

LYME DISEASE

Data sources:

NBPSDHU regional Lyme disease confirmed & probable cases – NBPSDHU & Ontario counts: Public Health Ontario. Query: North Bay Parry Sound District Health Unit & Ontario: Case counts of reportable disease by disease, year, age group, and gender. Toronto, ON: Ontario Agency for Health Protection and Promotion; 2017 Mar 01 [cited 2017 Mar 08]. Available from: <http://www.publichealthontario.ca/en/DataAndAnalytics/Query/Pages/default.aspx>

NBPSDHU & Ontario Population – 2006-2015 Population estimates: Statistics Canada 2006-2015, IntelliHEALTH Ontario, Ministry of Health and Long-term Care, extracted 2016/09/07.

Rate calculations:

Crude rates were age-standardized using the Direct Method and standard 2011 Canadian population. Confidence intervals (95%) were calculated for age-standardized rates based on the gamma distribution (Fay and Feuer, 1997. Tiwari and al., 2006).

Interpretation of a significant difference:

A statistic interpreted as 'significantly different' from another is an estimate found to be statistically meaningful; the difference is unlikely due to chance. Error bars noted in figures within this report illustrate 95% confidence intervals. If there is no overlap in range, the difference can be described as statistically significant.

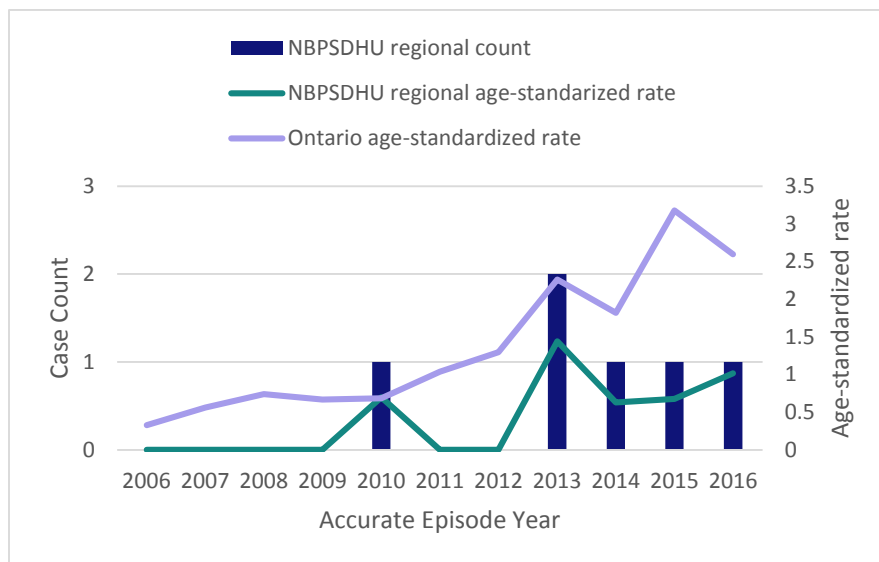
Confidence intervals (CI) and variances were estimated using the exact method in STATA IC/14.2 (2014) for the North Bay Parry Sound District Health Unit (NBPSDHU) and Ontario

Overall rates

The North Bay Parry Sound District Health Unit (NBPSDHU) regional age-standardized rate for Lyme disease has been statistically similar to the Ontario rate for all years between 2006 and 2016, with an annual median number of 0 cases (confirmed and probable) (see Figure 1 & Table 1). In the past five years (2012-2016), a median of one case occurred in our region, while between 2006 and 2011, a median of zero cases occurred in our region.

Since the NBPSDHU region is not an area of high risk of exposure to *Ixodes scapularis* (the tick species of concern for the transmission of Lyme disease), passive surveillance has been conducted since 2007. For passive surveillance, the public is informed to contact the health unit to submit any human acquired ticks they have found. In 2015, 35 ticks were submitted through human exposure for identification, eight specimens were identified as *Ix. scapularis*. The results for all eight specimens were negative for the bacterium *Borrelia burgdorferi*, the agent for Lyme disease.

Figure 1. Count and Age-Standardized Rate per 100,000 Population of Lyme Disease Cases (Confirmed and Probable), by Region, 2006 - 2016



Note: The 2016 age-standardized rates for both regions were calculated using 2015 population estimates as 2016 population estimates are not yet available.

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Definitions:

Lyme disease case:

Includes confirmed and probable cases as defined by the Ministry of Health & Long-Term Care (Infectious Diseases Protocol: Lyme Disease; Appendix B. Available from http://www.health.gov.on.ca/en/pro/programs/publichealth/oph_standards/docs/lyme_disease_cd.pdf). Previous to April 28, 2009 cases now defined as probable were defined as confirmed cases.

Table 1. Count and Age-Standardized Rate (95% CI) per 100,000 Population of Lyme Disease Cases (Confirmed and Probable), by Region, 2006 - 2016

Frequency	NBPSDHU Regional Case Count	NBPSDHU Regional Age-Standardized Rate	Ontario Age-Standardized Rate
2006	0	0 (0.0, 3.4)	0.3 (0.2, 0.4)
2007	0	0 (0.0, 3.4)	0.6 (0.4, 0.7)
2008	0	0 (0.0, 3.3)	0.7 (0.6, 0.9)
2009	0	0 (0.0, 3.3)	0.7 (0.5, 0.8)
2010	1	0.7 (0.0, 4.4)	0.7 (0.5, 0.8)
2011	0	0 (0.0, 3.2)	1.0 (0.9, 1.2)
2012	0	0 (0.0, 3.3)	1.3 (1.1, 1.5)
2013	2	1.4 (0.2, 5.6)	2.3 (2.0, 2.5)
2014	1	0.6 (0.0, 4.2)	1.8 (1.6, 2.1)
2015	1	0.7 (0.0, 4.3)	3.2 (2.9, 3.5)
2016	1	1.0 (0.0, 5.3)	2.6 (2.3, 2.9)

Note: The 2016 age-standardized rates for both regions were calculated using 2015 population estimates as 2016 population estimates are not yet available.