

Health **FAX**

Legionellosis Laboratory Testing Update

Attention: **All Physicians, Infection Control Practitioners, Emergency Departments**

Date: September 10, 2012

Surveillance Update

In Simcoe Muskoka, there have been 2 laboratory confirmed legionellosis cases in 2012 (both in August). Between 2008-2011, there were 2-4 cases per year (0.2-0.75 cases per 100,000 population). Between 2002-2007, there were 0-1 cases per year.

In Ontario, the legionellosis incidence rate has increased from 0.2 cases per 100,000 population in 2002 to 1.2 cases per 100,000 in 2011. The largest increase has occurred since 2009 when the rate was 0.6 cases per 100,000. Clusters of cases were identified in the greater Toronto area health unit in 2008, 2010 and 2011. From January - June 2012, there were 31 confirmed cases in Ontario for a rate of 0.2 cases per 100,000, however incidence usually peaks in late summer months.

In Canada, the legionellosis incidence rate was similar to Ontario from 2002 - 2008 after which time data are not available. **Currently, there is an outbreak of legionellosis in Quebec with 151 cases and 9 deaths in August 2012.** The source of the outbreak is under investigation.

Laboratory Testing and Case Identification

Urine antigen detection is the most commonly used testing method for legionellosis case identification. The urine antigen detection test exclusively detects *Legionella pneumophila* serogroup 1 but no other *Legionella* serotypes. Urine samples cannot be cultured and therefore cannot link human cases to environmental source(s).

Public Health Ontario Laboratories (PHOL) therefore requires respiratory samples for culture to provide laboratory support for epidemiological investigations. The ideal sample for culture is obtained from the lower respiratory tract specimens, such as by bronchoalveolar lavage, lung tissue, etc. collected in a sterile container. If collection of a BAL/lower respiratory tract sample cannot be arranged it is recommended that a sputum specimen is collected for possible culture. Molecular typing can only be done on isolates obtained from culture and is necessary in order to link cases to each other or to an environmental source(s).

For more information on the legionella testing of lower respiratory tract samples, please visit:
<http://oahpp.ca/resources/documents/lababstracts/LAB-SD-084-000%20-%20Legionella%20-%20Change%20in%20testing%20methodology%20to%20Real-Time%20PCR%20Testing.pdf>

Legionella is a reportable disease. If you suspect a case of Legionellosis or have questions regarding proper specimen collection, please contact the Simcoe Muskoka District Health Unit Communicable Disease Team at 705-721-7520 or 1-877-721-7520 Ext. 8809.