Campylobacteriosis

Epidemiology in New Zealand
Campylobacteriosis is the most frequently notified foodborne disease in New Zealand. There is marked seasonality in notifications, with the peak in spring and summer.

More detailed epidemiological information is available on the Institute of Environmental Science and Research (ESR) surveillance website at www.surv.esr.cri.nz

Further information on foodborne illness is available at www.foodsafety.govt.nz and www.mpi.govt.nz.

Case definition

Clinical description
An illness of variable severity with symptoms of abdominal pain, fever and diarrhoea, often with bloody stools.

Laboratory test for diagnosis
Laboratory confirmation requires isolation of Campylobacter spp. from a clinical specimen.

Case classification
- Under investigation: A case that has been notified, but information is not yet available to classify it as probable or confirmed.
- Probable: A clinically compatible illness that either is a contact of a confirmed case of the same disease or has had contact with the same common source – that is, is part of a common-source outbreak.
- Confirmed: A clinically compatible illness that is laboratory confirmed.
- Not a case: A case that has been investigated and subsequently found not to meet the case definition.

Spread of infection

Incubation period
Usually 2–5 days, range 1–10 days.
Mode of transmission
Most often by ingestion of contaminated food, typically undercooked poultry but also other meats or unpasteurised milk. Cross-contamination from raw meat to other foodstuffs may occur via hands, utensils, chopping boards or incorrect storage. In New Zealand, consumption of faecally contaminated water and direct contact with farm or domestic animals are other common routes of transmission. Person-to-person transmission is uncommon.

Period of communicability
Campylobacter spp. may be shed in the stool for several weeks after infection.

Notification procedure
Attending medical practitioners or laboratories must notify the local medical officer of health immediately of cases of probable or confirmed campylobacteriosis.

All health care workers are encouraged to talk with a medical officer of health about any suspected outbreaks or cases in people who are in high-risk occupations.

Management of case
Investigation
Obtain a food consumption history and details of water consumption and animal contact as well as details of occupation.

Investigate and obtain a more detailed history if there is an outbreak or if the case is in a high-risk occupation or attends an early childhood service.

Ensure symptomatic cases submit stool samples for testing.

Restriction
In a health care facility, only standard precautions are indicated in most cases. If the case is a diapered or incontinent child, apply contact precautions for the duration of illness. For further details, refer to the exclusion and clearance criteria in Appendix 2: Enteric Disease.
Treatment

Fluid replacement is the mainstay of therapy. Antimicrobial agents have modest if any benefit on duration of symptoms and are only indicated if the infection is severe, the patient is immunocompromised or prompt termination of excretion of organisms is desired. Erythromycin is the preferred antimicrobial agent in New Zealand and generally clears the stool of *Campylobacter* spp. within 3 days. Other macrolides are equally effective. Ciprofloxacin or norfloxacin are alternatives but are associated with increasing resistance and are not recommended for children.

Counselling

Advise the case and their caregivers of the nature of the infection and its mode of transmission. Educate about hygiene.

Management of contacts

As set out in the exclusion and clearance criteria (Appendix 2: Enteric Disease), screening or restriction is not indicated for contacts of infectious cases or for people who have been exposed to the same food material suspected to be the source of infection.

If symptomatic, investigate and manage as a case until the stool test results are known.

Other control measures

Identification of source

Check for other cases in the community. Investigate potential food or water sources of infection only if there is a cluster of cases or an apparent epidemiological link.

If indicated, check water supply for microbiological contamination and compliance with the latest New Zealand drinking-water standards (Ministry of Health 2008). Liaise with the local territorial authority staff to investigate potential water sources of infection.

Disinfection

Clean and disinfect surfaces and articles soiled with stool. For more details, refer to Appendix 1: Disinfection.

Health education

Educate the public about safe food preparation (see Appendix 3: Patient Information).

Hand-cleaning facilities should be available and used after contact with animals. Young children should be supervised during contact with animals and during hand cleaning. Food-related activities should be separated from areas that house animals. Domestic animals that have diarrhoea should be taken to a veterinarian for assessment and treatment.
If a water supply is involved, liaise with the local territorial authority to inform the public. Advise on the need to boil water.

In early childhood services or other institutional situations, ensure satisfactory facilities and practices regarding hand cleaning; nappy changing; toilet use and toilet training; preparation and handling of food; and cleaning of sleeping areas, toys and other surfaces.

**Reporting**

Ensure complete case information is entered into EpiSurv.

Liaise with the environmental health officer of the local territorial authority where food premises are thought to be involved. Liaise with the Ministry for Primary Industries if a contaminated commercial food source is thought to be involved.

If a cluster of cases occurs, contact the Ministry of Health Communicable Diseases Team and outbreak liaison staff at ESR, and complete the Outbreak Report Form.

**References and further information**