



**NOTIFIABLE DISEASES IN NOVA SCOTIA
2023 SURVEILLANCE REPORT**

ACKNOWLEDGEMENTS

Provincial notifiable disease surveillance would not be possible without the timely and complete case reporting by health care providers, public health professionals, and laboratories within the province. The Nova Scotia Department of Health and Wellness extends its thanks to all those whose contributions have helped make this report possible.

For questions regarding this report, contact:

Nova Scotia Department of Health and Wellness
PO Box 488
Halifax, NS B3J 2R8

Email: surveillancedhw@novascotia.ca

TABLE OF CONTENTS

2023 HIGHLIGHTS	4
INTRODUCTION	5
METHODS	6
LIMITATIONS	8
2023 SPOTLIGHT DISEASES	9
Gonorrhea	9
Invasive Group A Streptococcal Disease (iGAS).....	11
Invasive Pneumococcal Disease (IPD)	15
Invasive Listeriosis.....	18
Lyme Disease	21
2023 REPORTABLE DISEASES IN NOVA SCOTIA BY DISEASE GROUP	24
Bloodborne Pathogens	24
Acquired Immune Deficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV).....	24
Hepatitis B (Acute and Chronic)	25
Hepatitis C	25
Direct Contact, Respiratory Routes, and Through the Provision of Health Care	25
Health Care Associated Infections	25
Clostridium difficile	25
Methicillin Resistant Staphylococcus Aureus (MRSA)	25
Vancomycin-Resistant Enterococcus (VRE)	26
Direct Contact and Respiratory Route	26
Legionellosis	26
Invasive Meningococcal Disease	26
Tuberculosis	26
Other Direct Contact and Respiratory Route Pathogens	26
Enteric, Foodborne, and Waterborne Disease	26
Campylobacteriosis	27
Cryptosporidiosis.....	27
Giardiasis	27
Hepatitis A.....	27
Salmonellosis.....	27
Verotoxigenic E. coli (VTEC).....	27
Other Enteric Diseases	27
Sexually Transmitted Infections	28
Chlamydia.....	28
Syphilis (Infectious, Non-Infectious, and Unable to Stage)	28
Vaccine Preventable Diseases	28
Pertussis	28
Mpox	28
Other Vaccine Preventable Diseases	28
Vector-borne and Other Zoonoses	28
Anaplasmosis.....	28
Babesiosis	29
Other Vector-borne and Zoonoses.....	29
REFERENCES	30
APPENDIX A – Notifiable Diseases in Nova Scotia	31
APPENDIX B – List of Tables	32

2023 HIGHLIGHTS

There were 8,555 cases of notifiable disease reported to Nova Scotia public health in 2023, excluding influenza and COVID-19¹. There was an increase in the total number of notifiable disease cases in 2023 compared to 2022 (N=5,344), as well as compared to 2018 (pre-pandemic, N=6,720). This increase can be partially attributed to higher case counts, on average, of notifiable diseases reported in Nova Scotia; additionally, in 2023, four diseases were added to the list of reportable diseases in Nova Scotia (totaling 319 cases in 2023), and the methodology for counting confirmed Lyme disease cases changed.

Sexually transmitted infections (STIs) accounted for 37.3% of all notifiable disease cases reported in Nova Scotia in 2023, excluding influenza and COVID-19. Chlamydia, an STI, was the most frequently reported disease (n=2,730) overall, followed by Lyme disease (n=2,058), and *Clostridium difficile* (n=978). In 2023, tickborne diseases accounted for 27.8% of all notifiable disease cases, excluding influenza and COVID-19.

In 2023, there were two health care facility outbreaks of methicillin-resistant *Staphylococcus aureus* (MRSA), and three health care facility outbreaks of vancomycin-resistant enterococcus (VRE). There was also one MRSA outbreak in a congregate/communal living setting. The rate of MRSA cases in 2023 (63.2 cases per 100,000 population) was higher than in 2022 (55.6 cases per 100,000 population), but similar to pre-pandemic rates. The rate of reported cases of VRE tripled from 2022 (2.1 cases per 100,000 population) to 2023 (6.3 cases per 100,000 population).

Mpox, anaplasmosis, babesiosis, and Powassan virus disease were the four diseases added to the notifiable disease list in 2023. There was one case of mpox, 316 cases of anaplasmosis, 2 cases of babesiosis, and 0 cases of Powassan virus disease reported in 2023.

Methodology for counting Lyme disease cases changed in 2023. Prior to 2023, public health staff created investigations for reported cases of Lyme disease, including classifying cases as probable or confirmed, and documenting clinical evidence of disease. In 2023, the case definition was updated to rely only on positive laboratory results for Lyme disease surveillance, and not require clinical confirmation to be deemed a case. A key rationale for this change is because of known under-reporting of clinical evidence. Since the revised case definition relies only on laboratory data, Lyme disease case counts increased substantially in 2023. These numbers should not be compared to prior years' counts due to the change in case definition.

¹ Influenza and COVID-19 cases are reported in Respiratory Watch, which can be found at: [CDPC - Respiratory Watch Report | novascotia.ca](#). Prior to the 2023/2024 season, COVID-19 was reported separately; these reports can be found here: [Coronavirus \(COVID-19\): alerts, news and data - Government of Nova Scotia, Canada](#).

INTRODUCTION

Surveillance is defined as the “systematic and continuous collection, analysis, and interpretation of data, closely integrated with the timely and coherent dissemination of the results and assessment to those who have the right to know so that action can be taken.” (1)

In Nova Scotia, surveillance of notifiable diseases is governed by the provincial *Health Protection Act*, which mandates the reporting of notifiable diseases by many partners within the public health system and the health system as a whole (2). The list of notifiable diseases changes over time and the current list can be found in Appendix A. In 2023, three tickborne diseases (anaplasmosis, babesiosis, and Powassan virus disease) and one vaccine preventable disease (mpox) were added to Nova Scotia’s notifiable disease list.

The purpose of this report is to describe the number and rate of notifiable diseases reported in Nova Scotia in 2023 and to describe trends in notifiable diseases across zones, age groups, sex, and over time. The report was compiled by the Nova Scotia Department of Health and Wellness (DHW). It includes highlights of notifiable disease data for 2023, examines important trends for 2018-2023, and provides comparisons with national data where available.

METHODS

In Nova Scotia, reporting of notifiable disease cases is mandated by the *Health Protection Act* (2). As part of case management, public health staff document information about notifiable disease cases that can include demographic, clinical, exposure, risk factor, treatment, and laboratory information. Specific data collected varies by disease.

Cases are classified based on standard case definitions and are reported to the Nova Scotia Department of Health and Wellness (DHW), for provincial public health surveillance purposes, through the electronic public health information system, Panorama. Panorama was implemented provincially in 2018 and contains data on case classification, as well as demographic, clinical, and risk factor information.² For the current report, all case data, including age, sex, and zone were extracted between January 1st, 2018, to December 31st, 2023, from Panorama and are current as of July 9th, 2024.

Further information on the case definitions, reporting procedures, and forms can be found in the Nova Scotia [Surveillance Guidelines for Notifiable Diseases and Conditions](#) (3). Information on public health case management and control measures can be found in the Nova Scotia [Communicable Disease Control Manual](#) (4).

Cases of notifiable diseases are generally reported based on their place of residence (e.g., zone) at the time of diagnosis, with some exceptions. For more information on the guidelines for reporting and counting of cases, refer to the [Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions](#) (3). For chronic infectious conditions (e.g., HIV), only residents with a first-time diagnosis in Nova Scotia are included in this report. If information on previous diagnosis for a case is not available, these cases are counted as Nova Scotia cases.

Cases are assigned to a year, which runs from January 1st to December 31st, based on episode date. The episode date corresponds to the earliest known date associated with the disease episode, reflecting symptom onset date (if applicable), or the closest available date (specimen collection date, clinical diagnosis date, or test result date).

Only cases meeting a confirmed case definition are included in this report. The majority of notifiable diseases are investigated by public health. As part of this process, public health staff classify cases according to the case definitions found in the Surveillance Guidelines (3), and available information is entered in Panorama for each case. For a subset of diseases, surveillance relies on positive laboratory results from the Provincial Public Health Laboratory Network only. For these diseases, analytical code is used to apply inclusion and exclusion criteria to verify that the lab results meet case definition. There are limitations to this method, and it is possible that cases of diseases under laboratory-only surveillance are mis-classified (i.e., a result is excluded when it should have been included, or vice versa). Diseases currently under laboratory-only surveillance in Nova Scotia include anaplasmosis, chlamydia, *Clostridium difficile*, COVID-19, influenza, invasive pneumococcal disease (IPD), Lyme disease, MRSA, and VRE.

² Data collected prior to the implementation of Panorama were housed in the Application for Notifiable Disease Surveillance (ANDS) and the Application for Notifiable Disease Surveillance and Immunization (ANDI); these were merged in Panorama in 2018.

Diseases are grouped into six categories, primarily according to their route of transmission (e.g., through blood or bodily fluids). The exception is vaccine preventable diseases, which are diseases that can be prevented through vaccination. It should be noted that some diseases in other categories are also vaccine preventable (i.e., hepatitis B, meningococcal and pneumococcal diseases). In addition, two non-specific syndromes are included: bacterial meningitis and acute flaccid paralysis.

All Canadian notifiable disease data presented in this report were obtained from the Public Health Agency of Canada (PHAC) (5). Rates are presented by year for the population overall; by sex and age groups, and by each of the four Health Management Zones (Figure 1). The zone numbers correspond to the following health management areas: Western (Zone 1), Northern (Zone 2), Eastern (Zone 3), and Central (Zone 4). The [2023 Census population](#) (6) was used to calculate rates per 100,000 overall and by sex and age group; the [2022 Census population](#) (7) was used for the rate calculation by zone, as this was the most recent available source for this data at the zone level.

Additional analyses and interpretation were provided for select notifiable diseases (i.e., spotlight diseases). These diseases were selected based on recent shifting epidemiologic trends either provincially or nationally. In depth trends for these diseases are presented from 2018 and onwards. Appendix B includes data tables with case counts and rates per 100,000 population over time (Table B1), by health zone (Table B2), age group (Table B3), and sex (Table B4).

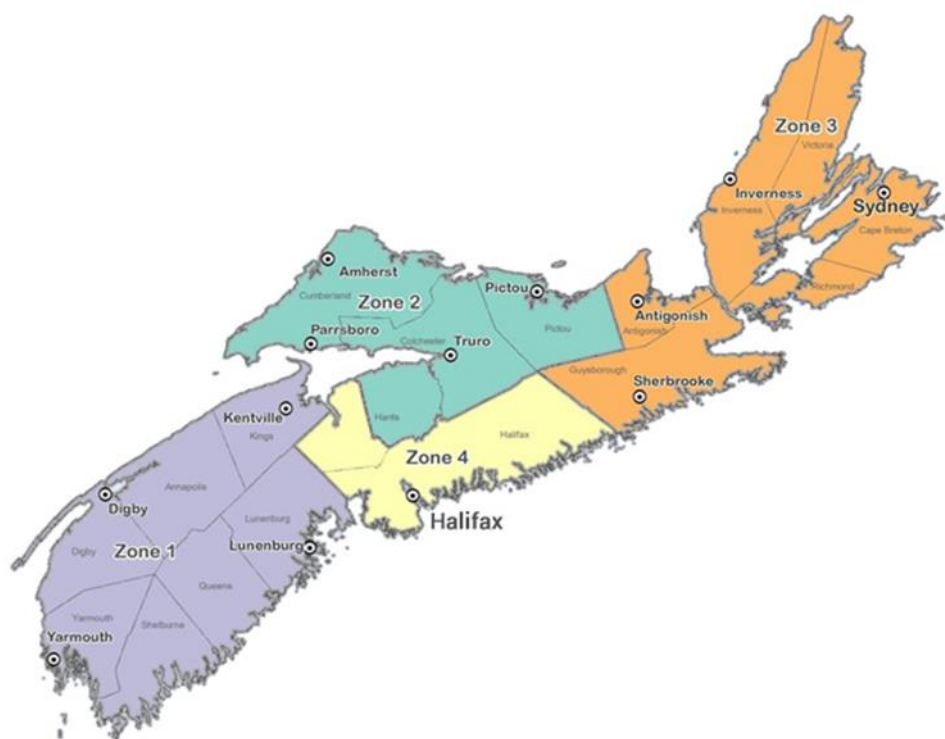


Figure 1. Map of Health Management Zone boundaries, Nova Scotia

LIMITATIONS

The numbers cited in this report reflect only those cases that are reported to Public Health within Nova Scotia and may under-represent the true number of cases in the population. This is more likely for diseases that may remain asymptomatic (e.g., chlamydia) and those that have a wide clinical spectrum (e.g., Lyme disease, influenza). Diseases where the illness is almost always severe are more likely to present for medical care and be diagnosed and reported to public health (e.g., invasive meningococcal disease). As a result, these diseases are likely well-captured in the surveillance data. Additional limitations in surveillance data may also be present for specific diseases (e.g., misclassification of hepatitis B cases as acute or chronic) and for laboratory-only diseases, as discussed in the previous section.

Positive cases reported to public health who were tested anonymously (e.g., from anonymous HIV testing programs) are not included in this report. Anonymous positive test results are not routinely reported to public health. For HIV, cases must be tested nominally before receiving treatment for their infection, so it is assumed that most HIV cases who first test anonymously are reported nominally to public health and, in turn, are included in the provincial surveillance data.

Changes in case finding procedures (e.g., changes to laboratory testing methods, access to testing, or case definitions) may result in an increase or decrease in the number of reported cases that may not be reflective of true changes in disease occurrence within the province. An example of this is the change in the Lyme disease case definition in 2023, moving to a laboratory only surveillance system

Rates based on small numbers may be unstable and should be interpreted with caution throughout this report. This particularly affects diseases that have small overall case counts, and when disease counts are investigated in sub-populations (e.g., age-specific rates).

Trends in disease measures during the pandemic years (2020 to 2022) may not be comparable with the time periods before and after these years. Impacts of the pandemic may have included: reduced access to testing and diagnosis, change in healthcare seeking behaviours, as well as reduced public health capacity to carry out certain investigations. This may result in underestimation of rates of some diseases during this time. Additionally, reduced social mixing and fewer students living in dormitories where universities switched to virtual learning likely resulted in a true decrease for some diseases. Different diseases would have been affected differently; diseases with severe manifestations would be less likely to remain undiagnosed compared to less severe diseases or those that may remain asymptomatic. While we cannot quantify the exact impact of this combination of factors, data from the pandemic years should be interpreted with caution, especially when looking at trends over time spanning this period.

Since Panorama is a real-time public health surveillance system, numbers and rates reported here are expected to change slightly as information is updated. National notifiable disease data from PHAC that are used in this report are also subject to change.

2023 SPOTLIGHT DISEASES

Gonorrhoea

Gonorrhoea is a bacterial sexually transmitted infection. In Canada, rates have been rising since the mid-1990s (5). Gonorrhoea is often asymptomatic but may still result in serious complications. While gonorrhoea is treatable with antibiotics, resistance to multiple classes of antibiotics has been increasing, which impacts the number of treatment options available.

There were 359 cases of gonorrhoea reported in Nova Scotia in 2023 (33.9 cases per 100,000 population), which is the highest rate reported since 2018. The reported rate of gonorrhoea in Nova Scotia was below the Canadian rate from 2018-2022 but followed a similar pattern through time (Figure 2).

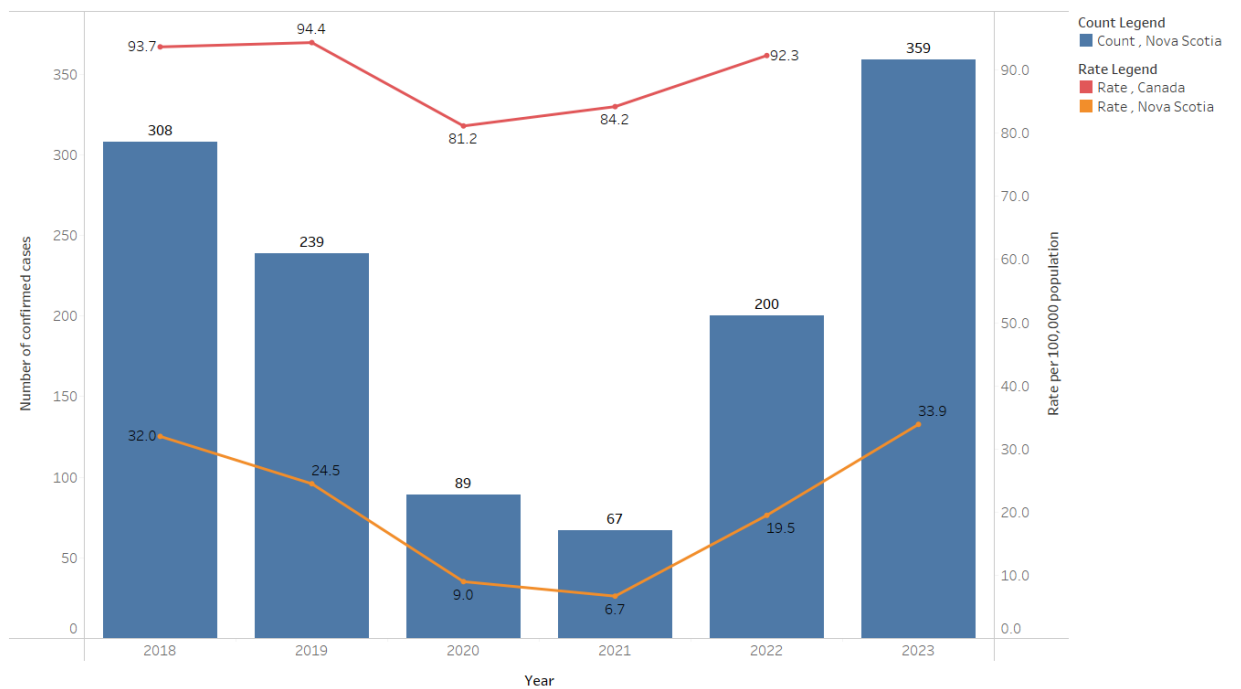


Figure 2. Number and rate per 100,000 population of confirmed gonorrhoea cases by year in Nova Scotia, 2018-2023

The sex-specific rate of gonorrhoea among males was 40.9 per 100,000 population in 2018, and then decreased for 3 years to reach its lowest point in 2021 (5.7 per 100,000 population). Since then, it has risen sharply to 46.8 cases per 100,000 population in 2023. The 2023 rate among males is also higher than the 2018 rate of 40.9 cases per 100,000 per population. The rate among males was over 2 times the rate among females in 2023; the rate among females in 2023 (21.3 cases per 100,000 population) was lower than the 2018 rate of 23.5 cases per 100,000 population (Figure 3).

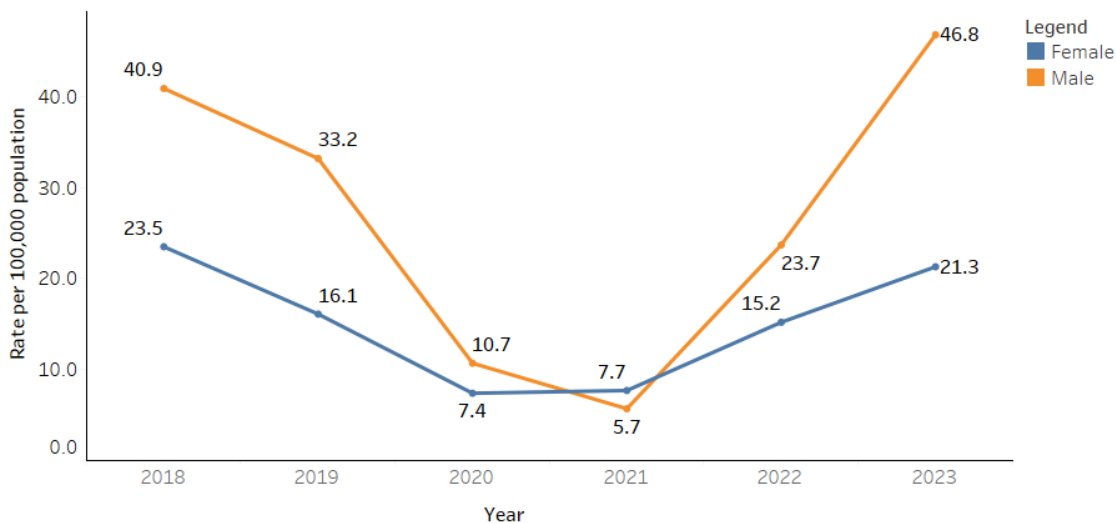


Figure 3. Rate per 100,000 population of confirmed gonorrhea cases by sex and year in Nova Scotia, 2018-2023

The 15-24-year-old age group had the highest age-specific rate of gonorrhea per 100,000 population over the majority of years from 2018 to 2023, closely followed by the 25-39-year-old age group. All other age groups had substantially lower rates over the time period, with no cases in the 0-4-year-old age group (Figure 4).

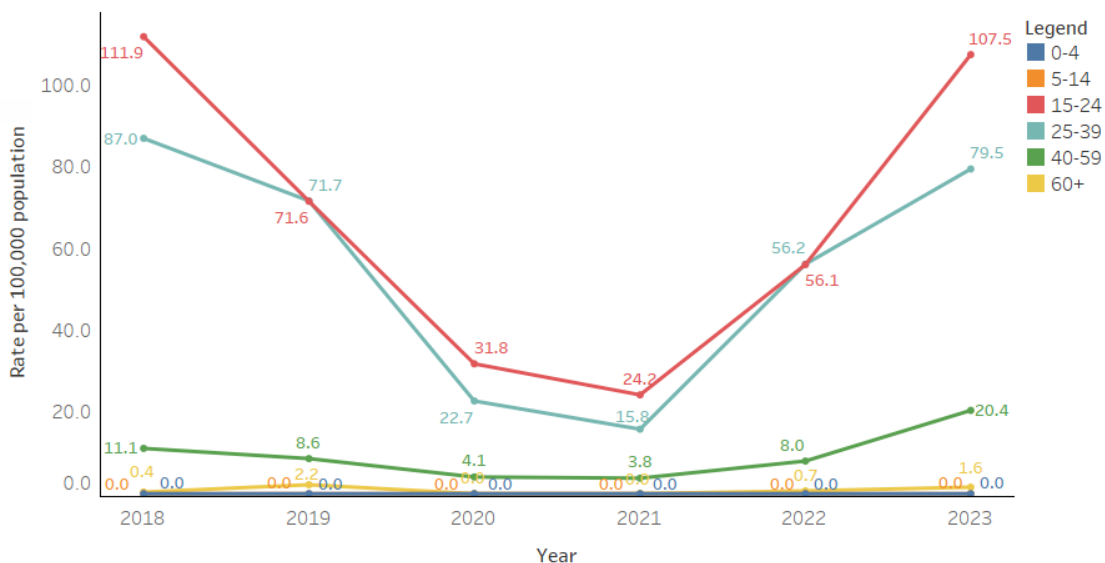


Figure 4. Rate per 100,000 population of confirmed gonorrhea cases by age group and year in Nova Scotia, 2018-2023

Central zone had the highest rate of gonorrhea in all years since 2018. In 2023, the rate of 55.0 cases per 100,000 population was over twice the rate of any other zone, and 5.5 times higher than the rate of 9.9 cases per 100,000 population in Northern zone (Figure 5).

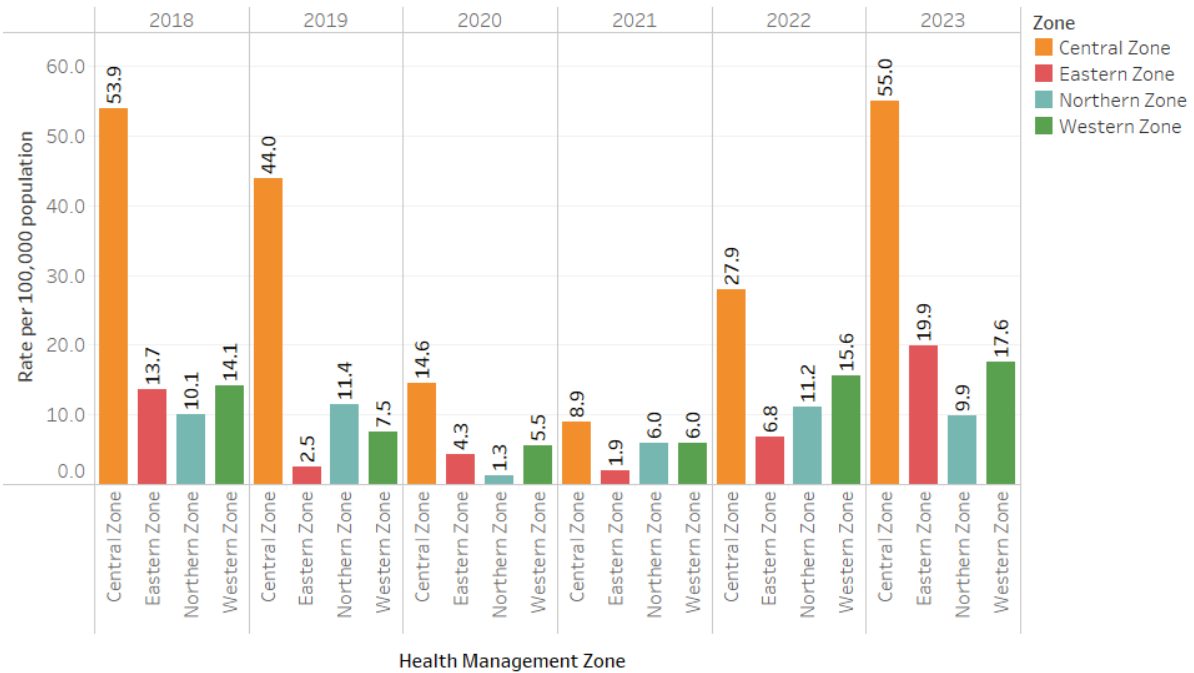


Figure 5. Rate per 100,000 population of confirmed gonorrhea cases by health zone and year in Nova Scotia, 2018-2023

Invasive Group A Streptococcal Disease (iGAS)

Group A streptococcus (GAS) is a common bacterium that can cause diseases including strep throat or skin infections. Occasionally, GAS infections can be severe and life threatening, causing “invasive” disease (iGAS). iGAS is more common in children under 5 years and adults 65 years and older, as well as individuals with other risk factors, such as having a weakened immune system, or living in congregate settings. Prior to 2019, cases had been rising slowly in Canada (5). After a decline during the pandemic years, iGAS rates have risen sharply in Canada (8) and globally.

There were 103 cases of iGAS reported in Nova Scotia in 2023 (9.7 cases per 100,000 population), which is the highest rate reported during 2018-2023, and 1.5 times the 2019 rate of 6.5 cases per 100,000 population. The reported rate of iGAS in Nova Scotia was below the Canadian rate from 2018-2022 (Figure 6).

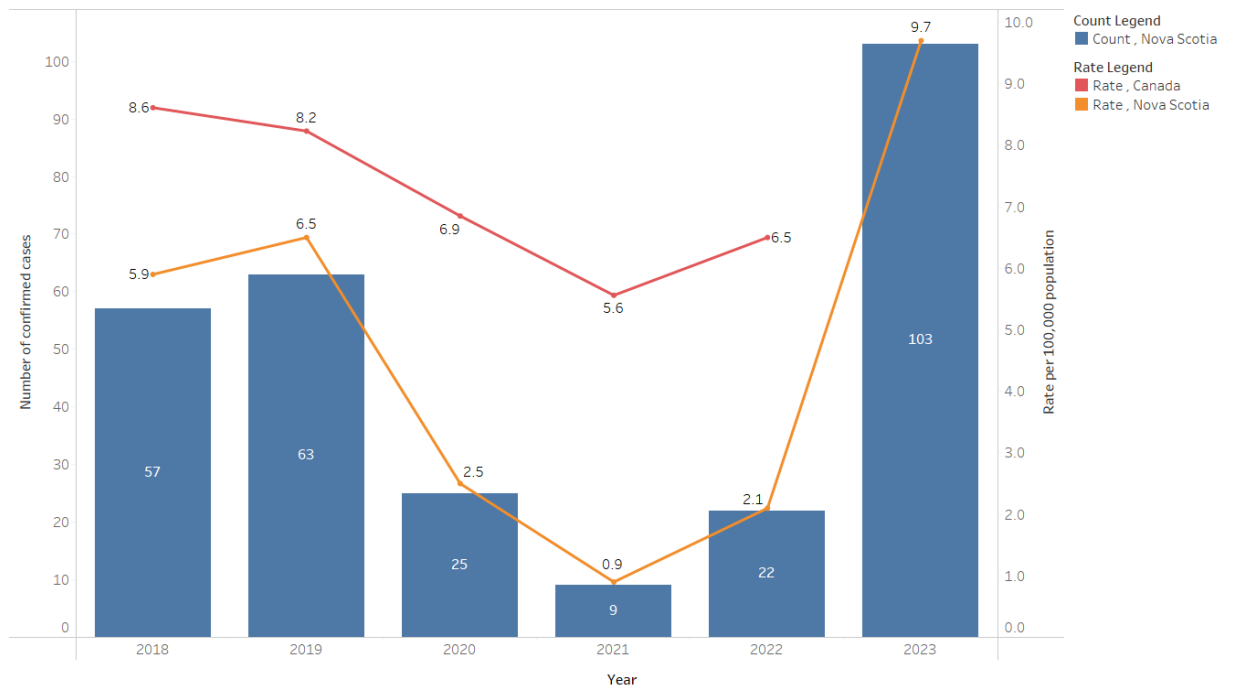


Figure 6. Number and rate per 100,000 population of confirmed iGAS cases by year in Nova Scotia, 2018-2023

Sex-specific iGAS rates per 100,000 population among males and females has followed a similar pattern since 2018, with males typically having slightly higher rates. The rate among both males and females rose substantially between 2022 and 2023, and the 2023 rates per 100,000 population are 1.7 times higher for males and 1.6 times higher for females compared to 2018 rates (Figure 7).

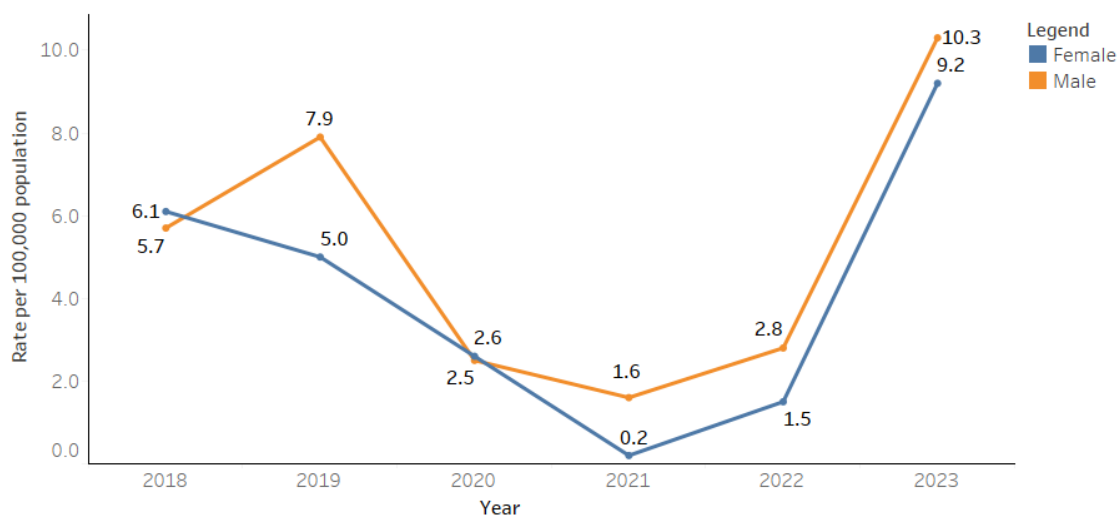


Figure 7. Rate per 100,000 population of confirmed iGAS cases by sex and year in Nova Scotia, 2018-2023

In 2023, the highest iGAS age-specific rates per 100,000 population were in the 0-4-year-old and 60+ age groups; rates were lowest in the 15-24-year-old age group. Rates increased for all age groups in 2023 compared to 2022, but the 15-24-year-old age group had the smallest increase. Compared to 2018, 2023 rates are higher for all age groups except for the 5-14-year-old and 14-24-year-old age groups (Figure 8).

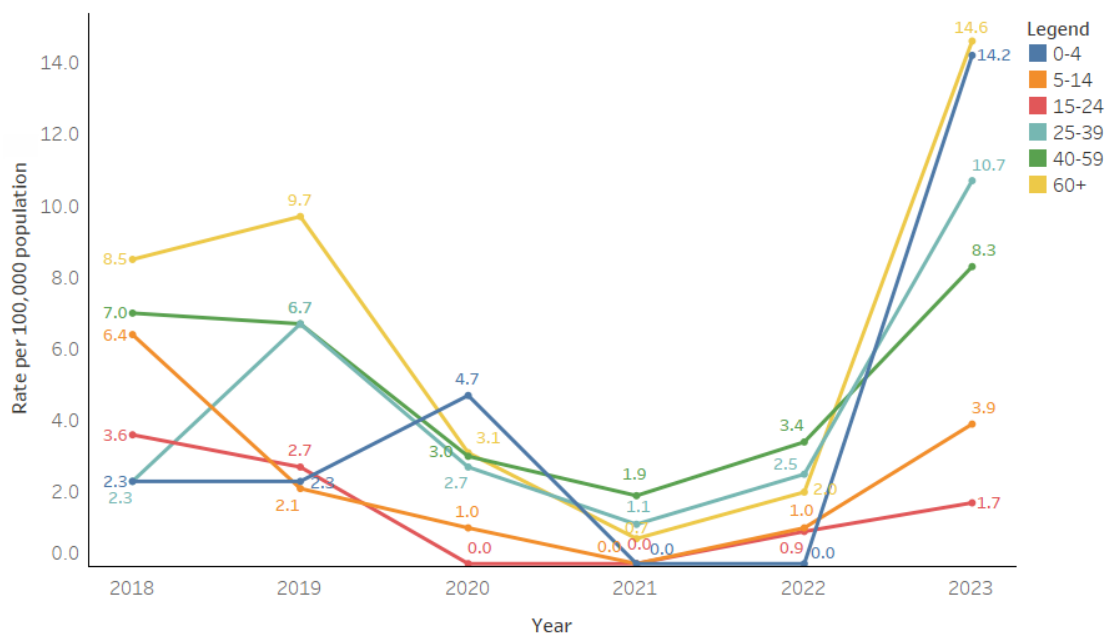


Figure 8. Rate per 100,000 population of confirmed iGAS cases by age group and year in Nova Scotia, 2018-2023

iGAS rates have fluctuated by zone since 2018, with Eastern zone having the highest rate per 100,000 population in 2019, 2021, and 2022; in 2023 Eastern zone had the second highest rate (12.4 cases per 100,000 population) after Northern zone (12.5 cases per 100,000 population). Compared to 2018, the 2023 iGAS rates were higher in all zones except Western zone (Figure 9).

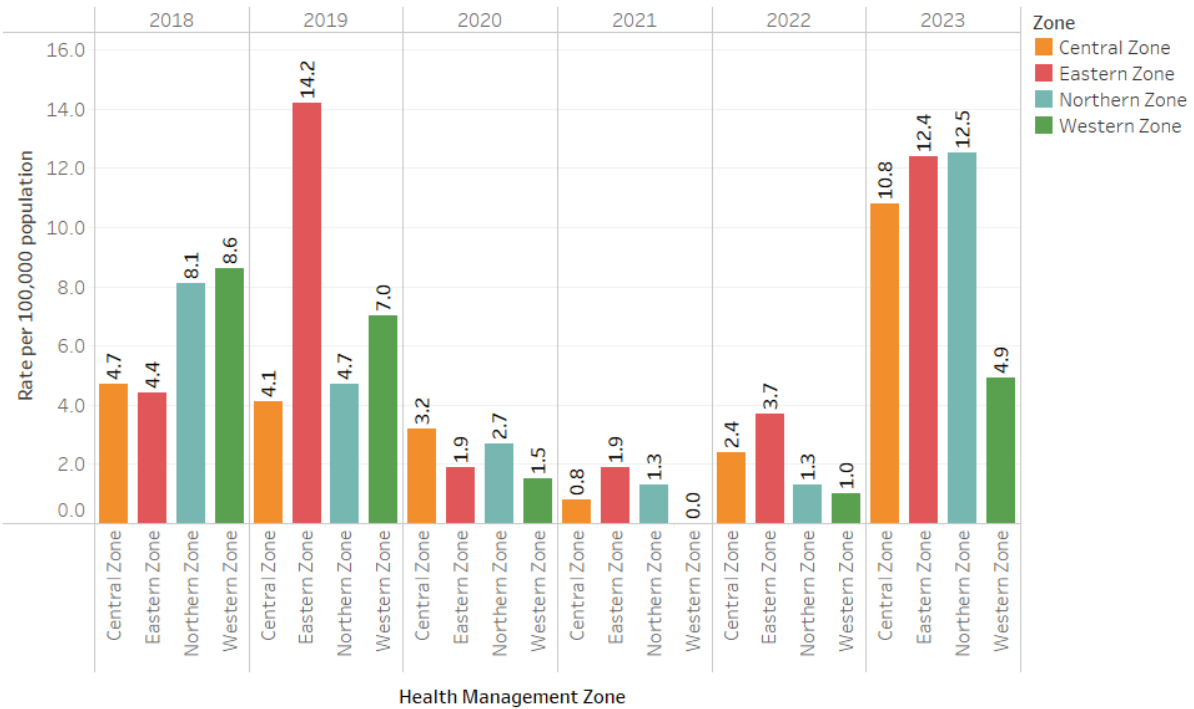


Figure 9. Rate per 100,000 population of confirmed iGAS cases by health zone and year in Nova Scotia, 2018-2023

iGAS is a severe disease, often requiring hospitalization, and can result in death. Among 279 cases reported in Nova Scotia between 2018 and 2023, 154 (55.2%) required hospitalization, 50 (17.9%) required a stay in the ICU, and 22 (7.9%) resulted in death. 33 cases (11.8%) recovered without needing to be hospitalized, and outcome information was missing for 20 cases (7.2%) (Figure 10). All cases with missing outcome data occurred in 2018 and may be related to the transition to Panorama in that year.

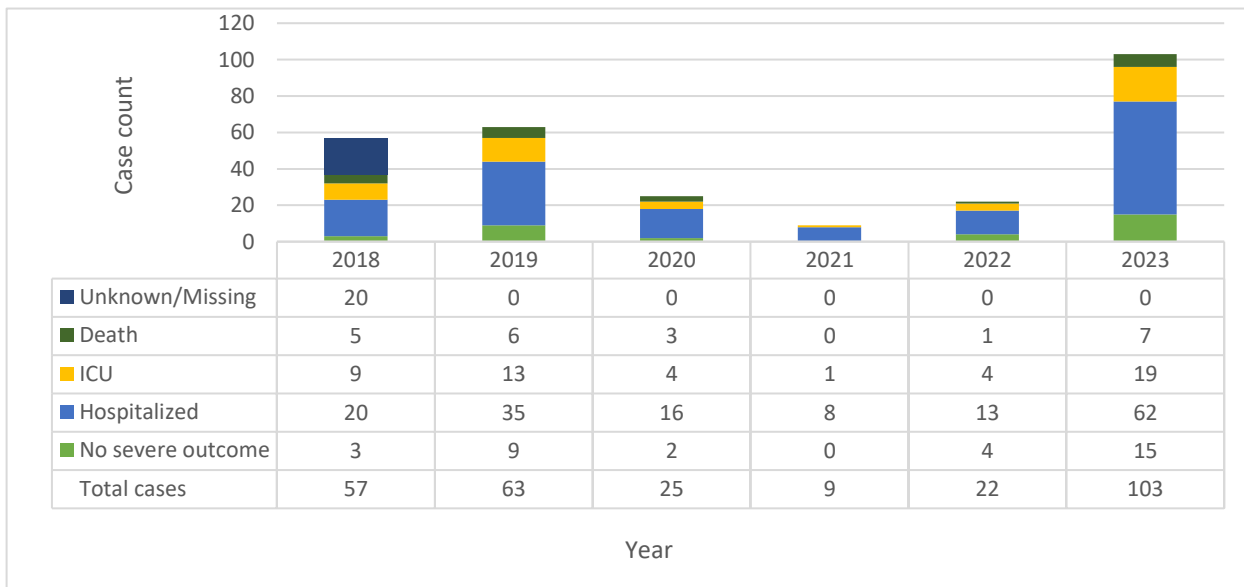


Figure 10. iGAS case outcomes³, 2018-2023, Nova Scotia.

³ Outcome information refers to the most severe outcome for a case. If someone was hospitalized, and later died, they are counted as a death in this report.

Among the 103 cases in 2023, 14.6% recovered without hospitalization, 60.2% were hospitalized, 18.5% required an ICU admission, and 6.8% died. Among the 36 iGAS cases aged 65 years and older, 13.9% died from their infection. There were no deaths among cases under 50 years of age. All 6 cases among children aged 0-4 years required hospitalization (Table 1).

Age group	Outcome				Total cases
	No severe outcome	Hospitalized	ICU	Death	
0-4	0 (0.0%)	6 (100%)	0 (0.0%)	0 (0.0%)	6 (100%)
5-14	1 (25.0%)	2 (50.0%)	1 (25.0%)	0 (0.0%)	4 (100%)
15-49	11 (30.6%)	20 (55.6%)	5 (13.9%)	0 (0.0%)	36 (100%)
50-64	1 (4.8%)	13 (61.9%)	5 (23.8%)	2 (9.5%)	21 (100%)
65+	2 (5.6%)	21 (58.3%)	8 (22.2%)	5 (13.9%)	36 (100%)
Total	15 (14.6%)	62 (60.2%)	19 (18.5%)	7 (6.8%)	103 (100%)

Table 1. Outcomes³ by age for 2023 iGAS cases, Nova Scotia.

Invasive Pneumococcal Disease (IPD)

Invasive pneumococcal disease (IPD) is a bacterial infection that causes serious disease. It is more common in the very young, the elderly, and among other risk groups including individuals with certain medical conditions or who are underhoused/experiencing homelessness. Vaccination can protect against some of the serotypes of the bacterium that causes IPD, and is publicly funded for certain [risk groups](#) in Nova Scotia.

There were 97 cases of IPD reported in Nova Scotia in 2023 (9.2 cases per 100,000 population), which is the highest rate reported during 2018-2023, but very similar to the 2019 rate of 9.0 cases per 100,000 population. The reported rate of IPD in Nova Scotia was below the Canadian rate from 2018-2022 but followed a similar pattern through time (Figure 11).

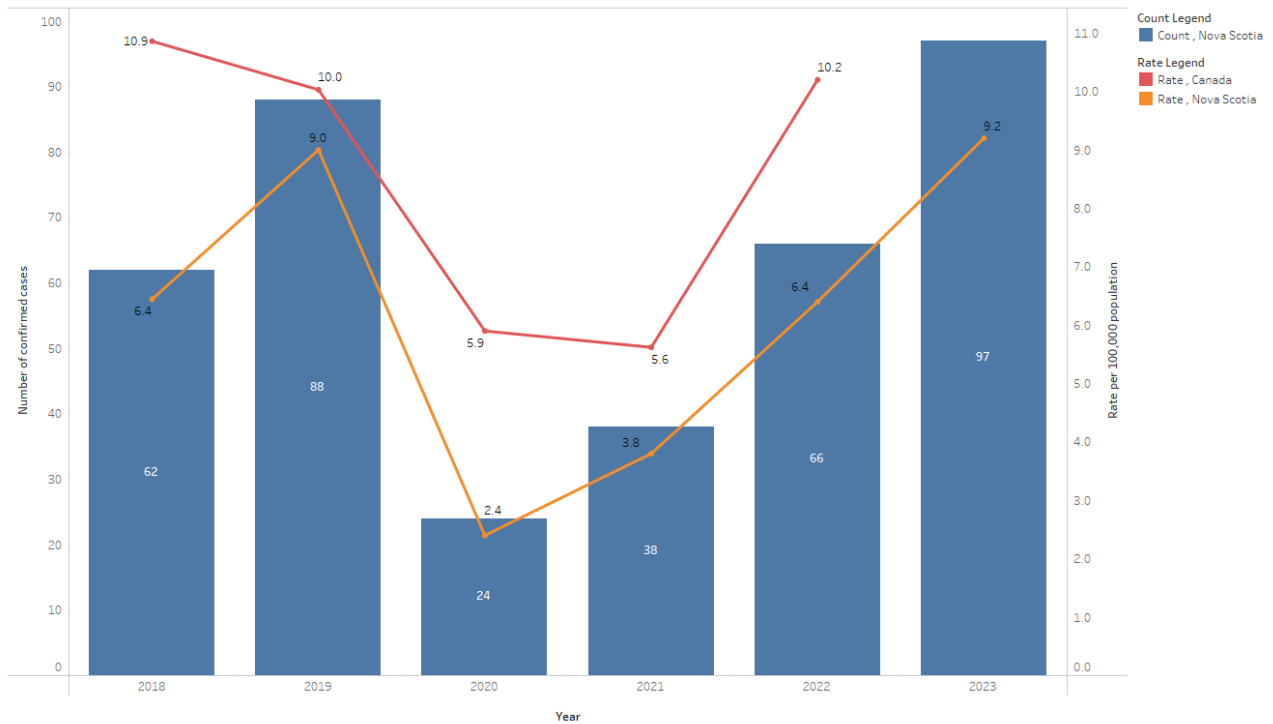


Figure 11. Number and rate per 100,000 population of confirmed IPD cases by year in Nova Scotia, 2018-2023

Sex-specific IPD rates per 100,000 population among males and females have followed a similar pattern since 2018, with males typically having slightly higher rates. The rate among both males and females and has risen after a drop in 2020 and 2021, with 2023 rates per 100,000 population very similar to 2019 rates for both males and females (Figure 12).

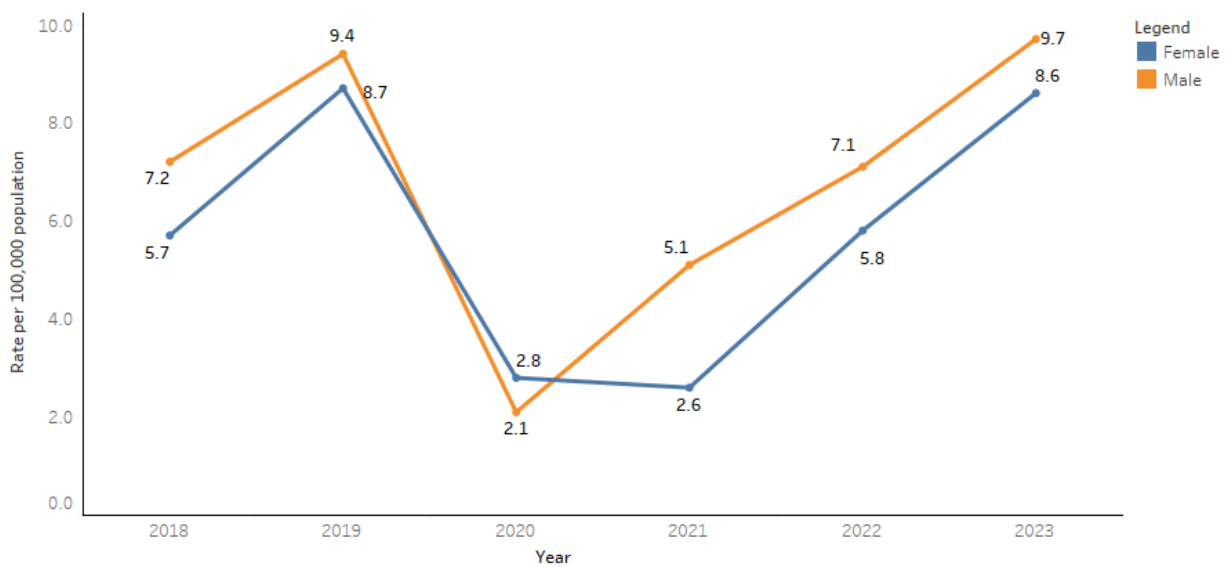


Figure 12. Rate per 100,000 population of confirmed IPD cases by sex and year in Nova Scotia, 2018-2023

Age-specific IPD rates per 100,000 population have been highest among the 60+ age group since 2018. Rates among this age group increased dramatically in 2023 and were 1.9 times higher than the 2022 rate per 100,000 population. Rates have typically been lowest among the 5-14-year-old and 15-24-year-old age groups from 2018-2023 (Figure 13).

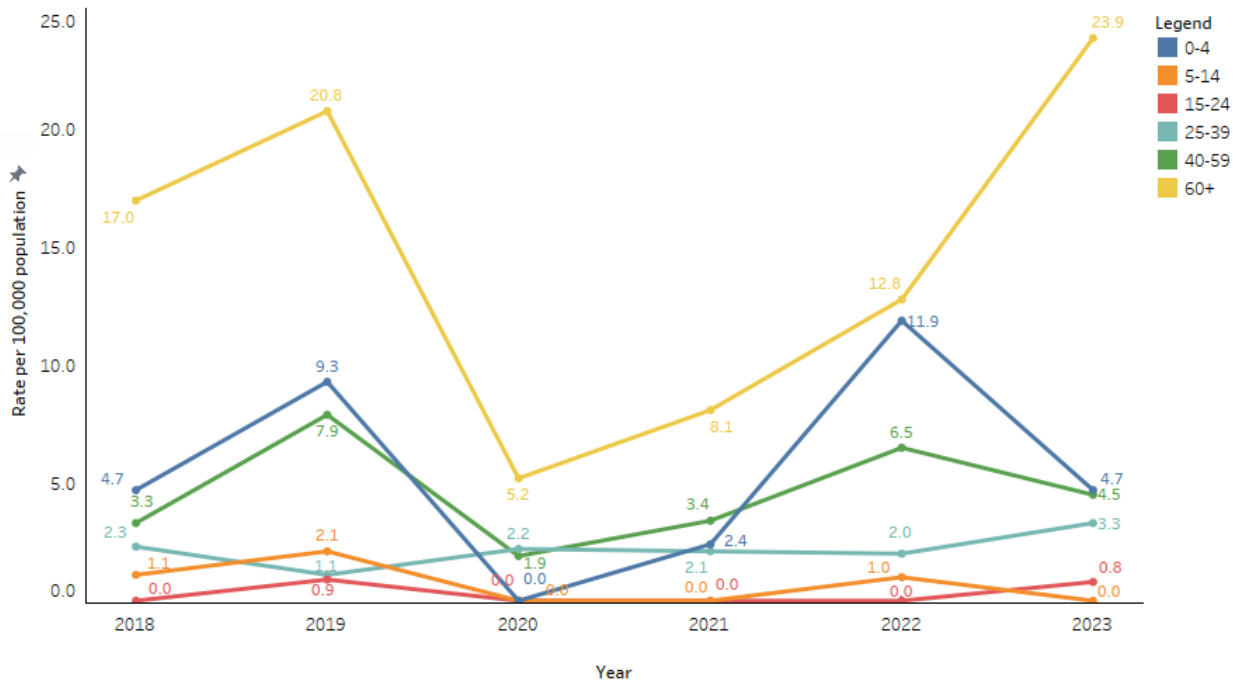


Figure 13. Rate per 100,000 population of confirmed IPD cases by age group and year in Nova Scotia, 2018-2023

Among the zones, IPD rates per 100,000 population were highest in Eastern zone in 2018, 2019, 2020, 2021, and 2023. From 2018-2023, the highest IPD rate per 100,000 population was in Eastern zone in 2019 (12.4 cases per 100,000 population). Compared to 2019, 2023 rates were higher for Central and Northern zones, and lower for Eastern and Western zones (Figure 14).

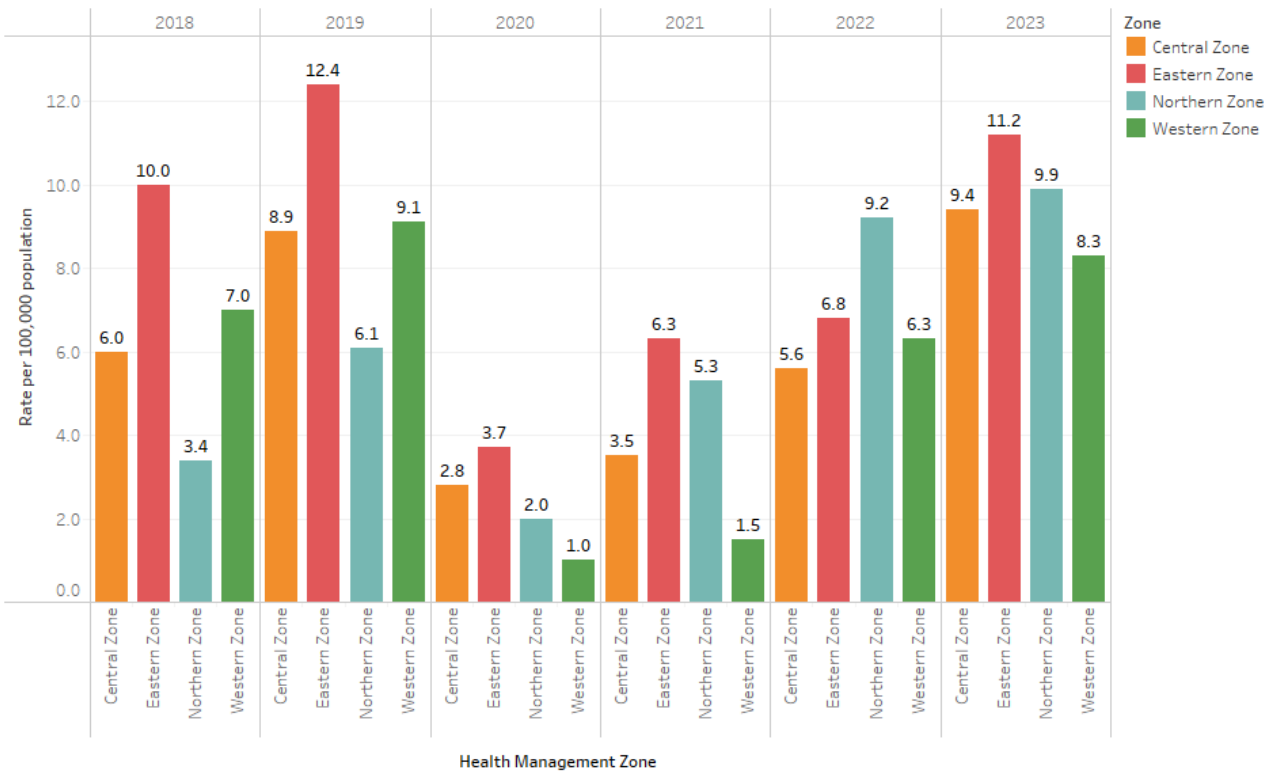


Figure 14. Rate per 100,000 population of confirmed IPD cases by health zone and year in Nova Scotia, 2018-2023

Invasive Listeriosis

Listeriosis is a bacterial infection that can be spread by eating food or drinking water that has been contaminated with *Listeria* bacteria, to babies during pregnancy, and through contact with infected animals. Overall, listeriosis is rare, but some foods are more likely than others to be contaminated, including unpasteurized cheese and milk (9). Rates of invasive listeriosis in Canada are typically low and have been relatively stable over time (5).

There were 12 cases of invasive listeriosis reported in Nova Scotia in 2023 (1.1 cases per 100,000 population), which is the second highest rate reported during 2018-2023, and slightly lower than the 2022 rate 1.4 cases per 100,000 population. The reported rate of invasive listeriosis in Nova Scotia was below the Canadian rate from 2018-2020, equal to it in 2021, and higher than it in 2022 (1.4 cases per 100,000 population in NS compared to 0.5 cases per 100,000 population nationally) (Figure 15).

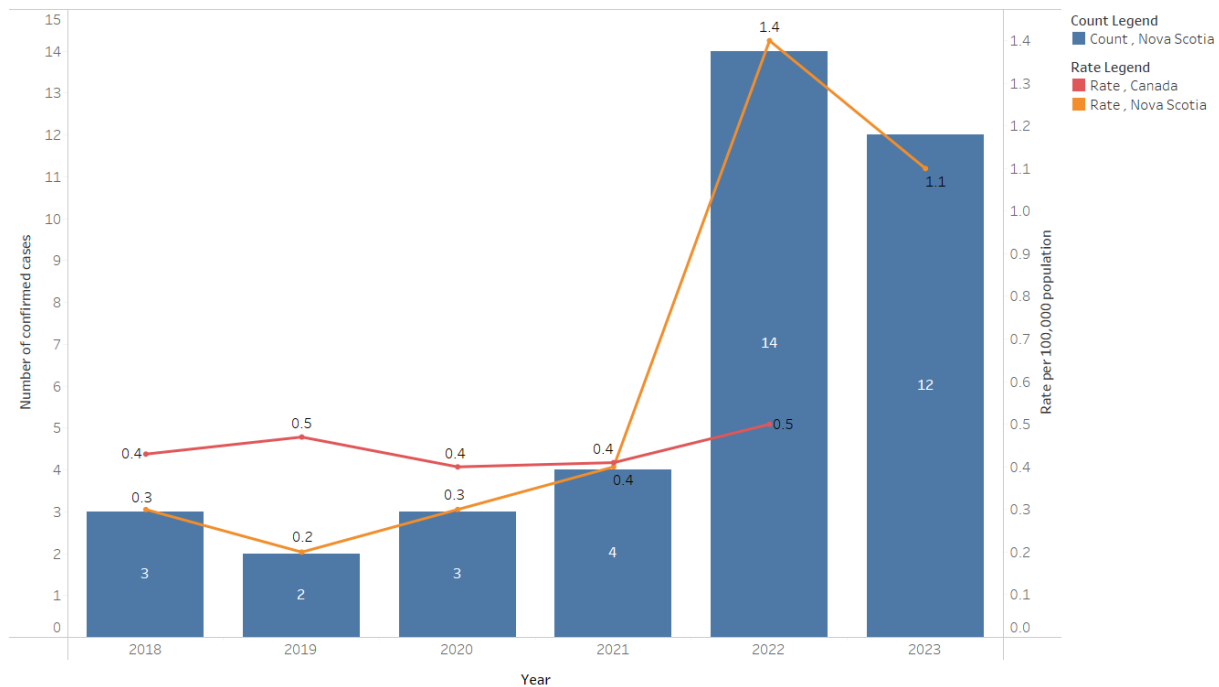


Figure 15. Number and rate per 100,000 population of confirmed invasive listeriosis cases by year in Nova Scotia, 2018-2023

Sex- specific invasive listeriosis rates per 100,000 population in Nova Scotia have generally been higher among females between 2018 and 2021, but this trend was reversed in 2022 and 2023, when rates among males were higher. Among both males and females, 2023 rates per 100,000 population were higher than 2018 and 2018 rates. (Figure 16).

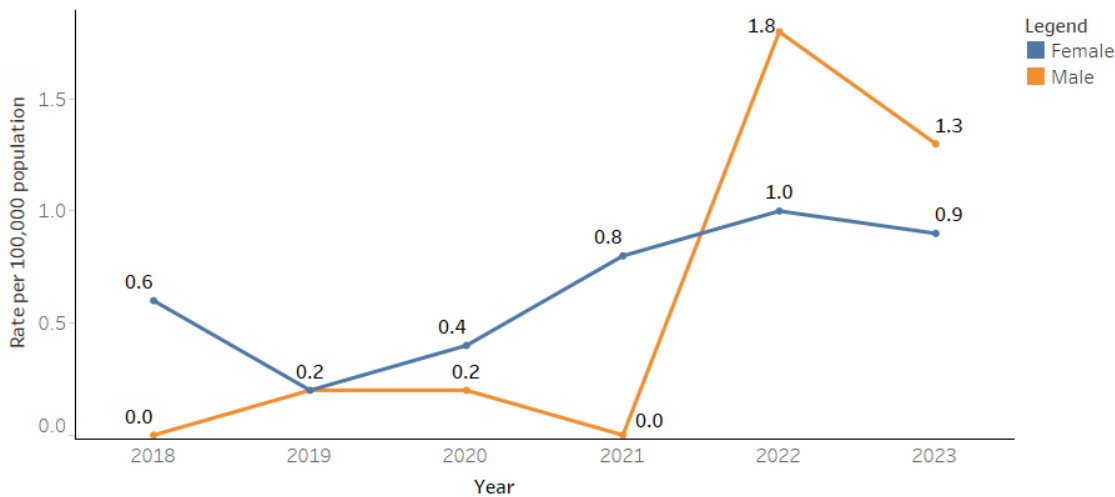


Figure 16. Rate per 100,000 population of confirmed invasive listeriosis cases by sex and year in Nova Scotia, 2018-2023

The 60+ age group has had the highest age-specific rate per 100,000 population of invasive listeriosis in all years since 2018. There have been no cases in the 5-14-year-old or 15-24-year-old age groups during this time period. All cases of invasive listeriosis in 2023 occurred in the 60+ age group (Figure 17).

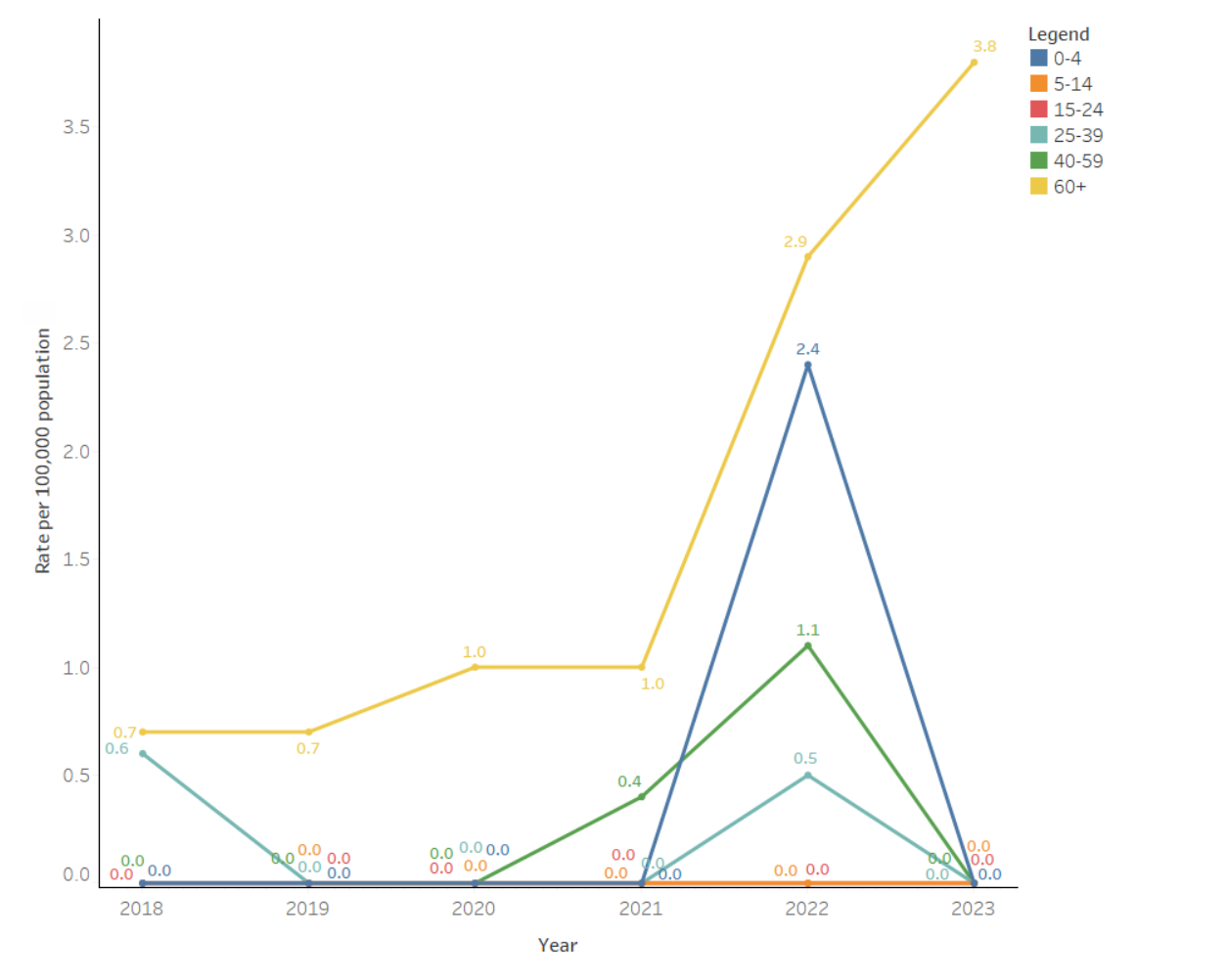


Figure 17. Rate per 100,000 population of confirmed invasive listeriosis cases by age group and year in Nova Scotia, 2018-2023

Rates of invasive listeriosis were low in all zones from 2018 through 2020. In 2021, Eastern zone had the highest rate of 1.9 cases per 100,000 population. 2022 rates were similar among all zones, and in 2023 the rate per 100,000 population in Eastern zone was roughly twice the rate in Central and Northern zones; there were no reported invasive listeriosis cases in Western zone in 2023 (Figure 18).

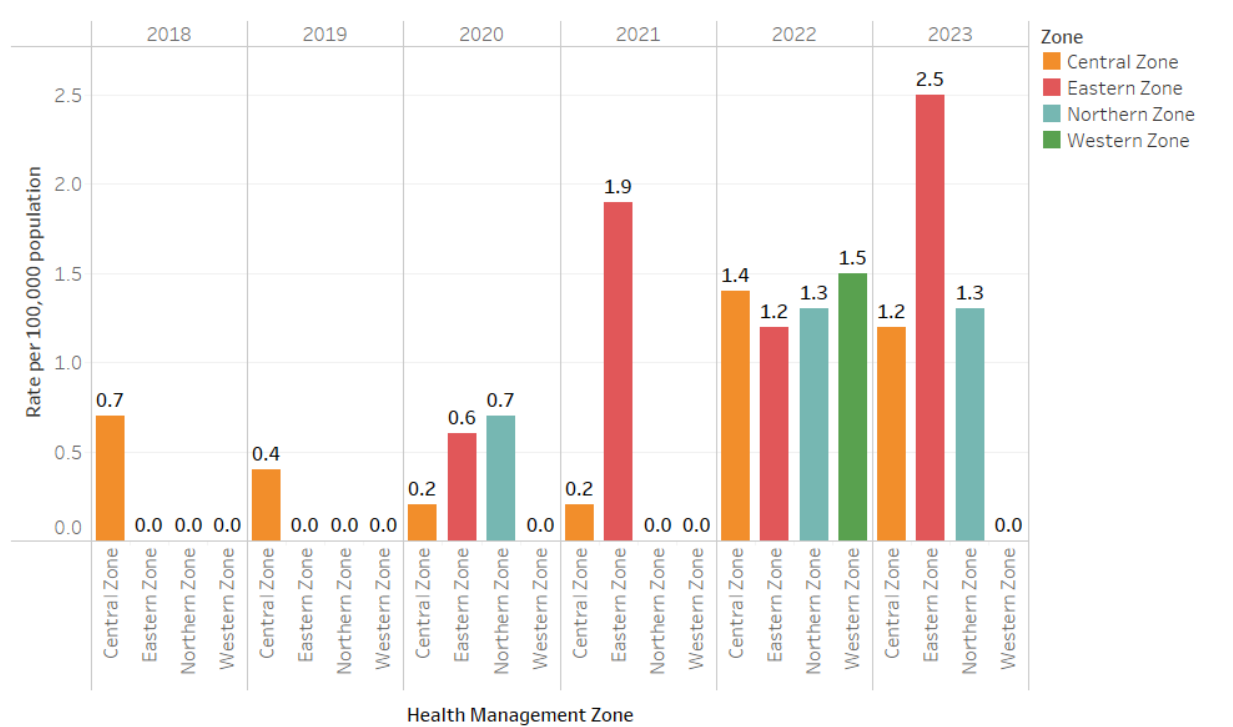


Figure 18. Rate per 100,000 population of confirmed invasive listeriosis cases by health zone and year in Nova Scotia, 2018-2023

Among the 12 invasive listeriosis cases in 2023, there were 9 hospitalizations, 1 ICU admission, and 2 deaths. In 2022 there were 14 total cases, with 5 hospitalizations, 2 ICU admissions, and 6 deaths; one 2022 case recovered without hospitalization.⁴

Lyme Disease

Lyme disease is a bacterial infection that can be transmitted to humans from infected ticks. In Nova Scotia, only the *Ixodes scapularis* blacklegged tick carries the bacteria that causes Lyme disease. Blacklegged tick populations are found throughout Nova Scotia and all areas of the province are considered to be at risk for Lyme disease. Rates of Lyme disease have been rising in Canada over time (5), and Nova Scotia has consistently had the highest rate of Lyme disease in the country since the disease became nationally notifiable in 2009 (10). Anyone who spends time outdoors, and those who are exposed to animals that spend time outdoors (including pets), is at risk of Lyme disease. Lyme disease can be treated with antibiotics; undiagnosed or untreated Lyme disease may lead to serious complications.

In 2023, the public health surveillance case definition for Lyme disease was changed. Previously, reported cases of Lyme disease were investigated by public health staff, who classified cases according to a case definition that required laboratory confirmation as well as confirmation of clinical evidence. Amid rising incidence of Lyme disease cases, it was recognized that there was substantial underreporting of signs and symptoms of laboratory confirmed cases of Lyme disease; without this information, cases with only positive lab results could not be classified as confirmed.

⁴ Outcome information refers to the most severe outcome for a case. If someone was hospitalized, and later died, they are counted as a death in this report.

The new case was updated to only rely on laboratory data, allowing for identification of, and reporting on, more cases, and better reflect the burden of disease in the province. The greatly increased numbers reported for 2023 compared to 2022 are related to the new case definition. Because of the known under-reporting of clinical evidence (included in the old case definition), the 2023 rates reflect a more accurate picture of Lyme disease epidemiology in Nova Scotia. Data for 2020-2022 should be interpreted with caution as pandemic-related demands impacted public health capacity to follow up all cases.

Due to the change in case definition, 2023 rates cannot be compared with prior years' rates (Figure 19). The reported rate of Lyme disease in Nova Scotia was consistently higher than the Canadian rate from 2018-2022 (Figure 19).

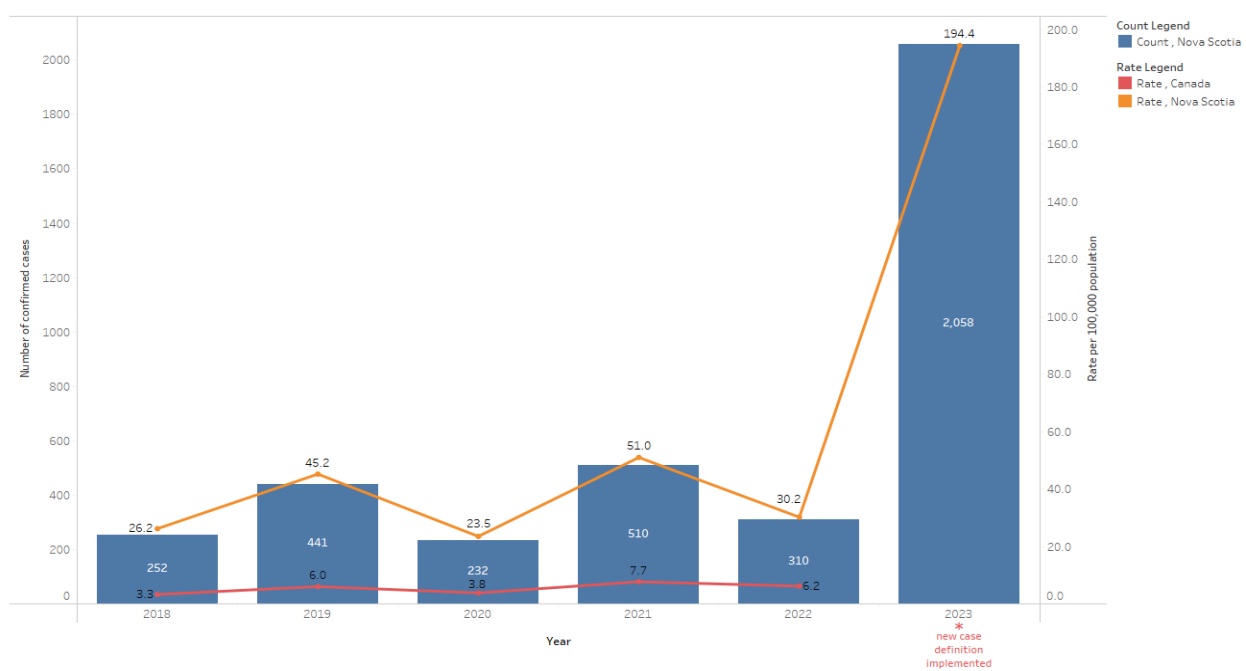


Figure 19. Number and rate per 100,000 population of confirmed Lyme disease cases by year in Nova Scotia, 2018-2023

From 2018-2023, sex-specific Lyme disease rates per 100,000 population have been about 1.3 to 1.6 times higher among males than females. The Lyme disease rate per 100,000 followed a similar pattern over the time period for both males and females (Figure 20).

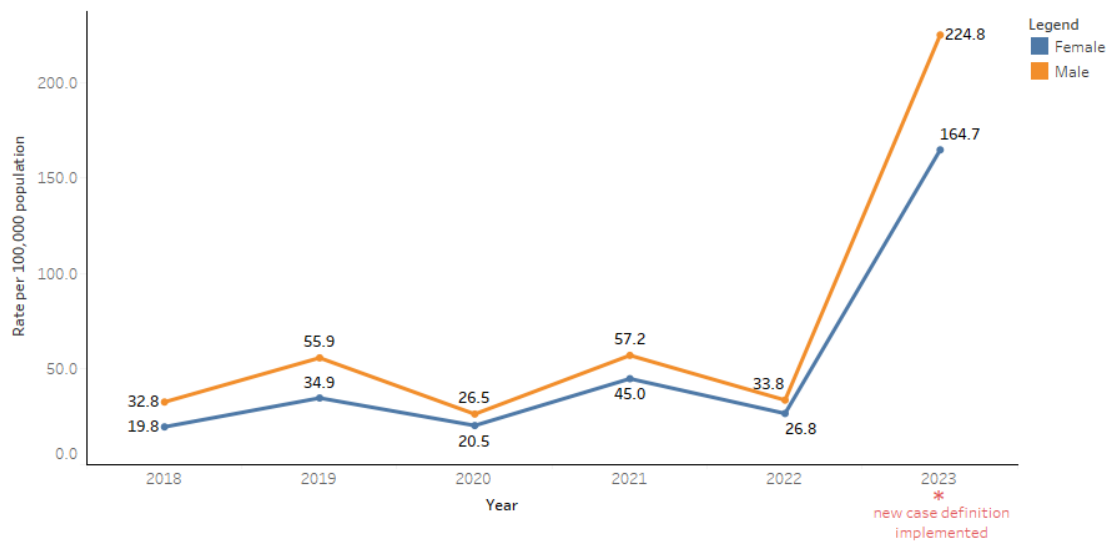


Figure 20. Rate per 100,000 population of confirmed Lyme disease by sex and year in Nova Scotia, 2018-2023

Age-specific Lyme disease rates per 100,000 population have been higher among those in the 5-14-year-old, 40-59-year-old, and 60+ age groups compared to the other age groups since 2018. Age-specific rates per 100,000 population followed similar patterns between 2018 and 2023 (Figure 21).

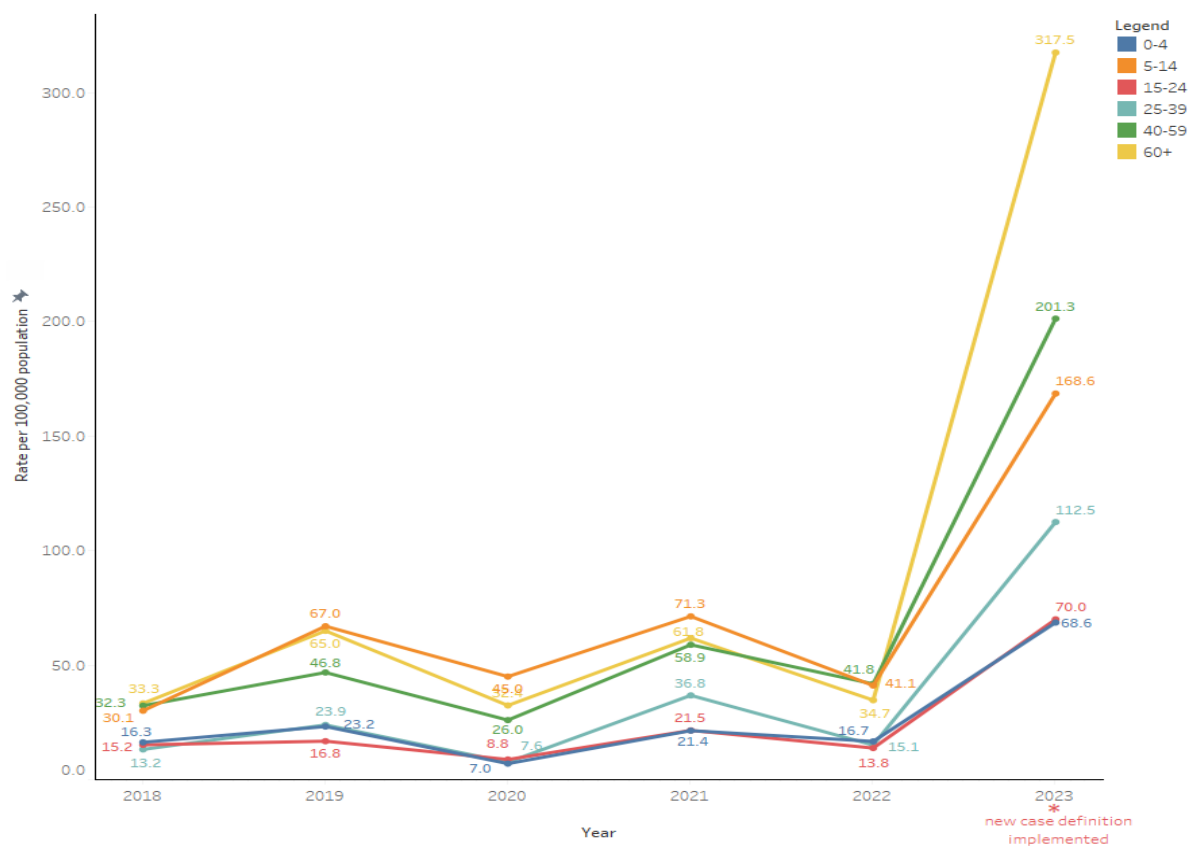


Figure 21. Rate per 100,000 population of confirmed Lyme disease by age group and year in Nova Scotia, 2018-2023

Among the zones, since 2018, Western zone has reported the highest Lyme disease rate per 100,000 population in all years except 2021 and 2022. However, the COVID-19 pandemic affected Lyme disease case reporting differentially by zone; therefore, the rates by zone do not reflect the true distribution of Lyme disease in Nova Scotia for these years. The 2023 rate of 582.1 cases per 100,000 population in Western zone was 3 times higher than the second highest rate of 194.4 cases per 100,000 population in Northern zone (Figure 22). Although the rates are highest in Western zone, all of Nova Scotia is considered high risk for Lyme disease.

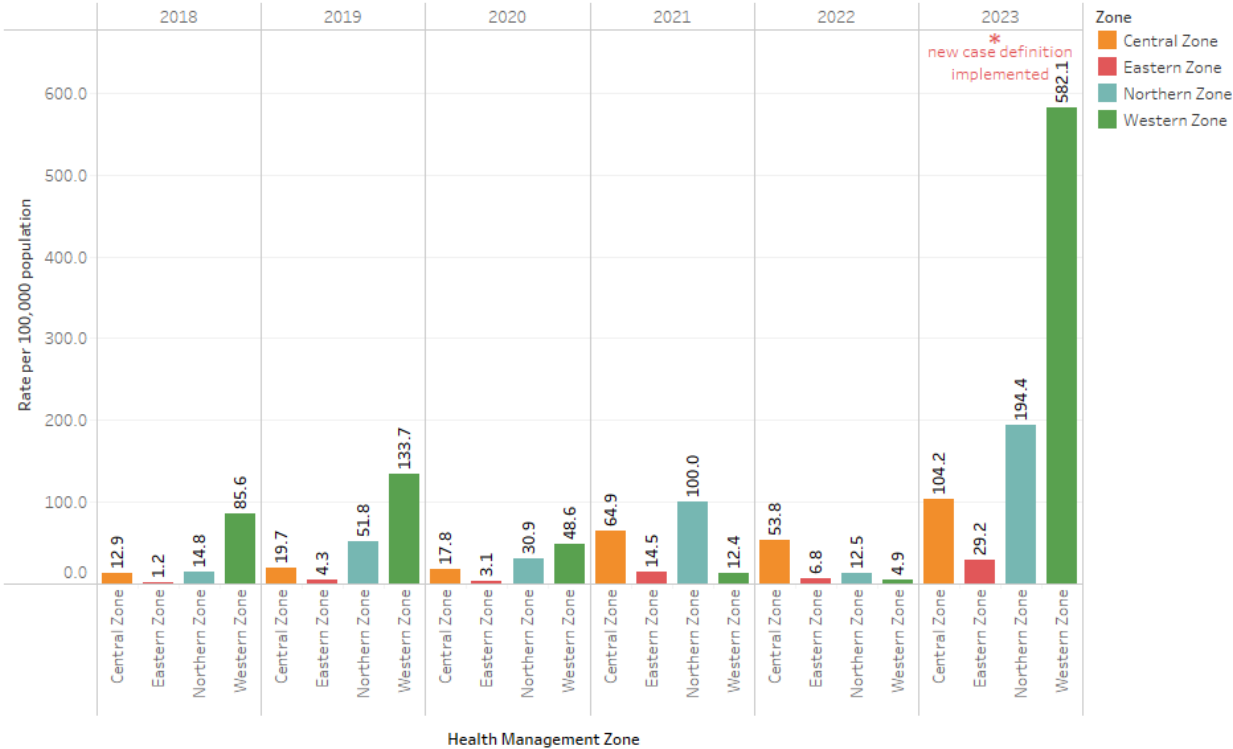


Figure 22. Rate per 100,000 population of confirmed Lyme disease by health zone and year in Nova Scotia, 2018-2023

2023 REPORTABLE DISEASES IN NOVA SCOTIA BY DISEASE GROUP

The purpose of this section is to present more detailed information on reported cases within each category of notifiable diseases in Nova Scotia. Overall case counts and rates by disease, as well as counts and rates by age, sex, and zone can be found in Appendix B.

Bloodborne Pathogens

Acquired Immune Deficiency Syndrome (AIDS) and Human Immunodeficiency Virus (HIV)

The number of reported HIV cases in 2023 was 33 (3.1 cases per 100,000 population). The 2023 Nova Scotia rate was lower than the 2022 national rate of 4.7 cases per 100,000 population. Among cases in 2023, the rate among males was 5.0 cases per 100,000 population, compared to 1.3 cases per 100,000

population among females, and the highest age-specific rate was among individuals aged 25-39 years (7.0 cases per 100,000 population). There were no reported cases of AIDS in 2023.

Hepatitis B (Acute and Chronic)

There were 3 reported cases of acute hepatitis B (0.3 cases per 100,000 population) and 24 reported cases of chronic hepatitis B reported in 2023 (2.3 cases per 100,000 population). The sex-specific rate of chronic hepatitis B was higher among males (2.9 cases per 100,000 population) compared to females (1.7 cases per 100,000 population). The age-specific rate of chronic hepatitis B was highest among individuals aged 25-39 years (6.0 cases per 100,000 population), and this was over twice the rate among the age group at next highest risk – those 40-59 years (2.7 per 100,000). Two hepatitis B cases were unable to be staged as either chronic or acute.

Hepatitis C

The number of reported cases of hepatitis C in 2023 was 395 (37.3 cases per 100,000 population). The 2023 Nova Scotia rate was higher than the 2022 national rate of 18.3 cases per 100,000 population. The sex-specific rate of hepatitis C was higher among males (46.2 cases per 100,000 population) compared to females (28.6 cases per 100,000 population) and the highest age-specific rate was among individuals aged 25-39 years (86.0 cases per 100,000 population).

Direct Contact, Respiratory Routes, and Through the Provision of Health Care

Health Care Associated Infections

This section focuses on the total number of provincially notifiable health care associated infections in the province. Infections that are typically associated with healthcare may also be reported in the community. The current process for reporting these infections to Public Health does not allow for differentiation between health care or community acquired infections.

Clostridium difficile

There were 978 cases of *C. difficile* reported in 2023 (92.4 cases per 100,000 population). The 2023 Nova Scotia rate was slightly higher than the national 2022 rate of 87.0 cases per 100,000 population. Among cases in 2023, the sex-specific rate was higher among females (103.0 cases per 100,000 population) compared to males (81.5 cases per 100,000 population). Age-specific rates generally increase with increasing age; the highest rate was among individuals aged 60 years and older (225.0 cases per 100,000 population). Two outbreaks of *C. difficile* in health care facilities were reported in 2023.

Methicillin Resistant Staphylococcus Aureus (MRSA)

The number of MRSA cases reported in 2023 was 669 (63.2 cases per 100,000 population). It is not possible to compare with Canadian rates because MRSA is not nationally reportable. In 2023, the sex-specific rate among males was 75.8 cases per 100,000 population, compared to 50.8 cases per 100,000 among females. Age-specific rates generally increase with increasing age; the highest rate was among individuals aged 60 years and older (336.0 cases per 100,000 population). There were two outbreaks of MRSA in health care facilities and one outbreak in a congregate/communal living setting in 2023.

Vancomycin-Resistant Enterococcus (VRE)

The number of VRE cases reported in 2023 was 67 (6.3 cases per 100,000 population). It is not possible to compare with Canadian rates because VRE is not nationally reportable. Rates of VRE were slightly higher among males (6.9 cases per 100,000 population) compared to females (5.8 cases per 100,000 population), and the highest age-specific rate was among individuals aged 60 years and older (16.9 cases per 100,000 population) in 2023. There were no cases reported in individuals under the age of 25 years. There were three outbreaks of VRE in health care facilities in 2023.

Direct Contact and Respiratory Route

Legionellosis

There were 29 cases of legionellosis reported in 2023 (2.7 cases per 100,000 population). This is higher than the 2022 national rate of 1.6 cases per 100,000 population. In 2023, sex-specific rates of legionellosis were slightly higher among males (3.3 cases per 100,000 population) compared to females (2.2 cases per 100,000 population); all cases were in individuals aged 40 years and older. There was one community outbreak of legionellosis in 2023.

Invasive Meningococcal Disease

There were 8 cases of invasive meningococcal disease reported in 2023 (0.8 cases per 100,000 population). This was higher than the 2022 national rate of 0.2 cases per 100,000 population. 7 of the 8 cases were male; all cases occurred in individuals under the age of 40.

Tuberculosis

There were 13 cases of tuberculosis reported in 2023 (1.2 cases per 100,000 population). The 2023 Nova Scotia rate is lower than the 2022 national rate of 5.1 cases per 100,000 population. The sex-specific rate of 1.5 cases per 100,000 population among males was higher compared to the rate of 0.9 cases per 100,000 population among females and the highest age-specific rates were in 15-24-year-old (2.5 cases per 100,000 population) and 25-39-year-old (2.3 cases per 100,000 population) age groups.

Other Direct Contact and Respiratory Route Pathogens

There was 1 case of Creutzfeldt-Jakob classic disease reported in 2023 (0.1 cases per 100,000 population). There were no cases of group B streptococcal disease of the newborn, leprosy, bacterial meningitis, severe acute respiratory infection (SARI), severe acute respiratory syndrome (SARS), or smallpox reported in 2023.

Enteric, Foodborne, and Waterborne Disease

In 2023, Nova Scotia participated in three Outbreak Investigation Coordinating Committees (OICC) which are coordinated by the Public Health Agency of Canada. OICCs are activated when a multi-jurisdictional enteric illness outbreak is detected for which a coordinated response would be beneficial. The 2023 OICC's that Nova Scotia participated in related to multidrug resistant (MDR) *Salmonella Typhimurium*; locally acquired Cyclosporiasis; and multi-strain outbreak of *Salmonella Soerenga*, *Salmonella Sundsvall*, *Salmonella Oranienburg*, and *Salmonella Newport*.

Campylobacteriosis

There were 226 cases of campylobacteriosis reported in 2023 (21.3 cases per 100,000 population). This is slightly higher than the 2022 national rate of 18.7 cases per 100,000 population. In 2023, sex-specific rates among males (24.6 cases per 100,000 population) were higher compared to rates among females (18.1 cases per 100,000 population) and the highest age-specific rate of reported cases was among individuals aged 60 years and older (26.4 cases per 100,000 population). Individuals 40-59 years old had a similar rate at 25.7 cases per 100,000 population.

Cryptosporidiosis

There were 30 cases of cryptosporidiosis reported in 2023 (2.8 cases per 100,000 population). The 2022 national rate was slightly lower at 2.4 cases per 100,000 population. In 2023, rates among males (2.7 cases per 100,000 population) were very similar to rates among females (3.0 cases per 100,000 population). The highest age-specific rate of reported cases was among individuals aged 15-24 years (5.0 cases per 100,000 population).

Giardiasis

There were 88 cases of giardiasis reported in 2023 (8.3 cases per 100,000 population). This is higher than the 2022 national rate of 6.3 cases per 100,000 population. Sex-specific rates among males and females were almost equal (8.4 cases per 100,000 population among males and 8.2 cases per 100,000 population among females). The highest age-specific rate was among individuals aged 40-59 years (14.4 cases per 100,000 population) followed by those aged 60+ years (11.8 cases per 100,000 population).

Hepatitis A

There were 6 cases of hepatitis A reported in Nova Scotia in 2023 (0.6 cases per 100,000 population). This is the same as the 2022 national rate. Four of the 6 cases were female, and half of cases were in the 15-24-year-old age group.

Salmonellosis

There were 133 cases of salmonellosis reported in 2023 (12.6 cases per 100,000 population). This is slightly higher than the 2022 national rate of 11.6 cases per 100,000 population. In 2023, The sex-specific rate among males (11.8 cases per 100,000 population) was lower than the rate among females (13.3 cases per 100,000 population). The highest age specific rate was among individuals aged 0-4 years (21.3 cases per 100,000 population). There was one outbreak of salmonellosis in 2023 in a congregate/communal living setting.

Verotoxigenic E. coli (VTEC)

There were 5 cases of VTEC reported in 2022 (0.5 cases per 100,000 population). This is lower than the 2022 national rate of 2.7 cases per 100,000 population. Three of the cases were male, and two were among children aged 0-4 years.

Other Enteric Diseases

In 2023, there were 5 cases of cyclosporiasis reported (0.5 cases per 100,000 population) and 10 cases of shigellosis (0.9 cases per 100,000 population). There were no cases of botulism, cholera, shellfish poisoning, or typhoid reported in 2023.

Sexually Transmitted Infections

Chlamydia

There were 2,730 cases of chlamydia reported in 2023 (258.0 cases per 100,000 population). This is slightly lower than the 2022 national rate of 299.1 cases per 100,000 population. The sex-specific rate among males (178.0 cases per 100,000 population) was lower than the rate among females (335.0 cases per 100,000 population), and the highest age-specific rate was among individuals aged 15-24 years (1305.0 cases per 100,000 population).

Syphilis (Infectious, Non-Infectious, and Unable to Stage)

There were 49 cases of infectious syphilis (4.6 cases per 100,000 population) and 52 cases of non-infectious or unable to be staged syphilis (4.9 cases per 100,000 population) reported in 2023. It is not possible to compare with Canadian rates as the 2022 national syphilis rate (48.7 cases per 100,000 population) does not differentiate between infectious and non-infectious syphilis. The sex-specific rate of infectious syphilis was substantially higher among males (8.4 cases per 100,000 population) compared to females (0.9 cases per 100,000 population), and the highest age-specific rate was among individuals aged 25-39 years (9.8 per 100,000 population). There were no cases of congenital syphilis in 2023.

Vaccine Preventable Diseases

Pertussis

There were no community acquired cases of pertussis reported in 2023. However, there were 40 cases of pertussis reported in 2023 acquired as part of a clinical trial where participants were exposed to pertussis in a controlled environment with health care support. Additional information on the study can be found on the Canadian Center for Vaccinology website (11).

Mpox

There was 1 travel acquired case of mpox reported in 2023 (0.1 cases per 100,000 population). It is not possible to compare with Canadian rates because mpox is not nationally reportable. Before mpox became provincially reportable in 2023, there were 2 travel acquired cases of mpox in Nova Scotia in 2022.

Other Vaccine Preventable Diseases

There was 1 case of measles reported in 2023 (0.1 cases per 100,000 population). There were no cases of acute flaccid paralysis, diphtheria, *Haemophilus influenzae* type b invasive disease, mumps, poliomyelitis, rubella, or tetanus reported in 2023.

Vector-borne and Other Zoonoses

Anaplasmosis

There were 316 cases of anaplasmosis reported in 2023 (29.8 cases per 100,000 population). It is not possible to compare with Canadian rates because anaplasmosis is not nationally reportable. The sex-specific rate among males (36.9 cases per 100,000 population) was higher than the rate among females (23.0 cases per 100,000 population), and the highest age-specific rate was among individuals aged 60 years and older (68.7 cases per 100,000 population).

Babesiosis

There were 2 cases of babesiosis reported in 2023 (0.2 cases per 100,000 population). It is not possible to compare with Canadian rates because babesiosis is not nationally reportable. Both cases were male, one aged 25-39 years old and the other 60 years and older.

Other Vector-borne and Zoonoses

There were 9 cases of travel acquired malaria in 2023 (0.9 cases per 100,000 population). There were no cases of anthrax, brucellosis, Ebola virus disease, hantavirus pulmonary syndrome, plague, Powassan virus disease, rabies, tularemia, viral hemorrhagic fever, West Nile virus, or yellow fever reported in 2023.

REFERENCES

1. Porta, M. (editor). (2014). *A Dictionary of Epidemiology*. Sixth Edition. Oxford University Press, New York.
2. Office of the Legislative Counsel, Nova Scotia House of Assembly. (2006). *Nova Scotia Health Protection Act, 2004, c. 4, s. 1*. Retrieved from <http://nslegislature.ca/legc/statutes/health%20protection.pdf>
3. Nova Scotia Department of Health and Wellness. (2013). *Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions*. Retrieved from <http://novascotia.ca/dhw/populationhealth/surveillanceguidelines/>
4. Communicable Disease Prevention and Control, Nova Scotia Department of Health and Wellness. (2013). *Nova Scotia Communicable Disease Control Manual*. Retrieved from <http://novascotia.ca/dhw/cdpc/cdcmanual.asp>
5. Notifiable Disease On-line, Canadian Notifiable Disease Surveillance System, Public Health Agency of Canada. (2024). Retrieved from <https://diseases.canada.ca/notifiable/>
6. Statistics Canada (2024). *Population estimates on July 1 by age and gender*. Retrieved from: [Population estimates on July 1, by age and gender \(statcan.gc.ca\)](https://www150.statcan.gc.ca/n1/pub/92-627-x/2024001/article/00001-eng.htm).
7. Statistics Canada (2023). *Population estimates, July 1, by health region and peer group, 2018 boundaries, inactive*. Retrieved from: [Population estimates, July 1, by health region and peer group, 2018 boundaries, inactive \(statcan.gc.ca\)](https://www150.statcan.gc.ca/n1/pub/92-627-x/2023001/article/00001-eng.htm).
8. *Group A Streptococcus*. (2024). Retrieved from [Group A Streptococcus – National Collaborating Centre for Infectious Diseases \(nccid.ca\)](https://www.nccid.ca/en/group-a-streptococcus).
9. *Risks of listeriosis (Listeria)*. (2016). Retrieved from [Risks of listeriosis \(Listeria\) - Canada.ca](https://www.canada.ca/en/health-canada/services/communicable-diseases/listeria.html).
10. *Surveillance for Lyme disease in Canada: 2009-2019*. (2022). Retrieved from <https://www.canada.ca/content/dam/phac-aspc/documents/services/reports-publications/canada-communicable-disease-report-ccdr/monthly-issue/2022-48/issue-5-may-2022/ccdrv48i05a05-eng.pdf>.
11. *Center for Vaccinology, Controlled Human Infection Model (pertussis)*. (2023). Retrieved from [Controlled Human Infection Model \(pertussis\) - Canadian Center For Vaccinology](https://www.cvhim.ca/en/controlled-human-infection-model-pertussis).

APPENDIX A – Notifiable Diseases in Nova Scotia

Acquired Immunodeficiency Syndrome (AIDS)	Measles
Acute Flaccid Paralysis (AFP)	Meningitis (bacterial)
Anaplasmosis	Meningococcal Disease Invasive (IMD)
Anthrax	Methicillin-resistant Staphylococcus aureus (MRSA)
Babesiosis	Mpox
Botulism (Foodborne, Wound, Infant, & Colonization Botulism)	Mumps
Brucellosis	Pertussis
Campylobacteriosis	Plague
Chlamydia (genital, extra-genital, and perinatally acquired)	Pneumococcal Disease, Invasive
Cholera	Poliomyelitis
Clostridium difficile	Powassan Virus Disease
Creutzfeldt-Jakob Disease – Classic (sporadic, iatrogenic, Genetic Prion Disease) and Variant	Rabies
Cryptosporidiosis	Rubella (Non-Congenital, Congenital Rubella Syndrome)
Cyclosporiasis	Salmonellosis (includes Paratyphoid)
Diphtheria	Severe Acute Respiratory Infection (SARI)
Ebola Virus Disease	Severe Acute Respiratory Syndrome (SARS)
Giardiasis	Shellfish Poisoning (Paralytic & Amnesic)
Gonorrhea (genital, extra-genital, and perinatally acquired)	Shigellosis
Group A Streptococcal Disease, Invasive	Smallpox
Group B Streptococcal Disease of Newborn	Syphilis (primary, secondary, early latent, late latent, infectious neurosyphilis, non-infectious neurosyphilis, tertiary other than neurosyphilis, and early congenital)
Haemophilus Influenzae type b (Hib) Invasive Disease	Tetanus
Hantavirus Pulmonary Syndrome (HPS)	Tuberculosis
Hepatitis A	Tularemia
Hepatitis B (Acute Case and Chronic Carrier)	Typhoid
Hepatitis C	Vancomycin Resistant Enterococcus (VRE)
Human Immunodeficiency Virus (HIV)	Verotoxigenic Escherichia coli
Influenza (laboratory confirmed)	Viral Hemorrhagic Fevers (Lassa, Marburg, Crimean-Congo, Other)
Invasive Listeriosis	West Nile Virus (WNV) (West Nile Asymptomatic Infection, West Nile Neurological Syndrome, West Nile Non-Neurological Syndrome)
Legionellosis	Yellow Fever
Leprosy (Hansen’s Disease)	
Lyme Disease	
Malaria (Plasmodium falciparum, Plasmodium malariae, Plasmodium ovale, Plasmodium vivax)	

APPENDIX B – List of Tables

Table B1: Number of cases and crude rates per 100,000 population of notifiable diseases in Nova Scotia, 2018-2023.....	33
Table B2: Notifiable diseases reported in Nova Scotia in 2023 by sex: Number of cases and sex-specific rates per 100,000 population	36
Table B3: Notifiable diseases reported in Nova Scotia in 2023 by age group: Number of cases and age-specific rates per 100,000 population	39
Table B4: Notifiable diseases reported in Nova Scotia in 2023 by Health Management Zone: Number of cases and crude rates per 100,000 population	42

Table B1: Number of cases and crude rates per 100,000 population of notifiable diseases in Nova Scotia, 2018-2023

Disease	2018		2019		2020		2021		2022		2023	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Bloodborne Pathogens												
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0
Hepatitis B - Acute	6	0.6	4	0.4	5	0.5	3	0.3	6	0.6	3	0.3
Hepatitis B - Chronic	21	2.2	21	2.2	15	1.5	20	2.0	15	1.5	24	2.3
Hepatitis B - Unable to Stage	1	0.1	1	0.1	0	0.0	2	0.2	0	0.0	2	0.2
Hepatitis C	348	36.2	350	35.9	245	24.8	284	28.4	371	36.2	395	37.3
Human Immunodeficiency Virus (HIV)	31	3.2	17	1.7	13	1.3	16	1.6	27	2.6	33	3.1
Direct Contact, Respiratory, and Through the Provision of Health Care												
Clostridioides difficile	980	102.0	903	92.5	835	84.4	957	95.7	919	89.6	978	92.4
Creutzfeldt-Jakob Disease - Classic	0	0.0	2	0.2	0	0.0	0	0.0	3	0.3	1	0.1
Creutzfeldt-Jakob Disease - Unknown	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	0	0.0
Creutzfeldt-Jakob Disease - Variant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive	57	5.9	63	6.5	25	2.5	9	0.9	22	2.1	103	9.7
Group B Streptococcal Disease of the Newborn*	5	62.8*	3	37.6*	0	0.0*	0	0.0*	1	12.3*	1	12.3*
Legionellosis	5	0.5	7	0.7	6	0.6	15	1.5	11	1.1	29	2.7
Leprosy	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningococcal Disease Invasive	4	0.4	7	0.7	3	0.3	2	0.2	7	0.7	8	0.8
Methicillin Resistant Staphylococcus Aureus (MRSA)	656	68.2	588	60.3	463	46.8	563	56.3	570	55.6	669	63.2
Pneumococcal disease, Invasive	62	6.4	88	9.0	24	2.4	38	3.8	66	6.4	97	9.2
Severe Acute Respiratory Infection (SARI)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Severe Acute Respiratory Syndrome (SARS)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tuberculosis	9	0.9	5	0.5	12	1.2	17	1.7	14	1.4	13	1.2
Vancomycin Resistant Enterococcus (VRE)	29	3.0	19	2.0	6	0.6	8	0.8	21	2.1	67	6.3
Enteric, Foodborne, and Waterborne Diseases												
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0
Campylobacteriosis	204	21.2	221	22.6	193	19.5	283	28.3	184	17.9	226	21.3
Cholera	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Cryptosporidiosis	41	4.3	40	4.1	34	3.4	19	1.9	28	2.7	30	2.8
Cyclosporiasis	2	0.2	1	0.1	0	0.0	0	0.0	1	0.1	5	0.5
Giardiasis	76	7.9	106	10.9	88	8.9	99	9.9	86	8.4	88	8.3
Hepatitis A	4	0.4	4	0.4	2	0.2	3	0.3	2	0.2	6	0.6

Disease	2018		2019		2020		2021		2022		2023	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Listeriosis Invasive	3	0.3	2	0.2	3	0.3	4	0.4	14	1.4	12	1.1
Salmonellosis	184	19.1	131	13.4	151	15.3	95	9.5	75	7.3	133	12.6
Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shigellosis	4	0.4	7	0.7	1	0.1	4	0.4	2	0.2	10	0.9
Typhoid	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0
Verotoxigenic E. coli	5	0.5	10	1.0	2	0.2	6	0.6	5	0.5	5	0.5
Sexually Transmitted Infections												
Chlamydia	3286	342.0	3072	315.0	2150	217.0	2099	210.0	2281	222.0	2730	258.0
Gonorrhoea	308	32.0	239	24.5	89	9.0	67	6.7	200	19.5	359	33.9
Syphilis - Infectious	32	3.3	55	5.6	29	2.9	15	1.5	47	4.6	49	4.6
Syphilis - Non-Infectious or Unable to Stage	19	2.0	28	2.9	22	2.2	26	2.6	40	3.9	52	4.9
Vaccine Preventable Diseases												
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenzae type b (Hib) Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Measles	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Mpox	-	-	-	-	-	-	-	-	-	-	1	0.1
Mumps	77	8.0	2	0.2	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis*	3	0.3	6	0.6	13	1.3	1	0.1	4	0.4	40	3.8
Poliomyelitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vector-borne and Other Zoonoses												
Anaplasmosis	-	-	-	-	-	-	-	-	-	-	316	29.8
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Babesiosis	-	-	-	-	-	-	-	-	-	-	2	0.2
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ebola Virus Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus Pulmonary Syndrome	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme disease	252	26.2	441	45.2	232	23.5	510	51.0	310	30.2	2058	194.4
Malaria	6	0.6	4	0.4	1	0.1	2	0.2	8	0.8	9	0.9
Plague	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Powassan Virus Disease	-	-	-	-	-	-	-	-	-	-	0	0.0
Rabies	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Disease	2018		2019		2020		2021		2022		2023	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Tularemia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Viral Hemorrhagic Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yellow Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	6720		6448		4663		5168		5344		8555	

*Rate calculations for group B streptococcal disease of the newborn used the number of live births by year as the denominator for rate calculations.

**All Pertussis cases in 2023 were not community acquired cases but acquired as part of a clinical trial.

- : Disease was not provincially reportable in the corresponding year.

Note: Influenza cases and COVID-19 cases are not included in this table.

Table B2: Notifiable diseases reported in Nova Scotia in 2023 by sex: Number of cases and sex-specific rates per 100,000 population

Disease	Female		Male		Nova Scotia	
	n	Rate	n	Rate	n	Rate
Bloodborne Pathogens						
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0
Hepatitis B - Acute	1	0.2	2	0.4	3	0.3
Hepatitis B - Chronic	9	1.7	15	2.9	24	2.3
Hepatitis B - Unable to Stage	1	0.2	1	0.2	2	0.2
Hepatitis C	153	28.6	242	46.2	395	37.3
Human Immunodeficiency Virus (HIV)	7	1.3	26	5.0	33	3.1
Direct Contact, Respiratory, and Through the Provision of Health Care						
Clostridioides difficile	551	103.0	427	81.5	978	92.4
Creutzfeldt-Jakob Disease - Classic	0	0.0	1	0.2	1	0.1
Creutzfeldt-Jakob Disease - Unknown	0	0.0	0	0.0	0	0.0
Creutzfeldt-Jakob Disease - Variant	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive	49	9.2	54	10.3	103	9.7
Group B Streptococcal Disease of the Newborn*	1	25.2*	0	0.0*	1	12.3*
Legionellosis	12	2.2	17	3.3	29	2.7
Leprosy	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0
Meningococcal Disease Invasive	1	0.2	7	1.3	8	0.8
Methicillin Resistant Staphylococcus Aureus (MRSA)	272	50.8	397	75.8	669	63.2
Pneumococcal disease, Invasive	46	8.6	51	9.7	97	9.2
Severe Acute Respiratory Infection (SARI)	0	0.0	0	0.0	0	0.0
Severe Acute Respiratory Syndrome (SARS)	0	0.0	0	0.0	0	0.0
Smallpox	0	0.0	0	0.0	0	0.0
Tuberculosis	5	0.9	8	1.5	13	1.2
Vancomycin Resistant Enterococcus (VRE)	31	5.8	36	6.9	67	6.3
Enteric, Foodborne, and Waterborne Diseases						
Botulism	0	0.0	0	0.0	0	0.0
Campylobacteriosis	97	18.1	129	24.6	226	21.3
Cholera	0	0.0	0	0.0	0	0.0
Cryptosporidiosis	16	3.0	14	2.7	30	2.8
Cyclosporiasis	4	0.8	1	0.2	5	0.5
Giardiasis	44	8.2	44	8.4	88	8.3
Hepatitis A	4	0.8	2	0.4	6	0.6
Listeriosis Invasive	5	0.9	7	1.3	12	1.1
Salmonellosis	71	13.3	62	11.8	133	12.6

Disease	Female		Male		Nova Scotia	
	n	Rate	n	Rate	n	Rate
Shellfish Poisoning	0	0.0	0	0.0	0	0.0
Shigellosis	3	0.6	7	1.3	10	0.9
Typhoid	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	2	0.4	3	0.6	5	0.5
Sexually Transmitted Infections						
Chlamydia	1795	335.0	933	178.0	2730	258.0
Gonorrhea	114	21.3	245	46.8	359	33.9
Syphilis - Infectious	5	0.9	44	8.4	49	4.6
Syphilis - Non-Infectious or Unable to Stage	17	3.2	35	6.7	52	4.9
Vaccine Preventable Diseases						
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0
Diphtheria	0	0.0	0	0.0	0	0.0
Haemophilus Influenzae type b (Hib) Invasive Disease	0	0.0	0	0.0	0	0.0
Measles	0	0.0	1	0.2	1	0.1
Mpox	0	0.0	1	0.2	1	0.1
Mumps	0	0.0	0	0.0	0	0.0
Pertussis	19	3.6	21	4.0	40	3.8
Poliomyelitis	0	0.0	0	0.0	0	0.0
Rubella	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0
Vector-borne and Other Zoonoses						
Anaplasmosis	123	23.0	193	36.9	316	29.8
Anthrax	0	0.0	0	0.0	0	0.0
Babesiosis	0	0.0	2	0.4	2	0.2
Brucellosis	0	0.0	0	0.0	0	0.0
Ebola Virus Disease	0	0.0	0	0.0	0	0.0
Hantavirus Pulmonary Syndrome	0	0.0	0	0.0	0	0.0
Lyme disease	881	164.7	1177	224.8	2058	194.4
Malaria	3	0.6	6	1.2	9	0.9
Plague	0	0.0	0	0.0	0	0.0
Powassan Virus Disease	0	0.0	0	0.0	0	0.0
Rabies	0	0.0	0	0.0	0	0.0
Tularemia	0	0.0	0	0.0	0	0.0
Viral Hemorrhagic Fever	0	0.0	0	0.0	0	0.0
West Nile Virus	0	0.0	0	0.0	0	0.0
Yellow Fever	0	0.0	0	0.0	0	0.0
Total	4342		4211		8555	

*Rate calculations for group B streptococcal disease of the newborn used the number of live births by sex as the denominator for rate calculations.

** : There were two cases of chlamydia of unknown sex. This occurs when sex is not identified during case investigation or through laboratory reports. These cases are included in the Nova Scotia total column.

Table B3: Notifiable diseases reported in Nova Scotia in 2023 by age group: Number of cases and age-specific rates per 100,000 population

Disease	0-4		5-14		15-24		25-39		40-59		60+		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Bloodborne Pathogens														
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hepatitis B - Acute	0	0.0	0	0.0	1	0.8	0	0.0	2	0.8	0	0.0	3	0.3
Hepatitis B - Chronic	0	0.0	0	0.0	1	0.8	13	6.0	7	2.7	3	1.0	24	2.3
Hepatitis B - Unable to Stage	0	0.0	0	0.0	0	0.0	2	0.9	0	0.0	0	0.0	2	0.2
Hepatitis C	0	0	0	0	26	21.7	185	86	141	53.3	43	13.7	395	37.3
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	3	2.5	15	7.0	10	3.8	5	1.6	33	3.1
Direct Contact, Respiratory, and Through the Provision of Health Care														
Clostridioides difficile	17	40.2	8	7.8	30	25.0	74	34.4	143	54.1	706	225.0	978	92.4
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.1
Creutzfeldt-Jakob Disease - Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Creutzfeldt-Jakob Disease - Variant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive	6	14.2	4	3.9	2	1.7	23	10.7	22	8.3	46	14.6	103	9.7
Group B Streptococcal Disease of the Newborn*	-	-	-	-	-	-	-	-	-	-	-	-	1	12.3*
Legionellosis	0	0.0	0	0.0	0	0.0	0	0.0	7	2.7	22	7.0	29	2.7
Leprosy	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningococcal Disease Invasive	1	2.4	1	1.0	4	3.3	2	0.9	0	0.0	0	0.0	8	0.8
Methicillin Resistant Staphylococcus Aureus (MRSA)	10	23.7	11	10.7	23	19.2	132	61.3	157	59.4	336.0	107.0	669	63.2
Pneumococcal disease, Invasive	2	4.7	0	0.0	1	0.8	7	3.3	12	4.5	75	23.9	97	9.2
Severe Acute Respiratory Infection (SARI)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Severe Acute Respiratory Syndrome (SARS)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tuberculosis	0	0	0	0	3	2.5	5	2.3	3	1.1	2	0.6	13	1.2
Vancomycin Resistant Enterococcus (VRE)	0	0.0	0	0.0	0	0.0	5	2.3	9	3.4	53	16.9	67	6.3
Enteric, Foodborne, and Waterborne Diseases														
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	10	23.7	5	4.9	16	13.3	44	20.4	68	25.7	83	26.4	226	21.3
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cryptosporidiosis	1	2.4	2	2.0	6	5.0	5	2.3	12	4.5	4	1.3	30	2.8

Disease	0-4		5-14		15-24		25-39		40-59		60+		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Cyclosporiasis	0	0.0	0	0.0	0	0.0	0	0.0	4	1.5	1	0.3	5	0.5
Giardiasis	1	2.4	0	0.0	2	1.7	10	4.7	38	14.4	37	11.8	88	8.3
Hepatitis A	0	0.0	0	0.0	3	2.5	1	0.5	1	0.4	1	0.3	6	0.6
Listeriosis Invasive	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12	3.8	12	1.1
Salmonellosis	9	21.3	6	5.9	16	13.3	19	8.8	31	11.7	52	16.5	133	12.6
Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shigellosis	0	0.0	0	0.0	1	0.8	3	1.4	4	1.5	2	0.6	10	0.9
Typhoid	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	2	4.7	1	1.0	0	0.0	1	0.5	0	0.0	1	0.3	5	0.5
Sexually Transmitted Infections														
Chlamydia	1	2.4	1	1.0	1566	1305.0	990	460.0	159	60.2	13	4.1	2730	258.0
Gonorrhoea	0	0.0	0	0.0	129	107.5	171	79.5	54	20.4	5	1.6	359	33.9
Syphilis - Infectious	0	0.0	0	0.0	7	5.8	21	9.8	18	6.8	3	1.0	49	4.6
Syphilis - Non-Infectious or Unable to Stage	0	0.0	0	0.0	6	5.0	25	11.6	16	6.1	5	1.6	52	4.9
Vaccine Preventable Diseases														
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenzae type b (Hib) Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Measles	1	2.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Mpox	0	0.0	0	0.0	0	0.0	1	0.5	0	0.0	0	0.0	1	0.1
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	0	0.0	0	0.0	18	15.0	22	10.2	0	0.0	0	0.0	40	3.8
Poliomyelitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vector-borne and Other Zoonoses														
Anaplasmosis	0	0.0	2	2.0	6	5.0	19	8.8	73	27.6	216	68.7	316	29.8
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Babesiosis	0	0.0	0	0.0	0	0.0	1	0.5	0	0.0	1	0.3	2	0.2
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ebola Virus Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus Pulmonary Syndrome	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme disease	29	68.6	173	168.6	84	70.0	242	112.5	532	201.3	998	317.5	2058	194.4
Malaria	1	2.4	4	3.9	2	1.7	0	0.0	2	0.8	0	0.0	9	0.9
Plague	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Disease	0-4		5-14		15-24		25-39		40-59		60+		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Powassan Virus Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rabies	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tularemia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Viral Hemorrhagic Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yellow Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	91		218		1956		2038		1525		2726		8555	

*Rate calculations by age group for group B streptococcal disease of the newborn were not calculated as only live births are considered in the denominator. This case is included in the Nova Scotia total column.

Table B4: Notifiable diseases reported in Nova Scotia in 2023 by Health Management Zone: Number of cases and crude rates per 100,000 population

Disease	Western Zone		Northern Zone		Eastern Zone		Central Zone		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Bloodborne Pathogens										
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hepatitis B - Acute	0	0.0	0	0.0	0	0.0	3	0.6	3	0.3
Hepatitis B - Chronic	2	1.0	1	0.7	2	1.2	19	3.8	24	2.3
Hepatitis B - Unable to Stage	0	0.0	1	0.7	0	0.0	1	0.2	2	0.2
Hepatitis C	77	37.6	72	47.3	91	56.6	155	30.9	395	37.3
Human Immunodeficiency Virus (HIV)	0	0.0	2	1.3	3	1.9	28	5.6	33	3.1
Direct Contact, Respiratory, and Through the Provision of Health Care										
Clostridioides difficile	184	89.9	149	97.8	214	133.0	431	85.9	978	92.4
Creutzfeldt-Jakob Disease - Classic	0	0.0	1	0.7	0	0.0	0	0.0	1	0.1
Creutzfeldt-Jakob Disease - Unknown	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Creutzfeldt-Jakob Disease - Variant	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive	10	4.9	19	12.5	20	12.4	54	10.8	103	9.7
Group B Streptococcal Disease of the Newborn*	0	-	0	-	1	-	0	-	1	12.3*
Legionellosis	2	1.0	11	7.2	3	1.9	13	2.6	29	2.7
Leprosy	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningococcal Disease Invasive	1	0.5	1	0.7	1	0.6	5	1.0	8	0.8
Methicillin Resistant Staphylococcus Aureus (MRSA)	98	47.9	152	99.8	152	94.5	267	53.2	669	63.2
Pneumococcal disease, Invasive	17	8.3	15	9.9	18	11.2	47	9.4	97	9.2
Severe Acute Respiratory Infection (SARI)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Severe Acute Respiratory Syndrome (SARS)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tuberculosis	1	0.5	2	1.3	0	0	10	2.0	13	1.2
Vancomycin Resistant Enterococcus (VRE)	16	7.8	12	7.9	3	1.9	36	7.2	67	6.3
Enteric, Foodborne, and Waterborne Diseases										
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	62	30.3	38	25.0	30	18.7	96	19.1	226	21.3
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Cryptosporidiosis	6	2.9	14	9.2	3	1.9	7	1.4	30	2.8

Disease	Western Zone		Northern Zone		Eastern Zone		Central Zone		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Cyclosporiasis	1	0.5	0	0.0	0	0.0	4	0.8	5	0.5
Giardiasis	25	12.2	15	9.9	8	5.0	40	8.0	88	8.3
Hepatitis A	0	0.0	0	0.0	5	3.1	1	0.2	6	0.6
Listeriosis Invasive	0	0.0	2	1.3	4	2.5	6	1.2	12	1.1
Salmonellosis	23	11.2	25	16.4	18	11.2	67	13.4	133	12.6
Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shigellosis	1	0.5	3	2.0	0	0.0	6	1.2	10	0.9
Typhoid	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	0	0.0	1	0.7	0	0.0	4	0.8	5	0.5
Sexually Transmitted Infections										
Chlamydia	301	147.0	320	210.0	327	203.0	1782	355.0	2730	258.0
Gonorrhoea	36	17.6	15	9.9	32	19.9	276	55.0	359	33.9
Syphilis - Infectious	5	2.4	3	2.0	4	2.5	37	7.4	49	4.6
Syphilis - Non-Infectious or Unable to Stage	5	2.4	2	1.3	1	0.6	44	8.8	52	4.9
Vaccine Preventable Diseases										
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenzae type b (Hib) Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Measles	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Mpox	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	5	2.4	0	0.0	1	0.6	34	6.8	40	3.8
Poliomyelitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vector-borne and Other Zoonoses										
Anaplasmosis	232	113.0	32	21.0	3	1.9	38	7.6	316	29.8
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Babesiosis	1	0.5	0	0.0	0	0.0	1	0.2	2	0.2
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Ebola Virus Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus Pulmonary Syndrome	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme disease	1192	582.1	296	194.4	47	29.2	523	104.2	2058	194.4
Malaria	1	0.5	0	0.0	0	0.0	8	1.6	9	0.9

Disease	Western Zone		Northern Zone		Eastern Zone		Central Zone		Nova Scotia	
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate
Plague	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Powassan Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rabies	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tularemia	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Viral Hemorrhagic Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Yellow Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	2304		1204		991		4045		8555	

*: The number of live births by zone were unavailable and therefore rates by zone for group B streptococcal disease of the newborn were not calculated.

** : There were 11 cases of anaplasmosis with an unknown health zone. This occurs when addresses captured through laboratory reports do not correspond to a health zone in Nova Scotia.