

Proactive Steps for Preventing Community-Wide Outbreaks of Cryptosporidiosis

Transmission of *Cryptosporidium*, the parasite that causes cryptosporidiosis, has been increasing over the last two decades. This parasite has a low infectious dose, a small size that allows it to bypass water filtration systems, and resistance to chlorine disinfection at levels routinely used at aquatic venues such as swimming pools, water parks, and interactive fountains. It is the leading cause of outbreaks associated with disinfected recreational water and has also caused outbreaks in child care facilities. *Cryptosporidium* has the ability to cause community-wide outbreaks when transmitted in these venues.

Pre-planning and rapid response to an increase in reports of cryptosporidiosis are the best ways to reduce the risk of community-wide spread of this parasite. This approach saves valuable time by making the public health response dependent on exceeding a pre-designated disease incidence threshold rather than waiting for an outbreak investigation to be completed. This approach allows a more rapid implementation of control measures, which is different from the traditional outbreak response, where an investigation is initiated and control measures are implemented only after identification of the outbreak source.

Proactive steps that can be taken to prevent community-wide outbreaks of cryptosporidiosis are described below. This material is condensed from the Cryptosporidiosis Outbreak Response and Evaluation document that can be found on the CDC website at www.cdc.gov/crypto/pdfs/core_guidelines.pdf.

Work Groups

Form multi-disciplinary, multi-agency work groups to proactively plan a coordinated response to cryptosporidiosis.

- Develop communication plan.
- Set disease-action threshold (e.g., 2–3 fold increase over baseline for the previous 5 years) at which community partners will be notified to implement intensified control measures.

Financial Investment

Devote financial resources to fund surveillance, education, and other activities.

Surveillance

Track incidence and reporting trends for cryptosporidiosis cases.

Consider increasing timeliness of reporting (e.g., within 24 hours) of cryptosporidiosis cases during peak transmission season (i.e., July and August).

Communication

Maintain updated lists of contact information for partners within the health department and in neighboring local/state health departments, and community partners (e.g. healthcare providers, child care program operators, school nurses, home owner associations, aquatic venue operators, and pool maintenance companies).

Create and maintain email, blast fax, or other communication networks/lists so that partners can quickly be notified if the disease-action threshold has been exceeded or an outbreak has been detected.

Health Communication Materials

Create educational materials such as presentations for use by the health department and brochures for operators of aquatics venues and child care programs to distribute to patrons.

Prepare health education materials to be used in the event the disease-action threshold is exceeded or an outbreak is detected. These materials could include signs to be posted at aquatic venues and letters to community partners.

Education (by audience)

Healthcare providers: increase awareness of cryptosporidiosis, encourage requesting of testing for *Cryptosporidium* in patients whose symptoms are clinically compatible, and provide them with educational materials to give to these patients.

Community partners: educate about how *Cryptosporidium* is transmitted, how transmission can be prevented in their particular setting, and intensified control measures that will need to be implemented if the disease-action threshold is exceeded or an outbreak is detected.

- Aquatic venue operators and pool maintenance companies: hold waterborne illness prevention seminars prior to the start of the swim season and provide aquatic venue operators with written information. If someone from an aquatic venue is unable to attend one of the seminars, hand deliver the information packet and discuss cryptosporidiosis when the aquatic facility is inspected.
- Child care programs: enforce diarrhea-exclusion policy, supervise and encourage good hand washing practices, ban use of fill-and-drain pools (e.g., small inflatable or plastic pools).

General public: collaborate with community partners to educate the public about cryptosporidiosis and other waterborne diseases, including how they are transmitted and how transmission can be prevented. Educate the public through TV and radio spots, newspaper inserts, press releases and interviews, information distributed at fairs, posters, and information on the health department website.

Engineering Control Measures

Encourage installation of supplemental disinfection methods that target *Cryptosporidium*, such as ultraviolet light or ozone, in aquatic venues. Encourage operators of interactive fountains not using supplemental disinfection to consider using only single-pass water.

Healthy Swimming Policies for Aquatic Facilities

Establish fecal incident response protocols. Establish and enforce policies to exclude patrons and staff with diarrhea from entering the water. Develop protocols for water treatment targeting *Cryptosporidium* (e.g. hyperchlorination at 20 ppm for 12 hours, 45 minutes) that can be initiated proactively (e.g. weekly) or in response to notification by the health department that an increase in cryptosporidiosis incidence has been detected. Require cleansing showers before swimmers enter recreational water. Do not allow diapering at poolside.

Outbreak Response Preparedness

Prepare health department for response if disease-action threshold is exceeded or an outbreak is detected. Ensure that staff are trained in outbreak response procedures, understand the communication plan, have the necessary investigative tools available, and understand the procedures for obtaining stool samples and environmental specimens, testing the samples and specimens, and, if needed, sending them to the CDC for further testing. CDC's Water-Related Outbreak Response Toolkits and Resources are available at: <http://www.cdc.gov/healthywater/emergency/toolkit/index.html>.