

YERSINIOSIS

Disease Overview

Yersiniosis is an infectious disease caused by a bacterium of the genus *Yersinia*. Human illness is caused by a few strains of *Y. Enterocolitica*. *Y. Pseudotuberculosis* causes an illness like *Y. Enterocolitica*. Yersiniosis is common worldwide.

Symptoms

Infection causes a variety of symptoms depending on the age of the person. Common symptoms in children are fever, abdominal pain, and diarrhea, which is sometimes bloody. In older children and adults, abdominal pain and fever may be the predominant symptoms. Most infections are uncomplicated and resolve completely. Complications such as skin rash, joint pains, or spread of bacteria to the bloodstream can occur.

Reservoir

The major animal reservoir for *Y. enterocolitica* strains that cause human illness is pigs, but other strains are also found in many other animals including rodents, rabbits, sheep, cattle, horses, dogs, and cats.

Mode of Transmission

Fecal-oral route and includes consumption of contaminated food or water.

Outbreaks have been traced to food sources such as raw or undercooked pork and pork products, tofu and milk. *Y. Enterocolitica* strains can multiply under refrigerated and microaerophilic conditions.

Contact with infected animals (including puppies and kittens).

Person to person transmission appears rare but can occur.

Incubation Period

Probably 3-7 days.

Period of Communicability

There is fecal shedding when symptomatic, usually for 2-3 weeks. Prolonged asymptomatic carriage can also occur.

Risk Factors

Increased risk for persons acquiring and/or severe illness:

- Most cases occur among infants and young children.

Surveillance Case Definition

Confirmed case

Laboratory confirmation, with or without clinical illness:

- Isolation of *Yersinia* spp. (excluding *Yersinia pestis*) from an appropriate clinical specimen (e.g., stool, blood, rectal swab).

Probable case

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

OR

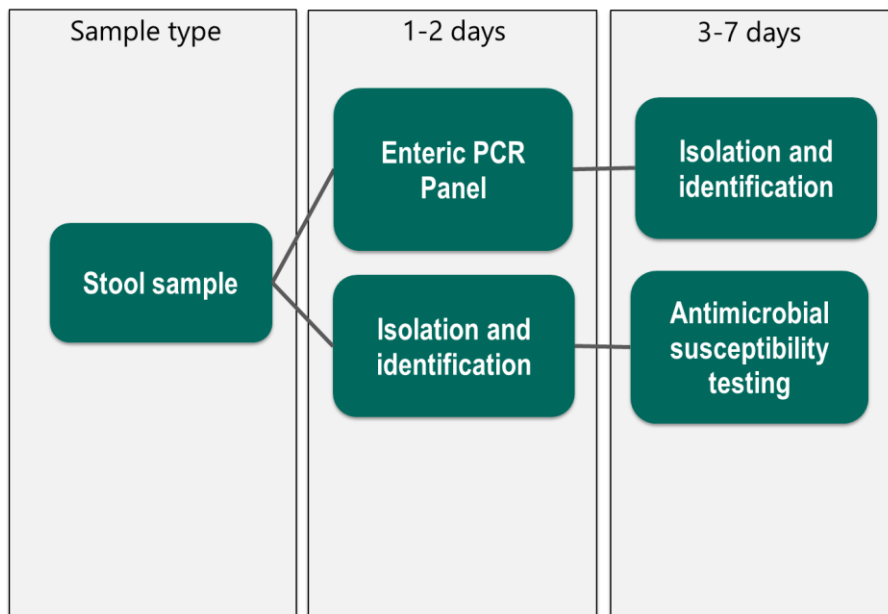
Detection of *Yersinia* spp. nucleic acid with or without clinical illness, in an appropriate clinical specimen (dependent on the test used) using a nucleic acid test (NAT), such as a polymerase chain reaction (PCR).

Diagnosis and Laboratory Guidelines

Y. enterocolitica infections are generally diagnosed by detecting the organism in the stools. Isolation and antimicrobial testing is available in regional microbiology laboratories.

Y. enterocolitica DNA can be detected by enteric PCR panel. Most laboratories will report the result directly while doing reflex culture on positives. A positive culture is still required for confirmed case.

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
- Mode of transmission

- Enteric precautions
- Personal hygiene including hand washing
- Care with food and water during travel to less developed countries

Investigation

For cases complete enteric investigation form.

Exclusion/Social Distancing

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

Treatment

Many antibiotics are effective. Consult a physician.

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.