CHOLERA

Case Definition

Confirmed Case[1]:

Laboratory confirmation of infection with or without clinical illness[2], through isolation of cholera toxin producing *Vibrio cholerae* serotype O1, O139, or other toxigenic serogroups from an appropriate clinical specimen (e.g., stool, rectal swab, vomit, blood).

Probable Case[3,4]:

- Clinical illness[2] in a person who is epidemiologically linked to a confirmed case;
  OR
- Detection of *Vibrio cholerae* nucleic acid by the *ctx* or *toxR* gene with or without clinical illness, in an appropriate clinical specimen (dependent on the test used), using a nucleic acid test (NAT), such as a polymerase chain reaction (PCR).

Clinical Evidence

Clinical illness is typically characterized by the following signs or symptoms: Acute and/or profuse watery diarrhea (sometimes described as "rice-water stools"), nausea, leg cramps, myalgias, and/or vomiting. The severity of illness may vary. While not considered clinical illness, asymptomatic infections may also occur.

Reporting Requirements

Report confirmed or probable cases **immediately** to DHW Surveillance via Panorama and the Surveillance Inbox.

Additional Forms

None.

Data Entry

Complete Generic Food Questionnaire form in the User Defined Forms section in Panorama.

Additional Comments

- NAT-positive (NAT+) and culture-negative (culture-) result would still be considered a probable case.

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[1] Illnesses caused by strains of *V. cholerae* other than toxigenic *V. cholerae* should not be reported as cases of cholera. Note that cholera refers to toxigenic *V. cholerae* while vibriosis refers to both non-toxigenic *V. cholerae* and other *Vibrio* spp.
[2] See Clinical Evidence section.
[3] Culture is required for public health and clinical management. Thus, culture must be performed on NAT-positive (NAT+) specimens to enable molecular typing (e.g., whole genome sequencing) for surveillance, outbreak detection and response, as per Canadian Public Health Laboratory Network (CPHLN) guidance. An isolate may also be required for antimicrobial susceptibility testing (AST) and/or antimicrobial resistance (AMR) predictions to guide clinical treatment and/or for AMR surveillance.
[4] NAT positive specimens should be submitted for culture of *V. cholerae* and confirmatory testing of the cholera toxin. Also, NAT-positive (NAT+) and culture-negative (culture–) results would still be considered a probable case.

- Illness caused by stains of *V.cholerae* other than toxigenic *V.cholerae* should not be reported as cases of cholera. Note that cholera refers to toxigenic *V.cholerae* while vibriosis refers to both non-toxigenic *V.cholerae* and other *Vibrio spp.*
- It is best practice to culture the NAT positive specimen as soon as possible, such as performing culture in the laboratory that generated the NAT positive signal. When a specimen is positive using a NAT, it is strongly advised to collect and document information on all culture results for the specimen (i.e., NAT+/culture+ **vs** NAT+/culture– **vs** NAT+/culture not done);
- NAT positive specimens should be submitted for culture of *V.cholerae* and confirmatory testing of the cholera toxin.
    - Although the *toxR* gene is specific for *V. cholerae,* it can be present in both toxigenic (*ctx*+) and non-toxigenic (*ctx*-) strains. Thus, a proportion of specimens positive for the *toxR* gene may not cause Cholera.