

3. Campylobacteriosis

(Notifiable)

Description: *Campylobacter* produces a diarrhoeal and systemic illness. Its public health importance lies in the fact that it is the commonest bacterial cause of IID in Ireland.

Annual Numbers: There are between 1600 and 1900 cases reported in Ireland each year.

Seasonal Distribution: There is a seasonal peak in May-June each year.

Causative Agent: *Campylobacter* are helical Gram-negative bacteria. *C. jejuni* is the species most frequently seen. *C. coli*, *C. lari* and *C. fetus* are much less common. Quite a low infectious dose (fewer than 500 cells is required to produce illness).

Reservoir: Campylobacteriosis is a zoonotic infection. *C. jejuni* is associated primarily with poultry but also cattle and domestic pets. *C. coli* is associated with pigs and poultry and *C. fetus* with cattle. Asymptomatic carriage is not uncommon.

Transmission:

Primary: Ingestion of contaminated food or water. It is likely that about 80% of campylobacteriosis cases are transmitted by food. Poultry especially chicken is the primary reservoir.

Secondary: Person-to-person spread can occur if hygiene is poor. Transmission is also possible from contact with infected pets or animals. Milk borne transmission is well described from raw milk.

Outbreak Potential: *Campylobacter* has low outbreak potential if transmitted through food and moderate outbreak potential if transmitted through water.

Incubation period: Medium: typically 3 days (range 2-5 days). Range may vary from 1-10 days depending on infectious dose and physical condition of patient. Median symptom duration is about 7 days.

Period of communicability: Generally while organism is present in the stool, but much more infectious while symptomatic. Infectivity can last as long as 7 weeks. Excretion of bacteria falls exponentially following resolution of gastrointestinal symptoms at which point risk of onward transmission becomes very low.

Epidemiology: The infective dose is low (as few as 500 cells) are needed to cause infection. It is mostly foodborne (raw/undercooked poultry, unpasteurised milk or dairy products, sausages and undercooked pork and milk - raw or from bird-pecked bottles). Water (untreated water supplies, sea swimming) is also an important route of infection. Other risk factors include travel abroad, contact with dogs and cats (particular risk for children). *Campylobacter* does not readily cause outbreaks and those that occur tend to be small.

Campylobacter does not replicate on food. Transmission from foodhandlers is very rare.

Clinical Features: Profuse diarrhoea, which is bloody in at least one quarter of cases. Headache, abdominal pain and fever (at least 75% of cases), which are often prodromal, can be very prominent. Vomiting is uncommon. Infection may be mild or subclinical. Median duration of diarrhoea is 6 days (7 in children), duration of more than 10 days is unusual. Rare complications include haemolytic uraemic syndrome (HUS), thrombocytopenia and perforation of ileum. Sequelae include reactive arthritis (within three weeks of infection) (1:100 campylobacteriosis cases) and Guillain-Barré syndrome (GBS) (1:1000 campylobacteriosis cases are complicated by GBS). *Campylobacter* infection is suspected as the cause in approximately 30% of all GBS cases. In addition, campylobacteriosis is associated with a thrombotic thrombocytopenic purpura (TTP) syndrome.

Exposure-prone groups:

Small children (especially toddlers), residents in institutions, food handlers, diners at barbecues, those consuming home prepared poultry and dog owners.

Clinical Management of

Cases:

Enteric precautions and rehydration are all that are required. Information on enteric precautions should be provided by the attending physician – a follow up letter can also be provided. 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: unnecessary unless part of a confirmed or suspected outbreak.

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

Public Health Management of Contacts: Nil required except to advise that if symptoms develop, they manage conservatively at home unless so symptoms become severe.

Exclusion: Until 48 hours after first normal stool.

Microbiological Clearance: Not required.

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

Campylobacter tends not to produce extensive, general outbreaks – outbreaks, when they occur, tend to be restricted to families.