

Yersiniosis (non-pestis)

Disease Category: Enteric

Timeframe to follow-up: Within 1 working day

Signs and Symptoms ^{6,8}	- Acute febrile diarrhea that may be bloody and can persist for several weeks - Enterocolitis-inflammation small intestine and colon - Abdominal lymph node pain (mesenteric adenitis) - Erythema nodosum and reactive arthritis-common postinfectious complication
Incubation ⁹	Usually 4-6 days; range 1-14 days
Case Classification	Clinical criteria: A person with a clinically compatible illness. Common presentations of illness include fever (measured or subjective), diarrhea (bloody or non-bloody), or abdominal pain that may be severe enough to mimic appendicitis. However, presentations of extraintestinal illness can include sepsis, wound infection, or soft tissue infections, and gastrointestinal signs may be absent in these instances. Confirmed: Isolation of any non-pestis <i>Yersinia</i> spp. by culture from a clinical specimen. Probable: Detection of non-<i>pestis Yersinia</i> spp. in clinical specimen (e.g., stool or blood specimen) using a Nucleic Acid Amplification Test (NAAT) or other molecular testing method. OR Meets clinical criteria AND epidemiologic linkage criteria (a person who shares an exposure with or is exposed to a confirmed or probable case).
Differential Diagnosis ⁷	Appendicitis, campylobacter infection, salmonellosis, shigellosis, enteroinvasive <i>E. coli</i> infection, <i>Entamoeba histolytica</i> infection, <i>Clostridioides difficile</i> infection, and inflammatory bowel disease.
Treatment ^{6,9}	Most infections are self-limited. Normally treated with supportive care, hydration and correction of electrolyte abnormalities. Antibiotics are not recommended for mild cases but may be used for neonates and for patients with immunosuppression or iron overload. Severe infections should be treated with third generation cephalosporins, trimethoprim-sulfamethoxazole, aminoglycosides, fluoroquinolones, chloramphenicol, and doxycycline. <i>Y. enterocolitica</i> is resistant to first generation cephalosporins and most penicillins.
Duration ⁷	Symptoms usually persist for 1-3 weeks
Exposure ^{7,8}	Exposure is usually from raw or undercooked contaminated pork, but can also occur through contaminated food, animal feces, untreated water, feces of an infected person or blood transfusion.

<u>Laboratory Testing</u>	Diagnosis is made through stool culture. Local Health Authority can arrange testing if an outbreak is suspected OR for contacts of cases: • https://www.unr.edu/nevada-state-public-health-laboratory/directory-services/gastrointestinal-panel-naat • https://www.cdc.gov/yersinia/php/laboratories/index.html
<u>Control of Contacts</u>	• Identify all contacts and evaluate risk of infection. • Exclude contacts especially those with sensitive occupations (food handlers, healthcare worker, childcare worker) as necessary from high-risk settings.
Key areas of focus during investigation	Food history, especially raw/undercooked pork and unpasteurized milk consumption, other refrigerated food items and cross contamination. Animal contact, water exposure, gathering with shared food (e.g., food festival, picnics), and recent blood transfusion.
Public Health Actions	Reports of Yersiniosis cases must be made to the Local Health Authority during the regular business hours of the health authority on the first working day following the identification of the case. Local Health Authority to notify Office of State Epidemiology (dpbhepi@health.nv.gov) or call 775-400-0333 for individual cases or if outbreak suspected. For individual confirmed or probable cases: • Confirm diagnosis, if possible • Coordinate transport of specimens to NSPHL to confirm diagnosis if needed • Identify potential exposures • Prepare a case report and submit to the Chief Medical Officer (through OSE) within 7 days after completing the case investigation • Identify potential outbreaks from common sources • Provide education about how to prevent transmission To the best of the local health authority's ability, each step of the investigation should be completed within one working day or in alignment with NAC 441A.
<u>Key Partner Agencies</u>	• Local health authorities • Laboratories including Nevada State Public Health Laboratory (NSPHL)

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YERSINIOSIS

I. DISEASE REPORTING

A. Legal Reporting Requirements

A report to the health authority may be made by telephone; telecopy (in the form prescribed by the health authority); or any form of electronic communication identified by the health authority, following the specified format and procedure.¹

1. *Health Care Providers and Health Care Facilities*

Health providers and facilities must notify the health authority where provider is located within the first working day after identifying the case.¹⁻³

2. *Laboratories*

Laboratories must notify the health authority within the first working day after identifying the case.¹ If the lab is located outside of Nevada, notify the Nevada Chief Medical Officer through the Office of State Epidemiology (OSE) within the same timeframe.^{1,4}

3. *Local Health Authority (LHA)*

LHA's must notify the Office of State Epidemiology (OSE) within 7 days after completing the case investigation.⁵

II. THE DISEASE AND ITS EPIDEMIOLOGY

A. Background

Yersiniosis is a foodborne zoonotic disease that can cause enteric infection. Symptoms include acute febrile diarrhea that may be bloody. Humans are incidental hosts and do not contribute to the natural disease cycle. Individuals at increased risk include children <5 years of age, especially those <12 months of age, and people with iron metabolism disorders (e.g., iron overload, cirrhosis, sickle cell disease, thalassemia) or immunosuppression.⁷ Yersiniosis is not likely to spread from person-to-person. However, an infected person can excrete the organism for 2 to 3 weeks and for up to 3 months in untreated cases. Prolonged asymptomatic carriage is possible.⁸ Yersiniosis is more commonly isolated during cool months because of favorable growth conditions at lower temperatures.⁸

B. Etiologic Agent

Yersiniosis is caused by *Yersinia*, a gram-negative coccobacillus. The species most associated with yersiniosis are *Y. enterocolitica* (serogroups O:3, O:5,27, O:8, and O:9) and *Y. pseudotuberculosis*.⁶

C. Description of Illness

Yersiniosis is characterized by acute diarrhea with abdominal pain and fever. Illness usually begins 4 to 7 days after exposure to the bacteria and can last up to 3 weeks. Bloody diarrhea may occur and can persist for several weeks.⁷

D. Disease Burden in Nevada

In the United States, most yersiniosis cases are caused by *Y. enterocolitica*. Thus far in 2026, there have been 15 cases of yersiniosis reported in Nevada with 0.4 cases per 100,000 population.

See the [Nevada Office of State Epidemiology Communicable Disease Dashboard](#) for Nevada specific data on Yersiniosis (zoonotic section).

E. Reservoirs

Animals are the main reservoirs of yersiniosis, particularly pigs for *Y. enterocolitica*. In pigs, the organism colonizes the tonsils and other oropharyngeal tissues and can then shed into the gastrointestinal tract. During slaughter, the organism can spread to other parts of the meat and contaminate it. Contaminated water is another potential source of infection, although it is uncommon. *Y. pseudotuberculosis* has been found in a variety of mammals and birds and has caused epizootic disease in brown hares in northern Europe, sheep in Australia, and farmed deer in New Zealand.^{7,8,9}

F. Modes of Transmission

Transmission occurs through ingestion of raw or undercooked pork products that have been contaminated. Vehicles linked to outbreaks include soybean cakes, pork chitterlings, and unpasteurized milk. Outbreaks of *Y. pseudotuberculosis* have also been associated with produce, pasteurized milk (suggesting post-pasteurization contamination), and vegetable juice in northern Europe, Japan, and Canada. Less common modes of transmission include exposure to pets, primarily puppies and kittens, and person-to-person fecal-oral spread. In very rare cases, transmission has occurred through transfusion of stored blood from donors who were asymptomatic or had mild gastrointestinal illness.^{7,8,9}

G. Incubation Period

The incubation period for yersiniosis is usually 4-6 days with a range of 1-14 days.⁹

H. Period of Communicability

There is fecal shedding as long as symptoms persist, which is typically 2 to 3 weeks. However, an infected person if untreated may remain contagious for 2 to 3 months. Prolonged asymptomatic carriage has been reported in both children and adults.⁸

I. Testing

Y. enterocolitica and *Y. pseudotuberculosis* can be recovered from stool, mesenteric lymph nodes, and blood. Stool cultures generally yield bacteria during the first 2 weeks of illness.⁹ Laboratory personnel should be notified when yersinia infection is suspected so that stool can be properly stored (e.g., Cary-Blair transport media) and cultured on a suitable media

(e.g., blood, chocolate, and MacConkey agars incubated at 25°C to 35°C for 24 to 48 hours in ambient air). Isolation from nonsterile sources such as stool is recommended using selective media. CDC recommends use of cefsulodin-irgasan-novobiocin (CIN) agar for isolation of *Yersinia* spp. from nonsterile sites.¹⁰ Incubation at 25°C is recommended to promote growth of *Yersinia* over other members of the *Enterobacteriaceae* family that can grow on CIN agar. Biochemical or molecular tests should be performed on a pure culture for complete identification.

J. Treatment

Yersiniosis usually resolves on its own and generally only requires supportive care, including fluid replacement to prevent dehydration. Antidiarrheal medication may be prescribed by a provider but should not be used if the individual has bloody diarrhea. In severe infections, antibiotics such as aminoglycosides, doxycycline, trimethoprim-sulfamethoxazole, or fluoroquinolones may be used.⁶ Medications containing bismuth, such as Pepto-Bismol® and Kaopectate®, should not be given to children younger than 12 years of age.¹²

Provide most current treatment guidelines from [Red Book](#) or UpToDate to the healthcare provider or refer case to physician for proper treatment for Yersiniosis.

III. EPIDEMIOLOGIC CASE INVESTIGATION

The public health authority should begin investigating the case of yersiniosis, step by step, within one working day of notification or in alignment with [NAC 441A](#).

According to NRS 441A.160 (1), “A health authority who knows, suspects or is informed of the existence within the jurisdiction of the health authority of any communicable disease that poses a risk to the health of the public and is in an infectious state, at risk of developing into an infectious state or at risk of developing into a progressed state that endangers the health of the person with the communicable disease shall immediately investigate the matter and all circumstances connected with it, and shall take such measures for the prevention, suppression and control of the disease as are required by the regulations of the Board or a district board of health.”

A. Step 1: Review relevant information about the disease.

1. *Review scientific information in [Control of Communicable Diseases Manual](#), most recent edition.*
2. *Review Yersiniosis most recent case definition ([Non-pestis Yersiniosis 2025 Case Definition / CDC](#)).*

B. Step 2: Begin investigating the case.

1. *Contact Reporting Source and/or Reported Case*

Upon receiving an initial case report, review lab test results and available clinical details and epidemiologic factors. Attempt to contact the provider to gather additional clinical information. Then attempt to contact the case (regardless of whether contact was made

with the provider). Please make three attempts to contact the case (text and phone calls) on separate days, at different times of the day (morning, afternoon, late afternoon). Document all attempts to contact a reporting source and/or reported case in the “Encounters” tab of EpiTrax. Please use the questions in EpiTrax to gather accurate information about the case. Focus on the key data elements listed below. If PDF CMR is used, the completed PDF version should be attached to the CMR in EpiTrax in the “Notes” tab. The CMR should be completed within 7 days of completing the investigation of the case.⁵

C. Step 3: Identify potential sources of infection

The investigation focuses on exposures about 2 weeks before symptom onset. Ask about any risk factors for infection, exposures to food especially pork or milk, animals, water, and recent blood transfusion.

D. Step 4: Initiate control measures for case and/or for contacts (see Section IV – Section VI below).

E. Step 5: Provide Education and Prevention messaging to the case and/or contacts (see Section VII below).

IV. CONTROL OF CASE^{9,11}

1. *Management/Exclusions for Specific Groups or Settings*

Symptomatic cases	
Sensitive Occupation* (Food handler, childcare worker, healthcare worker)	Do not allow work until authorized by a health authority. A case may be authorized to work if 2 fecal specimens, collected at least 24 hours apart and at least 48 hours after cessation of antimicrobial therapy, do not show <i>Yersinia</i> spp. upon testing by a medical laboratory.
Childcare/School Attendee	An infant or child excreting <i>Yersinia</i> spp. shall not attend a childcare facility until asymptomatic. The health authority shall instruct the childcare facility attended by an infant or child with yersiniosis on the proper method of hand washing and other practices to control infection and prevent transmission.

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Case in a Medical Facility	Medical facility shall provide care to the case in accordance with enteric precautions or other appropriate disease specific precautions. Standard precautions are recommended in addition to contact precautions for diapered or incontinent children for the duration of diarrheal illness.
General Population	Recommended to stay home from work until symptoms have fully resolved for around 48 hours. Use of proper hygiene is critical, washing hand thoroughly with soap and water after every bathroom visit. (11)

* NAC 441A.725 Yersiniosis

Asymptomatic cases

The local health authority may authorize asymptomatic cases to work or attend school if the case is asymptomatic and there's no indication of poor personal hygiene.¹¹

V. CONTROL OF CONTACTS

Per NAC 441A.725 a contact living in the same household as a case having yersiniosis shall not work in a sensitive occupation unless authorized by a health authority. Investigate symptomatic contacts in the same manner as a case.

Symptomatic contacts

Will need to be excluded from work or school until asymptomatic for at least 24 hours. For those in sensitive occupations like healthcare workers, food handlers or childcare workers it may need to be extended to at least 48 hours of being asymptomatic.

Asymptomatic contacts

No exclusion from work or school if no indication of poor personal hygiene.

VI. CONTROL OF CARRIERS

Prolonged asymptomatic carriage is seen in children and adults; thus, it is important to emphasize the importance of hand hygiene.

VII. MANAGEMENT OF SPECIAL SITUATIONS/OUTBREAK CONTROL

Coordinate with senior epidemiology staff to determine if an outbreak is occurring. If so, notify DPBH Environmental Health, local health authorities, or infection control, as

appropriate. Possible foodborne outbreaks can occur due to contaminated sources of pork products or water that was contaminated by an infected animal.

VIII. PREVENTION

The investigator should reference the most recent disease, specific public educational materials from the CDC. The [Nevada OSE website](#) also provides information about Yersiniosis. Include a bullet point list for prevention tips.

- Avoid ingestion of raw or undercooked meat, specifically pork and pork products.
- Specifically, after handling raw chitterlings (pig intestines), hands and fingernails need to be washed very thoroughly.
- When slaughtering pigs the head and neck should be removed from the body to avoid contaminating the meat.
- Avoid untreated drinking water.
- Avoid unpasteurized milk and milk products.
- Wash hands with soap and water before preparing and eating food.
- Wash hands after contact with animals.

IX. REFERENCES

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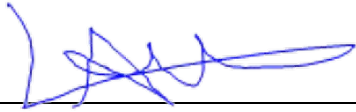
X. ACKNOWLEDGEMENTS

This document was developed based on the content and format of the disease investigation guidelines of several state and local health jurisdictions:

- Oregon Health Authority Investigative Guidelines
- Washington State Department of Health Reporting and Surveillance Guidelines
- Washoe County Health District Epidemiology and Communicable Disease Program Investigation of Communicable Disease Manual

The Nevada Office of State Epidemiology would like to acknowledge the work of these great partners.

XI. UPDATE LOG



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7/31/26

Chief Medical Officer Approval Date