



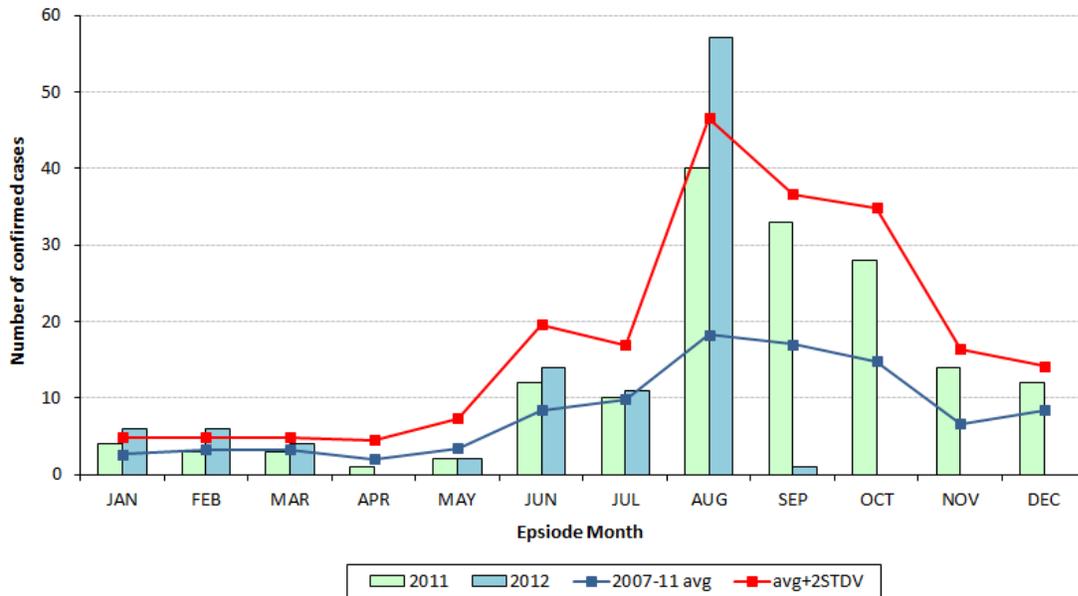
## Legionellosis in Ontario Summary

**Data current as of:** September 7, 2012, at 9:00AM

**Data source:** Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/07].

<p><b>Total case count</b></p>	<p>58 confirmed cases from August 1 to September 7, 2012 101 confirmed cases from January 1 to September 7, 2012</p>
<p><b>Cases reported since August 1, 2012</b></p>	<ul style="list-style-type: none"> <li>• Legionellosis case counts since August 1, 2012, are slightly higher than expected based on comparison to five-year historical case counts (2007-2011). Case counts in August 2011 were also higher than previous years (2006-2010).</li> <li>• Most of the cases (91%, 53/58) are over the age of 50, with 36/58 (62%) of cases between the ages of 50 and 70.</li> <li>• The median age of cases is 63 years (range: 33 to 92 years).</li> <li>• Male to female ratio is 2.2:1 (40:18).</li> <li>• The age and sex distribution of cases reported since August 1, 2012, is as expected based on the literature and as reported in the province from previous years.</li> <li>• Data on cases reviewed below are preliminary and subject to change as case investigations continue.</li> </ul>

**Figure 1. Confirmed cases of legionellosis by month and year: Ontario, 2011-2012\***



**Source:** Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/07].

\*Note: 2012 counts only include cases reported up to September 7, 2012.

**Distribution by health unit**

(n=58)

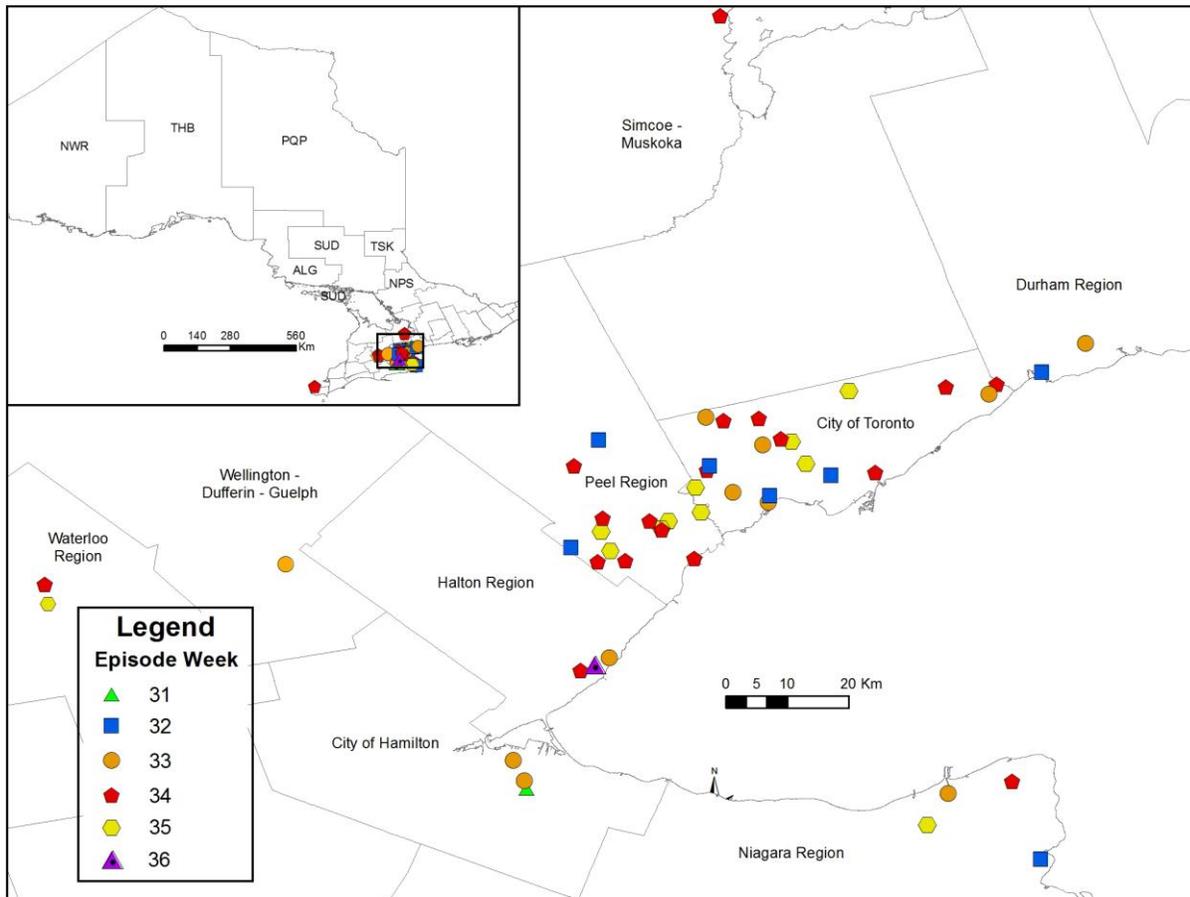
- Since August 1, 2012, 12 health units have reported 58 confirmed cases of legionellosis in Ontario.
- The majority of cases (86%; 50/58) have been reported in Toronto, Peel Region, Region of Waterloo, Niagara Region, Halton Region, and City of Hamilton health units, while these health units only represent approximately 46% of Ontario's population. There is no tight geographical clustering to suggest a point source exposure.
- In 2011, the majority of the cases (65%, 106/162) were reported in Toronto, Peel Region, City of Hamilton and Durham Region health units.
- The geographic distribution of cases reported since August 1, 2012, is in a similar area of the province compared to previous years.
- Statistical analyses using SaTScan were performed on legionellosis cases reported in iPHIS from June 1 to August 31, 2012. No statistically significant geographic clusters of cases have been identified.

**Table 1.** Distribution of reported cases of legionellosis by health unit: Ontario, August 1 – September 7, 2012

<b>Health Unit</b>	<b>Count</b>
City of Hamilton	3
City of Ottawa	1
Durham Region	2
Halton Region	3
Middlesex-London	1
Niagara Region	4
Peel Region	14
Simcoe Muskoka District	2
Toronto	21
Waterloo Region	5
Wellington-Dufferin-Guelph	1
Windsor-Essex County	1
<b>TOTAL</b>	<b>58</b>

**Source:** Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/07].

**Figure 2. Confirmed cases of legionellosis by week of symptom onset and postal code of residence: Ontario, August 1 to September 7, 2012**



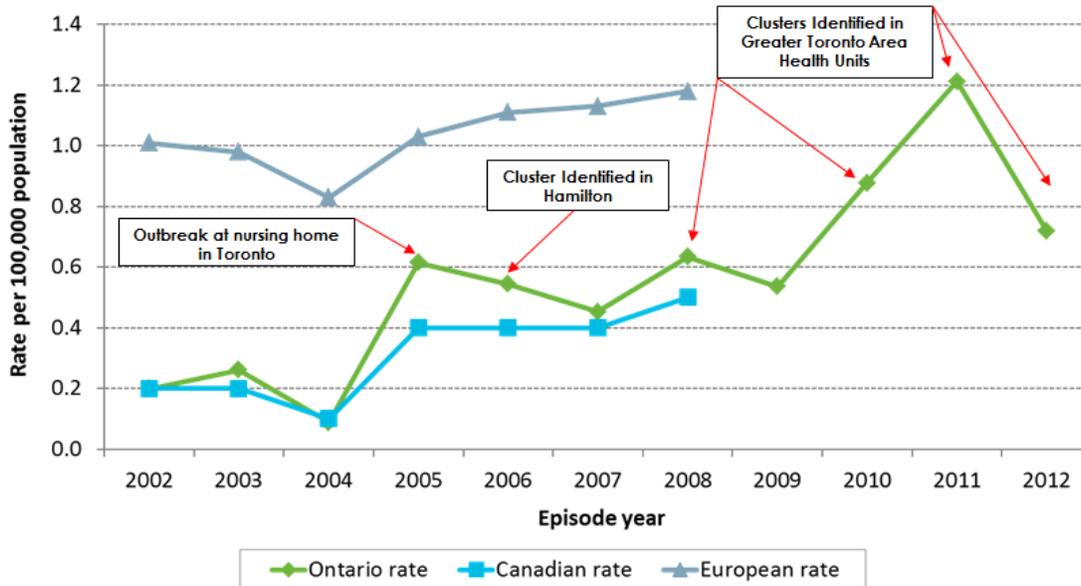
**Source:** Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/07].

**Note:** Postal code at time of illness was available for 90% (52/58) of August cases reported up to September 7, 2012. The six cases with no postal code at time of illness available are from Waterloo (3 cases), Simcoe Muskoka (1 case), Middlesex-London (1 case), and City of Ottawa (1 case).

<p><b>Symptoms</b> (n=37)</p>	<p><b>Table 2.</b> Symptoms reported by confirmed cases of legionellosis: Ontario, August 1 to September 7, 2012</p> <table border="1" data-bbox="431 296 1377 520"> <thead> <tr> <th>Symptoms</th> <th>Number of Cases</th> <th>Percent (%)</th> </tr> </thead> <tbody> <tr> <td>Fever</td> <td>31</td> <td>84</td> </tr> <tr> <td>Malaise</td> <td>25</td> <td>68</td> </tr> <tr> <td>Non-productive cough</td> <td>19</td> <td>51</td> </tr> <tr> <td>Chills</td> <td>16</td> <td>43</td> </tr> <tr> <td>Diarrhea</td> <td>14</td> <td>38</td> </tr> </tbody> </table> <p><b>Note:</b> Cases may have reported more than one symptom; symptom information was not reported by 21 cases.</p>	Symptoms	Number of Cases	Percent (%)	Fever	31	84	Malaise	25	68	Non-productive cough	19	51	Chills	16	43	Diarrhea	14	38
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<p><b>Risk Factors</b> (n=32) <b>and</b> <b>Exposures</b> (n=34)</p>	<ul style="list-style-type: none"> <li>• Risk factor and exposure information was entered for 55% (32/58) and 59% (34/58) of cases, respectively: <ul style="list-style-type: none"> <li>○ The risk factor ‘Smoker’ was reported by 11 cases (34%), ‘Recent exposure to aerosolized water’ was reported by 11 cases (34%), and ‘Gardening/disturbing soil’ was reported by 7 cases (22%).</li> <li>○ Exposures reported include travel, large public spaces with air conditioning, private home air conditioners, hot tubs, grocery stores, hotels, occupational, gardening, and environmental sources such as creeks and streams.</li> <li>○ Potential exposure at a single premise identified among three cases, with exposure dates ranging from August 2 to 9. The cases are from Peel Region (2 cases) and Toronto (1 case).</li> <li>○ No other common sources have been identified.</li> </ul> </li> </ul>																		
<p><b>Severe outcomes</b> (n=58)</p>	<ul style="list-style-type: none"> <li>• Of the cases reported since August 1, 2012, (57%, 33/58) were identified as Legionnaires’ disease based on the diagnosis of pneumonia reported in iPHIS.</li> <li>• Twenty-six cases (45%) have been hospitalized, of which 16 cases have been reported as discharged from hospital.</li> <li>• ICU admission has been reported for six cases (10%).</li> <li>• Three deaths (5%) have been reported.</li> <li>• Case investigations are ongoing and this information is subject to change as data are entered into iPHIS.</li> </ul>																		

**Historical Trends**

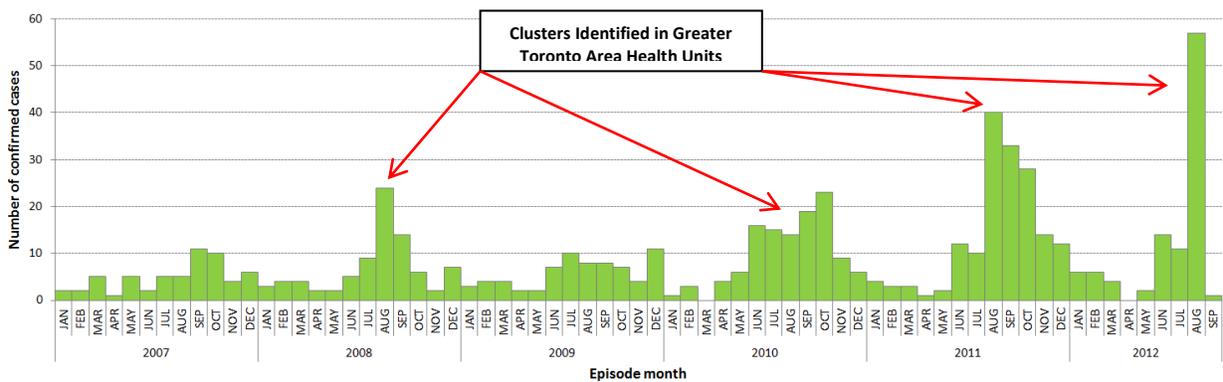
**Figure 3. Incidence of legionellosis: Ontario, 2002-2012\*; Canada and Europe, 2002-2008**



**Sources:** Ontario data – Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/05]. Ontario population – IntelliHEALTH Ontario, extracted by Public Health Ontario [2012/01/13]. Canada – Public Health Agency of Canada, Canadian Notifiable Disease Section, Surveillance and Risk Assessment Division, Centre for Communicable Diseases and Infection Control. Europe – European Working Group for Legionella Infections.

\*Note: 2012 counts only include cases reported up to September 5, 2012.

**Figure 4. Confirmed cases of legionellosis by month: Ontario, 2007-2012\***



**Source:** Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2012/09/07].

\*Note: 2012 counts only include cases reported up to September 7, 2012.

**Caveat for iPHIS data:** iPHIS is a dynamic disease reporting system which allows ongoing updates to data previously entered. As a result, data extracted from iPHIS represents a snap shot at the time of extraction and may differ from previous or subsequent reports.

When exposure information is known, cases are endemic and have not reported travel outside Ontario during the incubation period, unless stated otherwise.