

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

This guidance is intended for facility-based gastrointestinal (GI) illness outbreaks, often spread from person to person, 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.

GI Illness 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.

1 Reporting	<p>In accordance with 105 CMR 300, 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 DPH.</p> <ul style="list-style-type: none">• Norovirus outbreaks associated with healthcare facilities (long term care, hospital, etc.), child care facilities, and K-12 schools can be reported directly by the facility through the completion of the following DPH online reporting forms: Healthcare, Child Care & K-12 Schools<ul style="list-style-type: none">○ Submission of this form creates a GI Illness outbreak event in MAVEN.○ New outbreak events will not go into any LBOH workflows. An DPH 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 shelters, etc. should be reported by phone or other means to the LBOH where the facility is located or to DPH. 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 Illness Complaint (FBI), followed by a call to the DPH Division of Epidemiology (617) 983-6800 or Division of Food Protection (617) 983-6712															
2 Document in MAVEN	<p>If needed, create a MAVEN outbreak event:</p> <ul style="list-style-type: none">• 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.” <p>Ensure all required fields are completed in the following MAVEN Question Packages (QPs):</p> <table border="1"><thead><tr><th></th><th>Number of clients¹</th><th>Total in facility, Number ill</th></tr></thead><tbody><tr><td rowspan="4">Facility-based Cluster Questions QP</td><td>Number of staff</td><td>Total in facility, Number ill, Number ill food handlers</td></tr><tr><td>Number of wings/units</td><td>Total in facility, Number affected</td></tr><tr><td>Illness information</td><td>First and last onset date, Symptoms</td></tr><tr><td>Child care² & K-12 school details</td><td>Grade(s) or age group(s) affected, More than one school/daycare impacted</td></tr><tr><td>Standard QP</td><td>Facility information</td><td>Exposure setting name and type</td></tr></tbody></table> <p>¹Clients can refer to residents, patients, students, or attendees based on type of facility. ²The terms “child care” and “daycare” are used interchangeably in MAVEN and DPH guidance documents.</p>		Number of clients ¹	Total in facility, Number ill	Facility-based Cluster Questions QP	Number of staff	Total in facility, Number ill, Number ill food handlers	Number of wings/units	Total in facility, Number affected	Illness information	First and last onset date, Symptoms	Child care ² & K-12 school details	Grade(s) or age group(s) affected, More than one school/daycare impacted	Standard QP	Facility information	Exposure setting name and type
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<p>3</p> <p>Investigate</p>	<p>The following steps can be completed by reviewing reported illness information and calling the facility.</p>			
	<p>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.</p>			
	Point Source Outbreak		Propagated Source Outbreak	
	Who	Mostly clients ¹ , may include some kitchen staff	Illness among clients and staff	
	What	Most individuals have a shared meal or event exposure	No obvious common food or event exposure	
	Where	Illnesses spread across units/floors of the facility	Most illnesses among individuals on the same floor/unit or part of the same grade	
	When	Most illness onsets occur within one incubation period (24 hours) of each other	May begin with a couple ill, then 24 hours later (one incubation period), additional illness onsets observed	
	How	Foodborne transmission → create a Foodborne Illness Complaint	Person-to-person transmission	
	<p>¹Clients can refer to residents, patients, students, or attendees based on type of facility.</p>			
	Goal 2: Identify outbreak etiology	<ul style="list-style-type: none"> 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: <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 5px;"> Kaplan Criteria¹ <ol style="list-style-type: none"> 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 </td><td style="width: 50%; padding: 5px;"> Lively Criteria <ol style="list-style-type: none"> 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. </td></tr> </table> <p>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.</p>		Kaplan Criteria¹ <ol style="list-style-type: none"> 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
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Goal 3: Prevent further spread	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 			

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	Food handlers (all settings)	<p>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.</p> <ul style="list-style-type: none"> • 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 child care programs, 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. <p>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</p> <p>Food handlers with noro-like symptoms with no lab confirmation should be excluded in the same manner as a lab-confirmed case.</p>		
	Schools/ child care	<ul style="list-style-type: none"> • Prevention and Control Recommendations for Child Care and K-12 Schools • Follow exclusion and return guidance outlined in the Gastrointestinal Illness Symptom Checklist for Children and Staff in Child Care Programs and K-12 Schools. 		
	Healthcare facilities	<ul style="list-style-type: none"> • Prevention and Control Recommendations for 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 		
Additional Resources	<p>DPH Division of Epidemiology: (617) 983-6800</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; vertical-align: top;"> <p>General Resources</p> <ul style="list-style-type: none"> • DPH Norovirus webpages • Fact Sheets: DPH, CDC • Handwashing Posters: DPH, CDC • CDC Prevent Norovirus • MMWR: Updated Norovirus Outbreak Management and Disease Prevention Guidelines • EPA's Registered Antimicrobial Products Effective Against Norovirus </td><td style="width: 50%; vertical-align: top;"> <p>Setting-Specific Resources</p> <ul style="list-style-type: none"> • Norovirus Information for Healthcare Facilities • Norovirus Information for Child Care Programs and K-12 Schools • DPH School Health Manual: <ul style="list-style-type: none"> ○ Diseases Spread Through the Intestinal Tract: page “8-27” of the manual, or 400 of the PDF ○ Norovirus: page “8-34” of the manual, or 407 of the PDF ○ Sample letter for parent/guardian: page “8-101” of the manual, or 474 of the PDF </td></tr> </table>		<p>General Resources</p> <ul style="list-style-type: none"> • DPH Norovirus webpages • Fact Sheets: DPH, CDC • Handwashing Posters: DPH, CDC • CDC Prevent Norovirus • MMWR: Updated Norovirus Outbreak Management and Disease Prevention Guidelines • EPA's Registered Antimicrobial Products Effective Against Norovirus 	<p>Setting-Specific Resources</p> <ul style="list-style-type: none"> • Norovirus Information for Healthcare Facilities • Norovirus Information for Child Care Programs and K-12 Schools • DPH School Health Manual: <ul style="list-style-type: none"> ○ Diseases Spread Through the Intestinal Tract: page “8-27” of the manual, or 400 of the PDF ○ Norovirus: page “8-34” of the manual, or 407 of the PDF ○ Sample letter for parent/guardian: page “8-101” of the manual, or 474 of the PDF
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