Communicable Diseases Protocol

Cryptosporidiosis

Last updated: 1 July 2012

Public health priority:
High
PHU response time:
Respond to confirmed cases within one working day of notification
Enter confirmed cases on NCIMS within 3 working days
Case management:
Identify risk factors. Exclude case from childcare for 24 hours after symptoms have resolved
Where a cluster is identified, control the suspected source
Contact management:
Not applicable

1. Reason for surveillance

- To identify the source of infection and to prevent further cases
- To monitor the epidemiology of cryptosporidiosis to inform the development of better prevention strategies.

2. Case definition

A confirmed case requires laboratory definitive evidence.

Laboratory definitive evidence
Detection of *Cryptosporidium.*

Factors to be considered in case identification
Laboratory diagnosis of cryptosporidiosis usually involves identification of *Cryptosporidium* oocysts from stool samples by microscopy or a monoclonal antibody test. PCR may also be used.

3. Notification criteria and procedure

Cryptosporidiosis is to be notified by:
- Laboratories on confirmation (ideal reporting by routine mail).

Only confirmed cases should be entered onto NCIMS.

4. The disease

Infectious agent
The coccidian protozoa *Cryptosporidium*. Multiple species of *Cryptosporidium* exist, but two are thought to be the main cause of human disease: *C. hominis* is specific to humans, while *C. parvum* infects people, cattle and a range of other mammals.

Mode of transmission
Cryptosporidiosis is transmitted by the faecal-oral route directly from person to person, from animal to person and by ingesting contaminated food and water. Outbreaks have been linked to sources such as contaminated drinking water and swimming pools and to petting infected animals.

Timeline
The typical incubation period is probably about 1 to 12 days, with an average of 7 days.

Patients are infectious while they excrete oocysts. This may continue for several weeks after diarrhoea stops.

Clinical presentation
Infection may be asymptomatic, but usually presents as profuse watery diarrhoea and abdominal cramps. Children may present with a prodrome of anorexia and vomiting.

5. Managing single notifications

Response times

Investigation
Within 1 working day of notification of a confirmed case begin follow-up investigation.

Data entry
Within 3 working days of notification enter confirmed cases on NCIMS.

Response procedure
The response to a notification will normally be carried out in collaboration with the case's health carers. But regardless of who does the follow-up, PHU staff should ensure that action has been taken to:

- Confirm the onset date and symptoms of the illness
- Confirm results of relevant pathology tests, or recommend the tests be done
- Find out if the case or relevant care-giver has been told what the diagnosis is before beginning the interview
- Seek the doctor's permission to contact the case or relevant care-giver
- Review case and contact management
- Identify and control the likely source.

Case management

Investigation and treatment
Treatment is supportive.

Education
The case or relevant care-giver should be informed about the nature of the infection and the mode of transmission. Emphasise the importance of hygienic practices, particularly:

- not swimming for at least 2 weeks after complete resolution of symptoms
- hand washing with soap and running water for at least 10 seconds before eating, and after going to the toilet, handling nappies, and touching animals or their manure
- for food handlers, not handling food for at least 48 hours after complete resolution of symptoms
- for carers of the sick, children or the elderly, not having contact with these groups for at least 48 hours after complete resolution of symptoms
- not sharing linen and towels for at least 2 weeks after complete resolution of symptoms.

Isolation and restriction
Recommend that children with diarrhoea not attend child care for at least 24 hours after symptoms have resolved.

Environmental evaluation
Where a water-borne source is suspected, discuss with CDB for advice on further assessment and control measures.

Contact management

Identification of contacts
Not applicable.

5. Managing Special Situations

Case clusters

Childcare
Where more than one case is epidemiologically linked to the same childcare facility, ask the director to telephone the PHU if new cases of diarrhoea are reported. The director should recommend that parents take their symptomatic children to a GP for assessment. The facility should be telephoned or visited at least once a week for 2 weeks after onset of the last case to verify that surveillance and appropriate infection control measures are being carried out.

Swimming facilities
Where more than one case is epidemiologically linked to a swimming pool or other swimming facility, then the PHU should ensure that the facility is reviewed for compliance with NSW Health's *Public Swimming Pool And Spa Pool Guidelines* (http://www.health.nsw.gov.au/pubs/2004/poolguidelines.html) and *Protocol for Minimising the Risk of Cryptosporidium Contamination in Public Swimming Pools and Spa Pools* (http://www.health.nsw.gov.au/pubs/2004/cryptopools.html) This includes superchlorination of the pool, and ensuring (through prominent signage and handouts) that patrons are aware of the importance of not entering the pool if they have had diarrhoea in the previous 2 weeks, and of showering before entering the pool.

Ongoing source of risk
Where an ongoing source of infection is suspected, consider the need for an epidemiological study and specific interventions. Seek advice from CDB.