

18. Yersiniosis

(Notifiable)

Description: Yersiniosis is a gastrointestinal illness, caused by consumption of food contaminated with enteropathogenic *Yersinia* spp (including *Y. enterocolitica* and *Y. pseudotuberculosis*).

Annual Numbers: Between three and six cases per year.

Seasonal Distribution: Yersiniosis is more common in the winter months.

Causative Agent: *Yersinia* is a zoonotic bacterium found worldwide.

Reservoir: *Yersiniae* are associated with pigs (*Y. enterocolitica* colonises heavily the pharynx of pigs) and mammals and birds (*Y. pseudotuberculosis*).

Transmission: Transmission is by the faeco-oral route through contaminated food and water and through direct contact with infected people and animals. Bloodborne outbreaks of yersiniosis have been described in the literature. Pork is readily contaminated at slaughter and if consumed raw or insufficiently cooked may cause illness. *Yersinia* spp multiply at temperatures as low as 4°C so refrigeration offers little protection.

Outbreak Potential: *Yersinia* have moderate to high outbreak potential, particularly if transmitted by food.

Incubation period: The incubation period for *Yersinia* is typically 3-7 days (range 2-10).

Period of communicability: Secondary spread of *Yersinia* is uncommon. Shedding begins with onset of symptoms. Excretion typically lasts for up to two weeks but can occur for extended periods (up to three months, especially in children).

Epidemiology: Cases occur most commonly in children and young people under the age of 25. It is estimated that between 1% and 3% of the population carry *Yersinia* asymptomatically.

Exposure-prone groups: those consuming high risk foods, food handlers, children, veterinarians and abattoir workers.

Clinical Features: *Y. enterocolitica* produces an enterocolitis with diarrhoea, fever and abdominal pain in a majority of cases (vomiting is seen in about $\frac{1}{3}$ of cases). Illness generally lasts for 2-3 weeks. One quarter of children develop bloody diarrhoea. Post infective syndromes with reactive arthritis or erythema nodosum are well described. Occasionally, cases may present with a pharyngitis, an appendicitis-like syndrome in children or septicaemia in the elderly, the immunosuppressed and those with haemochromatosis. In 20% of paediatric cases, *Y. pseudotuberculosis* presents with mesenteric adenitis, fever and right iliac fossa pain and tenderness, regularly resulting in unnecessary appendectomy. In the past, outbreaks of yersiniosis have been identified as local increases in appendectomy rates. Enteritis and septicaemia are rare but erythema nodosum may occur.

Clinical Management of Cases

Enteric precautions.

Admit to hospital if necessary. Invasive disease and septicaemic cases should be treated with appropriate antimicrobials.

The case should be notified to the local Department of Public Health. It is important to determine if the case is aware of similar cases suggesting the possibility of an outbreak. Determine if case is in a risk category.

Public Health Management of Cases

Obtain food history (especially pork products, undercooked meats and milk) for 10 days prior to onset of symptoms. Determine if linked cases. If presenting with appendicitis-like picture, determine if there is a local (or regional) increase in appendectomy rate suggestive of other, potentially linked cases.

Food Hygiene Implications: Food hygiene re-education is necessary for food handlers.

Public Health Management of Contacts

Clinical surveillance.

Exclusion: Until 48hr after first normal stool (if diarrhoeal presentation).

Microbiological Clearance: None

Notifiable: to the local [Medical Officer of Health](#).