Introduction

Enteric illnesses are a group of diseases that are associated with the ingestion of food and/or water contaminated by microorganisms and microbial toxins which attack the gastrointestinal tract. Common symptoms include nausea, vomiting, diarrhea, abdominal cramps, fever, chills, and a loss of appetite and can appear 30 minutes to 10 days after contact. Because many individuals mistake the symptoms of enteric illness, it is difficult to get an accurate number of cases of enteric illness; however, it is estimated that there are 2.2 million cases of enteric diseases in Canada annually.

This fact sheet focuses on Campylobacteriosis, Giardiasis, and Salmonellosis in the Sudbury & District Health Unit (SDHU) area. Information was collected via the Integrated Public Health Information System (iPHIS) between 2008 and 2012 and was extracted in September 2013.

Campylobacteriosis

Campylobacter bacteria is a common cause of diarrhea in humans. Symptoms of infection often include diarrhea, which may be bloody, cramps, fever, nausea and vomiting, and usually appear 2 to 5 days following exposure. Campylobacter bacteria are found on animals and birds, particularly puppies, kittens and poultry. In persons with comprised immune systems, Campylobacter occasionally spreads to the bloodstream and causes a serious life-threatening infection. In order for infection to take place, the bacteria must be swallowed; therefore frequent hand washing, kitchen sanitizing and thorough cooking of meat, poultry, and eggs are recommended.

The number of reported cases of Campylobacteriosis varied between 2008 and 2012. As shown in Figure 1, the highest number of cases was reported in 2012 with 30 cases, and the lowest number was reported in 2011 with 23 cases. The 65 years and over age group in the SDHU area had the highest number of reported Campylobacteriosis cases with 30 cases reported between 2008 and 2012 (Figure 2).

When sex differences were examined, a similar number of Campylobacteriosis cases were reported among females (51%) and males (49%) during the 2008–2012 period.

Figure 2. Number of reported Campylobacteriosis cases in the SDHU area, by age group, 2008–2012

![Figure 2. Number of reported Campylobacteriosis cases in the SDHU area, by age group, 2008–2012](source: Integrated Public Health Information System)
Giardiasis

Giardiasis is an infection of the intestines caused by the tiny parasite Giardia lamblia. Symptoms include diarrhea (or loose, greasy bowel movements), stomach cramps, bloating, severe flatulence, weight loss and fatigue; however, some infected individuals will show no symptoms. Symptoms generally appear within 3 to 25 days after contact and children tend to be infected more frequently than adults. Giardiasis is most commonly spread through fecally contaminated water supplies, or contact with human or animal feces, but can also be spread from person-to-person through hand-to-mouth contact or improper food handling. Frequent hand washing is recommended, in addition to avoiding swallowing water while swimming.

The number of reported cases of Giardiasis decreased in the SDHU area between 2010 and 2012 (Figure 3). The highest number of reported cases was 20 in 2010 and the lowest number of reported cases was 8 in 2008. Not all cases are diagnosed and therefore these numbers are likely to underestimate the incidence.

Salmonellosis

Salmonella bacteria is one of the main causes of food-borne illness worldwide, and is commonly found in the intestines of livestock and other animals. Symptoms of Salmonellosis include sudden onset of cramps accompanied by diarrhea, nausea, fever, chills, headache and vomiting, and usually occur 12 to 36 hours after contact. Salmonella is dangerous when it occurs in those with weak immune systems. An infection usually occurs when people eat contaminated food or through person-to-person contact with unwashed hands. In addition, any raw animal foods (meat, poultry, eggs, unpasteurized milk, fish and shellfish) may carry salmonella. Frequent hand washing, thorough cooking, a sanitized kitchen and drinking only pasteurized milk and milk products are recommended.

The number of Salmonellosis cases in the SDHU area varied between 2008 and 2012 (Figure 4). The highest number of cases was diagnosed in 2010 with 43 cases, and the lowest in 2011 with 24 cases. As not all cases are reported, this is likely to be an underestimate.

Conclusion

Salmonellosis is the most common enteric disease in the SDHU area, with 160 reported cases between 2008 and 2012, followed by Campylobacteriosis, with 127 reported cases between the same time frame. Whereas the number of Campylobacteriosis and Salmonellosis cases have remained relatively consistent, the number of cases of Giardiasis appears to be decreasing.

In order to prevent enteric diseases, avoid re-contamination within the kitchen after cooking is complete, perform proper kitchen sanitizing and thorough cooking of meat, poultry, and eggs are recommended. Drinking untreated water and unpasteurized milk should be avoided. Frequent and thorough hand washing is also recommended, especially before, during, and after food preparation, before eating, after using the toilet, and after handling animals, pet foods, and after cleaning animal enclosures.
Suggested Resources

Sudbury & District Health Unit  
705.522.9200  
www.sdhu.com

Health Canada  
www.hc-sc.gc.ca

Public Health Agency of Canada  
http://www.phac-aspc.gc.ca/publicat/ccdr-rmtc/

Centers for Disease Control and Prevention  
www.cdc.gov

World Health Organization  
http://www.who.int/csr/en/

Additional information is available in the Communicable Disease Report for the Sudbury & District Health Unit Area 2000–2010 at


For More Information

Information Resource Centre  
Resources, Research, Evaluation and Development Division  
Sudbury & District Health Unit  
1300 Paris Street  
Sudbury, ON P3E 3A3  
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