Non-*pestis* Yersiniosis Investigative Guidelines
February 2026

REPORT WITHIN 1 WORKING DAY

1. DISEASE REPORTING

1.1 Purpose of Surveillance and Reporting

1. To identify outbreaks and potential sources or sites of ongoing transmission.
2. To assess the risk of the case transmitting infection to others, and to prevent such transmission.
3. To educate people about how to reduce their risk of infection.
4. To identify other cases.
5. To better characterize the epidemiology of this infection.

1.2 Laboratory and Physician Reporting Requirements

Laboratories and physicians are required to report non-*pestis* yersiniosis to the local health department (LHD) within one working day of identification or diagnosis. Reports should not be delayed for final laboratory confirmation.

Laboratories must forward isolates (preferred) or positive clinical specimens to the Oregon State Public Health Laboratory (refer to §3.4 for laboratory submission details).

1.3 Local Health Department Reporting and Follow-Up Responsibilities

1. Report all confirmed and presumptive cases (refer to §3 for case definitions) to the Oregon Health Authority (OHA) Acute and Communicable Disease Prevention Section (ACDP) within one working day of initial physician or laboratory report. This can be accomplished by creating a case in Orpheus. Enter information about the case into Orpheus as you investigate.
2. Begin follow-up investigation of cases within one working day. Interview the case or a proxy who can provide pertinent information. If

unable to interview the case or a proxy (3 – 5 attempts is reasonable), then review the medical record to obtain data to complete Clinical tab fields (e.g., symptoms, onset date, whether hospitalized overnight; also, any available Risks tab data).

3. Enter data directly into Orpheus or use the Yersiniosis case report form to collect data before entering it into Orpheus: https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/COMMUNICABLEDISEASE/REPORTINGCOMMUNICABLEDISEASE/REPORTINGFORMS/Documents/yersinia.pdf

   All data are automatically submitted to Oregon Health Authority (OHA) Acute and Communicable Disease Prevention Section (ACDP) electronically via the Orpheus application. Enter date in "LHD Completion Date" box in Orpheus (bottom left of home page) when investigation is complete.

3. For outbreaks, consult the OHA ACDP on-call epidemiologist to create an outbreak record and request any needed assistance. The OHA ACDP epidemiologist assigned to the outbreak is available to assist the LHD with the investigation and documentation of findings in the Outbreaks database.

2. THE DISEASE AND ITS EPIDEMIOLOGY

2.1 Etiologic Agent

Yersinia spp. are facultative anaerobic Gram-negative coccobacilli. In the U.S., *Y. enterocolitica* is the most commonly reported cause of non-*pestis* yersiniosis in humans, although other species (e.g., *Y. fredericksenii*, *Y. pseudotuberculosis*, and *Y. intermedia*) are also reported. Illness severity from Y. *enterocolitica* infection is associated with bioserotype; *Y. enterocolitica* type O3 is responsible for most outbreaks in the U.S.

2.2 Description of Illness

Clinical manifestations of non-*pestis* yersiniosis include fever, diarrhea (especially in young children) that may be bloody, and abdominal pain. Abdominal lymph node involvement can cause right-sided abdominal pain, which may be mistaken for appendicitis (especially in older children and adults). Extraintestinal manifestations can include soft tissue abscesses, sepsis, and post-infectious immune-mediated syndromes such as reactive arthritis and soft tissue swellings (erythema nodosum). People with iron

overload (e.g., hemochromatosis) or underlying immunosuppression are particularly susceptible to septicemia.

2.3 Reservoirs

Animals are the principal reservoir for *Yersinia* spp. *Yersinia enterocolitica* is an intestinal and oropharyngeal commensal bacterium in pigs. Non-pestis *Yersinia* species are found in feces of many animal species (e.g., rodents, cows, sheep, horses, dogs, and cats) and the environment (e.g., soil and water).

2.4 Modes of Transmission

Yersinia enterocolitica infections are commonly attributed to the handling or consumption of contaminated food, especially raw or undercooked contaminated pork or pork products. Historically, incidence was highest among children <5 years of age and associated with household preparation of pork intestines (e.g., chitterlings). Other contaminated foods that have been identified in previous outbreaks include tofu, produce, and milk. Other modes of transmission include contact with the feces of infected pets of other animals; contaminated water sources; or, more rarely, the feces of an infected person. Sepsis has been reported after transfusion with red blood cells contaminated with *Y. enterocolitica*.

2.5 Incubation Period

Typically, 4-6 days (range, 1-14 days).

2.6 Period of Communicability

Bacterial shedding occurs with diarrhea and may persist for a prolonged period after symptoms resolve; however, secondary transmission is rare.

2.7 Treatment

Uncomplicated cases of diarrhea due to non-pestis yersiniosis usually do not require antibiotic treatment. However, such treatment may be indicated for severe or complicated infections. If treatment is indicated, antimicrobial susceptibility of the isolate should be ascertained first.

3. CASE DEFINITIONS, DIAGNOSIS AND LABORATORY SERVICES

In 2018, Oregon laboratories started reporting non-*pestis* yersiniosis infections detected by culture-independent diagnostic tests (CIDTs),

including nucleic acid amplification testing (NAAT), such as polymerase chain reaction (PCR). If you receive a CIDT-positive test result without culture confirmation, please proceed to interview the presumptive case without waiting for culture results.

Recovery of an isolate via culture is needed for *Yersinia* identification and speciation for public health purposes. If NAAT is positive for non-*pestis Yersinia* spp., some laboratories will perform a reflex culture. Laboratories should forward isolates (preferred) or the CIDT-positive specimen (e.g., if reflex culture was not performed) to the Oregon State Public Health Laboratory (OSPHL) for identification.

Laboratory-developed CIDTs based on molecular methods (e.g., next generation sequencing and metagenomics) are also now being used to test clinical specimens (e.g., blood and stool). Results of metagenomic tests (e.g., Karius test) and other laboratory-developed CIDTs should be interpreted with caution as diagnostic tools for non-*pestis* yersiniosis as they may not have been fully validated for all infection types against gold-standard diagnostic methods.

A repeat positive laboratory result within 365 days is not counted as a new case unless it is a different species. If a result is more than 365 days after the initial report, a new case should be created.

3.1 Confirmed Case Definition

Anyone with a non-*pestis Yersinia* spp. cultured from a clinical specimen.

3.2 Presumptive Case Definition

Anyone with non-pestis *Yersinia* spp. detected in a clinical specimen (e.g., stool or blood specimen) using a NAAT or other molecular testing method, OR

A person with a clinically compatible illness (e.g., fever, diarrhea, or abdominal pain) who shares an exposure with (or is exposed to) a confirmed or probable case of non-*pestis* yersiniosis.

3.4 Services Available at the Oregon State Public Health Laboratory (OSPHL)

OSPHL provides isolate identification and speciation, as well as stool culture for *Yersinia* species. For complete specimen collection, handling, and transport instructions, please refer to the OSPHL Lab Test Menu at www.healthoregon.org/labtests. Complete all required fields on the

General Microbiology Test Request Form (#60), available at www.bitly.com/phl-forms. Include one form per sample.

For isolate identification, submit a pure isolate of the organism growing on a medium that will support growth (for example, TSA [Tryptic Soy Agar] slant or Blood Agar plate). On the OSPHL Test Request Form, in the **Enterics** section, select the **ID (YERID**) box in the Isolate column of the *Yersinia* spp. (non-*pestis*) row.

For stool culture, submit stool collected in Cary Blair transport media. Add stool to the fill line on the container. On the OSPHL Test Request Form, under the **Enterics** section, select the **Culture (YERC)** box in the Original Material column box of the *Yersinia* spp.(non-*pestis*) row.

All specimens must be properly packaged for transport. Contact OSPHL with questions about submitting specimens at 503-693-4100.

4. CASE INVESTIGATION

4.1 Case Interview

Identify Possible Source of Infection

Ask about the exposures and risks in the 2–10 days prior to onset:

- Consumption or handling of
  - raw or undercooked pork or pork products
  - chitterlings (pig intestines)
  - tofu
  - unpasteurized milk or unpasteurized dairy products (e.g., soft cheeses made with raw milk)
- Contact with pigs
- Contact with other any other pet animals (e.g., dogs, cats, rodents, birds)
- Blood transfusion
- Condition that causes iron overload
- Meals eaten at restaurant or public gatherings (collect name, date, and location)
- Contact with people that are sick or in diapers
- Occupational exposure to excreta

4.2 Identify Potentially Exposed Persons

Collect name, age (date of birth), sex, onset date, and contact information of people with similar illness.

4.3 Environmental Evaluation

An environmental evaluation would be indicated if the source of infection appears to be associated with a day care facility, restaurant, dairy, or public drinking water supply; or, if the case works at, a day care facility or works as a food handler, health care provider, or residential care provider.

5. CONTROLLING FURTHER SPREAD

5.1 Patient/Household Education

As indicated, provide basic instruction to cases and potentially exposed contacts about hand washing after defecation or diaper changing and before food preparation. Provide information about minimizing fecal exposure in daily life.

5.2 Isolation of Case

Standard precautions are adequate to prevent transmission of non-*pestis* yersiniosis.

5.3 Occupational Restrictions

Work or day care restrictions: Food handlers, day care attendees and providers, and health care personnel with diarrhea should be excluded from work while symptomatic; however, no specific measures are needed to prevent or control transmission from asymptomatic carriers beyond good hand hygiene.

5.4 Restrictions on Household Contacts

None.

5.5 Follow-up Stool Cultures

Routine follow-up cultures are not indicated.

5.6 Environmental Measures

In outbreak situations, implicated food products will be recalled.

6. MANAGING SPECIAL SITUATIONS

6.1 Outbreaks

Although rare, non-pestis yersiniosis outbreaks are important to identify and investigate, particularly if young children are affected. Such investigations will generally require an outbreak-specific questionnaire, active surveillance, and may involve environmental evaluations. Consultation with the OHA ACDP epidemiologist assigned to the outbreak is recommended before beginning a non-pestis yersiniosis outbreak investigation.

UPDATE LOG

February 2026: Updated for consistency with 2024 update to CSTE non-*pestis* yersiniosis position statement and to align with current OSPHL procedures (Matthew Burns, Sarah King, Rosalie Trevejo, Veronica Williams).

February 2019: updated case definition to include PCR-positive cases without culture as presumptive per CSTE case definition. Not considered a new case until specimens are >365 days apart. Updated recommendation for Orpheus data entry and testing at OSPHL. (June Bancroft)

March 2016: Added culture independent test (CIDT) under §3. Revised suspect case definition. (Beletshachew Shiferaw)

December 2015: Placed into new template and corrected spelling and link errors. (Leslie Byster)

May 2010: Created.