. Vomiting in greater than 25% of cases.

1About 30% of Norovirus outbreaks do not meet Kaplan’s criteria. If criteria are not met, it does not rule out norovirus as the cause.

### Goal 3: Prevent further spread

- Provide education and post signs encouraging proper and frequent hand washing with soap and water (alcohol-based hand sanitizer is not effective)
- Cohort ill individuals away from well individuals
- Limit movement of people and things:
  - Limit staff floating between groups, units, or classrooms
  - Limit sharing of objects/fomites
  - Cancel or reschedule group activities or events
- Increase cleaning and disinfection to at least twice daily using an EPA-approved disinfectant
- Notify visitors or parents/guardians of the ongoing outbreak
- Review and remind individuals of sick worker and sick child policies at the facility
### TIP SHEET for Noro-like Outbreaks in Non-Food Establishment Settings (continued)

<table>
<thead>
<tr>
<th>Exclude</th>
<th></th>
</tr>
</thead>
</table>
| **Food handlers (all settings)** | A food handler is defined in [105CMR300](#) as any person directly preparing or handling food; any person handling clean dishes or utensils; any person who dispenses medications by hand, assists in feeding, or provides mouth care.  
  
  - **In healthcare settings:** this includes those who set up trays for patients to eat, feed or assist patients with eating, give oral medications or mouth/denture care.  
  - **In daycare facilities, schools, and community residential programs:** this includes those who prepare food for clients to eat, feed or assist clients in eating, or give oral medications.  
  
  **Food handlers who test positive for norovirus** must be excluded until 72 hours past the resolution of symptoms, or 72 hours past the date the norovirus positive specimen was produced, whichever occurs last. [Implementing the Exclusion of Food Handlers with Reportable Conditions](#)  
  
  **Food handlers with noro-like symptoms with no lab confirmation** should be excluded in the same manner as a lab-confirmed case. |
| **Schools/childcare** | • Most staff in childcare settings are considered food handlers. Staff should be excluded following food handler criteria above.  
  
  • Children in childcare settings and K-12 schools diagnosed with norovirus should be excluded until 72 hours after symptom resolution, and in accordance with the facility’s illness policy. |
| **Healthcare facilities** | • Staff who meet the definition of a food handler should be excluded following food handler criteria above.  
  
  • Residents/patients should be placed on standard plus contact precautions for the duration of their illness and remain on precautions until 72 hours after their diarrhea has resolved. [Infection Prevention in Long Term Care: Gastrointestinal Illness](#) |

### MDPH Division of Epidemiology: (617) 983-6800

#### General Resources
- [MDPH Guide to Surveillance, Reporting, and Control](#)
- Fact Sheets: [MDPH](#), [CDC](#)
- Handwashing Posters: [MDPH](#), [CDC](#)
- [CDC Prevent Norovirus](#)
- [MMWR: Updated Norovirus Outbreak Management and Disease Prevention Guidelines](#)

#### Setting-Specific Resources
- [CDC Healthcare-Associated Infections: General Information about Norovirus](#)
- [MDPH Infection Prevention in Long Term Care: Gastrointestinal Illness](#)
- [MDPH School Health Manual]:  
  - Diseases Spread Through the Intestinal Tract: page 8-27  
  - Norovirus: page 8-34  
  - Sample letter for parent/guardian: page 8-10