

Infectious Disease and Environmental Health Report: July – December, 2017 (Q3/Q4)

Part 1: Mandatory Reporting

1a) Confirmed Cases of Mandatory Reportable Diseases

How It's Spread	2014	2015	2016	2017
Respiratory or Direct Contact	1238	1309	1477	1241
Enteric, Foodborne & Waterborne	301	312	264	269
Vectorborne and Zoonotic Diseases	11	17	13	19
Sexually Transmitted & Bloodborne Infections ¹	1901	2036	2244	2374
Other	35	21	29	35

1b) Confirmed Outbreaks Reportable to Public Health

Type of Outbreak	2014	2015	2016	2017
Community	8	4	6	5
Institutional	107	129	80	125

Top 3 diseases for each disease category (July – December, 2017):

Respiratory/Direct Contact:

1. Latent tuberculosis
2. Influenza A
3. Invasive streptococcus pneumoniae

Enteric, Foodborne & Waterborne:

1. Campylobacter enteritis
2. Salmonellosis
3. Giardiasis

Vectorborne and Zoonotic:

1. West Nile virus illness
2. Lyme disease
3. Malaria

Sexually Transmitted/Bloodborne:

1. Chlamydial infections
2. Gonorrhoea
3. Hepatitis C

¹The increase in sexually transmitted and bloodborne infections in 2017 compared to 2016 was driven by an increase in chlamydia and syphilis cases. Please see Part 4 for more information about chlamydia and syphilis.

Part 2: Environmental Health

2a) Mandatory Program Services

Programs	Areas	2014	2015	2016	2017
Vectorborne Disease	Animal Bites ²	1433	1423	1508	1543
	Ticks Submitted ³	144	352	297	892
Food	Special Events	76	73	56	55
	Food Handler Certifications	2696	2602	2572	2390
	Red Signs Posted	26	31	25	23
Health Hazards	Heat Alerts	3	4	9	2
	Cold Alerts	13	8	8	4

²A higher number of reports of animal bites in 2016 and 2017 are likely from increased awareness of rabies, due to the Hamilton and Ontario raccoon rabies outbreak that began in December 2015.

³The number of ticks submitted to Hamilton Public Health Services (PHS) for species identification increased in 2017 from other years; this may be due to increased public awareness about ticks and/or Lyme disease or an increase in the number of ticks locally. See report BOH18013 regarding a change in risk area related to Lyme disease.

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2b) Inspection and Enforcement					⁴ Tobacco Control Enforcement is reporting a decrease in the total number of Smoke-Free Ontario Act (legal enforcement) inspections for 2017 as a result of an overall decline in the number of licensed tobacco product retailers combined with an increase in overall compliance with the Legislative Regulations concerning tobacco sales to minors. The increased compliance resulted in fewer mandatory follow-up inspections of active tobacco product retailers. ⁵ The Electronic Cigarette Act came in effect on January 1, 2016. Tobacco Control Enforcement is reporting a decrease in the total number of Electronic Cigarette Act (legal enforcement) inspections for 2017 as a result of an overall decline in the number of licensed electronic cigarette retailers. ⁶ Effective January 1, 2017, enforcement of the Healthy Menu Choices Act began, resulting in more food safety inspections conducted in 2017 compared to 2016. ⁷ In 2017, the food premises portion of day cares were assessed using the food premise risk characterization tool. Some high risk premises (which require 3 inspections per year) were changed to moderate risk (requiring 2 inspections per year). This resulted in fewer total inspections performed in 2017. All day cares continue to receive 1 infection control inspection annually.
Categories	2014	2015	2016	2017	
Smoke Free Ontario Act inspections (legal enforcement) ⁴	1760	1640	1465	1271	
Electronic Cigarette Act inspections (legal enforcement) ⁵	n/a	n/a	544	427	
City of Hamilton By-law #11-080 Prohibiting Smoking within City Owned Parks and Recreation Property	56	56	73	60	
Food ⁶	6524	6616	5755	6141	
Water	885	853	884	884	
Residential Care Facilities	567	671	615	551	
Personal Service Settings	946	971	1015	1020	
Day Cares ⁷	558	569	608	534	
Other (e.g. funeral homes)	225	201	246	275	
Infection Prevention and Control Lapses	n/a	n/a	0	6	
Part 3: Workload					
3a) Complaints					⁸ More than two-thirds of complaints to the Health Hazards program in 2017 were about pests, while the remaining majority of complaints were related to healthy housing issues (e.g., mould, indoor air quality, asbestos, etc.).
Categories	2014	2015	2016	2017	
Smoke Free Ontario Act	241	335	274	213	
Electronic Cigarette Act	n/a	n/a	17	8	
City of Hamilton By-law #11-080 Prohibiting Smoking within City Owned Parks and Recreation Property	32	39	28	25	
Food	415	316	249	214	
Water	47	35	37	13	
Vector Borne Disease	97	102	109	126	
Infection Control	119	129	64	86	
Health Hazards ⁸	1250	1502	1638	1429	

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3b) Education, Requests for Non-Routine Inspections, Consults, Referrals

Categories	2014	2015	2016	2017
Food	378	440	795	661
Water	547	480	487	562
Vector Borne Disease	56	48	44	47
Infection Control ⁹	409	580	1415	1097
Health Hazards ⁹	234	267	637	241

⁹ The database used to capture this information related to health hazards and infection control consults was modified during the second half of 2017 resulting in an inability to extract information in the same way previously. We are seeking to better understand this in order to provide this information in future reports.

Part 4: Unusual Occurrences

Chlamydial Infections and Syphilis

The rise in the number of sexually transmitted and bloodborne infections in 2017 compared to 2016 was primarily driven by an increase in chlamydia. Additionally, there was a large increase in syphilis cases in 2017 compared to previous years.

Chlamydia is the most commonly reported sexually transmitted infection to public health, representing about 70% of all sexually transmitted and bloodborne infections in 2017. The rate of chlamydia in Hamilton increased by 8% in 2017 compared to 2016. Although a similar increase was seen across the province, Hamilton's rate of chlamydia remains below the provincial average. Almost 60% of chlamydia cases are among females, and three-quarters of all cases are among people aged 15 and 29. The top three reported risk factors or behaviours among Hamilton's chlamydia cases in 2017 were: no condom was used, having a repeat sexually transmitted infection, and having a new sexual contact in the past two months.

There was a large increase in **infectious syphilis** cases reported to public health in 2017 compared to previous years: Hamilton's 2017 rate was 42% higher than the 2016 rate. In 2017, 88% of cases were male, and 45% were aged 25 to 39 years. Among the male cases, approximately half identified as being men who have sex with men. Hamilton's syphilis rates remain below the provincial average. Other commonly reported risk factors were no condom was used and anonymous sex.