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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: SurveillanceServices@oahpp.ca. Past issues and additional information are available online.

INFECTIOUS DISEASE IN FOCUS

TUBERCULOSIS

Tuberculosis (TB) is predominantly caused by gram-negative bacteria called *Mycobacterium tuberculosis* (MTB); however, other mycobacterial species may also cause TB, such as *Mycobacterium africanum*, *bovis*, *microti*, and *canetti*.[1] TB is mainly acquired through the inhalation of droplet nuclei. These droplet

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nuclei are created during expiratory efforts – such as coughing, sneezing, singing, or playing wind instruments – by someone who is infected with MTB and who has active pulmonary and/or laryngeal disease.[1,2]

Active TB occurs when the immune system is unable to suppress the bacteria. Clinical signs and symptoms of disease may occur. When active TB occurs in the lungs, it is called pulmonary TB which, along with laryngeal TB, are the infectious forms of the disease. Some signs and symptoms of active pulmonary TB include a new cough lasting two or more weeks, coughing up blood, decreased appetite, weight loss, night sweats, and fever.[2] TB can be treated with antibiotics, usually in a four-drug regimen of antibiotics to which the MTB is sensitive. It is essential for the patient to be fully compliant with all medications or resistance to one or more of the anti-TB drugs can develop. TB medication may be prescribed anywhere from nine months up to two years, depending on an individual's adherence and response to treatment. Due to the importance of compliance with the anti-TB drugs and potential side effects from these medications, directly observed therapy (DOT), where a health care worker or designated individual watches the patient swallow each dose of the prescribed drug, is often used to support the patient through treatment.[2]

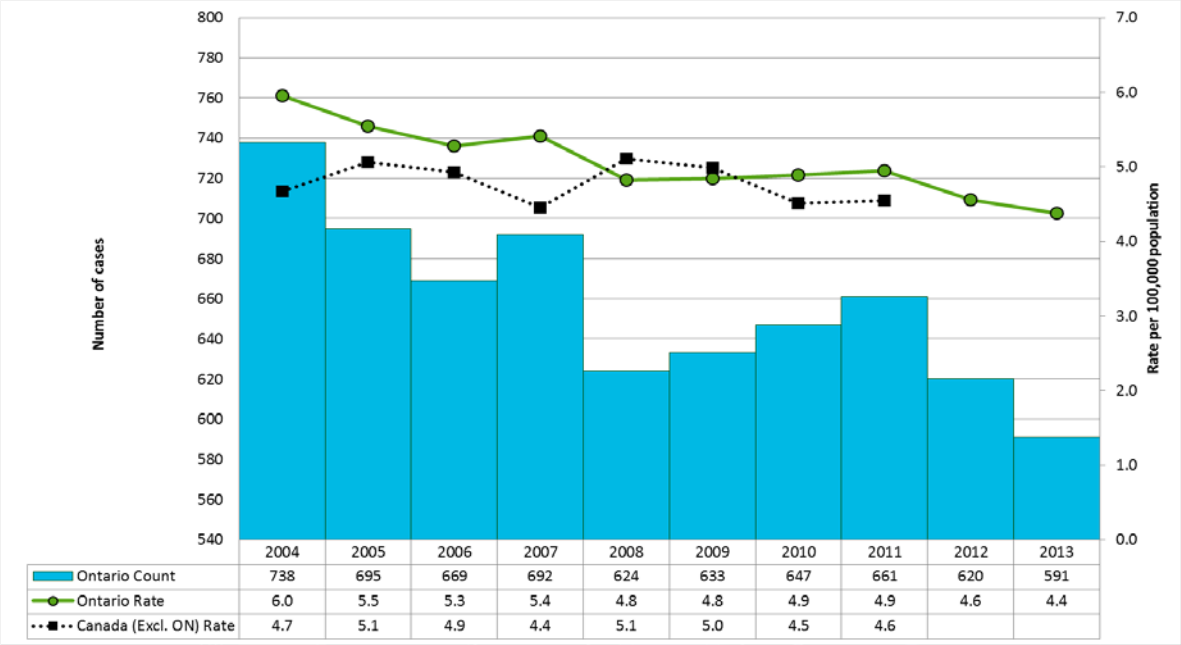
Latent TB infection (LTBI) occurs when MTB remains dormant; approximately 90% of those infected with TB will never develop active disease.[2] People with LTBI are not infectious and do not show signs or symptoms of TB. When detected in an individual, LTBI where appropriate can be treated with antibiotics to reduce the risk of progression to active TB disease. About 10% of persons with LTBI who do not have other risk factors will eventually develop active disease, 5% of them during the first 2 years.[2] There are a large number of conditions that increase the risk of activation from LTBI to active TB; the strongest risk factor is HIV infection. Other risk factors may include diabetes, renal failure, malnutrition, certain cancers, alcohol overuse, and cigarette smoking.[2]

Multi-drug resistant (MDR) TB is defined as mycobacteria that are resistant to two of the first-line antibiotic drugs used to treat TB: isoniazid (INH) and rifampin,[2] with or without resistance to other first- or second-line drugs. Extremely drug resistant (XDR) TB is resistant to INH, rifampin, any fluoroquinolone, and to at least one of the three injectable second-line drugs (kanamycin, amikacin, and capreomycin). Outside of Canada, there have also been recent reports of TB isolates completely resistant to all possible drug therapies, although it is difficult to ascertain resistance to some drugs as there are no standardized *in vitro* assays.[2]

According to the World Health Organization, TB still ranks as the second leading cause of death from an infectious disease worldwide, after human immunodeficiency virus (HIV).[3] Globally, over the last 20 years, the mortality and incidence rates have declined in most parts of the world. In large part, this has been due to global strategies such as the Stop TB Strategy. This strategy aims to dramatically reduce the burden of disease caused by TB by 2015 by pursuing high quality DOT expansion and enhancements; addressing TB-HIV coinfection, MDR-TB, and the needs of the poor and vulnerable populations; contributing to health system strengthening based on primary health care; engaging health care providers; and empowering people with TB through partnerships and promoting research, which is in line with the Millennium Development Goals and the Stop TB Partnership targets.[3]

In Canada, the rate of active TB disease was 4.6 cases per 100,000 population in 2011, which is a decrease of 2% from 4.7 cases per 100,000 in 2004. In Ontario, a total of 591 active TB cases were reported in 2013. Over the last ten years, the incidence rate of TB declined by 27%, from 6.0 cases per 100,000 population in 2004 to 4.4 cases per 100,000 population in 2013 (Figure 1). Ontario had higher incidence rates compared to the national incidence rates in the years 2004 to 2007 and 2010 to 2011.

Figure 1. Incidence rates (per 100,000 population) of active TB: Ontario and Canada, 2004-2013.



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ontario Count	738	695	669	692	624	633	647	661	620	591
Ontario Rate	6.0	5.5	5.3	5.4	4.8	4.8	4.9	4.9	4.6	4.4
Canada (Excl. ON) Rate	4.7	5.1	4.9	4.4	5.1	5.0	4.5	4.6		

Ontario cases: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2014/02/03]. (Note: 2013 data is preliminary and may change due to ongoing data cleaning.)

Ontario population: Ontario Ministry of Health and Long-Term Care, intelliHEALTH Ontario, extracted [2013/09/19].

Canadian rates: Public Health Agency of Canada, Canadian Notifiable Disease Section, received by Public Health Ontario [2013/12/16]; national data available up to 2011.

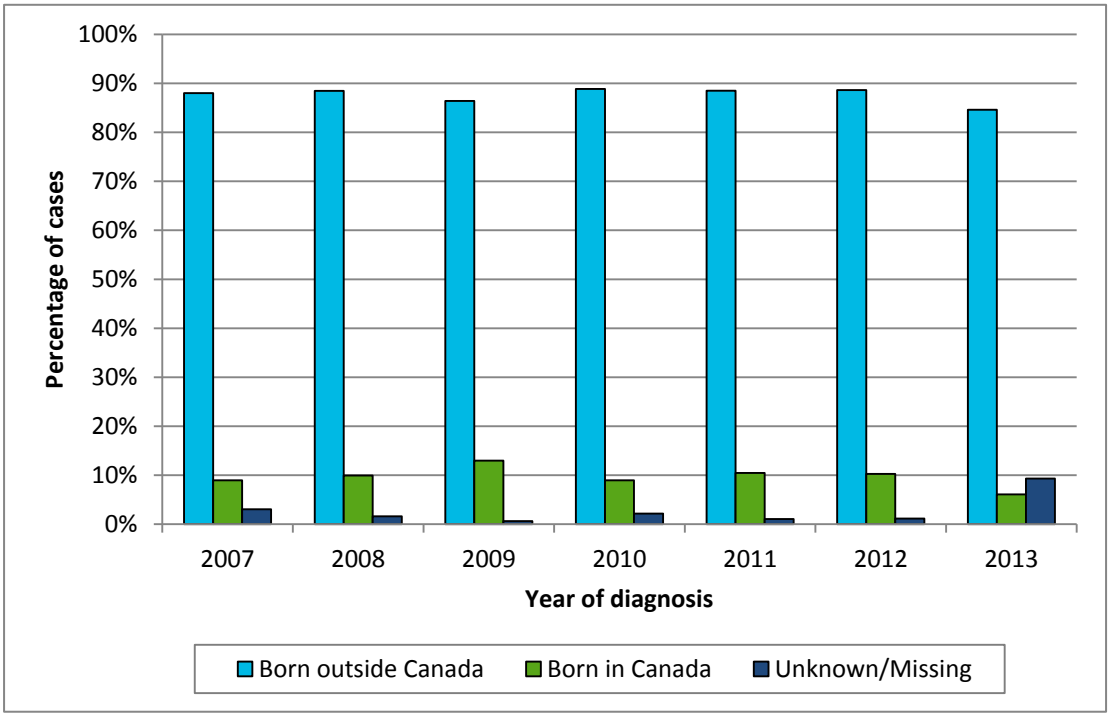
In 2013, the overall sex-specific incidence rates were higher for males than females, at 4.8 and 3.9 cases per 100,000 population, respectively. Males accounted for 54% (322/591) of cases reported in 2013. Cases ranged in age from one to 93 years, with a median age of 48 years. The highest age-specific rates were reported among older adults above the age of 70 years (9.5 cases per 100,000 population) and younger adults between the ages of 20 and 29 years (5.2 cases per 100,000 population). Population groups not previously exposed to TB appear to have greater susceptibility to new infection and disease, while reactivation of latent infection may account for a proportion of TB in older adults.[1]

By health unit, the highest incidence rate of active TB in 2013 was reported in Northwestern, with 17.0 cases per 100,000 population, followed by Toronto, Peel Region, and City of Ottawa with 9.9, 8.0, and 5.7 cases per 100,000 population respectively. The majority of cases in Ontario were reported in urban health units, which could be due to a higher proportion of immigrants living in urban areas from countries with greater incidence of endemic TB.[2]

Within Ontario, the Toronto census metropolitan area and the city of Ottawa remain the top two destinations for immigrants, which is reflected in the higher TB rates in these health units. The occurrence of MDR and XDR-TB incidence in Ontario is still relatively uncommon, with XDR-TB occurring with even less frequency than MDR-TB. The incidence of MDR and XDR-TB is largely influenced by the country of origin of recent immigrants. In 2008, most immigrants arrived in Ontario from India, China, the Philippines, and Pakistan[3] where TB prevalence is high[4], making the rise in the rate of MDR-TB a possibility; the increase in the incidence of MDR-TB is anticipated to be higher than that of XDR-TB. From 2007 to 2012, resistance to a least one TB drug was found in 7% to 10% of cases each year. However, MDR-TB cases represented less than 2% of TB cases over the same time span. Three cases of active XDR-TB were reported between 2007 and 2012.

In 2013, 85% (500/591) of TB cases in Ontario were reported among foreign-born individuals, primarily those from countries in Asia. Similar to previous years, the top five countries of birth for TB cases diagnosed in 2013 were India (19%, 111/591), the Philippines (16%, 95/591), China (9%, 54/591), Vietnam (4%, 26/591), and Pakistan (4%, 21/591). Canadian-born non-Aboriginal (6%, 34/591) and Canadian-born Aboriginal (0.3%, 2/591) populations represented a smaller proportion of the overall case count when compared to individuals born outside of Canada (Figure 2). However, data entry and cleaning is ongoing for 2013 cases, and as information on cases continues to be updated, these proportions are subject to change. Although most cases are from countries where TB is endemic, cases among First Nations peoples living on reserves in Ontario may be underreported since this population falls under federal jurisdiction.

Figure 2. Percentage of active TB cases by origin: Ontario, 2007-2013.



Source: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2014/02/03].
Note: 'Born in Canada' includes active TB cases reported among non-Aboriginal and Aboriginal (i.e., Inuit, Registered/Status Indian, and Other Aboriginal) people. 'Unknown/Missing' includes cases for which the country of birth was not provided or was unknown.

In order to prevent transmission, control measures including early diagnosis and mandatory reporting, respiratory isolation, contact follow up, and effective treatment of both latent infection and active disease are required.[1] Other prevention initiatives may include public education campaigns to build public awareness around TB, such as World TB Day, which occurs each year on March 24.

SIGNIFICANT REPORTABLE DISEASE ACTIVITY

Table 1 provides a list of reportable diseases for which incidence in 2014 was significantly higher than expected compared to the five-year historical average (2009-2013). Both monthly and year-to-month (YTM) comparisons were made for each of the reportable diseases listed in Appendix 1.

Table 1. Summary of significant increases in reportable disease incidence: Ontario, January 1 to January 31, 2014

Reportable disease	2014				Historical comparisons						5-year avg annual count (2009-2013)
	Jan	Jan rate ŧ	YTM	YTM rate ŧ	Current month 5-year avg (2009-2013)	Current month 5-year avg (2009-2013) rate ŧ	% difference in rates (current month minus 5-year avg)†	YTM 5-year avg (2009-2013)	YTM 5-year avg (2009-2013) rate ŧ	% difference in rates (YTM 2014 minus YTM 5-year avg)†	
Gonorrhoea (All Types)[1]	480	34.7	480	34.7	367	27.5	26.2	367	27.5	26.2	4065

Ontario Cases: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2014/02/12].
Ontario Population: Ontario Ministry of Health and Long-Term Care, IntelliHEALTH Ontario, extracted by Public Health Ontario [2013/09/16].
ŧ 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 2014) compared to the five-year historical average (January 1 to January 31 2009-2013) and current month (January 2014) compared to the five-year historical average (January 2009-2013).

GONORRHEA (ALL TYPES)

The incidence rate of reported laboratory-confirmed gonorrhea cases for January 2014 was significantly higher than the historical five-year (2009-2013) average rate for January. The significantly higher YTM incidence rate has been noted since October 2013, as reported in each issue since December 2013.

The number of cases was higher than expected in a number of public health units, and in men between the ages of 20 and 34 years. While definitive reasons for the increase are not yet known, increased diagnostic testing may be partly responsible. In addition, reduced susceptibility to gonorrhea treatment regimens is a growing concern, and may also play a role in greater disease transmission. New guidelines for testing and treatment of gonorrhea in Ontario were released in April 2013 and evaluation of their impact will be ongoing. The November 2012 (Volume 1, Issue 12) edition of the Monthly Infectious Diseases Surveillance Report describes the epidemiology of gonorrhea in Ontario. Further analysis of the current increase will be required to determine whether the epidemiology of gonorrhea in Ontario is changing.

INFECTIOUS DISEASE ACTIVITY IN OTHER JURISDICTIONS

This section of the report provides a snapshot of current activity related to infectious diseases across Canada and/or globally. The items included in this section are selected based on ongoing or potential implications for public health in Ontario.

MEASLES ACTIVITY IN THE PHILIPPINES

Summary:

Measles outbreaks have been declared in multiple jurisdictions across the Philippines, including Manila. Across the country, 2,232 confirmed cases of measles and 55 deaths were reported in 2013, whereas 1,499 confirmed cases and five deaths were reported in 2012. In Manila, 233 confirmed cases and three deaths were reported between January 1 and December 14, 2013, representing a 600% increase in incidence from 2012. The three deaths occurred in three- and nine-month-old infants, and a two-year-old child. The widespread destruction caused by typhoon Haiyan in November 2013 may have contributed to the spread of disease across the country, as November and December were associated with the highest number of laboratory-confirmed cases, most of whom occurred in children less than two years of age. In 2014, 1,163 suspected measles cases were reported nationally between January 1 and 11. Hospitalization rates are unknown, however one Manila hospital reported that more than half of the 500 beds were occupied by patients with measles. Mass immunization and catch-up campaigns are underway, as one- and two-dose measles vaccine coverage is approximately 85% and 40%, respectively.

Implications:

Ongoing measles activity in Philippines has led to importations in other countries including Australia, the United Kingdom, United States, and Canada. While measles has been eliminated from Canada, the risk of importation from endemic countries is high and unimmunized individuals remain at risk from this highly communicable disease. Cases related to travel to the Philippines have been reported in British Columbia, Alberta, Saskatchewan, and Ontario. In Ontario, a laboratory-confirmed case was identified in a hospitalized infant who had travelled to the Philippines in January 2014; although the infant received one dose of measles-mumps-rubella containing vaccine, this was administered after exposure and two days prior to rash onset. Subsequently, an unimmunized five year old child who travelled to the Philippines in February developed symptoms upon arrival in Ontario; at the time of writing, this child remains hospitalized. In both cases, significant effort was expended by the health units to conduct case management and contact tracing. Continued vigilance is required to ensure Ontario maintains its elimination status. Ontarians should ensure they are up to date with their measles immunizations, especially if travelling to measles endemic areas.

Sources:

www.who.int/wer/2013/wer8803.pdf

www.wpro.who.int/immunization/documents/measles_country_profile_may2013_PHL.pdf

www.doh.gov.ph/content/mass-measles-vaccination.html

www.doh.gov.ph/sites/default/files/012214-0009.pdf

http://manilatimes.net/measles-surges-back/65158/

ENHANCED SURVEILLANCE DIRECTIVES (ESD) DISCONTINUED IN FEBRUARY

No Enhanced Surveillance Directives were discontinued in February 2014.

References

In Focus – Tuberculosis

1. Heymann DL. Control of Communicable Diseases Manual. 19th ed. Washington, DC: American Public Health Association, 2008.
2. Public Health Agency of Canada. Ottawa, Canada. Canadian Tuberculosis Standards, 7th edition; 2013. [cited 2014 Feb 13]. Available from: *http://www.respiratoryguidelines.ca/tb-standards-2013*.
3. World Health Organization. Geneva, Switzerland. Global Tuberculosis Report: WHO report 2013; 2013 [cited 2014 Feb 13]. Available from: *http://www.who.int/tb/publications/global_report/en/index.html*.
4. Ontario Ministry of Citizenship and Immigration, Immigration Policy Branch. Research and Statistics. Toronto, ON: Queen's Printer for Ontario; 2010. [cited 2014 Feb 13]. Unpublished internal document.

Appendix – Reportable Diseases

Appendix 1. Confirmed cases of reportable diseases, and probable cases of select reportable diseases, by month: Ontario, 2009-2014*

Reportable disease	2014														Historical comparisons						5-year avg (2009-2013) annual count
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTM	YTM rate ŧ	Current month 5-year avg (2009-2013)	Current month 5-year avg (2009-2013) rate ŧ	% difference rates (current month minus 5-year avg)†	YTM 5-year avg (2009-2013)	YTM 5-year avg (2009-2013) rate ŧ	% difference rates (YTM 2014 minus YTM 5-year avg)†	
Acute Flaccid Paralysis	0	-	-	-	-	-	-	-	-	-	-	-	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AIDS	1	-	-	-	-	-	-	-	-	-	-	-	**1**	0.1	14	1.0	-93	14	1.0	-93	102
Amebiasis	36	-	-	-	-	-	-	-	-	-	-	-	**36**	2.6	71	5.3	-51	71	5.3	-51	801
Botulism	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	2
Brucellosis	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	5
Campylobacter Enteritis	192	-	-	-	-	-	-	-	-	-	-	-	**192**	13.9	191	14.3	-3	191	14.3	-3	3,592
Chlamydial Infections	3,026	-	-	-	-	-	-	-	-	-	-	-	**3,026**	218.6	2,964	221.7	-1	2,964	221.7	-1	33,967
Cholera	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	0
Cryptosporidiosis	10	-	-	-	-	-	-	-	-	-	-	-	**10**	0.7	14	1.1	-33	14	1.1	-33	311
Cyclosporiasis	2	-	-	-	-	-	-	-	-	-	-	-	**2**	0.1	3	0.3	-43	3	0.3	-43	117
Encephalitis	3	-	-	-	-	-	-	-	-	-	-	-	**3**	0.2	1	0.1	107	1	0.1	107	18
Encephalitis/Meningitis	10	-	-	-	-	-	-	-	-	-	-	-	**10**	0.7	8	0.6	27	8	0.6	27	152
Food Poisoning, All Causes	3	-	-	-	-	-	-	-	-	-	-	-	**3**	0.2	11	0.9	-75	11	0.9	-75	88
Giardiasis	55	-	-	-	-	-	-	-	-	-	-	-	**55**	4.0	116	8.7	-54	116	8.7	-54	1,380
Gonorrhoea (All Types)	480	-	-	-	-	-	-	-	-	-	-	-	**480**	34.7	367	27.5	26	367	27.5	26	4,065
Group A Streptococcal Disease, Invasive	75	-	-	-	-	-	-	-	-	-	-	-	**75**	5.4	61	4.5	20	61	4.5	20	584
Group B Streptococcal Disease, Neonatal	3	-	-	-	-	-	-	-	-	-	-	-	**3**	0.2	4	0.3	-24	4	0.3	-24	55
Haemophilus Influenzae B Disease, Invasive	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	4
Hepatitis A	3	-	-	-	-	-	-	-	-	-	-	-	**3**	0.2	9	0.7	-69	9	0.7	-69	117
Hepatitis B	14	-	-	-	-	-	-	-	-	-	-	-	**14**	1.0	9	0.6	57	9	0.6	57	116
Hepatitis C	310	-	-	-	-	-	-	-	-	-	-	-	**310**	22.4	377	28.2	-21	377	28.2	-21	4,322
HIV	41	-	-	-	-	-	-	-	-	-	-	-	**41**	3.0	69	5.1	-42	69	5.1	-42	810
Influenza	2,819	-	-	-	-	-	-	-	-	-	-	-	**2,819**	203.6	1,302	97.3	109	1,302	97.3	109	7,321
Legionellosis	7	-	-	-	-	-	-	-	-	-	-	-	**7**	0.5	5	0.3	47	5	0.3	47	160
Leprosy	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	2
Listeriosis	2	-	-	-	-	-	-	-	-	-	-	-	**2**	0.1	3	0.2	-40	3	0.2	-40	52
Lyme Disease	2	-	-	-	-	-	-	-	-	-	-	-	**2**	0.1	3	0.2	-26	3	0.2	-26	170
Malaria	13	-	-	-	-	-	-	-	-	-	-	-	**13**	0.9	16	1.2	-23	16	1.2	-23	220
Measles	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	8
Meningitis	6	-	-	-	-	-	-	-	-	-	-	-	**6**	0.4	7	0.5	-12	7	0.5	-12	114
Meningococcal Disease, Invasive	5	-	-	-	-	-	-	-	-	-	-	-	**5**	0.4	4	0.3	10	4	0.3	10	40
Mumps	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	10	0.7	-100	10	0.7	-100	67
Ophthalmia Neonatorum	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	3
Paralytic Shellfish Poisoning	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paratyphoid Fever	2	-	-	-	-	-	-	-	-	-	-	-	**2**	0.1	7	0.5	-73	7	0.5	-73	48
Pertussis (Whooping Cough)	8	-	-	-	-	-	-	-	-	-	-	-	**8**	0.6	32	2.4	-76	32	2.4	-76	421
Q Fever	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	1	0.1	-100	1	0.1	-100	13
Rabies	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	0
Rubella	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	1
Rubella, Congenital Syndrome	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	0
Salmonellosis	179	-	-	-	-	-	-	-	-	-	-	-	**179**	12.9	179	13.4	-3	179	13.4	-3	2,629
Shigellosis	18	-	-	-	-	-	-	-	-	-	-	-	**18**	1.3	23	1.8	-26	23	1.8	-26	257
Streptococcus Pneumoniae, Invasive	105	-	-	-	-	-	-	-	-	-	-	-	**105**	7.6	131	9.8	-23	131	9.8	-23	1,203
Syphilis, Early Congenital	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	1
Syphilis, Infectious	17	-	-	-	-	-	-	-	-	-	-	-	**17**	1.2	71	5.3	-77	71	5.3	-77	762
Syphilis, Other	27	-	-	-	-	-	-	-	-	-	-	-	**27**	2.0	67	5.0	-61	67	5.0	-61	756
Tetanus	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	1
Tuberculosis	28	-	-	-	-	-	-	-	-	-	-	-	**28**	2.0	44	3.3	-38	44	3.3	-38	631
Tularemia	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	1
Typhoid Fever	7	-	-	-	-	-	-	-	-	-	-	-	**7**	0.5	10	0.7	-32	10	0.7	-32	82
Verotoxin Producing E. Coli Including HUS	6	-	-	-	-	-	-	-	-	-	-	-	**6**	0.4	9	0.7	-37	9	0.7	-37	181
West Nile Virus Illness	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	84
Yellow Fever	0	-	-	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	0
Yersiniosis	8	-	-	-	-	-	-	-	-	-	-	-	**8**	0.6	19	1.4	-60	19	1.4	-60	199

Ontario Cases: Ontario Ministry of Health and Long-Term Care, integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario [2014/02/12].

Ontario Population: Ontario Ministry of Health and Long-Term Care, intelliHEALTH Ontario, extracted by Public Health Ontario [2013/09/16].

* 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.

ŧ 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.

Note 1: Does not include cases in 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'.

Note 2: Case counts for tuberculosis and AIDS are based on diagnosis date and not episode date. HIV case counts are based on encounter date.
Note 3: Differentials in year over year comparisons are reflective of changes in disease incidence and changes in the size of the population.
Note 4: Measles, rubella and congenital rubella syndrome have been eliminated from Canada. However as these diseases remain endemic in other countries, imported cases continue to occur in Ontario.
Note 5: Statistical tests comparing rates were not performed when the YTM rate in previous years was zero.
Note 6: Acute Flaccid Paralysis and Paralytic Shellfish Poisoning became reportable in Ontario in December 2013. No historical data is available.