



Infectious Diseases in Lambton County 2018 Annual Report

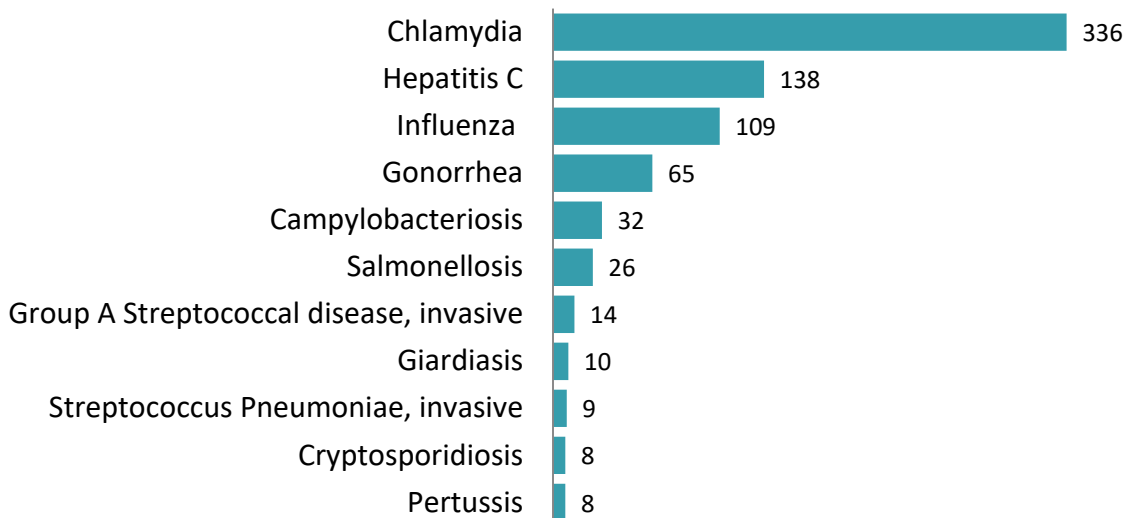
Released: December 2019

This report summarizes information about diseases of public health significance. Under the authority of the Health Protection and Promotion Act (HPPA), these diseases or suspected occurrences of these diseases must be reported to Lambton Public Health (LPH).

Highlights

- In 2018, Lambton Public Health investigated 793 confirmed cases of reportable diseases. This represents a 45% increase since 2014.
- Chlamydia, hepatitis C and influenza were the most common diseases reported (Figure 1).
- While incidence rates were higher in Lambton compared to Ontario for only two infectious diseases (hepatitis C and pertussis), several disease rates were elevated in 2018 compared to the previous local 5-year average (Figure 2).
- There were 24 institutional outbreaks and 3 community outbreaks reported to LPH in 2018. Aetiological agents for 9 of 27 outbreaks were identified, including: 3 norovirus, 2 influenza A(H3), 2 influenza B, 1 enterovirus and 1 cryptosporidium.

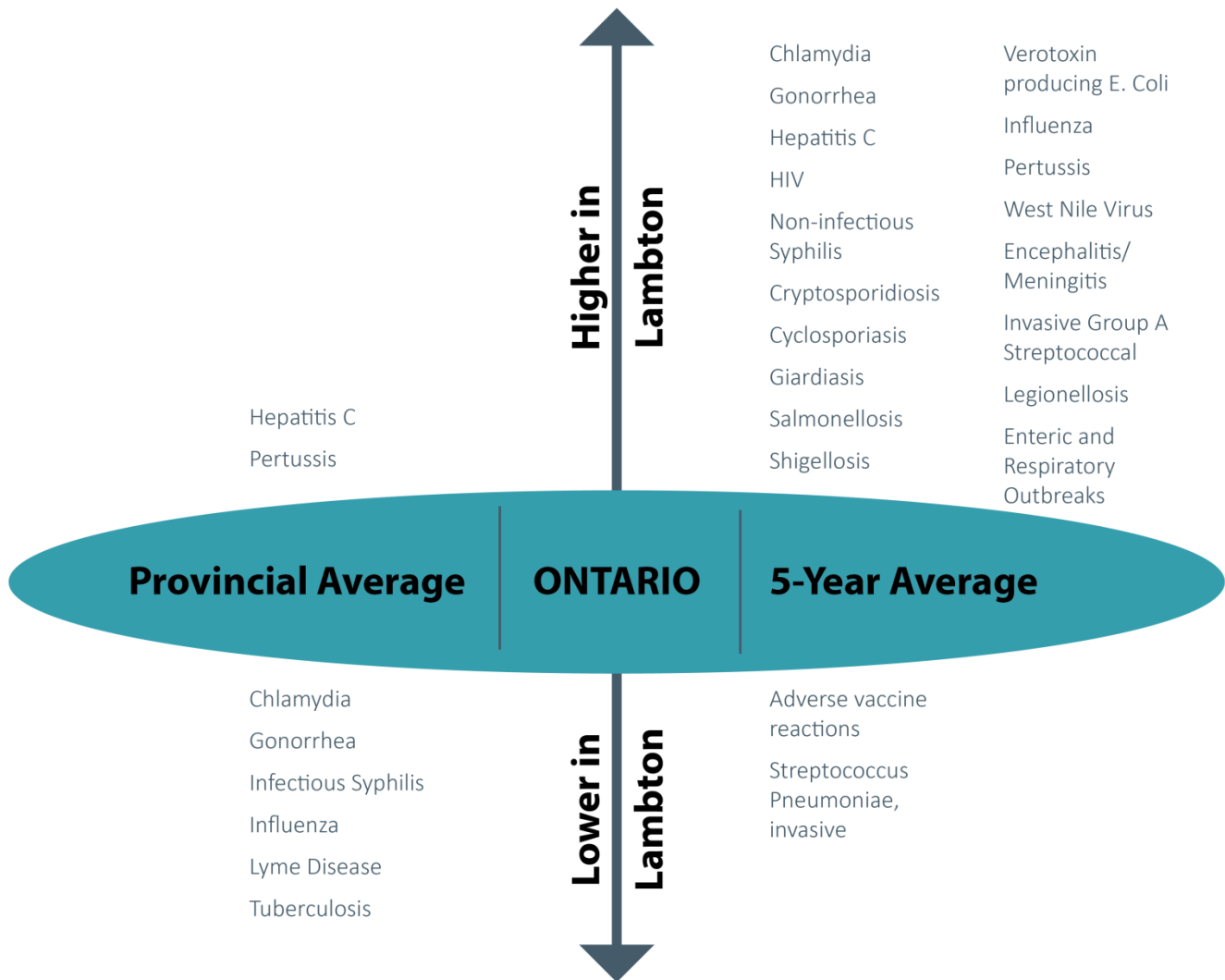
Figure 1: Most common infectious diseases of public health significance in Lambton County in 2018



See page 6 for a complete list of disease case counts, rates and statistical comparisons.

Infectious Diseases in Lambton - *continued*

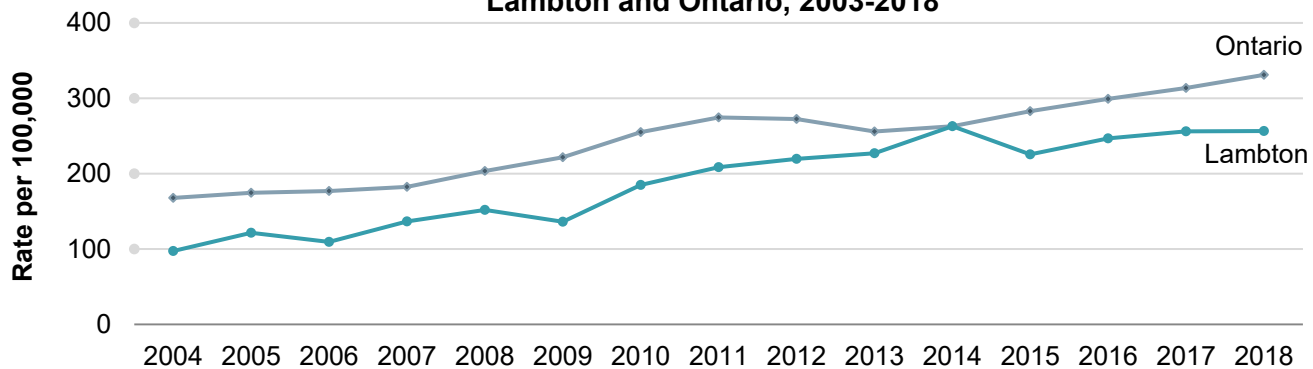
Figure 2: Infectious diseases reported in Lambton for which rates are statistically higher and lower than the provincial average and the previous local 5-year average. Diseases are not listed when differences in rates are not statistically significant.



Chlamydia:

- While chlamydia rates have been increasing steadily in Ontario since 2003, rates plateaued in Lambton between 2014 and 2018. Lambton rates are consistently lower than the province (**Figure 3**).
- Approximately 63% of cases were among females. In addition, the majority of cases were among those aged 15-29 years, accounting for approximately 83% of total cases.
- Most common risk factors include: sex with opposite sex (81%), no condom used (74%), new contact in past 2 months (13%), more than one sex contact in past 6 months (11%), anonymous sex (4%), and sex with same sex (2%).

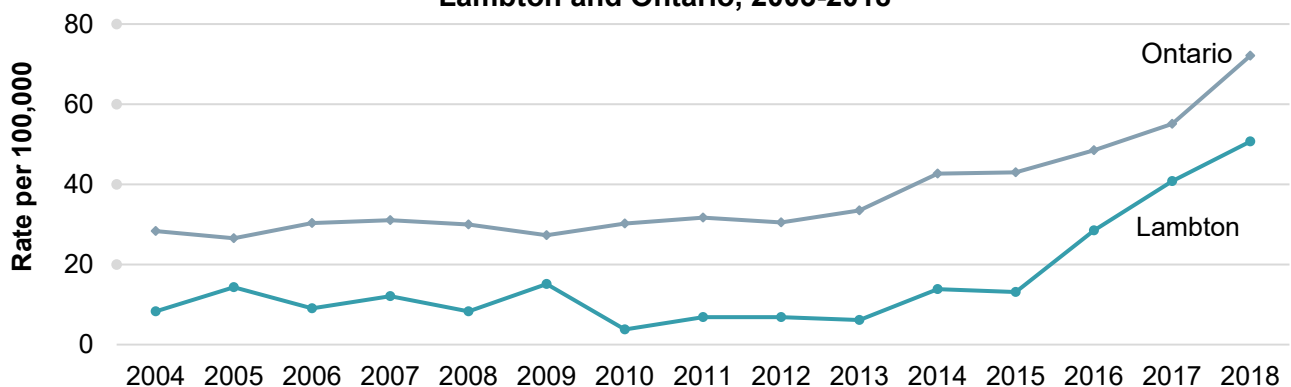
**Figure 3: Incidence of chlamydia infections by year
Lambton and Ontario, 2003-2018**



Gonorrhea:

- While local rates of gonorrhea remain lower than provincial rates, the Lambton rate was 50.7 per 100,000, which is a 25% increase from 2017 and a 13-fold increase from 2010 (**Figure 4**).
- Approximately 63% of cases occurred among males. Nearly 75% of cases were among those 20-39 years of age.
- Most common risk factors include: sex with opposite sex (69%), no condom used (68%), more than one sex contact in past 6 months (12%), new contact in past 2 months (11%), sex with same sex (9%), anonymous sex (8%).
- In 2018, 54% of confirmed cases of gonorrhea in Lambton were treated according to the [Guidelines for Testing and Treatment of Gonorrhea in Ontario](#).

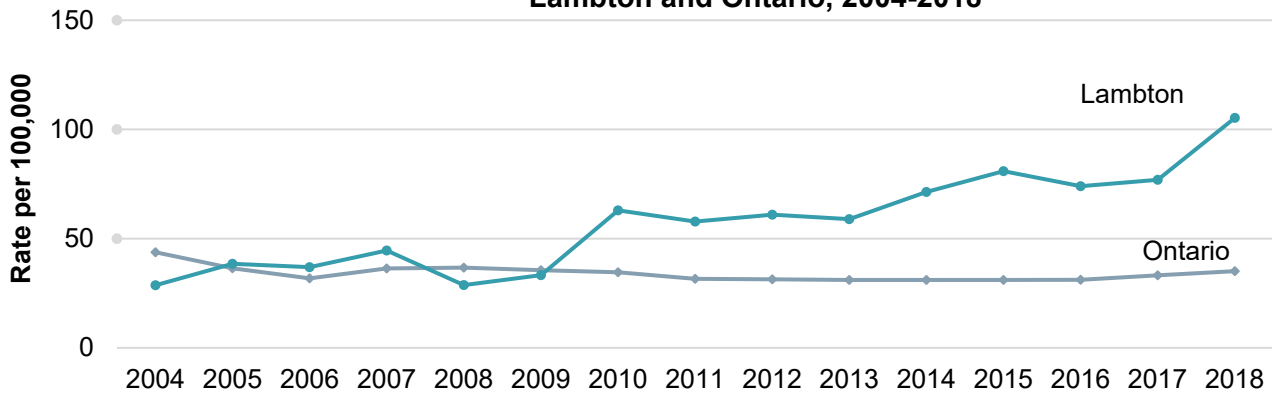
**Figure 4: Incidence of gonorrhea infections by year
Lambton and Ontario, 2003-2018**



Hepatitis C:

- While provincial hepatitis C rates have been relatively stable, local rates have increased between 2009 and 2018. Lambton rates remain significantly higher than Ontario rates (Figure 5).
- About 69% of cases were among males. Approximately 49% of cases were among those aged 20-39 years and 39% were among those aged 50 years and older.
- Most common risk factors include: injection drug use (46%), tattoo (28%), sex with opposite sex (25%), shared drug use equipment (18%), correctional facility (17%), contact is hepatitis C positive (8%), inhalation drug use (4%),

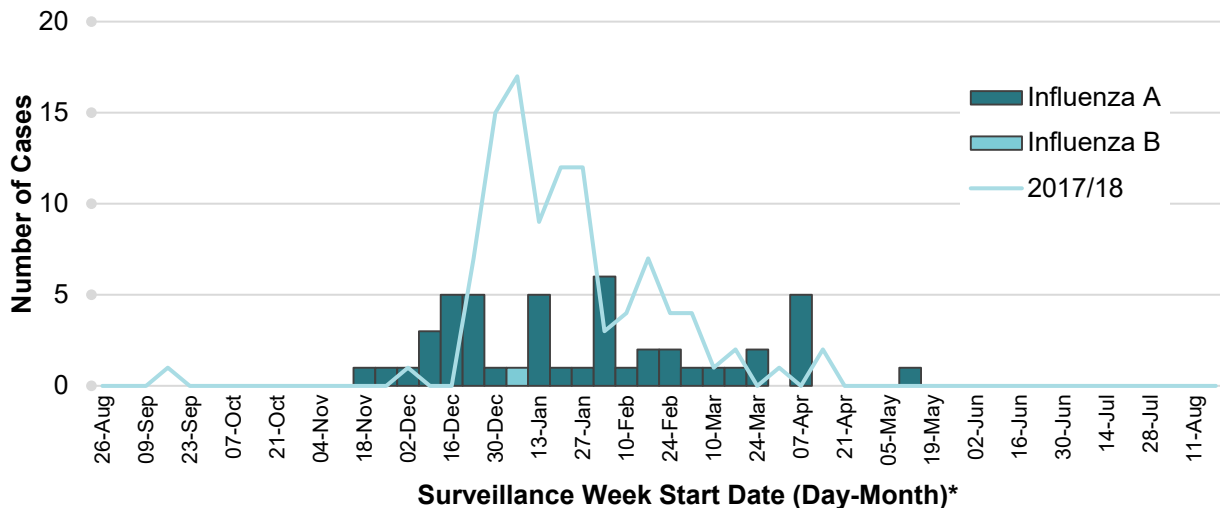
**Figure 5: Incidence of hepatitis C infections by year
Lambton and Ontario, 2004-2018**



Influenza:

- Unlike most influenza seasons, there was not a distinct peak in influenza cases observed in the 2018/19 season (Figure 6). A total of 46 confirmed cases of influenza A and 1 case of influenza B were reported.
- The predominant circulating strain was A (H1N1)pdm09.
- Approximately 45% of influenza cases were among adults 65 years and older.

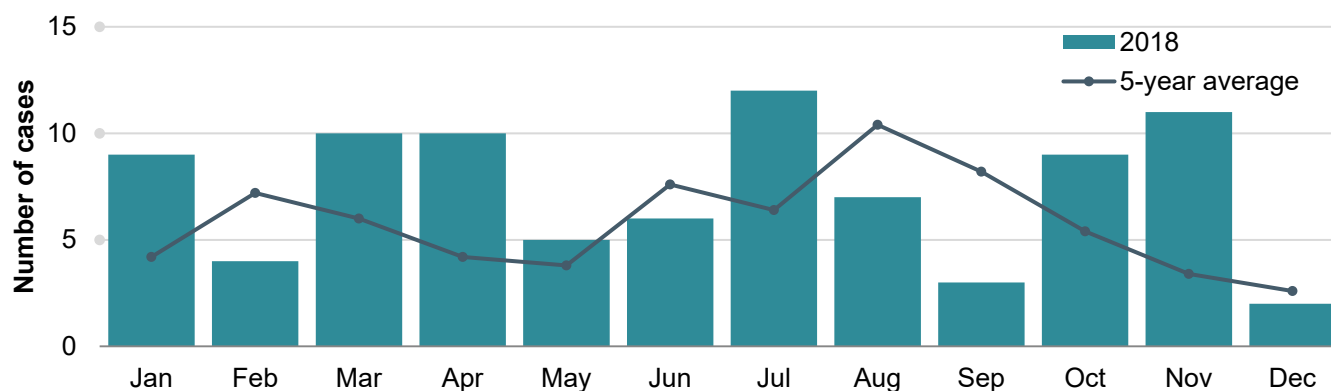
Figure 6: Confirmed influenza cases in Lambton, 2018/19 influenza season by week compared to previous season



Enteric Diseases:

- In 2018, 88 enteric disease cases were reported to Lambton Public Health. Enteric disease rates were similar in Lambton and Ontario in 2018.
- About 51% of cases were among females. Peaks in the number of local cases occurred among the 25-29 and 55-64 age groups.
- **Figure 7** shows the seasonal distribution of cases. While historically cases tend to peak in the summer months, there were elevated counts during several months throughout the year in 2018.

**Figure 7. Enteric disease 2018 case counts and historical averages
Lambton, by month**



*Includes amebiasis, campylobacter enteritis, cryptosporidiosis, cyclosporiasis, giardiasis, hepatitis A, listeriosis, salmonellosis, shigellosis, verotoxin producing E. Coli, yersiniosis.

Data Sources:

1. Case Counts and Crude Rates of Reportable Diseases by Year, Public Health Ontario, Query @ PHO, Extracted September, 2019.
2. Population Projections [2018], Ontario Ministry of Health, IntelliHEALTH Ontario, Extracted September 2019.
3. Risk Factors: iPHIS, Extracted September, 2019
4. Case Counts and Crude Rates of Reportable Diseases by Gender and Age Group, Public Health Ontario, Query @ PHO, Extracted September, 2019.

Infectious Diseases in Lambton - *continued*

Reportable Disease Case Counts and Rates, Lambton County, 2018¹

	Confirmed Cases 2018 ²	Historical 5-year average ³	Comparison to 5-yr ave ⁴	2018 Lambton Rate ⁵	2018 Ontario Rate ⁵	Comparison to Ontario Rate ⁶
Sexually Transmitted and Bloodborne						
Chlamydia	336	297.4	Higher	258.3	331.8	Lower
Gonorrhea	65	26.6	Higher	50.0	72.2	Lower
Group B Streptococcal, neonatal	0	0.2	Similar	0	0.4	Similar
Hepatitis B	0	3.8	Similar	0	0.6	Similar
Hepatitis C	138	99.2	Higher	106.1	36.6	Higher
HIV	5	2.4	Higher	3.8	6.3	Similar
Syphilis, infectious	2	2.2	Similar	1.5	13.2	Lower
Syphilis, other	3	0.8	Higher	2.3	6.3	Similar
Enteric, Food and Waterborne						
Amebiasis	1	1.6	Similar	0.8	0.7	Similar
Campylobacteriosis	32	29.2	Similar	24.6	23.8	Similar
Cryptosporidiosis	8	4.4	Higher	6.1	5.2	Similar
Cyclosporiasis	3	1.0	Higher	2.3	1.9	Similar
Giardiasis	10	7.8	Higher	7.7	10.6	Similar
Listeriosis	1	0.2	Similar	0.8	0.5	Similar
Salmonellosis	26	21.6	Higher	20.0	18.5	Similar
Shigellosis	4	2.0	Higher	3.1	2.2	Similar
Verotoxin-producing E.coli	3	0.8	Higher	2.3	1.2	Similar
Yersiniosis	0	0.8	Similar	0	2.1	Similar
Vaccine Preventable						
Adverse vaccine reactions	3	5.8	Lower	2.3	N/A	N/A
Influenza	109	67.2	Higher	83.8	132.6	Lower
Streptococcus Pneumoniae, invasive	9	14.0	Lower	6.9	9.0	Similar
Meningococcal disease, invasive	0	0.4	Similar	0	0.2	Similar
Mumps	1	0.6	Similar	0.8	0.6	Similar
Pertussis	8	1.2	Higher	6.1	2.3	Higher
Tetanus	0	0.4	Similar	0	0.0	Similar
Vector-borne & Zoonotic						
Lyme Disease	1	0.4	Similar	0.8	4.0	Lower
Q Fever	0	0.2	Similar	0.0	0.0	Similar
West Nile Virus	2	0.2	Higher	1.5	0.9	Similar
Other Infectious Diseases						
Carbapenemase-Producing Enterobacteriaceae	1	N/A	N/A	0.8	1.4	Similar
Creutzfeldt-Jacob Disease (<i>sporadic</i>)	0	0.4	Similar	0	0.1	Similar
Encephalitis/Meningitis	7	3.4	Higher	5.4	7.6	Similar
Group A Streptococcal disease, invasive	14	8.4	Higher	10.8	7.9	Similar
Legionellosis	2	0.6	Higher	1.5	2.3	Similar
Tuberculosis	0	0.4	Similar	0.0	4.6	Lower
Outbreaks						
Enteric Outbreaks	12	7.6	Higher	9.2	N/A	N/A
Respiratory Outbreaks	15	11.6	Higher	11.5	N/A	N/A
Probable Cases 2018						
Lyme Disease	1					
West Nile Virus Illness	1					

Infectious Diseases in Lambton - *continued*

¹ Rates were obtained from Query if available; otherwise calculated using Population Projections [2018].

² Confirmed case count in 2018 (Lambton residents). Table EXCLUDES reportable diseases with NO confirmed cases in Lambton between 2013 and 2018.

³ Mean confirmed case count in Lambton for the 5-year period, 2013-2017, rounded to the nearest integer if ≥ 1 .

⁴ Confirmed case count in 2018 compared to the previous 5-year annual mean; direction indicated if $p < 0.05$ (log likelihood test) AND effect size is not negligible (e.g. > 0.01 or > 1.01)

⁵ Crude rate per 100,000 population

⁶ Lambton crude rate compared to the Ontario rate; significant if $p < 0.05$ (mid-p exact probability test)