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The Monthly Infectious Diseases Surveillance Report is produced by Public Health Ontario (PHO) for the public health community of Ontario. We welcome feedback by email to: cdepr@oahpp.ca. Past issues and additional information are available [online](#).

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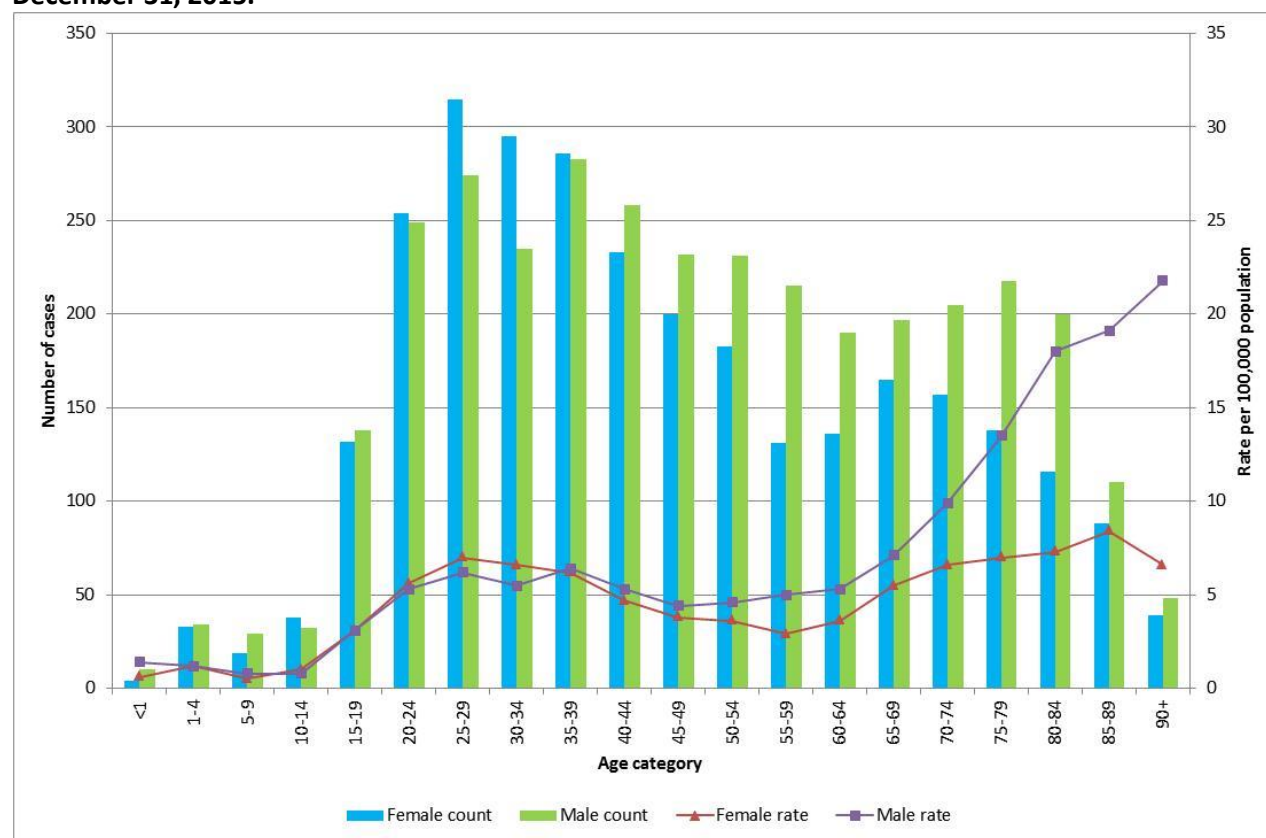
IN FOCUS

Estimating the burden of active tuberculosis in long-term care facilities in Ontario using reportable disease data

Older adults are one of several groups at increased risk of developing tuberculosis (TB) in Canada; others include foreign-born individuals and Canadian-born Aboriginals.¹ Older adults, especially males, are at increased risk of progression from latent TB infection (LTBI) to active TB.¹ Clinical diagnosis of TB in older adults can prove difficult as presentation can be atypical or resemble other conditions, which can result in delayed or missed diagnoses.² Older adults also have a greater risk of adverse events due to TB treatment, particularly hepatotoxicity, and the risks of LTBI treatment may outweigh the benefits as age increases.³

In Ontario, the highest rates of TB are observed in the older adult population aged 75 and above (Figure 1), particularly in older adult males. From 2006 to 2015, average annual reported TB incidence rates were disproportionately higher among males aged 75 years and older, increasing with age to 21.8 cases per 100,000 population among males aged 90 years and above.

Figure 1. Number and rates of TB cases by age categories and gender: Ontario, January 1, 2006 to December 31, 2015.



Ontario cases: Ontario Ministry of Health and Long-Term Care (MOHLTC), integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2016/02/17].

Older adults in long-term care facilities (LTCFs) are a particular population of interest for TB prevention and control in Canada and in Ontario. It has been estimated that between 6% and 25% of LTCF residents in Canada over age 60 would have positive tuberculin skin test (TST) results.⁴ In closed communities such as LTCFs, setting-specific environmental factors, such as suboptimal air circulation and ventilation, room sharing, and prolonged duration of exposure have the potential to facilitate TB transmission.⁵ One such TB outbreak occurred in 2010 in Ontario at a LTCF in the Wellington-Dufferin-Guelph public health unit (PHU).⁶ The index case was a LTCF staff member (although the source case was not identified). An additional three active cases among residents were identified through contact investigation, as well as 24 LTBI cases among residents (15/146) and staff (9/121) over a nine month period. Genotyping results provided evidence suggesting that transmission of TB had occurred among the four active cases. All active cases had an identical Euro-American strain that had not been previously identified in Canada.

In Ontario, the *Long-Term Care Homes Act (2007)* states that “residents must be screened for TB within 14 days of admission, unless the documented results of a TB screen within the last 90 days are available to the licensee of the home”; however, the method of screening is not specified.⁷ The updated *Canadian Tuberculosis Standards (CTBS)*, 7th Edition specify preferred TB screening methods for long-term care residents using an age-based approach.⁸ For persons over 65 years of age in this setting with identified TB risk factors (e.g., birth year prior to 1966), the CTBS recommends active TB screening on admission with a chest x-ray. Persons less than or 65 years old are recommended to be screened with a two-step TST on admission as well as a chest x-ray.

According to the *2015 Long-Term Care Utilization Report*, there are 626 licensed homes approved to operate in Ontario with a total of 76,569 long-stay beds.⁹ Screening all new LTCF admissions with a chest x-ray has considerable resource implications for LTCFs and their health system partners, including Ontario PHUs. In light of the higher rates of TB in older adults in Ontario and the requirement to screen all new admissions to LTCFs, it is important to assess the burden of active TB within LTCFs.

A recent analysis was performed on cases that had reported LTCF as a risk factor in the integrated Public Health Information System (iPHIS) between 2007 and 2011. This analysis found that 0.7% of the average annual number of cases of TB reported in Ontario were diagnosed in LTCF residents or staff over this time period.¹⁰ The aim of this subsequent analysis was to better estimate the burden of TB in LTCF by exploring additional fields in iPHIS. In addition to risk factor screens, we searched free-text entries in comment boxes, using a combination of relevant keywords, for TB cases reported between January 1, 2006 and December 31, 2015. Clients for whom treatment was reported in iPHIS to have started within a LTCF were also included in the search.

This enhanced iPHIS review identified that, over the 10-year period between 2006 and 2015, 66 individuals with active TB were a resident, staff, or visitor of a LTCF. Of the 66 clients, 44 were residents, 18 were staff, and one was a visitor. (Three had an unknown status.) The number of cases in residents represents a very small proportion of the annual number of active TB cases in Ontario, ranging from two residents in 2006 to eight residents in 2007. Between 2006 and 2015, the average annual proportion of active TB cases in Ontario who were reported as residents of a LTCF was 0.69% (Table 1). The 44 residents with active TB were distributed across 11 PHUs. Ten of the eleven PHUs had a cumulative total

of between one and five residents with active TB from 2006 to 2015. Toronto had the highest reported number of residents with active TB, with 19 cases reported during this 10-year period. This suggests that the estimated burden of active TB cases in LTCF relative to the overall active TB burden in Ontario is very low.

Table 1. Number and proportion of active TB cases who were residents of a LTCF as reported in iPHIS: Ontario, January 1, 2006 to December 31, 2015.

Year	Number of active TB cases who were residents at a LTCF	Total number of active TB episodes in Ontario	Annual proportion of active TB cases who were residents at a LTCF relative to all active TB cases
2006	2	672	0.30%
2007	8	691	1.16%
2008	6	625	0.96%
2009	4	635	0.63%
2010	5	648	0.77%
2011	3	663	0.45%
2012	5	623	0.80%
2013	4	635	0.63%
2014	4	587	0.68%
2015	3	584	0.51%
Total	44	6363	0.69%

Ontario cases: Ontario Ministry of Health and Long-Term Care (MOHLTC), integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2016/02/11].

The estimated burden of active TB cases in LTCFs presented in this analysis has several limitations. The data represent only what is reported through iPHIS at the time of data extraction, and reflect some variation in risk factor data entry. A systematic search of relevant free-text fields in iPHIS was conducted; however, this search was not exhaustive as some LTCF cases may have been captured under data fields that were not explored. Nevertheless, compared to the methods used in a previous analysis (i.e., searching only iPHIS risk factor fields), an additional three cases were identified with this expanded search during the years with overlapping data (2007 to 2011). Potential next steps include matching the client addresses in iPHIS to annual address lists of LTCFs operating in Ontario.

A key challenge for estimating the rates of TB in the LTCF resident population is obtaining appropriate denominator data for LTCF residents in Ontario. For example, an appropriate denominator for estimating the burden of active TB in LTCFs would be the number of residents in LTCFs over a defined time period (e.g., in a given year). The Continuing Care Reporting System⁹, which contains information on individuals receiving continuing care services in LTCFs in Canada, will be explored as a potential data source for obtaining more accurate denominators.

Despite these limitations, this preliminary iPHIS data analysis suggests that the estimated absolute burden of active TB cases in LTCFs in Ontario is low, representing an annual average of 0.69% of all active TB cases reported in Ontario between 2006 and 2015. This analysis can contribute to evidence-informed considerations of the optimally effective and efficient active TB screening approach for long-term care facility residents in Ontario.

References:

1. Canadian Thoracic Society, Public Health Agency of Canada, and the Canadian Lung Association. Canadian Tuberculosis Standards, 7th ed. Her Majesty the Queen in Right of Canada; 2014 [cited 2016 Feb 17]. Chapter 1, Epidemiology of tuberculosis in Canada. Available from: http://www.respiratoryguidelines.ca/sites/all/files/CTB_Standards_EN_Chapter%201.pdf
2. Van den Brande P. Revised guidelines for the diagnosis and control of tuberculosis: impact on management in the elderly. *Drugs Aging*. 2005;22(8):663-86.
3. Canadian Thoracic Society, Public Health Agency of Canada, and the Canadian Lung Association. Canadian Tuberculosis Standards, 7th edition. Her Majesty the Queen in Right of Canada; 2014 [cited 2016 Feb 17]. Chapter 6, Treatment of latent tuberculosis infection. Available from: http://www.respiratoryguidelines.ca/sites/all/files/CTB_Standards_EN_Chapter%206.pdf
4. Canadian Thoracic Society, Public Health Agency of Canada, and the Canadian Lung Association. Canadian Tuberculosis Standards, 7th edition. Her Majesty the Queen in Right of Canada; 2014 [cited 2016 Feb 17]. Chapter 13, Tuberculosis surveillance and screening in selected high-risk populations. Available from: http://www.respiratoryguidelines.ca/sites/all/files/CTB_Standards_EN_Chapter%2013.pdf
5. Canadian Thoracic Society, Public Health Agency of Canada, and the Canadian Lung Association. Canadian Tuberculosis Standards, 7th edition. Her Majesty the Queen in Right of Canada; 2014 [cited 2016 Feb 17]. Chapter 2, Pathogenesis and transmission of tuberculosis. Available from: http://www.respiratoryguidelines.ca/sites/all/files/CTB_Standards_EN_Chapter%202.pdf
6. Khalil NJ, Kyrzanowski JA, Mercer NJ, Ellis E, Jamieson F. Tuberculosis outbreak in a long-term care facility. *Can J Public Health*. 2013;104(1):e28-e32.
7. *Long-Term Care Homes Act, 2007*. O. Reg 79/10, Section 229(10). Available from: <https://www.ontario.ca/laws/regulation/r10079#BK0>
8. Canadian Thoracic Society, Public Health Agency of Canada, and the Canadian Lung Association. Canadian Tuberculosis Standards, 7th edition. Her Majesty the Queen in Right of Canada; 2014 [cited 2016 Feb 17]. Chapter 15, Prevention and control of tuberculosis transmission in health care and other settings. Available from: http://www.respiratoryguidelines.ca/sites/all/files/CTB_Standards_EN_Chapter%2015.pdf
9. Ontario Long Term Care Association. This is long-term care 2015. Toronto, ON: Ontario Long Term Care Association: 2015 [cited 2016 Feb 17]. Available from: <http://bluetoad.com/publication/?i=281415>
10. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Tuberculosis: Ontario provincial report, 2012. Toronto, ON: Queen's Printer for Ontario; 2015 [cited 2016 Feb 17]. Available from: http://www.publichealthontario.ca/en/eRepository/Tuberculosis_Ontario_Provincial_Report_2012.pdf

SIGNIFICANT REPORTABLE DISEASE ACTIVITY

Table 1 provides a list of reportable diseases for which incidence in 2016 was found to be significantly higher ($p < 0.05$) than expected compared to the five-year historical average (2011–15). Both monthly and year-to-month (YTM) comparisons were made for each of the reportable diseases listed in [Appendix 1](#), with the exception of influenza, measles, rubella, and congenital rubella syndrome. Influenza surveillance data are regularly reported through the [Ontario Respiratory Pathogen Bulletin](#). Measles, rubella, and congenital rubella syndrome have been eliminated in Canada, although cases continue to occur related to travel importations. Statistical comparisons are not included for these diseases.

Table 1. Summary of statistically significant increases in reportable disease incidence: Ontario, January 1 to January 31, 2015

Reportable disease	2016				Historical comparisons						5-year avg annual count (2011–2015)
	Jan	Jan rate ‡	YTM	YTM rate ‡	Current month 5-year avg (2011–2015)	Current month 5-year avg (2011–2015) rate ‡	% difference in rates (current month minus 5-year avg)†	YTM 5-year avg (2011–2015)	YTM 5-year avg (2011–2015) rate ‡	% difference in rates (YTM 2016 minus YTM 5-year avg)†	
Chlamydial Infections ^{1,2}	3534	253.4	3534	253.4	3177	234.6	8.0	3177	234.6	8.0	36510
Gonorrhoea (All Types) ^{1,2}	549	39.4	549	39.4	429	31.7	24.2	429	31.7	24.2	4921

Ontario Cases: Ministry of Health and Long-Term Care (MOHLTC), integrated Public Health Information System (iPHIS) database, extracted by PHO [2016/02/10].

Ontario Population: Population estimates [2005–2011]: Statistics Canada, distributed by MOHLTC, received [2014/07/03]. Population estimates [2012–2014]: Statistics Canada, distributed by MOHLTC, received [2015/11/18]. Population projections [2015–2016]: MOHLTC, IntelliHEALTH Ontario, extracted by PHO [2015/03/13].

‡ Rates listed are cases per 1,000,000 population.

† Percent (%) difference is calculated using unrounded rates; numbers displayed in these columns may vary from calculations using rounded rates.

¹ Statistically significant difference ($p < 0.05$) in incidence reported in year-to-month (January 1 to January 31, 2016) compared to the five-year historical average (January 1 to January 31, 2011–15), using a likelihood ratio test.

² Statistically significant difference ($p < 0.05$) in incidence reported in current month (January 2016) compared to the five-year historical average (January 2011–15), using a likelihood ratio test.

Chlamydia

Compared to the five-year historical averages, there was a statistically significant increase of 8.0% in the monthly (and subsequently in the YTM) incidence of laboratory confirmed chlamydial infections reported in January 2016 (from 234.6 cases per 1,000,000 population to 253.4 cases per 1,000,000 population).

Over the past ten years, the incidence of chlamydial infections has increased with the exception of 2013, when a decrease in the incidence and testing was observed. For further details about this decrease, please refer to [Reportable Disease Trends in Ontario, 2013](#). PHO will continue to monitor provincial chlamydia epidemiology in subsequent months.

Gonorrhea

Since September 2013, there have been statistically significant increases in both the monthly and YTM incidence of gonorrhea in Ontario. The cause of this ongoing provincial increase is not yet well understood and is likely multifactorial. For a summary of the analyses conducted to date, please refer to the In Focus section of the [February](#) 2015 issue of this report. Also, to download the slides and/or audio recording of a PHO Rounds presentation on gonorrhea (May 2015), please click [here](#).

APPENDIX – REPORTABLE DISEASES

Appendix 1. Confirmed cases of reportable diseases, and probable cases of select reportable diseases, by month: Ontario, 2011–16*

Reportable disease	2016														Historical comparisons						5-year avg (2011-2015) annual count
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTM	YTM rate ‡	Current month 5-year avg (2011-2015)	Current month 5-year avg (2011-2015) rate ‡	% difference rates (current month minus 5-year avg)†	YTM 5-year avg (2011-2015)	YTM 5-year avg (2011-2015) rate ‡	% difference rates (YTM 2016 minus YTM 5-year avg)†	
Acute Flaccid Paralysis	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-
AIDS	5	-	-	-	-	-	-	-	-	-	-	-	5	0.4	10.2	0.8	-52.4	10.2	0.8	-52.4	85
Amebiasis	45	-	-	-	-	-	-	-	-	-	-	-	45	3.2	67	4.9	-34.8	67	4.9	-34.8	794.4
Botulism	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	2.4
Brucellosis	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	5.2
Campylobacter enteritis	163	-	-	-	-	-	-	-	-	-	-	-	163	11.7	195.8	14.5	-19.2	195.8	14.5	-19.2	3685.8
Chlamydial Infections	3534	-	-	-	-	-	-	-	-	-	-	-	3534	253.4	3177.2	234.6	8.0	3177.2	234.6	8.0	36510.2
Cholera	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	0.4
Cryptosporidiosis	20	-	-	-	-	-	-	-	-	-	-	-	20	1.4	14.6	1.1	33.0	14.6	1.1	33.0	329.4
Cyclosporiasis	1	-	-	-	-	-	-	-	-	-	-	-	1	0.1	1.8	0.1	-46.1	1.8	0.1	-46.1	134.8
Encephalitis	3	-	-	-	-	-	-	-	-	-	-	-	3	0.2	2.2	0.2	32.4	2.2	0.2	32.4	21.4
Encephalitis/Meningitis	9	-	-	-	-	-	-	-	-	-	-	-	9	0.6	8.4	0.6	4.0	8.4	0.6	4.0	158.2
Food Poisoning, All Causes	3	-	-	-	-	-	-	-	-	-	-	-	3	0.2	4.8	0.4	-39.3	4.8	0.4	-39.3	76.6
Giardiasis	69	-	-	-	-	-	-	-	-	-	-	-	69	4.9	107.6	7.9	-37.7	107.6	7.9	-37.7	1327.6
Gonorrhoea (All Types)	549	-	-	-	-	-	-	-	-	-	-	-	549	39.4	429.2	31.7	24.2	429.2	31.7	24.2	4921.4
Group A Streptococcal Disease, Invasive	65	-	-	-	-	-	-	-	-	-	-	-	65	4.7	69.2	5.1	-8.8	69.2	5.1	-8.8	640.2
Group B Streptococcal Disease, Neonatal	7	-	-	-	-	-	-	-	-	-	-	-	7	0.5	3.6	0.3	88.8	3.6	0.3	88.8	52.4
Haemophilus Influenzae B Disease, Invasive	1	-	-	-	-	-	-	-	-	-	-	-	1	0.1	0.2	0.0	385.4	0.2	0.0	385.4	5.8
Hepatitis A	2	-	-	-	-	-	-	-	-	-	-	-	2	0.1	8.6	0.6	-77.4	8.6	0.6	-77.4	96.8
Hepatitis B (Acute)	8	-	-	-	-	-	-	-	-	-	-	-	8	0.6	10.4	0.8	-25.3	10.4	0.8	-25.3	102
Hepatitis B (Chronic)	61	-	-	-	-	-	-	-	-	-	-	-	61	4.4	-	-	-	-	-	-	-
Hepatitis C	340	-	-	-	-	-	-	-	-	-	-	-	340	24.4	361.6	26.7	-8.7	361.6	26.7	-8.7	4201.4
HIV	57	-	-	-	-	-	-	-	-	-	-	-	57	4.1	63	4.7	-12.2	63	4.7	-12.2	774.2
Influenza	644	-	-	-	-	-	-	-	-	-	-	-	644	46.2	2736.2	202.0	-77.1	2736.2	202.0	-77.1	8382.2
Legionellosis	5	-	-	-	-	-	-	-	-	-	-	-	5	0.4	6.6	0.5	-26.4	6.6	0.5	-26.4	173.2
Leprosy	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0.6	0.0	-100	0.6	0.0	-100.0	3.2
Listeriosis	8	-	-	-	-	-	-	-	-	-	-	-	8	0.6	2.6	0.2	198.7	2.6	0.2	198.7	52

Lyme Disease	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	2.8	0.2	-100.0	2.8	0.2	-100.0	251.4
Malaria	12	-	-	-	-	-	-	-	-	-	-	-	12	0.9	14	1.0	-16.8	14	1.0	-16.8	204.2
Measles	1	-	-	-	-	-	-	-	-	-	-	-	1	0.1	-	-	-	-	-	-	-
Meningitis	7	-	-	-	-	-	-	-	-	-	-	-	7	0.5	6.4	0.5	6.2	6.4	0.5	6.2	127
Meningococcal Disease, Invasive	2	-	-	-	-	-	-	-	-	-	-	-	2	0.1	3.8	0.3	-48.9	3.8	0.3	-48.9	31.2
Mumps	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	2.2	0.2	-100.0	2.2	0.2	-100.0	35
Ophthalmia neonatorum	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0.2	0.0	-100.0	0.2	0.0	-100.0	2.8
Paralytic Shellfish Poisoning	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-
Paratyphoid Fever	3	-	-	-	-	-	-	-	-	-	-	-	3	0.2	5.2	0.4	-44.0	5.2	0.4	-44.0	41.8
Pertussis (Whooping Cough)	28	-	-	-	-	-	-	-	-	-	-	-	28	2.0	27.2	2.0	-0.1	27.2	2.0	-0.1	515.6
Q Fever	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	1.6	0.1	-100.0	1.6	0.1	-100.0	16.4
Rabies	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0		0	0.0		0.2
Rubella	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-
Rubella, Congenital Syndrome	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	-	-	-	-	-	-	-
Salmonellosis	203	-	-	-	-	-	-	-	-	-	-	-	203	14.6	193	14.3	2.1	193	14.3	2.1	2809
Shigellosis	31	-	-	-	-	-	-	-	-	-	-	-	31	2.2	23.6	1.7	27.5	23.6	1.7	27.5	263.4
Streptococcus Pneumoniae, Invasive	90	-	-	-	-	-	-	-	-	-	-	-	90	6.5	127.8	9.4	-31.6	127.8	9.4	-31.6	1134.2
Syphilis, Early Congenital	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	1.2
Syphilis, Infectious	48	-	-	-	-	-	-	-	-	-	-	-	48	3.4	72.2	5.3	-35.5	72.2	5.3	-35.5	840.2
Syphilis, Other	53	-	-	-	-	-	-	-	-	-	-	-	53	3.8	57	4.2	-9.7	57	4.2	-9.7	653.2
Tetanus	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0.2	0.0	-100.0	0.2	0.0	-100.0	2
Tuberculosis	36	-	-	-	-	-	-	-	-	-	-	-	36	2.6	43.8	3.2	-20.2	43.8	3.2	-20.2	616.6
Tularemia	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	0.4
Typhoid Fever	8	-	-	-	-	-	-	-	-	-	-	-	8	0.6	9.4	0.7	-17.4	9.4	0.7	-17.4	75.8
Verotoxin Producing E. coli Including HUS	3	-	-	-	-	-	-	-	-	-	-	-	3	0.2	8	0.6	-63.6	8	0.6	-63.6	176.2
West Nile Virus Illness	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0	0.0	-	0	0.0	-	91.2
Yellow Fever	0	-	-	-	-	-	-	-	-	-	-	-	0	0.0	0.2	0.0	-100	0.2	0.0	-100.0	1.2
Yersiniosis	22	-	-	-	-	-	-	-	-	-	-	-	22	1.6	15.2	1.1	40.5	15.2	1.1	40.5	184

Ontario Cases: MOHLTC, iPHIS database, extracted by PHO [2016/02/10].

Ontario Population: Population estimates [2005–2011]: Statistics Canada, distributed by MOHLTC, received [2014/07/03]. Population estimates [2012–2014]: Statistics Canada, distributed by MOHLTC, received [2015/11/18]. Population projections [2015-2016]: MOHLTC, IntelliHEALTH Ontario, extracted by PHO [2015/03/13].

* Appendix 1 is not an exhaustive list of all reportable diseases in Ontario. Case counts for amebiasis, Lyme disease, mumps, pertussis, and West Nile Virus illness are based on the sum of confirmed and probable cases as reported in iPHIS.

₣ Rates listed are cases per 1,000,000 population.

† Percent (%) difference is calculated using unrounded rates; numbers displayed in these columns may vary from hand calculations using rounded rates.

Historical comparison data are not provided for measles, rubella, and congenital rubella syndrome because these diseases have been eliminated in Canada. However, as these diseases remain endemic in other countries, imported and import-related cases continue to occur in Ontario.

n/a Acute Flaccid Paralysis and Paralytic Shellfish Poisoning became reportable in Ontario in December 2013. No historical data are available for comparisons. Also, a provincial case definition for chronic hepatitis B was released in January 2012. Please note that chronic and acute hepatitis B case counts are not mutually exclusive and should not be added to obtain a total for hepatitis B cases in Ontario. Historical comparisons are not available as cases of chronic hepatitis B may have been entered using varying criteria prior to this time.

- Does not include cases for which the Ministry of Health and Long-Term Care was selected as the Diagnosing Health Unit or cases with a Disposition Description set to “DOES NOT MEET” or “ENTERED IN ERROR.”
- Differentials in year-over-year comparisons are reflective of changes in disease incidence and changes in the size of the population.
- Statistical tests comparing rates were not performed when the YTM rate in previous years was zero.
- Case counts for tuberculosis and AIDS are based on diagnosis date and not episode date. HIV case counts are based on encounter date. Case counts for all other diseases are based on episode date.