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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.

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IN FOCUS

Amebiasis

Amebiasis is an infection caused by the protozoan parasite *Entamoeba histolytica*. *E. histolytica* is one of several *Entamoeba* parasites, including *E. dispar* and *E. moshkovskii*, that infect the human intestine. *E. histolytica* was previously thought to be the only species known to be associated with disease in humans, while the others are thought to be non-pathogenic. However, recent

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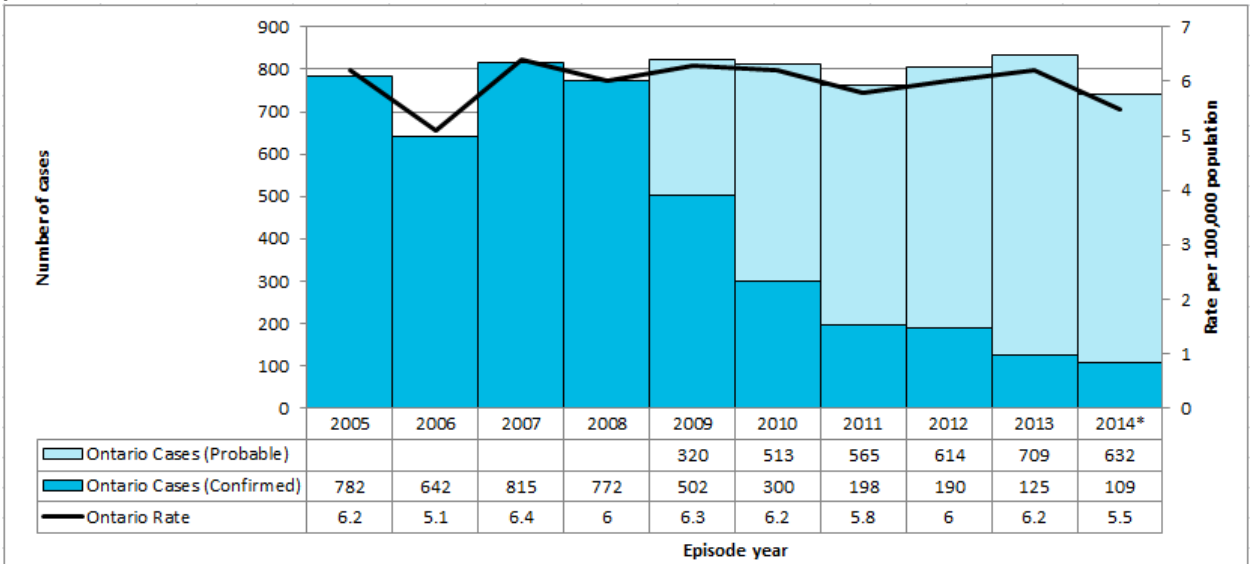
evidence has suggested that *E. dispar* may also be associated with disease in humans.[1]

E. histolytica occurs worldwide, but is more prevalent in tropical or subtropical regions, particularly in areas with poor sanitation.[2] In Ontario, from 2005 to 2014, the annual incidence rate of amebiasis ranged from 5.1 cases per 100,000 population in 2006 to 6.4 cases per 100,000 population in 2007 (Figure 1). In 2009, a new case definition was implemented due to changes in laboratory testing. As a result of the change, a number of cases that would have met the confirmed definition prior to 2009 were now classified as probable. In 2014, 741 confirmed and probable cases of amebiasis were reported (5.5 per 100,000), which is somewhat lower than the 831 confirmed and probable cases reported in 2013 (6.2 per 100,000). It remains to be seen if this decline will be sustained.

Figure 1. Reported number of cases and incidence rate (per 100,000 population) of confirmed and probable cases of amebiasis: Ontario, 2005-2014



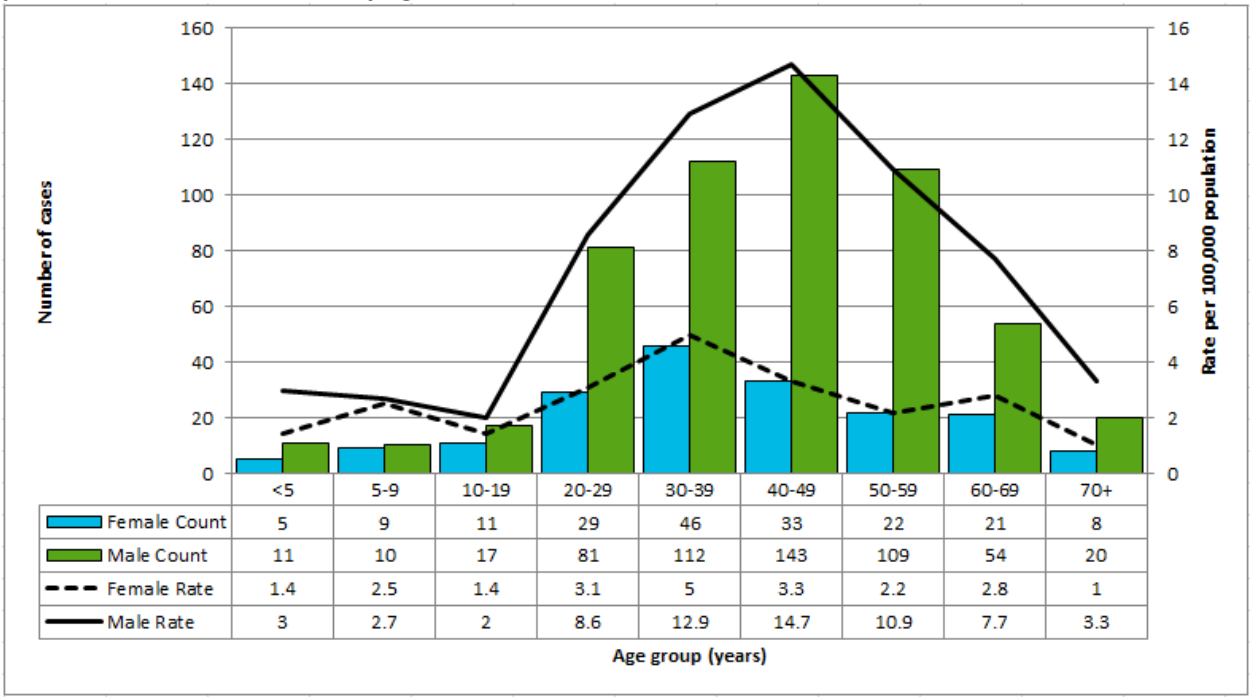
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014*
Ontario Cases (Probable)					320	513	565	614	709	632
Ontario Cases (Confirmed)	782	642	815	772	502	300	198	190	125	109
Ontario Rate	6.2	5.1	6.4	6	6.3	6.2	5.8	6	6.2	5.5

Data sources:
Ontario cases: Ministry of Health and Long-Term Care (MOHLTC), integrated Public Health Information System (iPHIS) database, extracted by Public Health Ontario (PHO)[2015/04/06].
Ontario population [2004-2013]: Population Estimates 1986-2013, MOHLTC, IntelliHEALTH ONTARIO, extracted [2014/07/02].
Notes:
*The Ontario population estimate for 2013 was used to calculate the 2014 rate.

Humans are the primary reservoir for *E. histolytica*, and infection is generally spread from either an individual with a chronic illness or an asymptomatic carrier. *E. histolytica* is usually transmitted either directly through the fecal-oral route or indirectly through the ingestion of water or food contaminated by feces containing *E. histolytica* cysts, the infective form of the parasite.[3] *E. histolytica* can persist in the cyst form for weeks in soil or water.[4] Once ingested, the *E. histolytica* cyst undergoes excystation to the trophozoite form, which is able to colonize the intestinal mucosa (specifically the sigmoid and colon).[4] The incubation period is generally two to four weeks, but can range from a few days to several months or years.[1] The majority of infections are asymptomatic, however, in 10% to 20% of cases infection results in disease.[5] Disease is often limited to the intestine and symptoms are generally mild and can include

loose stool, stomach pain, and cramps. However, a more severe form of disease called amebic dysentery may result if invasion of the intestinal mucosa occurs and is associated with bloody stool, stomach pain, and fever. Although rare, disseminated disease can also occur where *E. histolytica* invades the liver producing abscesses, and less commonly affects the lungs or brain, as well as causing ulceration of the skin (in particular the perianal and genital regions).[1] While susceptibility to infection with *E. histolytica* does not vary with age or gender, adults 20 to 50 years of age and males are more likely to develop invasive disease, such as amebic liver abscess.[1,4] In Ontario, incidence rates were higher among males compared to females for all age groups in 2014 and, in particular, among the those 20 years of age and over (Figure 2). The peak rate occurred in males 40 to 49 years of age at 14.7 per 100,000 compared to the female rate of 3.3 per 100,000 in that same age group.

Figure 2. Reported number of cases and incidence rate (per 100,000 population) of confirmed and probable cases of amebiasis by age and sex: Ontario, 2014



	<5	5-9	10-19	20-29	30-39	40-49	50-59	60-69	70+
Female Count	5	9	11	29	46	33	22	21	8
Male Count	11	10	17	81	112	143	109	54	20
Female Rate	1.4	2.5	1.4	3.1	5	3.3	2.2	2.8	1
Male Rate	3	2.7	2	8.6	12.9	14.7	10.9	7.7	3.3

Data sources:
Ontario cases: MOHLTC, iPHIS database, extracted by PHO [2015/04/06].
Ontario population [2004-2013]: Population Estimates 1986-2013, MOHLTC, IntelliHEALTH ONTARIO, extracted [2014/07/02].
Notes:
*The Ontario population estimate for 2013 was used to calculate the 2014 rate.

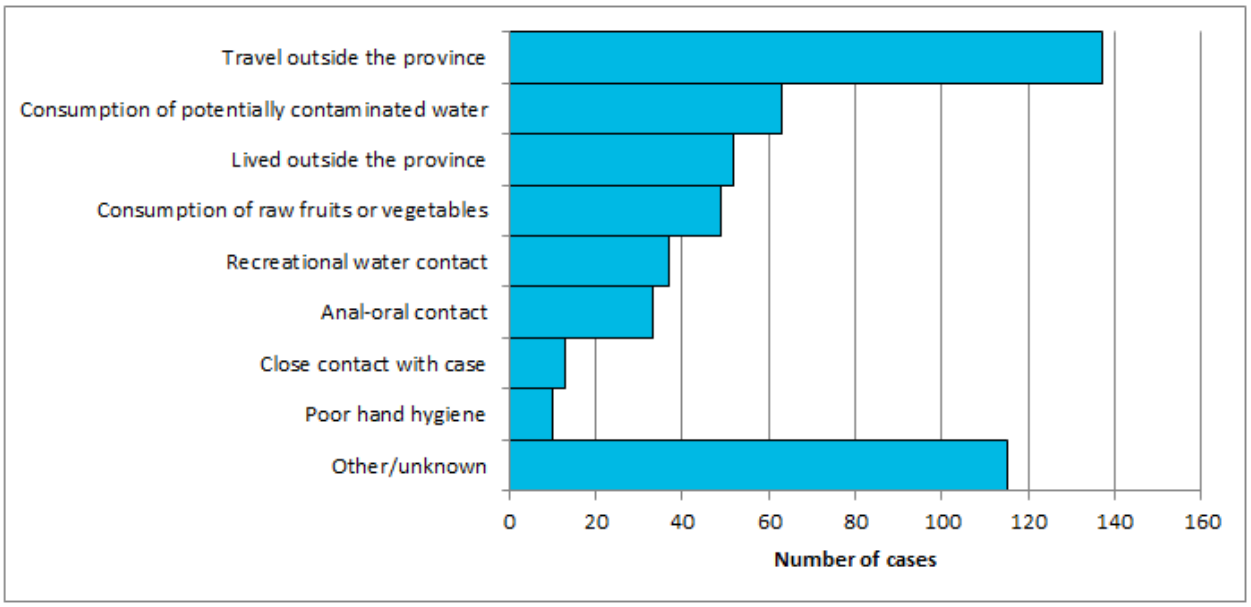
In temperate regions, infection is most common among travelers to tropical or subtropical regions and recent immigrants.[3] In Ontario, among the 280 cases (37.8% of the total number of reported cases) reporting at least one risk factor, the most commonly reported risk factor was travel outside of the province (137/280 cases, 48.9%) (Figure 3). Among cases reporting travel as a risk factor, the most frequently reported travel destinations included India (45/137 cases, 32.8%) and Pakistan (13/137 cases, 9.5%). Living outside the province was also reported by a large proportion of cases (52/280 cases,

18.6%) and the most frequently reported countries of residence (India and Pakistan) were the same as those reported as travel destinations (17/52 cases, 32.7%; and 6/52 cases, 11.5%; respectively).

Transmission has also been reported as a result of oral-anal contact, primarily among men who have sex with men (MSM).[6] Findings from a number of developing countries, including Japan and Australia, where *E. histolytica* prevalence is low, suggest infection with *E. histolytica* is becoming increasingly common among MSM.[6-11] In Ontario, anal-oral contact was a less frequently reported risk factor (33/280 cases, 11.8%) (Figure 3), although the predominance of male cases suggests that transmission is occurring among MSM.

Proper hand hygiene, in particular after defecation, sexual contact, and before and after preparing food, is important in decreasing transmission of amebiasis.[12] Other important control measures include use of safer sexual practices. In areas where water may potentially be contaminated, such as during travel to tropical or subtropical regions, water should be boiled, filtered, or chemically disinfected prior to consumption. Additional information of the prevention and control of amebiasis can be found in the Ontario Public Health Standards Infectious Disease Protocol.

Figure 3. Number of risk factors reported by confirmed and probable cases of amebiasis: Ontario, 2014*



Data source:
Ontario cases: MOHLTC, iPHIS database, extracted by PHO [2015/04/06].

Notes:
*Risk factor categories are not mutually exclusive. A case can report multiple risk factors.

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TORONTO 2015 PAN AM AND PARAPAN AM GAMES

The Pan Am Games will be coming to Ontario from July 10 to 26, 2015 (with events starting on July 7), followed by the Parapan Am Games from August 7 to 15, 2015. The Games are anticipated to bring an estimated 8,000 athletes and team officials participating in 51 sports from 41 countries from South, Central, North America, and the Caribbean, and more than 250,000 visitors. Events will take place across ten public health units (PHUs) in southern Ontario.

PHO, in collaboration with local, provincial, and federal public health partners, will be conducting enhanced public health surveillance of infectious diseases. Surveillance will focus on risks identified through a Hazard Identification and Risk Assessment process. Key data and information sources for public health surveillance of infectious diseases during the P/PAG will include reportable disease notifications from iPHIS, PHO Laboratories data, calls made to Telehealth Ontario, emergency department visits captured in the Acute Care Enhanced Surveillance (ACES) system, and news and media reports. Additional data and information sources will be monitored where feasible. PHO is working closely with our partners to provide high quality and timely surveillance and reporting before, during, and after the Games.

In preparation for conducting enhanced public health surveillance during the P/PAG, PHO will issue an Enhanced Surveillance Directive (ESD) on June 5, 2015 in the Weekly iPHIS Notice. This ESD will outline enhanced reporting requirements for all 36 PHUs before, during, and after the Games. To further support local preparations for enhanced surveillance, PHO will conduct iPHIS training sessions on June 9 and 10, 2015. The sessions will provide targeted refresher training on iPHIS reporting requirements that are most important during the P/PAG. Please refer to the Weekly iPHIS Notice for further details on the ESD and the iPHIS training sessions.

SIGNIFICANT REPORTABLE DISEASE ACTIVITY

Table 1 provides a list of reportable diseases for which incidence in 2015 was found to be significantly higher ($p<0.05$) than expected compared to the five-year historical average (2010-2014). 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 Virus Bulletin and the Laboratory-based Respiratory Pathogen Surveillance Report. Measles, rubella, and congenital rubella syndrome have been eliminated in Canada, although cases continue to occur related to travel importations. Statistical comparisons are no longer included for these diseases.

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

Reportable disease	2015				Historical comparisons						5-year avg annual count (2010-2014)
	Mar	Mar rate ŧ	YTM	YTM rate ŧ	Current month 5-year avg (2010-2014)	Current month 5-year avg (2010-2014) rate ŧ	% difference in rates (current month minus 5-year avg)†	YTM 5-year avg (2010-2014)	YTM 5-year avg (2010-2014) rate ŧ	% difference in rates (YTM 2015 minus YTM 5-year avg)†	
Gonorrhoea (All Types)[1,2]	467	33.3	1374	98.1	361	26.9	24.1	1076	80.1	22.5	4530
Q Fever[2]	4	0.3	5	0.4	0	0.0	1819.4	2	0.1	139.9	15

Ontario Cases: MOHLTC, iPHIS database, extracted by PHO [2015/04/15].
Ontario Population: Population Estimates [2010-2013]: Statistics Canada, distributed by MOHLTC, received [2014/07/03]. Population Projections [2014-2015]: MOHLTC, IntelliHEALTH Ontario, extracted by PHO [2014/04/11].
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 March 31, 2015) compared to the five-year historical average (January 1 to March 31, 2010-2014), using a likelihood ratio test.
[2] Statistically significant difference ($p<0.05$) in incidence reported in current month (March 2015) compared to the five-year historical average (March 2010-2014), using a likelihood ratio test.

GONORRHEA (ALL TYPES)

The monthly incidence rate of laboratory-confirmed gonorrhea reported in March 2015 increased by 5.1% (from 31.6 to 33.3 cases per 1,000,000 population) compared to March 2014. Similarly, the YTM incidence rate for cases reported between January 1 and March 31, 2015 increased by 3.6% (from 94.7 to 98.1 cases per 1,000,000 population) compared to the same time period in 2014.

Compared to the five-year historical averages, there were statistically significant increases in both the monthly and YTM incidence rates of gonorrhea reported in March 2015 and cumulatively from January 1 to March 31, 2015 (24.1% and 22.5% increases, respectively).

With the exception of January 2015, Ontario has experienced a statistically significant increase in the monthly and YTM incidence of gonorrhea, compared to five-year historical averages, since September 2013. The cause of this ongoing provincial increase in reported gonorrhea cases 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.

Q FEVER

The incidence rate of Q fever for the month of March 2015 was significantly higher than the five-year historical average (2010-2014) for March. In March 2015, four confirmed Q fever cases were reported in Ontario, compared to a five-year historical average of zero cases for March. The four cases were reported from three different PHUs: Peel Region (two cases); Brant County (one case); and Leeds,

Grenville, and Lanark District (one case). Episode dates ranged from March 1 to March 28. Three of the four cases were male. The cases were older adults, with ages ranging from 45 to 76 years. Risk factor information was available for two of the four cases. Both cases reported contact with animals (one case reported contact with a household cat and another reported contact with farm animals). In particular, one of the two cases reported occupational exposure on a farm as an animal handler and contact with parturient animals. No obvious connection among the four cases was identified.

ERRATUM

FEBRUARY 2015 ISSUE (VOLUME 4, ISSUE 2)

The 2014 case counts for acute flaccid paralysis (AFP) that were originally provided in Appendix 1 of the February 2015 issue have been updated and are current as of April 13, 2015. The updated 2014 case counts for AFP are: two confirmed cases in August, eight in September, two in October, and one in November, for a total of 13 confirmed cases in 2014 overall. Although cases of all ages were temporarily reportable in Ontario from October 2, 2014 to April 22, 2015, only cases under the age of 15 are included in the updated counts.

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.

Current high profile infectious disease activity in other jurisdictions has been described in recent issues of this report. Please refer to the August 2014 issue for a review of the ebola outbreak in West Africa, and the October 2014 issue for a review of enterovirus D68.

RECENTLY DISCONTINUED ENHANCED SURVEILLANCE DIRECTIVES

MEASLES

Measles is a highly infectious disease caused by the measles virus. It has been eliminated in Canada since 1998. Elsewhere, however, it remains to be one of the leading causes of death among young children. Importation and travel-related cases often occur because measles can easily spread from person to person. Recently, measles cases have been reported in the United States and in Canada. In Ontario, 19 confirmed cases of measles with rash onset dates between January 25 to March 12, 2015 were reported from five PHUs. Ten (52.6%) of the cases were females. Cases were between 13 months

and 55 years (median 23.6 years). Immunization status could be determined for 14 of the 19 cases (73.7%). Of the 14 cases for whom immunization status was known, two adults had received two doses and three adults had received one dose of measles-containing vaccine; nine were unimmunized. Only one of the 19 cases had a travel history. This case was not considered to be part of the outbreak in Ontario since it had genotype D8 and the remaining 18 cases were genotype D4 or epidemiologically-linked to a laboratory confirmed case of D4. For cases without travel history, subsequent transmission occurred in one case resulting in five epidemiologically-linked secondary cases. The remaining confirmed cases do not appear to be epidemiologically-linked to a confirmed case, and no subsequent transmission has been reported to date. However, onset dates suggest these were a second wave of cases who may have had unknown exposure to earlier cases. The outbreak was declared over March 21, 2015, 32 days following the rash onset date of the last outbreak-associated case, and the ESD was discontinued on March 27, 2015. For more information, please refer to the Ontario Measles Epidemiologic Summary.

Appendix – Reportable Diseases

Appendix 1. Confirmed cases of reportable diseases, and probable cases of select reportable diseases, by month: Ontario, 2010-2015*

Reportable disease	2015														Historical comparisons						5-year avg (2010-2014) annual count
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTM	YTM rate ŧ	Current month 5-year avg (2010-2014)	Current month 5-year avg (2010-2014) rate ŧ	% difference rates (current month minus 5-year avg)†	YTM 5-year avg (2010-2014)	YTM 5-year avg (2010-2014) rate ŧ	% difference rates (YTM 2015 minus YTM 5-year avg)†	
Acute Flaccid Paralysis	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
AIDS	3	7	2	-	-	-	-	-	-	-	-	-	**12**	0.9	11	0.8	-82	29	2.2	-61	99
Amebiasis	47	53	58	-	-	-	-	-	-	-	-	-	**158**	11.3	73	5.4	-24	206	15.3	-26	791
Botulism	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	2
Brucellosis	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	1	0.1	-100	5
Campylobacter enteritis	185	163	197	-	-	-	-	-	-	-	-	-	**545**	38.9	226	16.8	-16	618	46.0	-15	3,701
Chlamydial Infections	3,210	2,897	3,126	-	-	-	-	-	-	-	-	-	**9,233**	659.3	3,016	224.4	-1	8,852	658.7	0	35,417
Cholera	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	0
Cryptosporidiosis	16	13	18	-	-	-	-	-	-	-	-	-	**47**	3.4	21	1.6	-18	49	3.6	-8	321
Cyclosporiasis	1	5	1	-	-	-	-	-	-	-	-	-	**7**	0.5	4	0.3	-77	10	0.7	-30	117
Encephalitis	1	3	0	-	-	-	-	-	-	-	-	-	**4**	0.3	2	0.1	-100	5	0.4	-23	18
Encephalitis/Meningitis	11	10	9	-	-	-	-	-	-	-	-	-	**30**	2.1	8	0.6	11	24	1.8	22	149
Food Poisoning, All Causes	6	1	4	-	-	-	-	-	-	-	-	-	**11**	0.8	6	0.5	-40	19	1.4	-45	86
Giardiasis	89	93	85	-	-	-	-	-	-	-	-	-	**267**	19.1	104	7.7	-21	315	23.5	-19	1,340
Gonorrhoea (All Types)	473	434	467	-	-	-	-	-	-	-	-	-	**1,374**	98.1	361	26.9	24	1,076	80.1	23	4,530
Group A Streptococcal Disease, Invasive	75	42	64	-	-	-	-	-	-	-	-	-	**181**	12.9	68	5.0	-9	203	15.1	-14	637
Group B Streptococcal Disease, Neonatal	1	2	2	-	-	-	-	-	-	-	-	-	**5**	0.4	5	0.3	-58	14	1.0	-65	55
Haemophilus Influenzae B Disease, Invasive	0	1	0	-	-	-	-	-	-	-	-	-	**1**	0.1	1	0.1	-100	1	0.1	-4	4
Hepatitis A	11	4	6	-	-	-	-	-	-	-	-	-	**21**	1.5	9	0.7	-36	29	2.1	-30	110
Hepatitis B (Acute)	4	6	2	-	-	-	-	-	-	-	-	-	**12**	0.9	10	0.8	-82	30	2.2	-62	111
Hepatitis B (Chronic)	91	71	69	-	-	-	-	-	-	-	-	-	**231**	16.5	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Hepatitis C	354	337	361	-	-	-	-	-	-	-	-	-	**1,052**	75.1	370	27.5	-6	1,061	79.0	-5	4,263
HIV	56	54	63	-	-	-	-	-	-	-	-	-	**173**	12.4	71	5.3	-15	190	14.2	-13	793
Influenza	4,575	1,990	1,176	-	-	-	-	-	-	-	-	-	**7,741**	552.8	888	66.1	27	3,442	256.1	116	6,722
Legionellosis	6	2	4	-	-	-	-	-	-	-	-	-	**12**	0.9	3	0.3	13	13	1.0	-14	172
Leprosy	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	1	0.1	-100	3
Listeriosis	2	2	1	-	-	-	-	-	-	-	-	-	**5**	0.4	3	0.2	-63	10	0.7	-51	51
Lyme Disease	0	1	0	-	-	-	-	-	-	-	-	-	**1**	0.1	3	0.2	-100	7	0.5	-86	200
Malaria	12	2	8	-	-	-	-	-	-	-	-	-	**22**	1.6	11	0.8	-33	38	2.8	-44	223
Measles α	8	10	1	-	-	-	-	-	-	-	-	-	**19**	1.4	#	#	#	#	#	#	#
Meningitis	3	2	6	-	-	-	-	-	-	-	-	-	**11**	0.8	8	0.6	-31	20	1.5	-47	118
Meningococcal Disease, Invasive	5	3	1	-	-	-	-	-	-	-	-	-	**9**	0.6	4	0.3	-75	11	0.8	-19	32
Mumps	3	1	1	-	-	-	-	-	-	-	-	-	**5**	0.4	3	0.3	-72	17	1.3	-72	48
Ophthalmia Neonatorum	1	0	1	-	-	-	-	-	-	-	-	-	**2**	0.1	0	0.0	380	1	0.1	140	3
Paralytic Shellfish Poisoning	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Paratyphoid Fever	5	3	5	-	-	-	-	-	-	-	-	-	**13**	0.9	5	0.4	-4	16	1.2	-22	45
Pertussis (Whooping Cough)	16	20	22	-	-	-	-	-	-	-	-	-	**58**	4.1	17	1.2	27	54	4.0	2	399
Q Fever	1	0	4	-	-	-	-	-	-	-	-	-	**5**	0.4	0	0.0	1,819	2	0.1	140	15
Rabies	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	0
Rubella	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	#	#	#	#	#	#	#
Rubella, Congenital Syndrome	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	#	#	#	#	#	#	#
Salmonellosis	179	175	227	-	-	-	-	-	-	-	-	-	**581**	41.5	235	17.5	-7	644	47.9	-13	2,777
Shigellosis	17	18	14	-	-	-	-	-	-	-	-	-	**49**	3.5	19	1.4	-30	63	4.7	-26	263
Streptococcus Pneumoniae, Invasive	99	81	105	-	-	-	-	-	-	-	-	-	**285**	20.4	120	8.9	-16	355	26.4	-23	1,173
Syphilis, Early Congenital	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-100	0	0.0	-100	1
Syphilis, Infectious	55	55	33	-	-	-	-	-	-	-	-	-	**143**	10.2	76	5.6	-58	208	15.5	-34	794
Syphilis, Other	38	35	39	-	-	-	-	-	-	-	-	-	**112**	8.0	63	4.7	-40	179	13.3	-40	687
Tetanus	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	1	0.0	-100	2
Tuberculosis	40	29	47	-	-	-	-	-	-	-	-	-	**116**	8.3	55	4.1	-18	147	10.9	-24	628
Tularemia	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	1
Typhoid Fever	3	4	4	-	-	-	-	-	-	-	-	-	**11**	0.8	7	0.6	-48	27	2.0	-61	82
Verotoxin Producing E. coli Including HUS	6	6	4	-	-	-	-	-	-	-	-	-	**16**	1.1	6	0.5	-38	20	1.5	-23	173
West Nile Virus Illness	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-	86
Yellow Fever	0	0	0	-	-	-	-	-	-	-	-	-	**0**	0.0	0	0.0	-	0	0.0	-100	1
Yersiniosis	13	11	13	-	-	-	-	-	-	-	-	-	**37**	2.6	19	1.4	-35	50	3.7	-29	180

Ontario Cases: MOHLTC, iPHIS database, extracted by PHO[2015/04/15].

Ontario Population: Population Estimates [2010-2013]: Statistics Canada, distributed by MOHLTC, received [2014/07/03]. Population Projections [2014-2015]: MOHLTC, IntelliHEALTH Ontario, extracted by PHO [2014/04/11].

Column or row-specific notes:

***** 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.

α Please refer to the Measles Epidemiologic Summary for the most recent number of confirmed cases.

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.