CAMPYLOBACTERIOSIS

Disease Overview

Campylobacteriosis is caused by the bacterium *Campylobacter*, most commonly *C. jejuni* and less commonly *C. coli*. There are several serotypes found worldwide. Campylobacter causes diarrheal illness in all age groups worldwide. It is a leading cause of traveler's diarrhea.

Symptoms Infection is of variable severity and characterized by diarrhea (with blood and/or mucous), abdominal pain, nausea, malaise, fever, and sometimes vomiting. Symptoms usually last 2-5 days but can persist for one to two weeks. Many infected individuals are asymptomatic.

Reservoir

Animals, most frequently poultry and cattle. Puppies, kittens and other pets, swine, sheep, rodents and birds may also be sources of human infection.

Mode of Transmission

Fecal-oral transmission. Common source outbreaks are rare but have been traced to food sources such as:

- Raw or undercooked meat, particularly poultry/poultry products.
- Raw milk.

Campylobacter is also transmitted by contact with infected animals and their environments, especially puppies and kittens, farm animals and farm environments.

Fecal contamination of non-treated water can also be a source of infection.

Person-to-person transmission is rare but may occur through contact with infected infants and children.

Incubation Period

Average 2-5 days (range 1-10 days).

Period of Communicability

Throughout the course of the infection; usually several days to several weeks. Once acute illness is over, the risk of transmission usually decreases.

Risk Factors

Not applicable

Surveillance Case Definition

Confirmed case

Laboratory confirmation of infection with or without symptoms:

Isolation of *Campylobacter* spp. from an appropriate clinical specimen (e.g., stool, rectal swab, blood).

Probable case

Clinical illness in a person who is epidemiologically linked to a confirmed case;

OR

Detection of *Campylobacter* spp. nucleic acid 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).

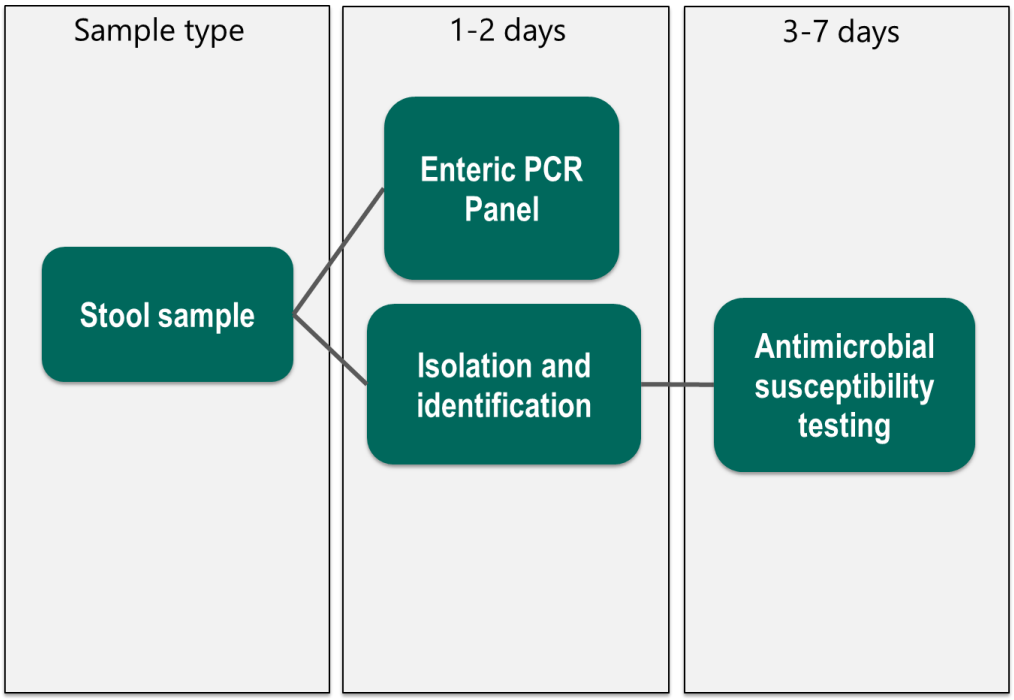
Diagnosis and Laboratory Guidelines

Isolation of organisms from stool samples (see Food and Water Borne Diseases Introduction).

Regional laboratories in New Brunswick can perform bacterial culture and identification of the *Campylobacter* genus, and the *C. jejuni* or *C. coli* species. Any other species of *Campylobacter* will be identified as *Campylobacter* species. Regional laboratories will also perform antimicrobial susceptibility testing on *Campylobacter* isolates.

PCR-based enteric panel will identify *Campylobacter* species through their genetic material. Laboratories will report based on the result of this test alone. Reflex culture is still done on positive results, and we still want a positive culture to confirm cases. Positive PCR panel results without a culture will have to remain classified as probable.

Figure 1: Testing timelines



Reporting

Per Policy 2.2 Disease and Event notification to OCMOHE and section 3 Disease and Event Reporting

- Routine surveillance (RDSS) for all confirmed cases.
- Access databases for all confirmed cases and for probable cases that are NAT or PCR positive. Database extracts are submitted to OCMOHE on a weekly basis.

Case Management

Education

Case or relevant caregiver should be informed about:

- Nature of infection, length of communicable period, and mode of transmission
- Enteric disease precautions
- Hand washing
- Food safety
- Safe water source

Investigation

For cases and symptomatic contacts, complete enteric investigation form. Obtain history of food consumption, travel and contact with animals.

Exclusion/Social Distancing

Follow exclusion period guidelines for cases under investigation (cases and symptomatic contacts) identified in high-risk individuals (food handlers, caregivers, and individuals in daycare centres and kindergartens).

Treatment

Antibiotic treatment usually not necessary.

Immunization

Not applicable

Contact Management

Education

Per case management

Investigation

Not applicable

Social Distancing/Exclusion

Follow exclusion period guidelines for cases under investigation (cases and symptomatic contacts) identified in high-risk individuals (food handlers, caregivers, and individuals in daycare centres and kindergartens).

Prophylaxis

Not applicable

Immunization

Not applicable

Outbreak Management

Activate the local outbreak plan when an outbreak is declared.