

## TIP SHEET for *Vibrio* Case Investigations

- **Disease:** *Vibrio* is a bacterium that can cause different clinical syndromes including **gastroenteritis** (primarily from *V. parahaemolyticus*, toxigenic and non-toxigenic *V. cholerae*), **wound infection** (*V. vulnificus*, *V. alginolyticus*), and **septicemia** (*V. vulnificus*). Gastroenteritis is the most common syndrome, with individuals experiencing watery, non-bloody stools, abdominal pain, low-grade fever, headache, and chills with spontaneous symptom recovery within 2 to 5 days. Severe wound infections from *V. vulnificus* can progress to necrotizing fasciitis.
- **Transmission & Incubation Period:** *Vibrio* bacteria naturally inhabit marine and estuarine environments with most infections occurring in summer and fall when water temperatures are warmer causing *Vibrio* bacteria to thrive. Individuals become ill by swallowing the bacteria via ingestion of raw or undercooked seafood, especially shellfish, or by getting contaminated water or seafood drippings into an open wound. Most *V. cholerae* infections reported in MA residents are non-toxigenic (not cholera disease). Toxigenic *V. cholerae* infections are rare and typically acquired via international travel. Person-to-person spread has not been documented. The incubation period for gastroenteritis is typically 24 hours (range of 5 to 92 hours) and for wound infections and septicemia is 1 to 7 days.

<p style="text-align: center;">① Notification</p>	<ul style="list-style-type: none"> <li>• LBOHs have primary responsibility to investigate cases of <i>Vibrio</i> in their jurisdiction.</li> <li>• <b>Cases with <i>V. cholerae</i> isolated by culture warrant immediate follow up year-round.</b></li> <li>• <b>From May 1 to October 31 (“Vibrio season”), all other <i>Vibrio</i> cases will flow into your “LBOH Notification for Immediate Disease” workflow.</b> <ul style="list-style-type: none"> <li>○ Immediate follow up is requested for cases with <i>Vibrio parahaemolyticus</i> or <i>Vibrio species</i> (not further speciated) detected in stool. This is to facilitate the prompt collection of any shellfish exposures. Due to warming coastal waters, immediate follow up is also requested for <i>Vibrio vulnificus</i> infections to identify any local waters that may be associated with infection.</li> <li>○ An MDPH epidemiologist will add a note indicating what follow up needed. For cases warranting immediate investigation, an MDPH epidemiologist will be assigned to ensure complete case follow up.</li> </ul> </li> <li>• Outside of these months, cases warrant routine investigation. New events will flow into your “LBOH Notification for Routine Disease” workflow.</li> </ul>
<p style="text-align: center;">② Get Prepared</p>	<ul style="list-style-type: none"> <li>• Familiarize yourself with the disease: <a href="#">MDPH Fact Sheets</a>, <a href="#">MDPH Guide to Surveillance</a></li> <li>• Review <b>foodhandler exclusion criteria</b> from 105 CMR 300 for cases and their household contacts. <a href="#">Implementing the Exclusion of Food Handlers with Reportable Conditions</a> A food handler is defined 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. <ul style="list-style-type: none"> <li>▪ <b>In healthcare:</b> this includes those who set up trays for patients to eat, feed or assist patients in eating, give oral medications or give mouth/denture care.</li> <li>▪ <b>In child care programs, schools, and community residential programs:</b> this includes those who prepare food for clients to eat, feed or assist clients in eating, or give oral medications.</li> </ul> </li> <li>• Review demographic and laboratory information available in MAVEN for the case.</li> </ul>
<p style="text-align: center;">③ Contact Ordering Provider</p>	<ul style="list-style-type: none"> <li>• The name and facility of the ordering provider can be found in the lab tab in the case’s MAVEN event. If ordering provider is a hospital, reach out to the hospital Infection Preventionist.</li> <li>• During call with provider’s office: <ul style="list-style-type: none"> <li>○ Confirm case’s contact information, collect additional phone number(s) or email address</li> <li>○ Obtain symptom onset date and clinical presentation</li> <li>○ Collect information on any potential exposures identified during visit (e.g., travel)</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Request case's occupation and employer, if available</li> <li>○ Ask if the case has been informed of their diagnosis</li> <li>● If the ordering provider cannot be reached in a timely manner, proceed to case interview.</li> </ul>	
<b>4</b> <b>Contact Case</b>	<ul style="list-style-type: none"> <li>● Introduce yourself, why you are calling, what you will use information for, and who has access to the information they provide.</li> <li>● Complete all questions in the Demographic and Clinical question packages.</li> <li>● Complete all questions in the Risk/Exposure question package for the <b>7 days prior to symptom onset</b>. <ul style="list-style-type: none"> <li>○ If the case experienced gastrointestinal illness and the specimen is stool, blood, or urine, ask them about consumption of high-risk animal products, including molluscan shellfish (clams, mussels, oysters, quahogs, etc.) and how they were prepared.</li> <li>○ If the case experienced a skin, ear, wound, or soft tissue infection, ask them about exposures to high-risk materials (e.g., where they went swimming).</li> </ul> </li> <li>● To improve the recall of activities or restaurants they may have dined at, encourage the case to look at their work and/or personal calendars, credit card or bank statements, and photos on their phone.</li> </ul>	
<b>5</b> <b>Prevent Further Transmission</b>	<b>Food handlers</b>	<ul style="list-style-type: none"> <li>● If individual meets the 105 CMR 300 definition of a food handler (see definition in "Get Prepared" above), they must be excluded from food handling duties until meeting clearance criteria: <ul style="list-style-type: none"> <li>○ <b>For cases with <i>V. cholerae</i> isolated via culture:</b> In non-outbreak circumstances: after diarrhea has resolved, <b>two</b> negative stool specimens produced 48 hours after completion of any antimicrobial therapy. <ul style="list-style-type: none"> <li>○ An MDPH foodborne epidemiologist can review whole genome sequencing data to identify if case has toxigenic <i>V. cholerae</i> warranting this exclusion.</li> </ul> </li> <li>○ <b>For all other <i>Vibrio</i> spp.:</b> After diarrhea has resolved.</li> <li>○ <a href="#">Implementing the Exclusion of Food Handlers with Reportable Conditions</a></li> </ul> </li> </ul>
<b>6</b> <b>Notify DPH as Needed</b>	<ul style="list-style-type: none"> <li>● <b>Suspected outbreaks are reportable to MDPH within 24 hours.</b> If case investigation indicates that two or more people from different households became ill with similar symptoms after a common exposure, notify the Division of Epidemiology: (617) 983-6800</li> <li>● <a href="#">Create a MAVEN foodborne illness complaint</a> if the case reports the following during their incubation period: <ul style="list-style-type: none"> <li>○ Eating seafood or shellfish obtained from any retail food establishment (e.g., restaurant, seafood market, grocery store) with sufficient details available (name of establishment, location, and date of purchase/consumption)</li> </ul> </li> </ul>	
<b>Other Notes</b>	<ul style="list-style-type: none"> <li>● It is recommended that three call attempts are made at different times of day to reach a case for interview. Consider texting or emailing a case requesting a call back if they are not responsive. <ul style="list-style-type: none"> <li>○ <b>If a case cannot be reached</b>, the following information should be collected from the ordering provider before closing out the case: symptom onset and clinical presentation, occupation and employer, and any exposure information available in the medical notes.</li> </ul> </li> <li>● Completion of all exposure questions in the MAVEN Risk Question Package is essential for detecting outbreaks and preventing further transmission. Many exposure questions for this disease will appear as child questions based upon specific answers in earlier questions.</li> </ul>	
<b>Additional Resources</b>	<ul style="list-style-type: none"> <li>● June 2022 webinar: <i>Cyclospora</i> and <i>Vibrio</i> Case Investigations <a href="#">Slides</a>, <a href="#">Recording</a></li> <li>● MDPH Division of Epidemiology: (617) 983-6800</li> </ul>	