

# Diseases of Public Health Significance in Halton

**2024 Annual Report** 

The Regional Municipality of Halton September 2025



# Reference Halton Region Public Health Department, Diseases of Public Health Significance in Halton, 2024 Annual Report. Oakville, Ontario, September 2025. Author Carley Aubin, Epidemiologist, Public Health Surveillance Acknowledgements Bushra Hamdani, Data Analyst, Public Health Surveillance Jennifer Heuft, Data Analyst, Public Health Surveillance Kristen Wheeler, Manager & Senior Epidemiologist, Public Health Surveillance



An important mandate of Public Health is to reduce the burden of infectious diseases in the community. Public Health works towards this goal through the delivery of programs and services such as investigating cases of infectious diseases, responding to outbreaks, inspecting retail food services and personal service settings, conducting health promotion campaigns, and providing immunizations and other clinical services.

The 2024 Diseases of Public Health Significance (DOPHS) in Halton report provides a summary of the DOPHS among Halton residents reported to Public Health. The report also summarizes all outbreaks investigated by Public Health.

In 2024 there were:

4,340

cases of diseases of public health significance among Halton residents reported to Public Health

178

respiratory institutional outbreak investigations

63

enteric institutional outbreak investigations

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# Background on infectious diseases

Infectious diseases are caused by a variety of organisms, including:

- bacteria,
- viruses,
- fungi,
- prions,
- parasites, or
- toxins from these organisms.

Infectious diseases can be spread by several different mechanisms, including, but not limited to:



Contaminated food and water



Sexual contact



Blood-to-blood contact



Animals and insects



Respiratory droplets (e.g. cough or sneeze) and direct/close contact

## Overview of infectious diseases in Halton

Public Health reduces the incidence of infectious disease in the Halton community by delivering a broad range of programs.

Staff respond to each reported case of a disease of public health significance (DOPHS), which can include: contacting the affected individual and ensuring they have received adequate treatment; educating them on how to prevent further spread of infection and ways to avoid reinfection; and answering any questions the individual may have. In addition, for certain DOPHS, contact tracing is completed to inform any potential contacts of possible exposures, and provide post-exposure prophylaxis or treatment where appropriate. Staff also respond to enteric and respiratory outbreaks in both the community and in institutions such as longterm care homes, retirement homes, acute care settings, childcare settings, and correctional institutions.

In addition to investigating cases of DOPHS and preventing further spread of disease, Public Health conducts regular inspections of licensed childcare

settings, personal service settings, food premises, small drinking water systems, and public spas and swimming pools. Public Health also inspects regulated health professionals (e.g. physicians, dentists) if complaints are reported.

Finally, Public Health provides education and programs such as immunization and harm reduction, which help to prevent and reduce the burden of infectious diseases.

DOPHS presented in this report are analyzed in categories. Many diseases can be placed in multiple categories; for example, Hepatitis B is both a blood-borne infection and a vaccine-preventable disease, as it is part of Ontario's regular vaccination schedule. For the purposes of this report, diseases are included in only one category. See Appendix C for a complete list of the DOPHS and their groupings.

# Outbreak investigations in Halton

All outbreaks of enteric and respiratory diseases that occur in institutions must be reported to Public Health. Institutions include long term care homes, retirement homes, acute care facilities, childcare centres and correctional facilities. Public Health staff provide recommendations for the prevention, detection, and management of respiratory and enteric outbreaks. In 2024, there were a total of 241 outbreaks in institutions for which Public Health provided outbreak management support, including 63 enteric outbreaks and 178 respiratory outbreaks.



#### **178** Respiratory

outbreak investigations in 2024

#### Including:

- 111 COVID-19
- 17 Influenza A
- 13 other coronavirus'
- 10 rhinovirus
- 10 metapneumovirus
- 7 parainfluenza
- 10 other agents

102 occurred in long-term care homes, 65 in retirement homes, 7 in hospitals and 4 in correctional facilities.



#### **63** Enteric

outbreak investigations in 2024

#### Includina:

- · 41 unspecified gastroenteritis agents
- 20 norovirus
- 2 other agents

39 occurred in childcare centres, 16 in retirement homes and 8 in long-term care homes.

# Overview of DOPHS in Halton

It is important to look at DOPHS to understand disease burden in the community and target prevention efforts appropriately. Please note that for many diseases, current environmental and political influences can have a major impact on the number of DOPHS that are reported to public health. This is especially true for those that experience mild, self-limiting illness where most individuals recover quickly with few complications. For example, when COVID-19 was at its peak, the expectations for testing and reporting were very different than they were in 2024, when most individuals infected with COVID-19 were presenting with a mild respiratory infection and no longer getting tested.

In 2024 there were

4,340

cases of diseases of public health significance reported among Halton residents



1,552 cases of sexuallytransmitted & blood-borne infections (STBBIs)



114 cases of vaccine preventable diseases (VPDs)



2,064 cases of respiratory/close contact infections



548 cases of enteric and food-borne illnesses



47 cases of zoonotic and vector-borne diseases



14 cases of other infectious diseases



1 case of neonatal diseases (Neonatal Group B Streptococcus)

# Most commonly reported infectious diseases in Halton

In 2024, the top 10 most commonly reported diseases of public health significance among Halton residents accounted for 89% of all DOPHS cases reported to Public Health. The number of cases reported to Public Health for each of the top ten diseases is shown in **Figure 1** below.

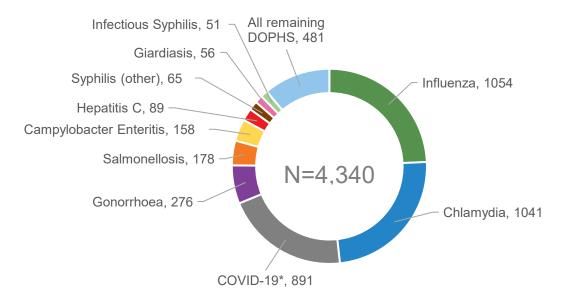


Figure 1: 10 most commonly reported diseases of public health significance, Halton Region, 2024
\*As of June 1, 2024, only deaths due to COVID-19 (not cases of COVID-19) are reportable, therefore significantly decreasing the total number of cases reported.

# Comparison to Ontario

The top 10 DOPHS reported among Halton residents compared to Ontario is shown in **Figure 2**. Halton had significantly higher rates of influenza, campylobacter enteritis, and salmonellosis compared to Ontario, but significantly lower rates of chlamydia, COVID-19, gonorrhea, hepatitis C, syphilis (other), and infectious syphilis compared to Ontario. Giardiasis was similar when compared to Ontario.

See **Appendix B** for a complete comparison of rates in Halton to Ontario.

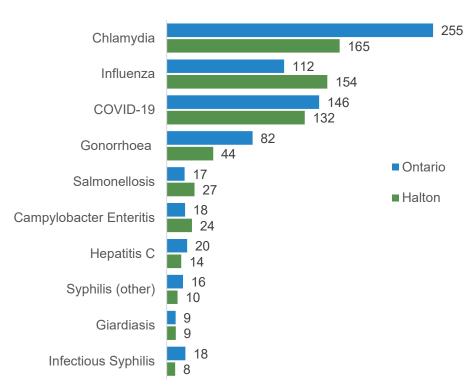


Figure 2: 10 most commonly reported DOPHS, Halton Region compared to Ontario, age-standardized rates (per 100,000), 2024

### Distribution of infectious diseases in Halton

Biology plays an important role in influencing health outcomes and includes factors such as age, sex and genetic pre-disposition. However, there are other external factors that can have a significant impact on health. These include: the environments where we live, learn, work and play; the amount of money we earn; our level of education; and having a strong social safety net with supportive friends and family. These factors are collectively known as the social determinants of health. People who are well-supported by the social determinants of health have more opportunities to make healthy choices. Thus, improvements in the social determinants of health are important when working to reduce the incidence and prevalence of infectious diseases.

### Age and Sex

In 2024, among Halton residents, there were 753 DOPHS cases reported for every 100,000 males, and 734 DOPHS cases reported for every 100,000 females. Differences by sex do exist for certain diseases. For example, chlamydia rates tend to be higher among females, likely due to higher screening rates compared to males. Gonorrhea rates tend to be higher among males as they are more likely to experience symptoms compared to females.

Overall age-related trends are shown in Figure 3. Diseases can vary in their distribution by age. Many infections are self-limiting among healthy adults but can cause more severe complications among young children or older adults, and therefore those age groups are more likely to seek medical attention. STIs tend to disproportionately affect young adults, while influenza predominantly affects young children and older adults, all of which influence the age distribution seen in Figure 3.

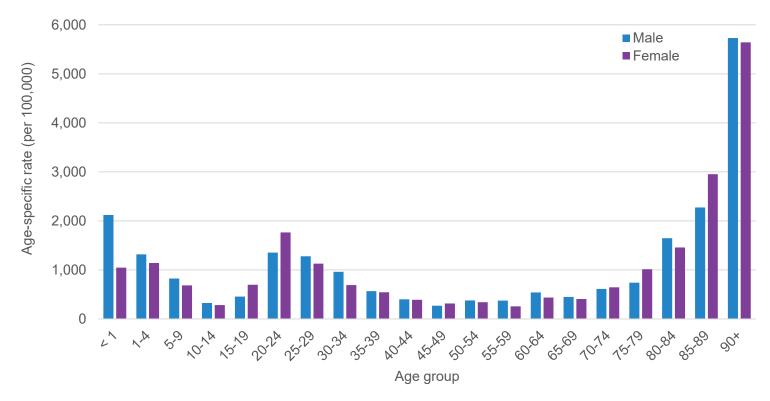


Figure 3: Age and sex-specific rate (per 100,000) of reported infectious diseases, Halton Region, 2024

#### Income



Figure 4: Age-standardized rate (per 100,000) of reported infectious diseases, by neighbourhood income group, Halton Region, 2024

Excludes prison dissemination areas

In 2024, the overall rate for all DOPHS decreased as neighbourhood income group increased, as seen in Figure 4. It is important to note that the majority of cases were among residents of middle (1,459 cases) and high income (2,226 cases) neighbourhoods, as there are far more neighbourhoods in the middle and high income groups compared to the low income (259 cases) group within Halton. For more information on how postal code was used as a proxy for neighbourhood income, please see **Appendix A**.

It is also important to note that the association between neighbourhood income and burden of infectious disease varies by disease. For example, some diseases show a relationship with income in Halton, but many diseases do not. While this could be because no such relationship exists, it may also be because of small case numbers in Halton; a relationship may be detected in jurisdictions with more cases and/or larger populations. Analysis by each disease and income could not be done due to small case numbers for most DOPHS. Analyses by income cannot be compared over time, as postal codes and populations by income groups change.

## Municipality

Figure 5 shows the difference in rates of DOPHS by municipality in Halton.

There are three correctional facilities in Halton: two are in Milton (Vanier Centre for Women, and Maplehurst Correctional Complex) and one is in Oakville (Svl Apps Youth Centre). Rates of sexually transmitted infections, blood-borne infections and tuberculosis tend to be higher within the prison population. This can have an impact on overall rates, especially by municipality. Figure 5 therefore shows rates both including and excluding correctional facility cases.

Differences in infectious disease rates by municipality are likely multi-factorial. For example, income, population density, and household density may contribute to rate variations.



Figure 5: Age-standardized rate (per 100,000) of reported infectious diseases, by municipality, Halton Region, 2024

The Milton correctional facility rate includes cases among individuals at the Vanier Centre for Women and Maplehurst Correctional Complex.



# Sexually transmitted and blood-borne infections (STBBIs) summary

Sexually transmitted and blood-borne infections (STBBIs) include a number of viral and bacterial infections that are primarily transmitted through blood and other bodily fluids. This includes during sexual contact including oral, vaginal, and/or anal intercourse, as well as sharing needles, and needle-stick or other sharps injuries. Symptoms can vary depending on the disease, but may include burning when urinating, unusual vaginal/penile discharge, and pelvic or testicular pain as well as fatigue, nausea, stomach pain, mild fever, and yellowing of the skin or eyes for hepatitis B and C. However, symptoms also often go unnoticed, or individuals may be asymptomatic.

Public Health promotes positive sexual health practices by providing residents, schools, and community agencies in Halton with information about sexual health topics including sexually transmitted infections (STIs). Testing, treatment, and counseling for STBBIs are available at Halton sexual health clinics, including in the new mobile health clinic. Public Health also offers provincially-funded STI medication to community health care providers, for the treatment of individuals and sexual contacts with chlamydia, gonorrhea and/or syphilis. This is intended to provide medication to those who are unable to afford the cost of treatment and facilitate access to first-line treatment. Public Health works to prevent or reduce the burden of blood-borne infections by conducting routine compliance inspections of personal service setting locations (e.g. nail salons, tattoo/piercing establishments), and inspects regulated health premises (e.g. dentists, doctors) upon receiving complaints of improper infection prevention and control (IPAC) practices. Public Health also provides those who use drugs with clean supplies and accepts used supplies for safe disposal through the Exchange Works Program.

In 2024, there were 1,552 STBBIs reported in Halton, accounting for 36% of all DOPHS cases reported to Public Health. Diseases with an average of less than 5 cases per year are not shown in the figure below. Please see **Appendix B** for a complete list of cases in 2024.

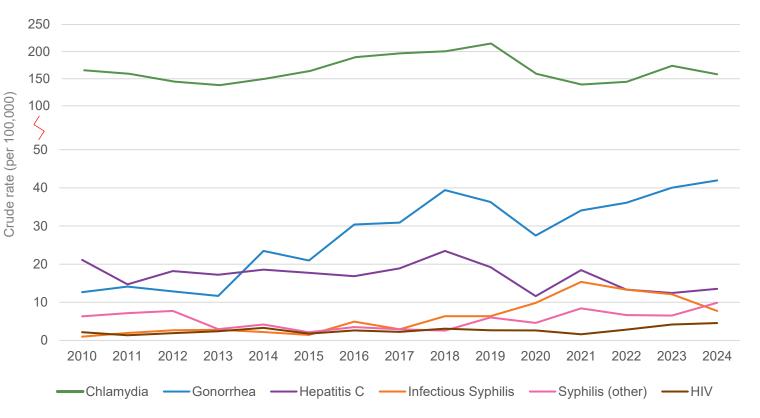


Figure 6: Crude rate (per 100,000) of sexually transmitted and blood-borne infections over time, Halton residents, 2010-2024



# Respiratory and close contact infections summary

Respiratory and close contact infections (RCCIs) are those that typically require close contact with an infected person to transmit the disease. What defines close contact can vary by disease, but typically includes family members, friends, coworkers, sexual partners, and/or schoolmates. Respiratory illnesses often require close contact to spread as droplets produced from sneezing, coughing, breathing, and talking more easily travel to those in close proximity.

In 2024, there were 2,064 cases of respiratory and close contact infections reported to Public Health, representing 48% of all DOPHS reported. Diseases with an average of less than 5 cases per year are not shown in the figures below. Please see Appendix B for a complete list of cases in 2024. Data were separated into multiple figures to allow better visualization since there were many more influenza and COVID-19 cases than the remaining RCCIs. As of June 1, 2024, only deaths due to COVID-19 (not cases of COVID-19) are reportable, therefore significantly decreasing the total number of cases reported.

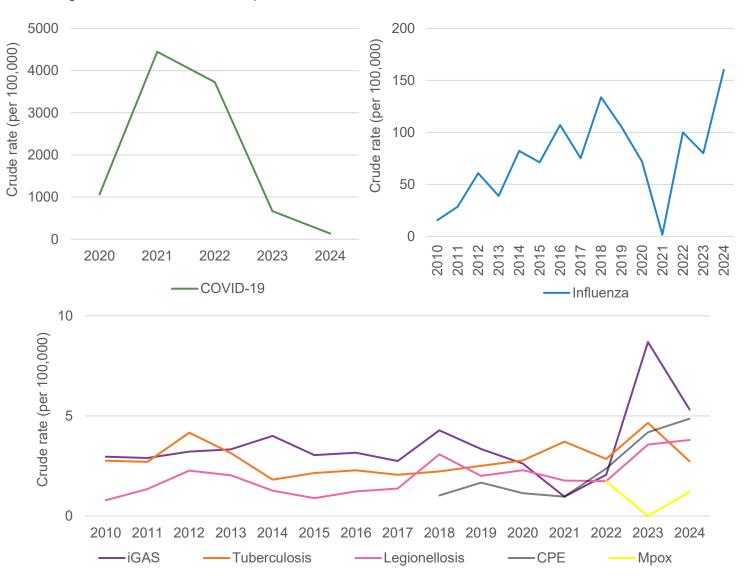


Figure 7: Crude rate (per 100,000) of respiratory and close contact infections over time, Halton residents, 2010-2024 Historical data is not available for the following DOPHS, based on when they became reportable to public health: CPE 2018, COVID-19 (cases reportable only from 2020-June 1, 2024), mpox 2022. Only infectious TB cases are included.



# Vaccine preventable diseases (VPDs) summary

Vaccine preventable diseases (VPDs) are infectious diseases for which an effective vaccine exists. Vaccines have eliminated or substantially reduced the incidence of many serious diseases and have led to major improvements in child health. There are 12 diseases of public health significance that are considered vaccine preventable within this report because they are part of Ontario's routine immunization program or have been eradicated through vaccination (smallpox).

Vaccines have different levels of effectiveness and/or do not cover all strains or subtypes of the organisms at which they are targeted. Coverage of the population is also not 100%, meaning not all individuals in the population have full immunity. This is why it is important to monitor the incidence of vaccine preventable diseases.

In 2024, there were 114 reported cases of vaccine preventable diseases among Halton residents (**Figure 8**), accounting for 2.6% of all DOPHS reported. Diseases with an average of less than 5 cases per year are not shown in the figure below. Please see **Appendix B** for a complete list of cases in 2024.

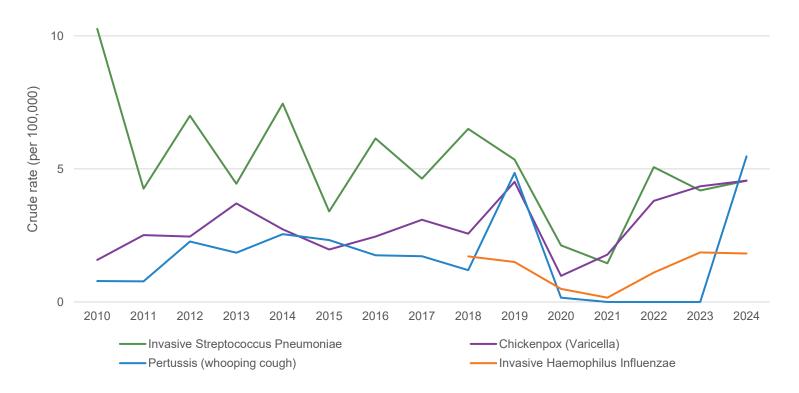


Figure 8: Crude rate (per 100,000) of vaccine preventable diseases over time, Halton residents, 2010-2024

# Did you know?

Getting immunized is the best way to protect yourself from VPDs. The Immunization of School Pupils Act (ISPA) requires parents/guardians to notify Public Health each time their child gets an immunization from their health care provider. For more information on reporting immunizations online, and immunization services offered by Public Health, visit halton.ca/immunize.

Measles is a viral respiratory infection that is extremely contagious. It is a vaccine preventable infection, with a vaccine efficacy of 95% after 1 dose and almost 100% after a second dose in children<sup>1</sup>. Ontario's immunization schedule recommends children be vaccinated at 12 months, and again between ages 4-6, before entering school.

Symptoms of measles infection include fever, cough, runny nose, watery eyes, and a red blotchy rash which starts on the face and moves down the body. In addition, white spots in the mouth and throat, called Koplik spots, may also occur. Measles can be dangerous, especially in children. Hospitalization is required in approximately 20% of unvaccinated cases due to complications such as pneumonia and encephalitis (swelling of the brain)<sup>1</sup>.

Until recently, measles cases have been extremely rare in Canada, thanks to high vaccination rates leading to the elimination of measles in Canada in 1998. Imported cases still occur due to travel to endemic areas. In 2024, Ontario began to see an increase in travel-related cases, due to an increase in cases globally. Unfortunately, this has resulted in outbreaks across Ontario and other provinces.

Between 2005-2023, there were 208 cases of measles reported in Ontario, of which 13 were among Halton residents. In 2024 alone there were 64 cases reported in Ontario (three in Halton). As of Aug 19, there have been 2368 cases in Ontario<sup>2</sup> (including six in Halton) (**Figure 9**). This rapid increase has been driven largely by locally acquired infections in unvaccinated people.

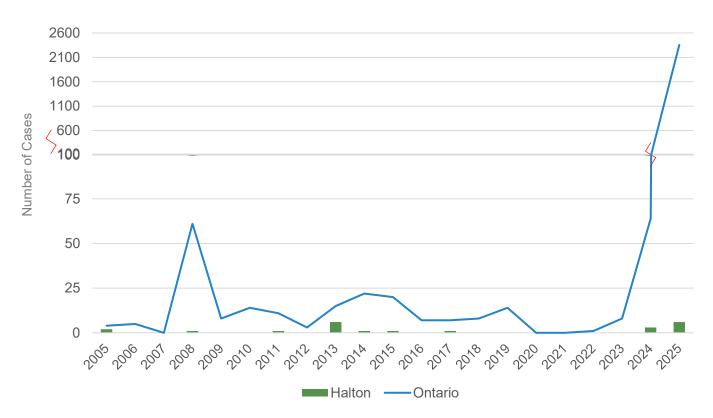


Figure 9: Number of measles cases, Halton and Ontario residents, 2005-Aug 19, 2025



# Enteric and food-borne illnesses (EFBs) summary

Enteric and food-borne illnesses are those that involve gastrointestinal symptoms and are caused by bacteria, parasites, and viruses that contaminate a food and/or water source. Symptoms can vary depending on the cause, but often include vomiting, stomach pain, fever, and diarrhea.

Public Health works to prevent or reduce the burden of enteric and food-borne illnesses in Halton Region. Public Health Inspectors (PHIs) conduct routine compliance inspections of all food premises in Halton, investigate consumer complaints about food premises, ensure timely response to food recalls and reports of food-borne illnesses or outbreaks, and carry out comprehensive risk assessments of all food premises. PHIs also inspect small drinking water systems, and recreational water facilities such as pools and spas, monitor beach water quality, respond to adverse water quality reports, investigate drinking and recreational water complaints, and provide education on private well water safety.

In 2024 there were 548 reported cases of enteric and food-borne illnesses among Halton residents, which accounts for 13% of all DOPHS reported to Public Health (Figure 10). Diseases with an average of less than 5 cases per year are not shown in this figure below. Data was separated into two figures to allow for better visualization since there are many different EFBs. Please see Appendix B for a complete list of cases in 2024.

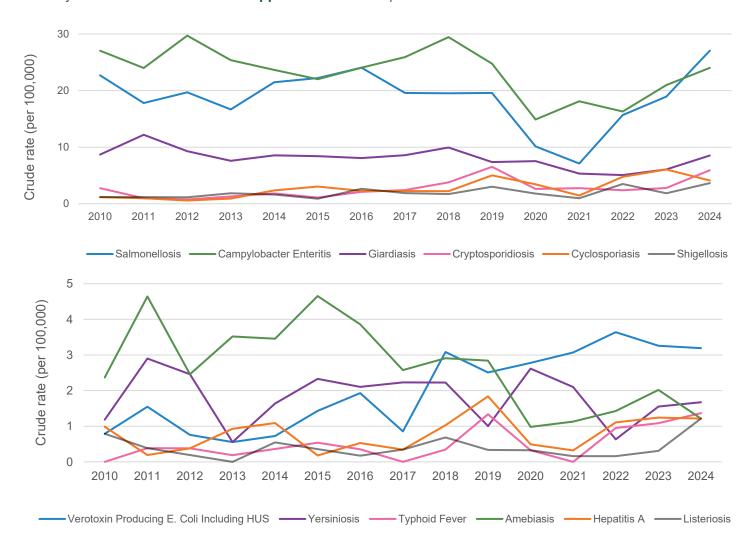


Figure 10: Crude rate (per 100,000) of enteric and food-borne illnesses over time, Halton residents, 2010-2024



# Zoonotic and vector-borne diseases summary

Zoonotic diseases are diseases that can be passed from animals and/or their environments to humans. Vector-borne diseases are spread to people by small organisms such as mosquitoes and ticks. Infection can be caused by any type of agent (bacteria, virus, parasites, etc.), and can be spread through direct contact (contact with the saliva, blood, urine, mucus, feces, or other bodily fluids of an infected animal), indirect contact (contact with the areas where the animal lives such as aquarium tank water, chicken coops, pet food etc.), or through the bite of an infected insect such a tick or mosquito.

Public Health assesses the risk of both West Nile Virus and Lyme disease, ensuring the public is aware of the risk and appropriate ways to protect against the mosquitoes and ticks that cause these diseases. Through collaboration with community and municipal partners, the prevalence of mosquitos is reduced by eliminating standing water sites and larviciding catch basins and standing water when necessary.

In 2024, there were 47 cases of zoonotic and vector-borne diseases reported among Halton residents, representing about 1.1% of all DOPHS reported (**Figure 11**). Many zoonotic and vector-borne diseases are quite rare within Halton and Ontario, with West Nile Virus and Lyme disease the only ones that are regularly reported. Please see **Appendix B** for a complete list of cases in 2024.

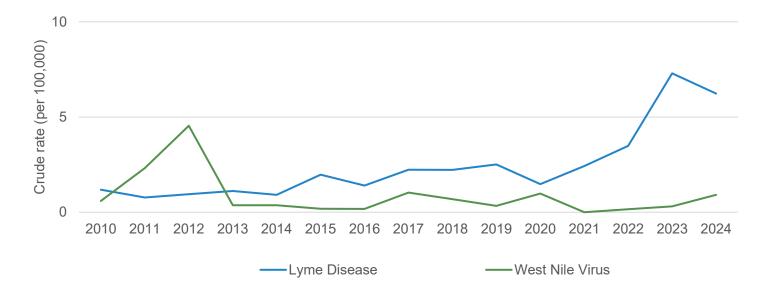


Figure 11: Crude rate (per 100,000) of zoonotic and vector borne diseases over time, Halton residents, 2010-2024



# Neonatal and other infectious diseases summary

In 2024 there was one case of neonatal Group B Streptococcal disease, and 14 cases of other infectious diseases among Halton residents (Figure 12). Neonatal diseases are those that are transmitted to infants during pregnancy or delivery. Neonatal diseases include early congenital syphilis, neonatal Group B Streptococcal disease, ophthalmia neonatorum, and rubella congenital syndrome. Other infectious diseases are those that do not belong to one of the other categories. These diseases include acute flaccid paralysis, encephalitis/meningitis, and Creutzfeldt-Jakob Disease (CJD).

Neonatal Group B Streptococcal disease can be passed to infants during childbirth if the mother is positive for Group B Streptococcus. During pregnancy women are screened, and if positive for Group B Streptococcus, they are given antibiotics during labour and delivery to reduce the chances of transmission to the infant during delivery.

The encephalitis and/or meningitis cases shown in Figure 12 are mostly due to viral cases where the agent found is not another DOPHS already included in this report (for example, West Nile Virus, invasive Meningococcal, or Haemophilus Influenza). Therefore, the causes can be a wide range of viral infections that lead to encephalitis and/or meningitis. Similarly, acute flaccid paralysis can be due to a number of different causative agents, however the symptom itself is what is reportable when the agent is not another DOPHS. Diseases with fewer than an average of 1 case per year are not shown in the figure below. Please see Appendix B for a complete list of cases in 2024.

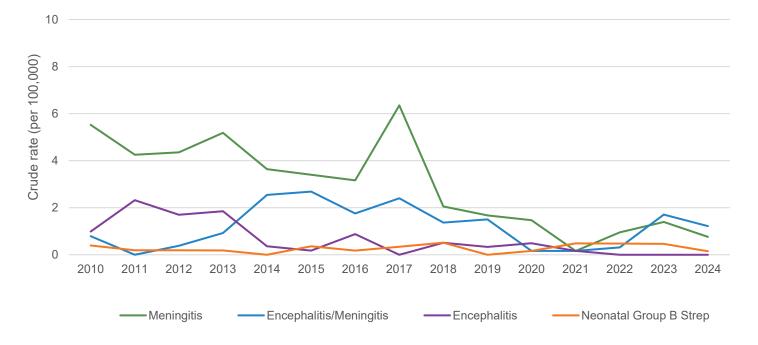


Figure 12: Crude rate (per 100,000) of neonatal and other infectious diseases over time, Halton residents, 2010-2024

# Appendix A: Data notes and limitations

#### **Definitions**

Dissemination areas (DAs) are small geographic units with a population of 400 to 700 persons. DAs are the smallest standard geographic area for which all census data are disseminated. All of Canada is divided into DAs. In the census year 2021, Halton Region was made up of 831 DAs.

#### Neighbourhood income groups:

The 2021 Census profile indicator "in the bottom half of the Canadian distribution" was used as the basis for the neighbourhood income groups. The term "neighbourhood" refers to a single DA. This indicator provides the percent of households per DA who are in the bottom half of the Canadian distribution based on adjusted household income. Using this value, all of the DAs in Canada were ranked into ten equal groups (deciles) and then categorized as low income (deciles 1-3), middle income (deciles 4-7), or high income (deciles 8-10). When looking at Halton alone, this resulted in an unequal number of DAs in each income group (40 DAs in the low-income, 216 in the middleincome and 562 DAs in the high-income group, and 13 DAs where income data was not available due to small counts), since deciles are based on the national ranking.

Each infectious disease case extracted from iPHIS or CCM was assigned to the appropriate DA using the provided postal code along with the postal code conversion file (Postal CodeOM Conversion File (PCCF), 2021). Since the actual income of individuals is not known, and may vary from their neighbourhood income, misclassification of individuals based on their neighbourhood income instead of household income may diminish the association between income and infectious disease incidence. Approximately 6% of infectious disease records from iPHIS were not included in the income analysis due to no postal code being provided, incomplete postal code, or postal code not matching the PCCF file.

All cases of diseases of public health significance diagnosed in Ontario are entered into iPHIS by local public health units. iPHIS is the Integrated Public Health Information System and is a dynamic disease reporting system which allows ongoing updates to data previously entered. As a result, data extracted from iPHIS represent a snapshot at the time of extraction and may differ from previous or subsequent reports.

#### Halton DOPHS/outbreak data:

Ontario Ministry of Health, Integrated Public Health Information System (iPHIS) [2010-2024], extracted April 16, 2025.

#### Halton COVID-19 data:

Ontario Ministry of Health, Public Health Case and Contact Management (CCM) Solution [2020-2024], extracted June 27, 2024.

#### **Ontario DOPHS data:**

Public Health Ontario ID query. Data from Integrated Public Health Information System [2024], extracted by Public Health Ontario [April 16, 2025].

#### Population estimates for Halton and Ontario:

Population Estimates and Projections, IntelliHEALTH, Ontario Ministry of Health [2010-2024], extracted Feb 2025.

# Population estimates by DA and income by DA:

Statistics Canada, 2021 Census of Population.

#### Postal code conversion file:

Postal Code<sup>OM</sup> Conversion File (PCCF), V2203; March 2022.

#### References

1. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Toronto, ON: King's Printer for Ontario; 2025. Measles. Retrieved May 2025, from

https://www.publichealthontario.ca/en/Diseases-and-Conditions/Infectious-Diseases/Vaccine-Preventable-Diseases/Measles

2. Ontario Agency for Health Protection and Promotion (Public Health Ontario). Measles in Ontario (Updated: August 21, 2025). Toronto, ON: King's Printer for Ontario, 2025. Retrieved August 2025, from https://www.publichealthontario.ca/-/media/Documents/M/24/measlesontario-epi-

summary.pdf?sc lang=en&rev=051fdf759aa64c13b42bfc145abc2847 &hash=9A37F9FBC94CFEFDD3FE8C0C2D78CB89

# Appendix A: Data notes and limitations

#### iPHIS data extraction logic

- · Diagnosis status date was used for AIDS cases
- · Encounter date was used for HIV cases
- Diagnosis date was used for tuberculosis cases
- Accurate episode date was used for all other diseases
- Diagnosing health unit = Halton
- Disposition statuses containing "do not use", "duplicate", "does not meet definition" or "entered in error" were not included
- Atypical mycobacterial infection tuberculosis cases were not included

For more information on data extraction logic, see Public Health Ontario's iPHIS <u>data caveats</u> for Query and <u>Metadata</u> document.

#### Limitations

There is likely to be under-reporting of cases, as not all infected individuals may experience symptoms and/or seek medical care, so laboratory testing may not be performed for all cases.

iPHIS and CCM are dynamic disease reporting systems which allow ongoing updates to data previously entered. Therefore, data in this report may differ from previous or subsequent reports and should not be compared to previous versions.

Diagnostic technology has changed over time, therefore changes over time should also be interpreted with caution as they may reflect changes in diagnostic procedures rather than true changes in incidence in the population. For more information on changes in case definitions see the <a href="Infectious Diseases Protocol">Infectious Diseases Protocol</a> (Appendix B).<sup>3</sup>

Estimates are rounded, therefore not all percentages may add up to 100%.

# Appendix B:

# Summary of counts and rates, all DOPHS, Halton and Ontario

The table below summarizes data for all DOPHS with at least one case reported in Ontario in 2024.

For Halton residents, the number of cases in 2024 is provided as well as the crude incidence rate. Age-standardized (AS) incidence rates are presented for Halton and Ontario for 2024. Age-standardized incidence rate ratios (IRRs) are also presented for Halton compared to Ontario in 2024 (N/A indicates there were fewer than five cases in Halton so the IRR was not calculated). An IRR of less than one means Halton has a lower rate than Ontario, and an IRR above one means Halton has a higher rate than Ontario. An IRR of one means Halton and Ontario have the same rate. Not all differences indicate a statistically significant difference. IRRs in green with a down arrow ( $\downarrow$ ) indicate that the age-standardized rate was statistically significantly lower in Halton compared to Ontario, and an IRR in red with an up arrow ( $\uparrow$ ) indicate that the age-standardized rate was statistically significantly higher in Halton compared to Ontario.

DOPHS	Count	Halton Crude rate	Halton AS rate	Ontario AS rate	IRR
Vaccine Preventable Diseases					
Chickenpox (Varicella)	30	4.6	4.4	5.1	0.9
Invasive Haemophilus Influenzae Disease	12	1.8	1.7	2.0	0.8
Invasive Meningococcal Disease	2	0.3	0.3	0.2	N/A
Measles	3	0.5	0.4	0.4	N/A
Mumps	1	0.2	0.1	0.7	N/A
Pertussis (Whooping Cough)	36	5.5	5.2	11.9	0.4 (\)
Invasive Streptococcus Pneumoniae	30	4.6	4.5	10.9	0.4 (\psi)
Tetanus	0	0.0	0.0	0.02	N/A
Sexually Transmitted and Blood Borne Diseases (STBBI)					
AIDS	0	0.0	0.0	0.3	N/A
Chlamydia	1041	158.2	165.4	254.7	0.6 (↓)
Gonorrhea	276	41.9	44.5	82.1	0.5 (↓)
Hepatitis B	0	0.0	0.0	12.8	N/A
Hepatitis C	89	13.5	14.0	19.7	0.7 (↓)
HIV	30	4.6	4.8	7.3	0.6 (↓)
Infectious Syphilis	51	7.8	8.2	17.9	0.5 (↓)
Syphilis, Other	65	9.9	10.4	15.6	0.7 (↓)
Respiratory and Close Contact					
Blastomycosis	1	0.2	0.2	0.72	N/A
COVID-19	891	135.4	132.0	145.84	0.9 (↓)
Carbapenemase-producing Enterobacteriaceae (CPE)	32	4.9	4.8	5.92	0.8
Invasive Group A Streptococcal (iGAS) Disease	35	5.3	5.2	10.98	0.5 (↓)
Influenza	1054	160.2	153.5	112.30	1.4 (↑)
Legionellosis	25	3.8	3.8	2.21	1.7 (↑)
Мрох	8	1.2	1.3	1.78	0.7
Tuberculosis	18	2.7	2.7	5.92	0.5 (\psi)

# Appendix B: Summary of counts and rates, all DOPHS, Halton and Ontario

DOPHS	Count	Halton Crude rate	Halton AS rate	Ontario AS rate	IRR
Enteric and Food-borne Illnesses					
Amebiasis	8	1.2	1.2	1.80	0.7
Campylobacter Enteritis	158	24.0	24.2	17.65	1.4 (↑)
Cholera	0	0.0	0.0	0.01	N/A
Cryptosporidiosis	39	5.9	6.0	5.41	1.1
Cyclosporiasis	27	4.1	4.2	2.70	1.5 (↑)
Giardiasis	56	8.5	8.7	8.57	1.0
Hepatitis A	8	1.2	1.2	0.81	1.5
Listeriosis	8	1.2	1.2	0.75	1.6
Paratyphoid Fever	1	0.2	0.2	0.42	N/A
Salmonellosis	178	27.1	26.62	17.18	1.5 (↑)
Shigellosis	24	3.6	3.6	2.15	1.7 (↑)
Typhoid Fever	9	1.4	1.3	0.88	1.5
Verotoxin Producing E. Coli Including HUS	21	3.2	3.2	1.59	2.0 (↑)
Yersiniosis	11	1.7	1.7	1.62	1.0
Zoonotic and Vector-borne Illnesses					
Brucellosis	0	0.0	0.0	0.1	N/A
Hemorrhagic Fevers	0	0.0	0.0	0.03	N/A
Lyme Disease	41	6.2	6.3	14.5	0.4 (\)
Q Fever	0	0.0	0.0	0.1	N/A
Rabies	0	0.0	0.0	0.01	N/A
Trichinosis	0	0.0	0.0	0.01	N/A
West Nile Virus Illness	6	0.9	0.9	0.5	1.8
Neonatal Diseases					
Neonatal Group B Streptococcal Disease	1	0.2	0.2	0.2	N/A
Ophthalmia Neonatorum	0	0.0	0.0	0.02	N/A
Early Congenital Syphilis	0	0.0	0.0	0.2	N/A
Other Illnesses					
Acute Flaccid Paralysis	1	0.2	0.1	0.04	N/A
Creutzfeldt-Jakob Disease, All Type	0	0.0	0.0	0.1	N/A
Encephalitis	0	0.0	0.0	0.2	N/A
Encephalitis/Meningitis	8	1.2	1.4	1.5	0.9
Meningitis	5	0.8	0.9	1.0	0.9

# Appendix C: List of diseases of public health significance

#### **Sexually Transmitted & Blood-borne Infections**

**AIDS** 

Chancroid

Chlamydial Infections

Gonorrhoea

Hepatitis B

Hepatitis C

HIV

Syphilis (infectious)

Syphilis (other)

#### **Vaccine Preventable Diseases**

Chickenpox (Varicella)

Diphtheria

Invasive Haemophilus Influenzae Disease, All Types

Invasive Meningococcal Disease

Invasive Streptococcus Pneumoniae

Measles

Mumps

Pertussis (Whooping Cough)

Poliomyelitis (acute)

Rubella

**Smallpox** 

**Tetanus** 

#### **Enteric and Food-borne Diseases**

**Amebiasis** 

**Botulism** 

Campylobacter Enteritis

Cholera

Cryptosporidiosis

Cyclosporiasis

Giardiasis

Hepatitis A

Listeriosis

Paralytic Shellfish Poisoning

Paratyphoid Fever

Salmonellosis

**Shigellosis** 

Trichinosis

Typhoid Fever

Verotoxin Producing E. Coli (VTEC), including HUS

Yersiniosis

#### **Respiratory/Close Contact**

Blastomycosis

Carbapenemase-producing Enterobacteriaceae (CPE)

COVID-19 (deaths only as of June 2024)

Invasive Group A Streptococcal Disease (iGAS)

Influenza

Legionellosis

Leprosy

Mpox

Severe Acute Respiratory Syndrome (SARS)

Tuberculosis (TB)

#### **Zoonotic and Vector-borne**

Anaplasmosis

**Anthrax** 

Babesiosis

Brucellosis

Echinococcus Multilocularis Infection

Hantavirus Pulmonary Syndrome

Hemorrhagic Fevers

Lyme Disease

Plague

Powassan Virus

Psittacosis/Ornithosis

Q Fever

Rabies

Tularemia

West Nile Virus

#### **Neonatal**

Early Congenital Syphilis

Neonatal Group B Streptococcal Disease

Ophthalmia Neonatorum

Rubella, Congenital Syndrome

#### Other

Acute Flaccid Paralysis

Encephalitis/Meningitis

Creutzfeldt-Jakob Disease (CJD)