

Recreational Water Illnesses (RWIs)

With summer activities approaching, the Vermont Department of Health (VDH) would like to remind healthcare providers to increase surveillance for RWIs – illnesses spread by ingesting contaminated recreational water. RWIs can cause a variety of symptoms, including gastrointestinal, skin, ear, respiratory, eye, neurologic and wound infections. The most commonly reported RWI is diarrhea, which can be caused by *Cryptosporidium*, *Giardia*, *Shigella*, *E.coli* O157:H7 and Norovirus. For more information, see: http://www.cdc.gov/healthyswimming/health_dept.htm.

Cryptosporidiosis is caused by the parasite *Cryptosporidium parvum*. Large farm animals are the primary reservoirs. The organism is hardy, evading many filtration systems and disinfectants. Symptoms commonly include watery diarrhea, abdominal cramps, and fever.

Giardiasis, caused by the parasite *Giardia lamblia*, can be found in the feces of infected humans or animals. Symptoms commonly include watery diarrhea and abdominal cramps. Metronidazole is the treatment of choice.

Stool specimens for the diagnosis of *Giardia* or *Cryptosporidium* should be submitted to the VDH Laboratory in SAF preservative. Preferably, 3 specimens should be collected on alternate days. EIA testing is available for *Giardia* and *Cryptosporidium*. Microscopic examination will detect *Giardia* as well as other pathogenic and non-pathogenic parasites.

Shigellosis is caused by a family of bacteria called *Shigella*. The only significant reservoir is humans. Person-to-person transmission can occur via the fecal-oral route. Symptoms commonly include diarrhea, (watery or bloody), abdominal cramps and fever. Antibiotic treatment is recommended for infected childcare workers and children who attend childcare facilities. ¹

Stool specimens should be transported in Cary Blair media. They should be received by the VDH Laboratory within 4 days of collection. Culture will be performed as well as typing on any *Shigella* species isolated.

E.coli O157:H7 is a strain of the bacterium *Escherichia coli*. Although most strains are harmless, living in the intestines of humans and animals, *E.coli* O157:H7 can cause severe illness. Symptoms commonly include bloody diarrhea and abdominal cramps. Hemolytic uremic syndrome (HUS) is a potentially life-threatening complication.

Stool specimens should be transported in Cary Blair media. They should be received by VDH Laboratory within 4 days of collection. Culture and shiga toxin testing will be performed. Typing will be performed on toxigenic *E.coli* species isolated.

Norovirus is a highly contagious gastrointestinal infection caused by a group of viruses. It is found in the stool or emesis of infected persons. Symptoms include acute onset of watery diarrhea and/or vomiting. Testing of stool and emesis is done by the VDH Laboratory in the event of an outbreak.

Prevention: Please advise anyone with a diarrheal illness to avoid swimming in public pools or lakes, sharing baths with others, and preparing food for others. To reduce risk of transmission, persons with diarrhea should wash their hands frequently with soap and water, after bowel movements, or after changing diapers.

Reporting: Cryptosporidiosis, Giardiasis, Shigellosis, *E.coli* O157:H7 and outbreaks of Norovirus are reportable to VDH by calling 863-7240 or 1-800-640-4374.

Specimen collection kits can be obtained by calling the VDH Laboratory at 863-7560 or 1-800-660-9997 (x7560).

¹ Red Book, 27th Edition. American Academy of Pediatrics, 2006

The Infectious Disease Bulletin can be viewed at:

<http://healthvermont.gov/pubs/IDB/index.aspx>

For questions & comments, please contact Mary Spayne at (802)863-7240

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