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# Communicable Disease in New Brunswick

2021 – ANNUAL SURVEILLANCE REPORT

April 2024  
Epidemiology and Surveillance



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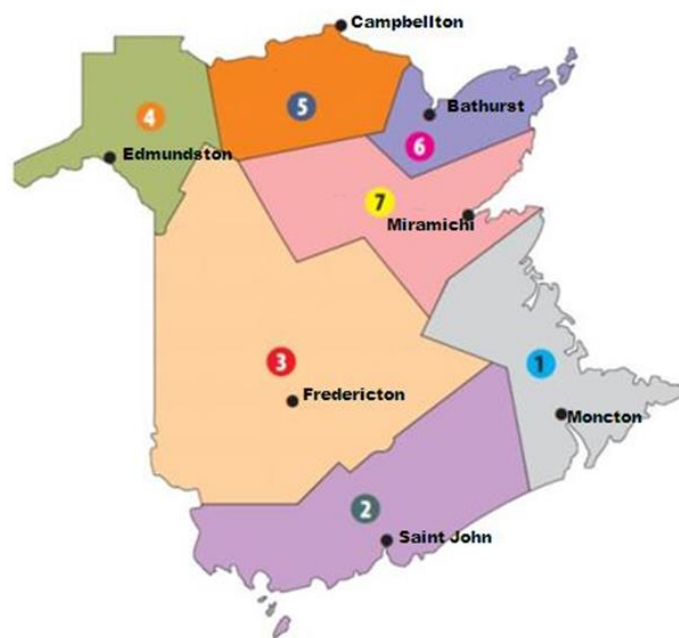
# Introduction

The reporting of notifiable diseases and events in New Brunswick (NB) is governed by the NB Public Health Act<sup>1</sup> (PHA). The PHA stipulates the duties and requirements of health professionals, laboratories and institution operators with respect to the reporting of notifiable diseases and events, as well as the reporting requirements within specified timeframes.

Surveillance programs, both passive and enhanced, are in place to capture information on notifiable communicable diseases and events in order to facilitate monitoring of trends, to detect aberrations and outbreaks, as well as for reporting, guiding response strategies and evaluating the impact of these strategies to inform policies and programs.

As per the PHA, NB public health statistics are provided for seven geographical areas called *Health Regions*<sup>2</sup>. These areas correspond to Regional Health Authorities (RHA) as follows: Horizon Health Network (HHN) – Health Regions 1, 2, 3, and 7; Vitalité Health Network (VHN) – Health Regions 1, 4, 5, and 6. See Figure 1 for an overview of the Health Regions.

The purpose of this report is to provide a summary of notifiable diseases and events that were reported in NB during 2021 and to compare trends over the previous five years, 2016-2020.



**Figure 1: Map of Health Regions in New Brunswick**

<sup>1</sup> Public Health Act (S.N.B. 1998, c. P-22.4). <http://laws.gnb.ca/en/showfulldoc/cs/P-22.4//20181113>

<sup>2</sup> Health Regions Regulation – Public Health Act. <http://laws.gnb.ca/en/showdoc/cr/2009-141>

# Data Sources

Confirmed cases reports were obtained from the seven NB Public Health regional offices through the *Reportable Disease Surveillance System* (RDSS). All cases were classified according to the date they were first reported to the Health Region.

Data for enteric diseases were obtained through the enteric database maintained within the Office of the *Chief Medical Officer of Health and Epidemiology* (OCMOHE). Outbreak summaries of enteric diseases are also notifiable since January 2017 as part of the Outbreak Summaries module within the *Canadian Network for Public Health Intelligence* (CNPHI).

Data for invasive meningococcal disease (IMD), invasive pneumococcal disease (IPD), invasive group A streptococcal disease (iGAS), measles, mumps, legionellosis, tuberculosis (TB), sexually transmitted and bloodborne infections (except Chlamydia) and Lyme disease were obtained through enhanced surveillance systems maintained by the OCMOHE. The data are derived from forms specifically designed to each disease and completed by Public Health regional staff. Since 2017, data for the Human Immunodeficiency Virus (HIV) infections and Acquired Immunodeficiency Syndrome (AIDS) are obtained from the HIV/AIDS enhanced database; data for prior years are from the *HIV/AIDS Case Report Surveillance System* database.

The denominators used to calculate provincial rates are population estimates from Statistics Canada, Demography Division, released March 2021. National disease rates for 2016 to 2021 were retrieved online from the *Notifiable Diseases Online*<sup>3</sup> page on the Public Health Agency of Canada's (PHAC) website. For 2021, national rates for Hepatitis B were not available at the time of writing of this report.

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<sup>3</sup> Notifiable Diseases Online, PHAC: <https://diseases.canada.ca/notifiable/>

# Limitations

The numbers cited in this report reflect only confirmed cases that met the *National Case Definitions*<sup>4</sup> and were reported to OCMOHE. As a result, the data may under-estimate the true number of infected individuals in the population. This is particularly relevant for diseases where many infected individuals remain asymptomatic, and diseases that have a wide clinical spectrum. It should be noted that persons experiencing severe illness are more likely to present to a healthcare provider.

Also, number and rates presented in this report are based on 2021 notifications received as of April 2022. Some of these figures may change somewhat in future reports due to delays in reporting. The national data provided by PHAC and used in this report may also be subject to minor changes in future reports for similar reasons.

Please use caution when interpreting age-, sex-, and region-specific annual incidence rates for some diseases, as the relatively small number of cases can lead to major fluctuations in rates from year-to-year.

The decrease in reported disease counts observed among several diseases from 2019 to 2021 may be related to the change in human behaviors due to the COVID-19 pandemic such as reduced or restricted travels. In addition, access to health services may have been affected and there may have been reduced access to public health services as well as health promotion, community development and collaboration as these resources were redirected towards COVID-19 pandemic response efforts.

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<sup>4</sup> Case definitions: Nationally Notifiable Diseases, PHAC: <https://diseases.canada.ca/notifiable/diseases-list>

# 2021 Highlights

## MAIN DISEASE TRENDS

### VACCINE PREVENTABLE DISEASES

In comparison to the previous 5-year average, lower rates were observed for Haemophilus influenza, IPD and varicella. Incidence rates were similar for IMD. No measles, Mumps, Pertussis, rubella, diphtheria, tetanus, or poliomyelitis cases were reported.

### ENTERIC, FOOD AND WATERBORNE DISEASES

The incidence rates for *Clostridium difficile* infections, hepatitis A, listeriosis, yersiniosis and vibrio species were higher than the previous 5-year averages, while the incidence rates for campylobacteriosis, cryptosporidiosis, infections, *E. coli* O157:H7, giardiasis, salmonellosis, and shigellosis were lower. No cases of other enteric diseases were reported.

### SEXUALLY TRANSMITTED AND BLOODBORNE INFECTIONS

The incidence rates were lower than the previous 5-year averages for chlamydia, acute and chronic hepatitis B, hepatitis C, and HIV, while the incidence rate for infectious syphilis was higher. For gonorrhoea, the incidence rate was much higher than the average rate of the five previous years. The sharp increase in the rates of gonorrhoea reported this year may have been attributed to the progressive easing of social restrictions implemented during the year. A provincial outbreak of gonorrhoea has been ongoing since 2019.

### VECTORBORNE AND ZONOTIC DISEASES

Lower incidence rates were reported for malaria compared to average rate of the previous 5-years, while the incidence rates were higher for Lyme disease and Q fever. No cases of other vectorborne and zoonotic diseases were reported.

### DISEASES TRANSMITTED VIA THE RESPIRATORY ROUTE AND DIRECT CONTACT

In comparison to the previous 5-year averages, incidence rates for legionellosis, tuberculosis and group B streptococcal infection of the newborn were higher, while the incidence rate for IGAS was lower.

## PROVINCIAL OUTBREAKS

Cases of Gonorrhoea have been increasing in New Brunswick since 2016 and a provincial outbreak has been declared since April 2019 based on sustained high levels of gonorrhoea activity in different Health Regions through 2018 and 2019.

The outbreak is still ongoing as of the time of writing this report.

# Vaccine Preventable Diseases

Vaccine preventable diseases are infectious diseases for which effective preventive vaccines exist. Early immunization of infants and completion of the full schedule of vaccinations up to and through adulthood contribute to reducing the incidence and burden of these diseases.

For information on the New Brunswick Routine Immunization Schedule, please refer to the [New Brunswick Immunization Guide](#).

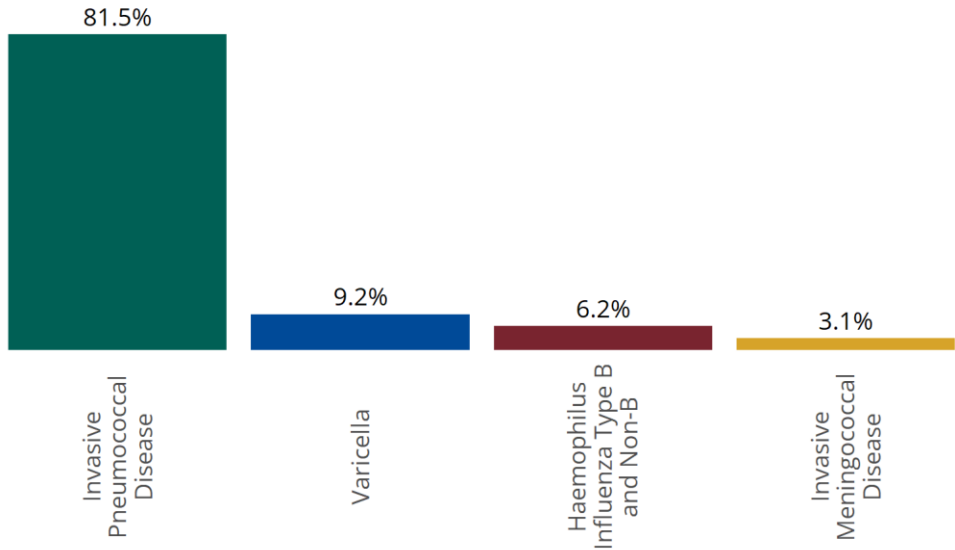


Figure 2: Percent Distribution of the most prevalent Vaccine Preventable Diseases in New Brunswick, 2021

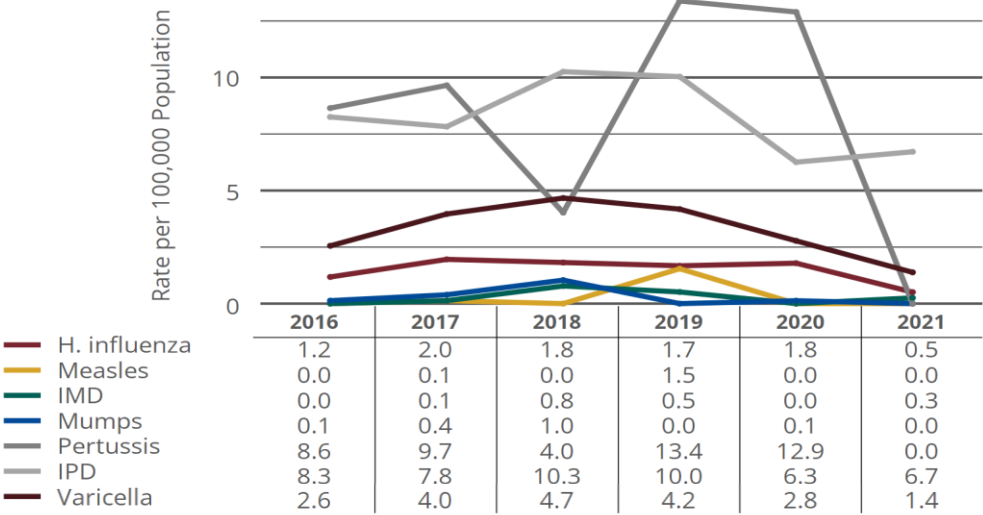


Figure 3: Incidence Rates of the most prevalent Vaccine Preventable Diseases in New Brunswick per 100,000 population, 2016-2021

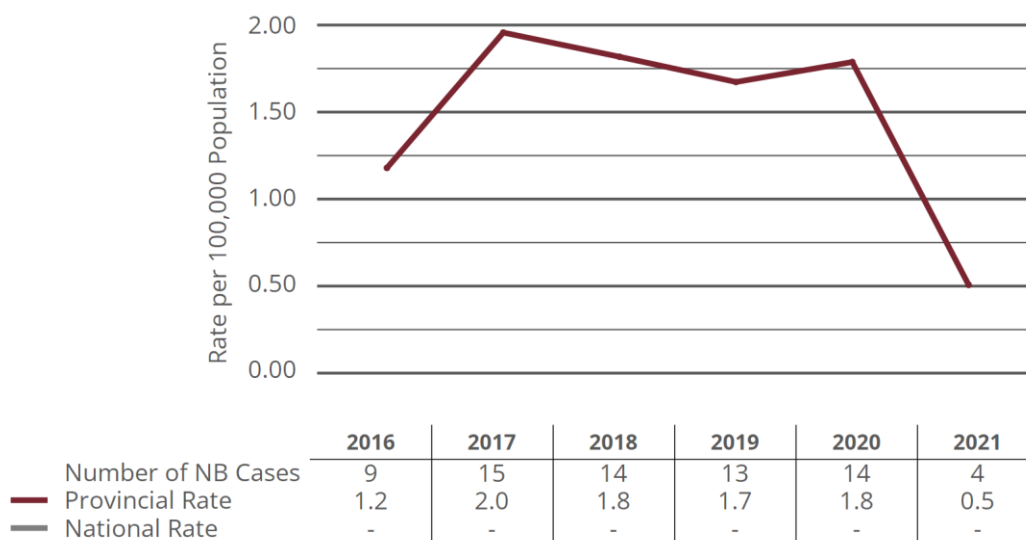


## HAEMOPHILUS INFLUENZA TYPE B AND NON-B

Only Haemophilus influenzae type b (Hib) is preventable by vaccine.

In New Brunswick, subtype reporting is not consistently available for Haemophilus influenzae. As a result, this report describes all invasive Haemophilus influenzae cases, whether type b or non-b, including untypable strains.

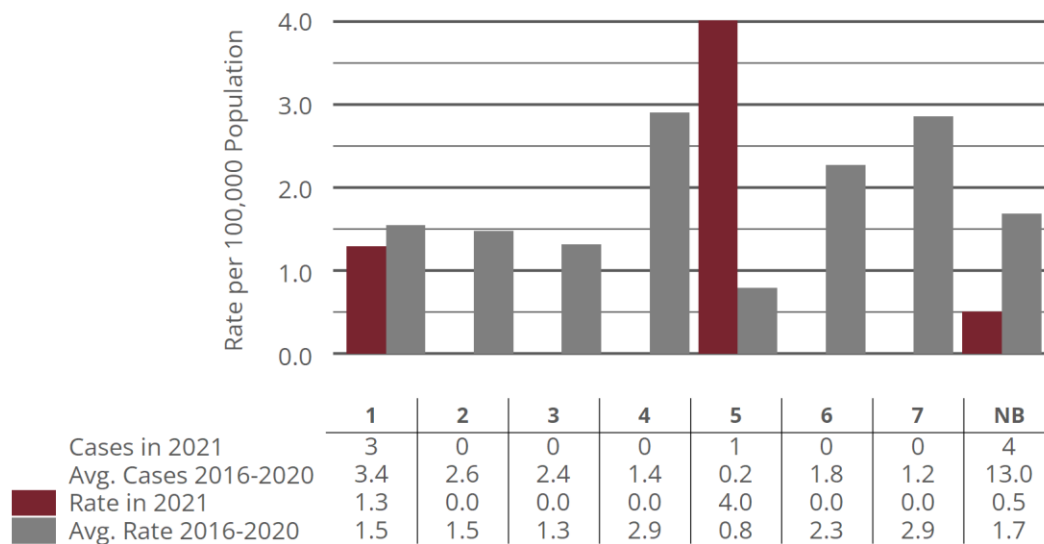
In 2021, a total of 4 cases (3 females and 1 male) of Haemophilus influenzae were reported to Public Health New Brunswick, with an incidence rate of 0.5 cases per 100,000 population. During the previous five years, an average of 13 cases were reported each year, with an average annual incidence rate of 1.7 cases per 100,000 population. There was an increase of the number of reported cases of Haemophilus influenzae between 2017 and 2020 that was likely due to an increase in reporting of non-tytable strains (invasive).



**Figure 4: Number of Reported Cases of Haemophilus Influenza Type B and Non-B and Incidence Rates per 100,000 population, New Brunswick<sup>5</sup>, 2016-2021**

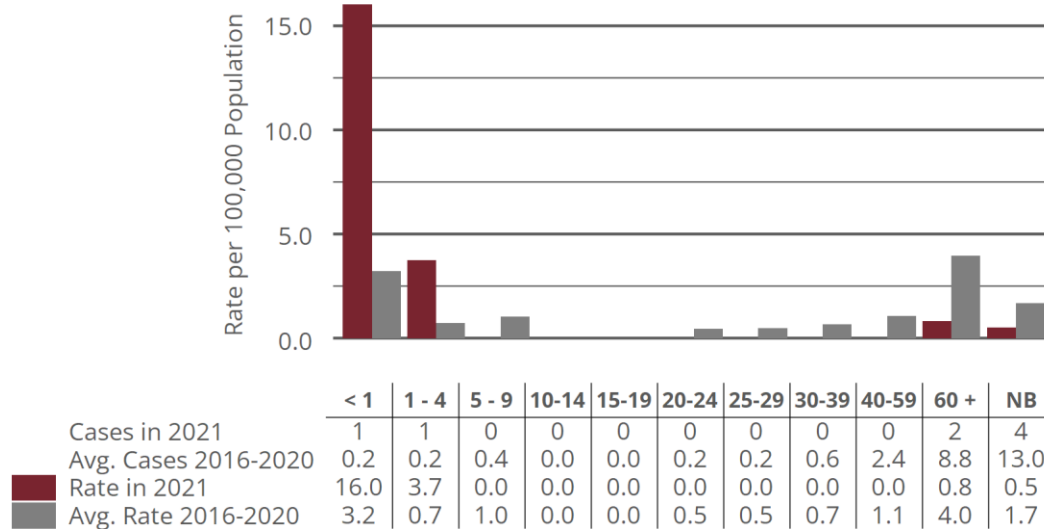
Most of the Cases were reported in Health Region 1 (3 cases) and 1 case was reported in Health Region 5. Information on strain type indicates that 2 cases had a b strain, and information was unknown for the other 2 cases.

<sup>5</sup> The national rates for Haemophilus influenzae are not presented in the figure since the rates for type B and non-B are reported separately at the national level.



**Figure 5: Number of Reported Cases of Haemophilus Influenza Type B and Non-B and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

In 2021, Haemophilus influenzae cases were reported in the 60+ years (2 cases or 50%), the <1 year and 1-4 years (1 case each) age groups.



**Figure 6: Number of Reported Cases of Haemophilus Influenza Type B and Non-B and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The annual differences in Haemophilus influenzae incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

Publicly funded Haemophilus influenzae type b immunization (DTaP-IPV-Hib) is offered at ages 2, 4, 6, and 18 months.

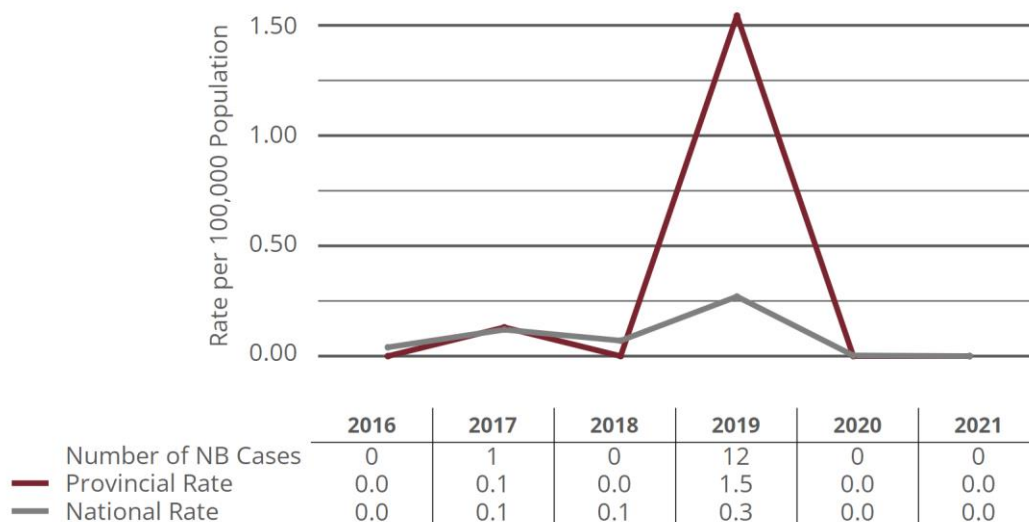
## INFLUENZA AND COVID-19

Influenza activity in New Brunswick is being monitored throughout the year. However, the influenza activity period usually begins later in the fall and ends in late spring. The 2021-2022 Summary Report of influenza activity in New Brunswick can be found on the Public Health New Brunswick's [Influenza Surveillance Reports](#) webpage.

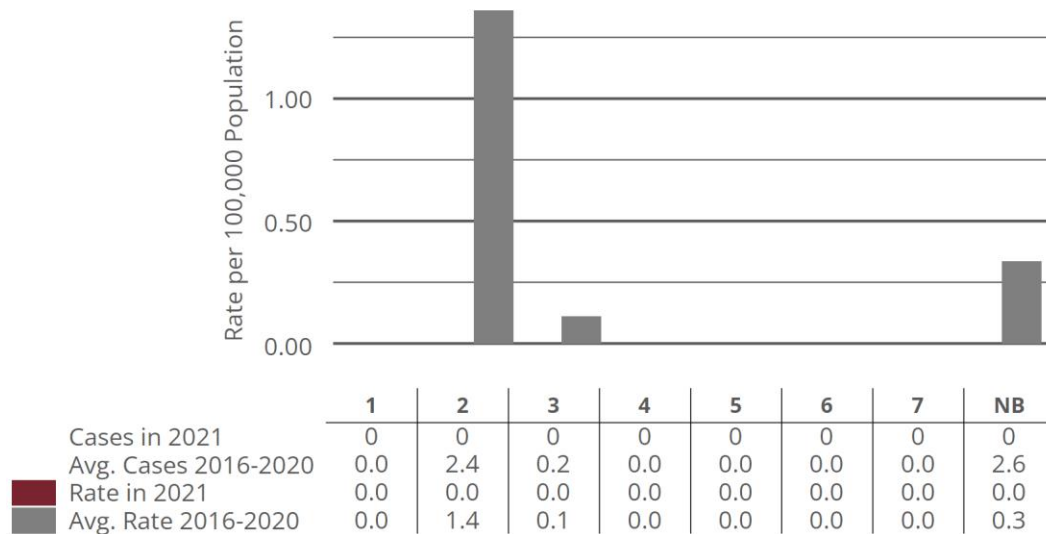
COVID activity in NB is being monitored throughout the year. COVID-19 data for the 2021-2022 season can be found on the provincial webpage [Respiratory Watch](#).

## MEASLES

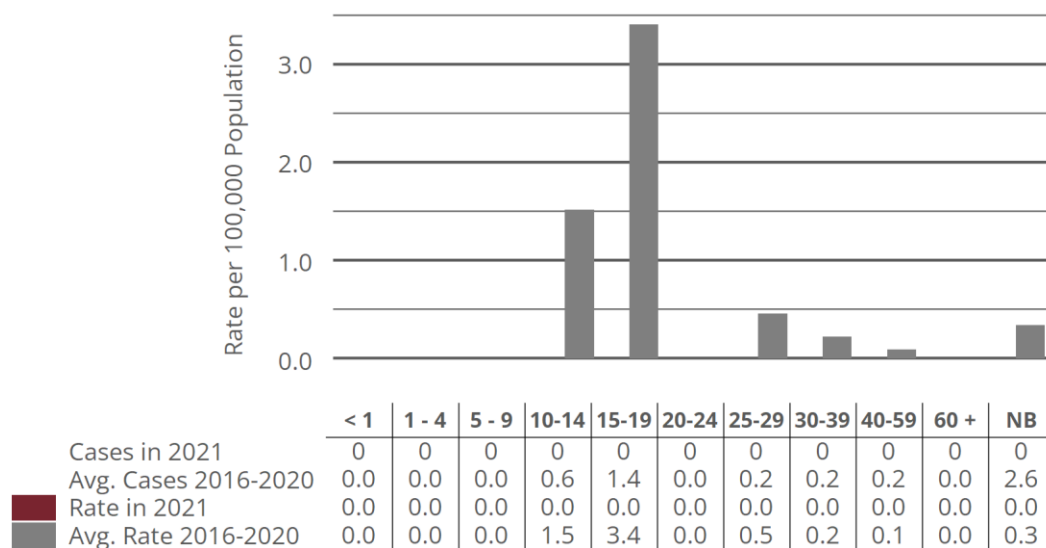
No cases of measles were reported to Public Health New Brunswick in 2021. Sustained measles transmission in Canada has been eliminated due to current immunization schedules and high coverage rates throughout the country; however, some outbreaks are still being reported. For instance, during the previous five years, an outbreak of measles was reported in 2019, (from April 25 to July 28) in Region 2. The outbreak was the result of an imported case from a traveler. A total of 12 confirmed cases were reported. Seventy-five percent of the cases (75%) were male. The average age of cases was 20.3 years. Seventy-five percent of the cases (75%) had received two doses of Measles Containing Vaccine. Apart from this outbreak, in the past five years, only one case was reported in 2017.



**Figure 7: Number of Reported Cases of Measles and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021.**



**Figure 8: Number of Reported Cases of Measles and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**



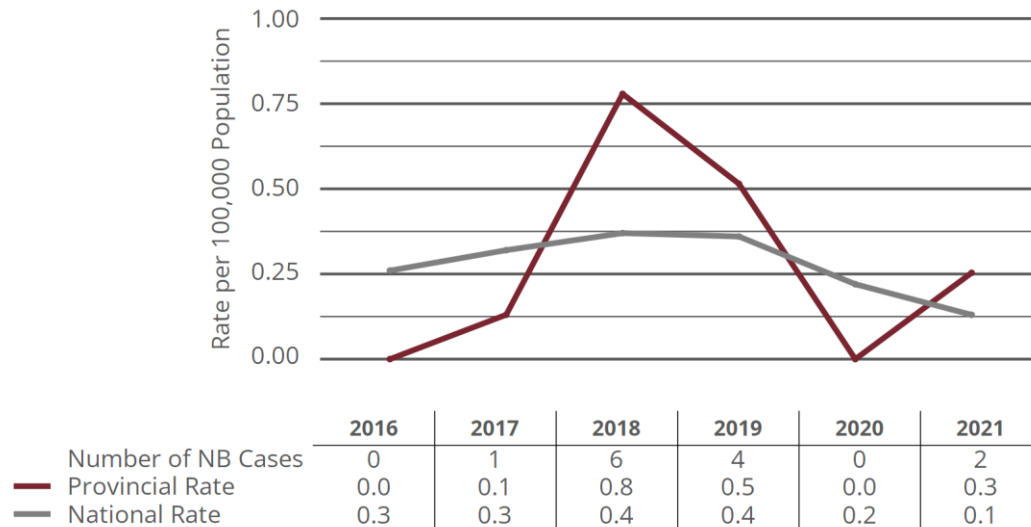
**Figure 9: Number of Reported Cases of Measles and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Publicly funded measles immunization (MMRV) is offered during childhood at 12 and 18 months of age.

The annual differences in Measles incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

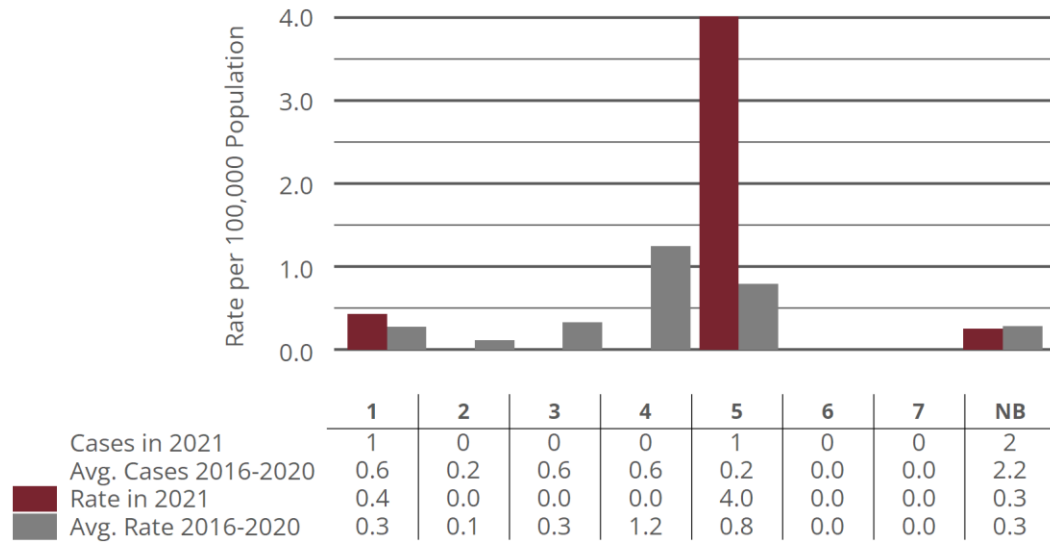
## INVASIVE MENINGOCOCCAL DISEASE

In 2021, a total of 2 cases (2 males) of IMD were reported to Public Health New Brunswick, with an incidence rate of 0.3 cases per 100,000 population. These figures are consistent with the previous five years, with an average of 2.2 cases reported each year and an average annual incidence rate of 0.3 cases per 100,000 population. In the past five years, the annual incidence rate has fluctuated being either lower or higher than the national rate.



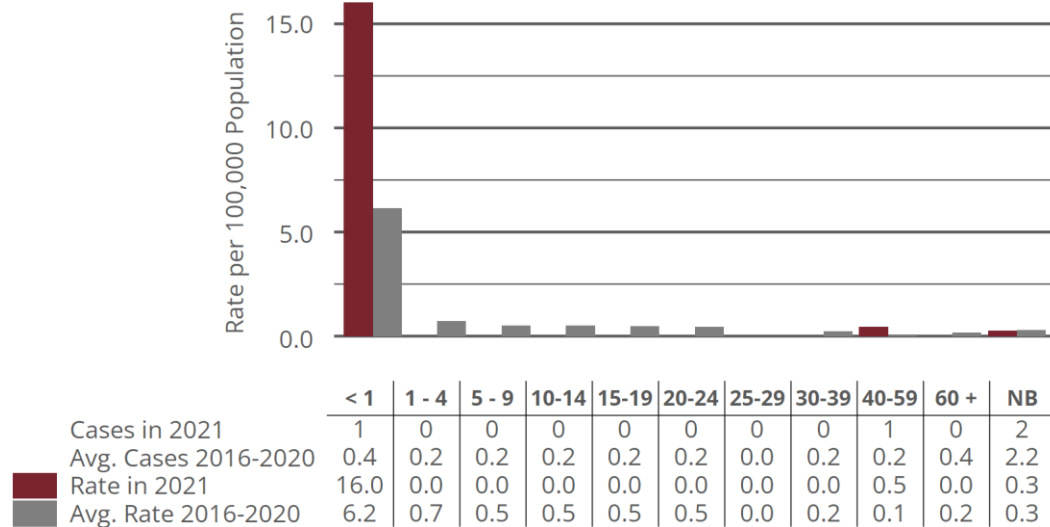
**Figure 10: Number of Reported Cases of Invasive Meningococcal Disease and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

Cases were reported in Region 1 and Region 5, with one case reported in each region. Information on serogroup indicates that 1 case was serogroup B and the information was unknown for the other case.



**Figure 11: Number of Reported Cases of Invasive Meningococcal Disease and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

In 2021, IMD cases were reported in the <1 and 40-59 age groups, with one case each.



**Figure 12: Number of Reported Cases of Invasive Meningococcal Disease and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The majority of reported IMD cases from 2016 to 2021 were serogroup B (9 cases, 69%), one case was serogroup Y, one serogroup W, one serogroup other and one case with serogroup unknown. A vaccine against meningococcal serogroup B disease was first introduced in Canada in 2014. In New Brunswick, the meningococcal serogroup B vaccine is available to those who are identified as having close contact with a case or are at higher risk of invasive meningococcal disease (for details on eligibility criteria, see:

<https://www2.gnb.ca/content/dam/gnb/Departments/h-s/pdf/en/CDC/HealthProfessionals/NBIPG-standard3-3-e.pdf>

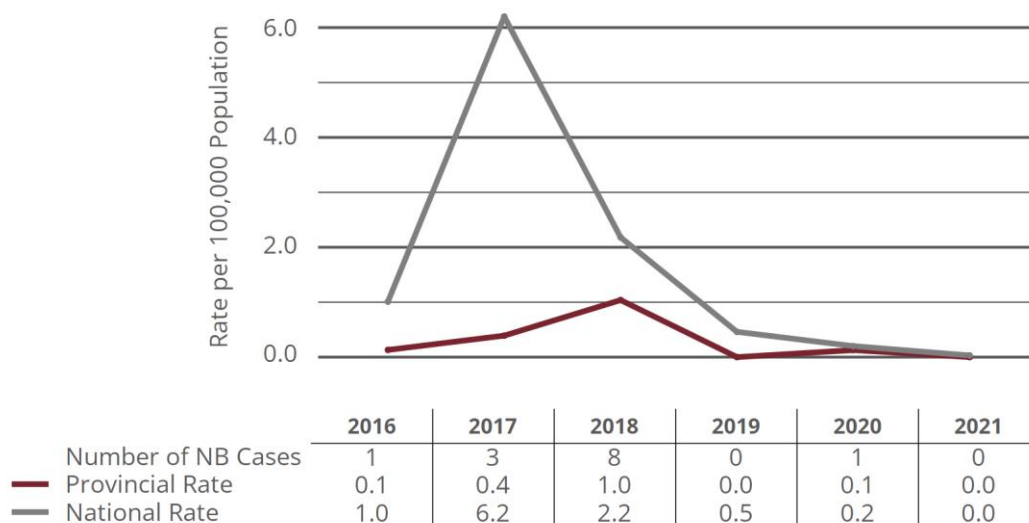
Since the introduction of the meningococcal C vaccine into the routine schedule at one year of age and the adolescent catch-up program in 2005, the incidence of serogroup C IMD has steadily decreased, with the last reported case to Public Health New Brunswick going back to 2008.

Annual differences in the IMD incidence rate should be interpreted with caution because of the small number of cases involved, which can lead to major rate fluctuations from year to year.

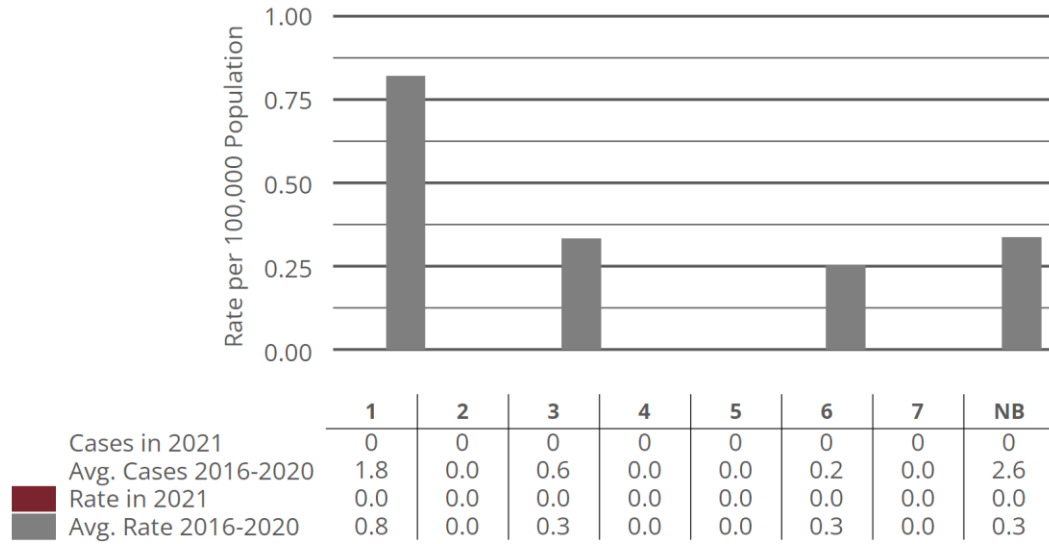
Publicly funded immunization against meningococcal disease is offered at 12 months (Meningococcal conjugate C) and in grade 9 (Meningococcal conjugate ACYW-135).

## MUMPS

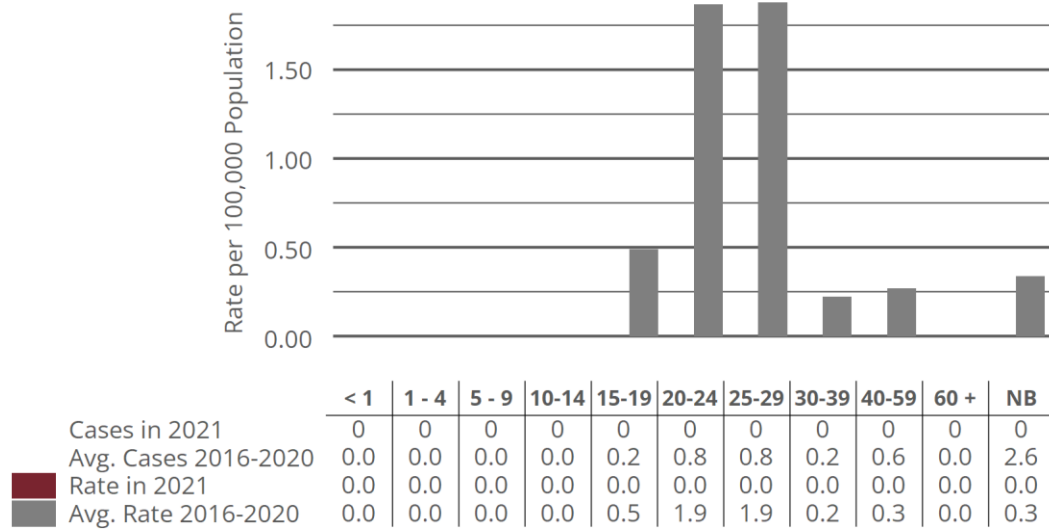
No cases of mumps were reported to Public Health New Brunswick in 2021. During the previous five years, there were 13 confirmed cases reported in New Brunswick: one case in 2016, 3 cases in 2017, 8 cases in 2018 (of which 4 cases were linked to a mumps outbreak in Region 1 in a post-secondary institution during the month of April), and 1 case in 2020.



**Figure 13: Number of Reported Cases of Mumps and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**



**Figure 14: Number of Reported Cases of Mumps and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**



**Figure 15: Number of Reported Cases of Mumps and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

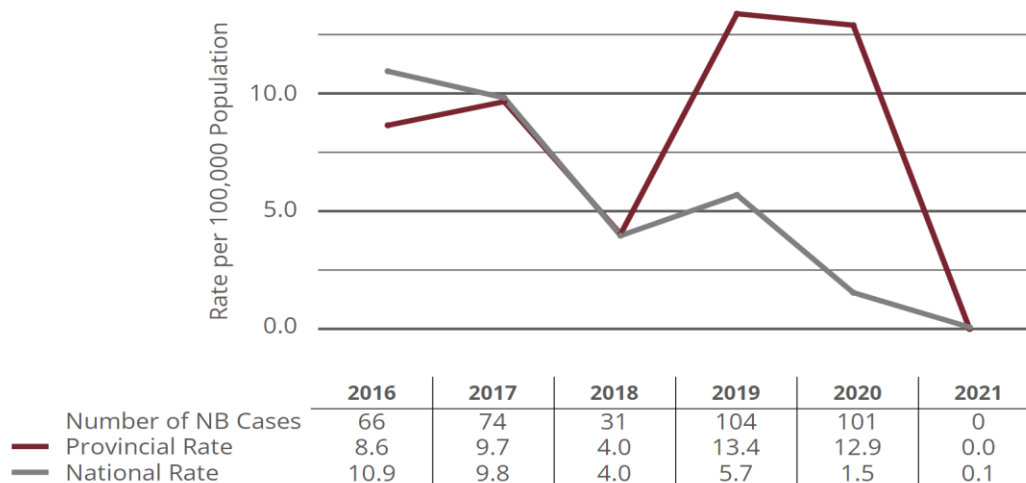
Publicly funded mumps immunization (MMRV) is offered at 12 and 18 months of age.

The annual differences in Mumps incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

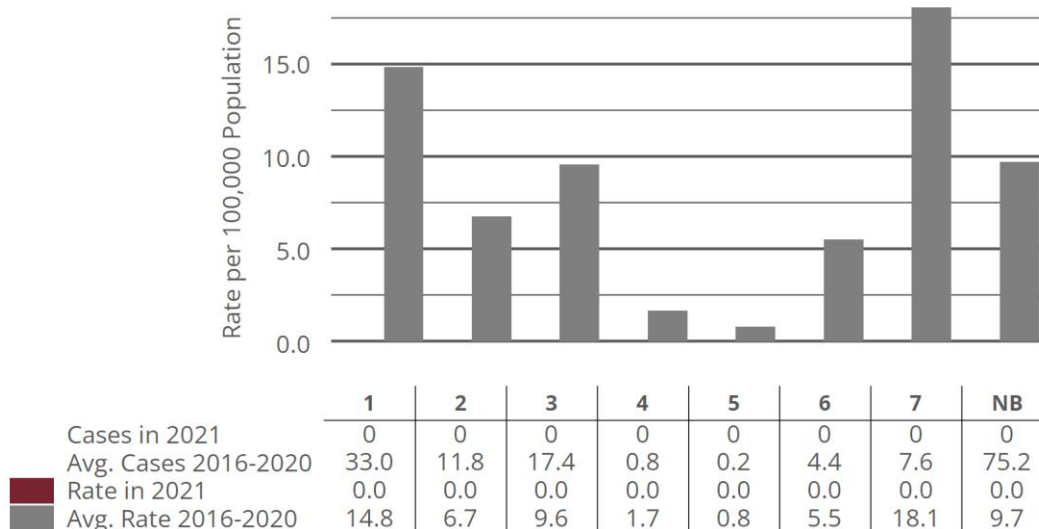


## PERTUSSIS (WHOOPIING COUGH)

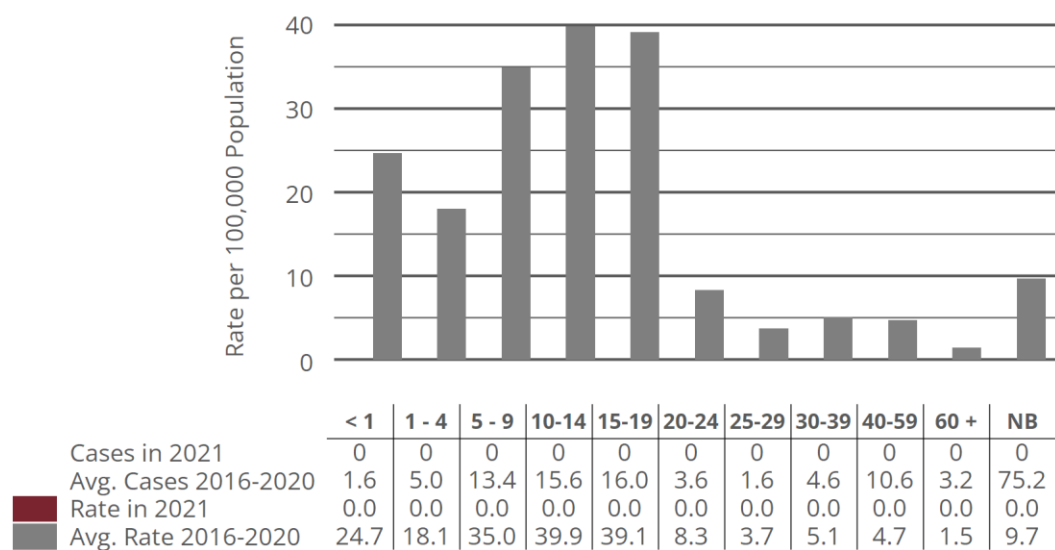
No cases of pertussis were reported to Public Health New Brunswick in 2021. During the previous five years, an average of 75 cases were reported each year, with an average annual incidence rate of 9.7 cases per 100,000 population. The increase of cases in 2019 and 2020 was driven by the pertussis outbreak in Region 1 (declared on December 20, 2019, and declared over on August 2020) and Region 7 (declared on December 13, 2019, and declared over on May 15, 2020).



**Figure 16: Number of Reported Cases of Pertussis (Whooping Cough) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2020.**



**Figure 17: Number of Reported Cases of Pertussis (Whooping Cough) and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**



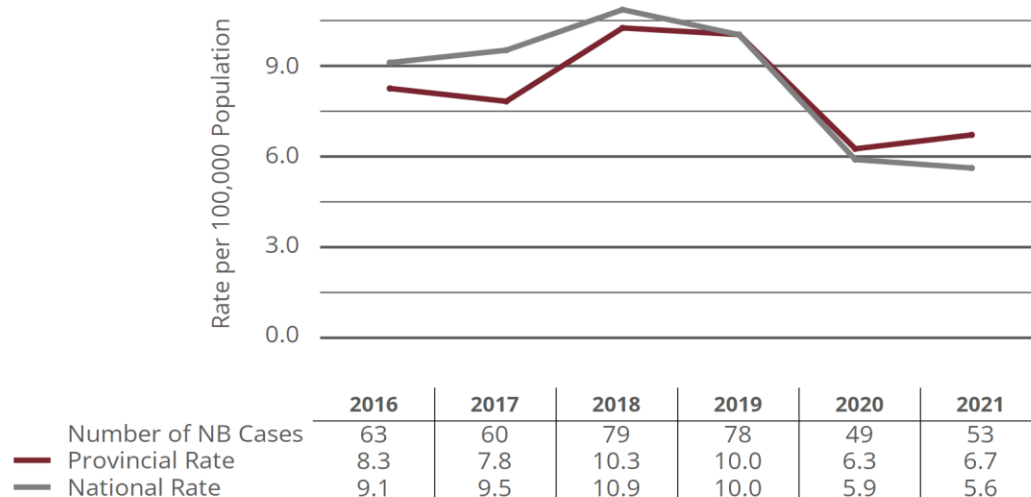
**Figure 18: Number of Reported Cases of Pertussis (Whooping Cough) and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Publicly funded pertussis immunization is offered at 2, 4, 6, and 18 months (DTaP-IPV-Hib), 4 years (Tdap-IPV), grade 7 (Tdap), and once in adulthood (Tdap). One dose is also offered to pregnant women during each pregnancy.

The annual differences in Pertussis incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

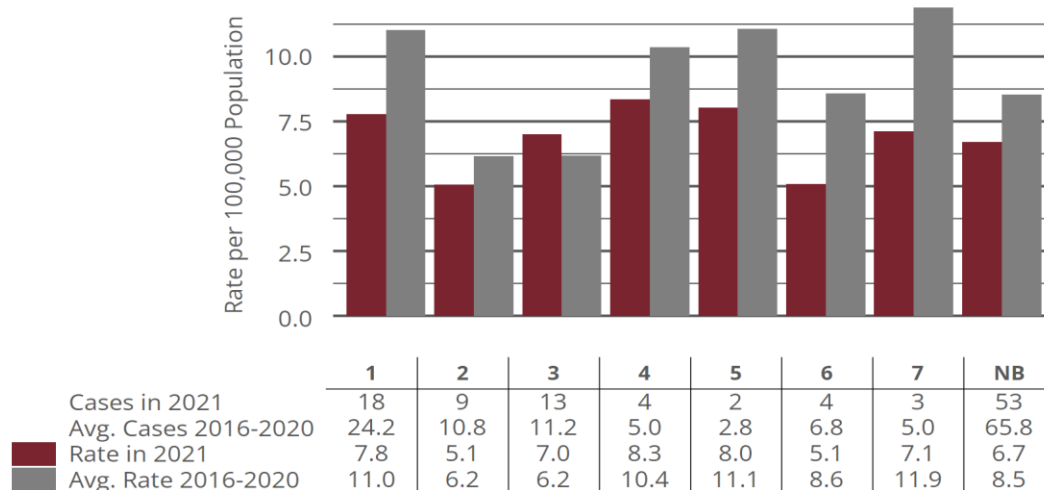
## INVASIVE PNEUMOCOCCAL DISEASE

In 2021, a total of 53 cases (20 females and 33 males) of IPD were reported to Public Health New Brunswick, with an incidence rate of 6.7 cases per 100,000 population. During the previous five years, an average of 66 cases were reported each year for an average annual incidence rate of 8.5 cases per 100,000 population. From 2016 onwards, the average annual incidence rate was lower than or equal to the national rate, except for 2020 and 2021 when the New Brunswick rate was higher than that for Canada.



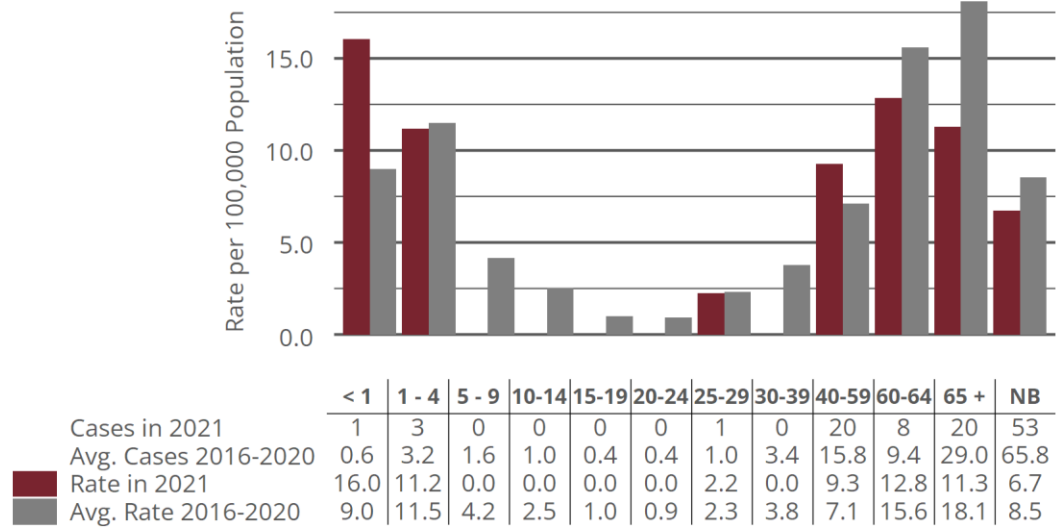
**Figure 19: Number of Reported Cases of Invasive Pneumococcal Disease and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, IPD incidence rates were lower in all Health Regions compared to the previous five years, except for Region 3. However, region-specific rates should be interpreted with caution because of the small numbers involved, which can lead to major fluctuations in rates from year to year.



**Figure 20: Number of Reported Cases of Invasive Pneumococcal Disease and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

During the previous five years, the highest age-specific incidence rate was observed in the 65+ years age group (18.1 cases per 100,000 population; 29 cases), followed by the 60-64 years age group (15.6 cases per 100,000 population; 9.4 cases), and the 1-4 years age group (11.5 cases per 100,000 population; 3.2 cases).



**Figure 21: Number of Reported Cases of Invasive Pneumococcal Disease and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

In 2021, New Brunswickers aged 65 years and older represented 38% (n=20) of all reported IPD cases. Among these cases, the most prevalent serotypes were: 22F (25%) and 15A, 19F, 23A (10% each). More than half, 65% (n=13) of the cases aged 65 years and older had information on their vaccine status available. Of these, 7 cases were vaccinated (3 with the 23-valent pneumococcal vaccine, 1 case received both the 13-valent conjugate pneumococcal vaccine and the 23-valent pneumococcal vaccine, and 3 with vaccine type received unknown). Among vaccinated cases, 100% (n=7) of the serotypes were vaccine preventable. In comparison, in the five previous years, among vaccinated cases of 65 years and older, 58% of the cases, on average, were caused by a vaccine preventable serotype. Among non-vaccinated cases of 65 years and older in 2021 (n=6), 50% of the cases were caused by vaccine-preventable serotypes compared to an average of 55% in the 5 previous years. The proportions of cases caused by vaccine preventable serotypes should be interpreted with caution because of the small number of cases involved.

Publicly funded IPD immunization is offered at 2, 4, and 12 months of age (Pneumococcal conjugate- Pevnar-13) and also for other individuals who presents high-risk factors of IPD.

Publicly funded IPD immunization for pneumococcal polysaccharide (Pneumo-P-23) is offered for persons 65 years of age and older, individuals newly admitted to a long-term care facility and all individuals ≥ 2 years of age, not previously immunized and with health conditions that place them at greater risk of IPD. For details on eligibility criteria, see:

<https://www2.gnb.ca/content/dam/gnb/Departments/hs/pdf/en/CDC/HealthProfessionals/NBIPG-standard3-3-e.pdf>

The annual differences in Invasive Pneumococcal Disease incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

## RUBELLA

No rubella cases were reported in 2021 and the previous five years (2016-2020).

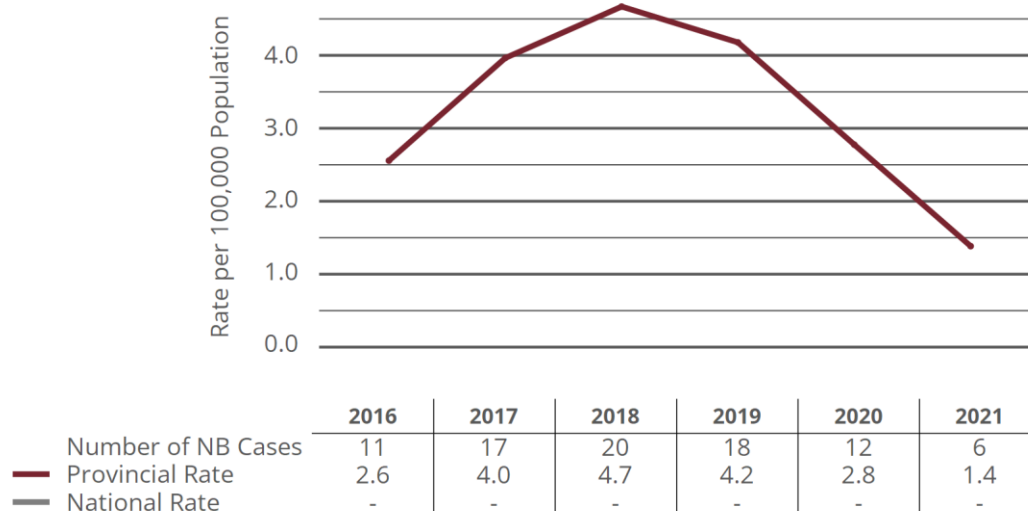
Publicly funded rubella immunization (MMRV) is offered during childhood (12 and 18 months).

The annual differences in Rubella incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

## VARICELLA

Varicella is under-reported to Public Health New Brunswick, mostly clinically diagnosed with no laboratory confirmation. Due to the fact that most cases in adults 50 years and older present with shingles (herpes zoster), this report focuses only on reported cases in those aged 0 to 49 years.

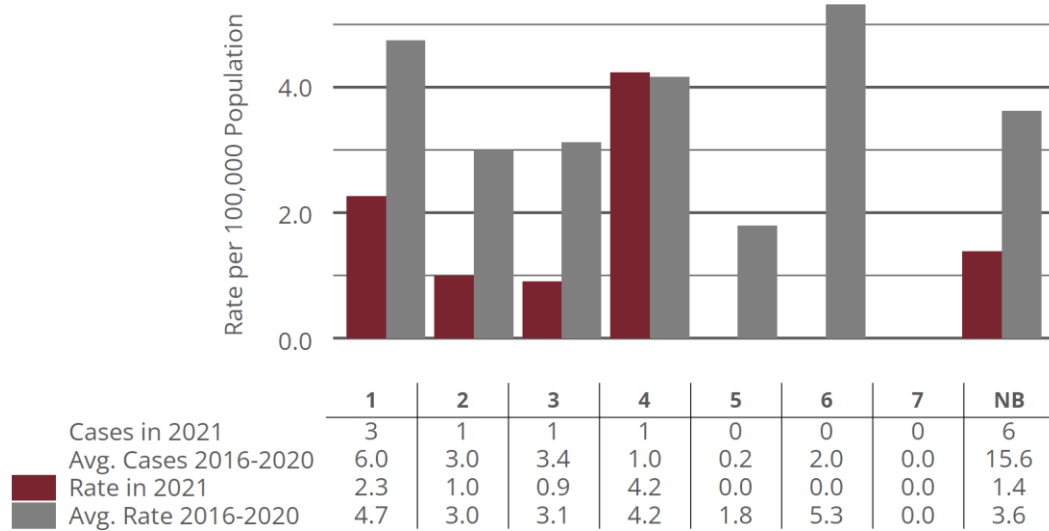
In 2021, a total of 6 laboratory-confirmed cases (2 females and 4 males) of varicella were reported to Public Health New Brunswick, with an incidence rate of 1.4 cases per 100,000 population. During the previous five years, an average of 15.6 cases were reported each year, with an average annual incidence rate of 3.6 cases per 100,000 population. The incidence rate increased in 2017, with a stable pattern until 2019 and then followed by a sharp decrease.



**Figure 22: Number of Reported Cases of Varicella and Incidence Rates per 100,000 population, New Brunswick<sup>6</sup>, 2016-2021**

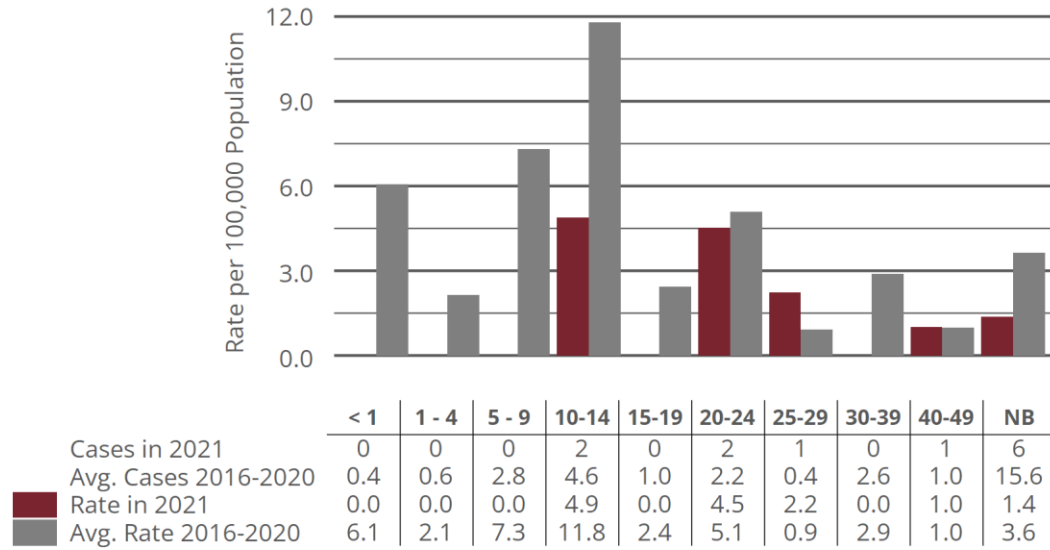
<sup>6</sup> No national comparisons available as not all provinces report varicella cases in any given year, which leads to high fluctuation in rates from year to year.

The highest number of cases was in Region 1 (3 cases or 50%), followed by Region 2, Region 3 and Region 4 (1 case each). The incidence rates were lower than the average of the five previous years in all the regions except for Region 4 where it was similar.



**Figure 23: Number of Reported Cases of Varicella and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

In 2021, cases were reported in the 10-14 years and 20-24 years age groups (2 cases each), and in the 25-29 years and 40-49 years age groups (1 case each).



**Figure 24: Number of Reported Cases of Varicella and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Publicly funded varicella immunization (MMRV) is offered during childhood at 12 and 18 months of age. The two-dose varicella vaccine schedule started in 2011 for the 2009 birth cohort onwards. In response to the school outbreaks in 2015, a catch-up program for the second dose was introduced in the 2015/16 school year for grade 9 and 10 students. The vaccine has continued to be offered to grade 9 students until the 2022/23 school year.

The annual differences in Varicella incidence rate should be interpreted with caution because of the small number of cases involved that can lead to major fluctuations in the rate from year to year.

## OTHER VACCINE PREVENTABLE DISEASES

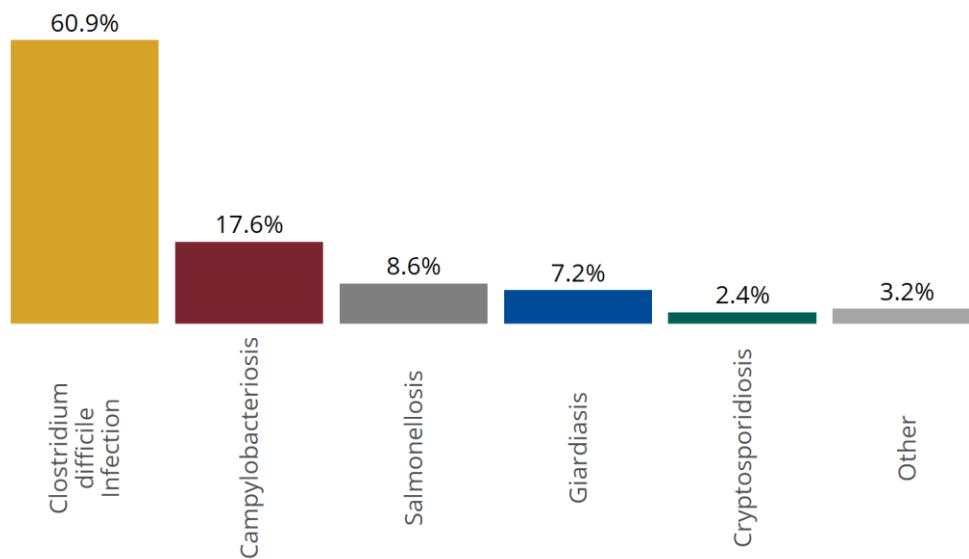
No cases of diphtheria, tetanus, or poliomyelitis were reported between 2016 and 2021. Publicly funded immunizations are provided during childhood (DTaP-IPV-Hib, Tdap-IPV, Tdap), adolescence (Tdap), and adulthood (Tdap, Td).

For further details on case counts and rates of different vaccine-preventable diseases, please refer to Appendix B.

# Enteric, Food and Water Borne Diseases

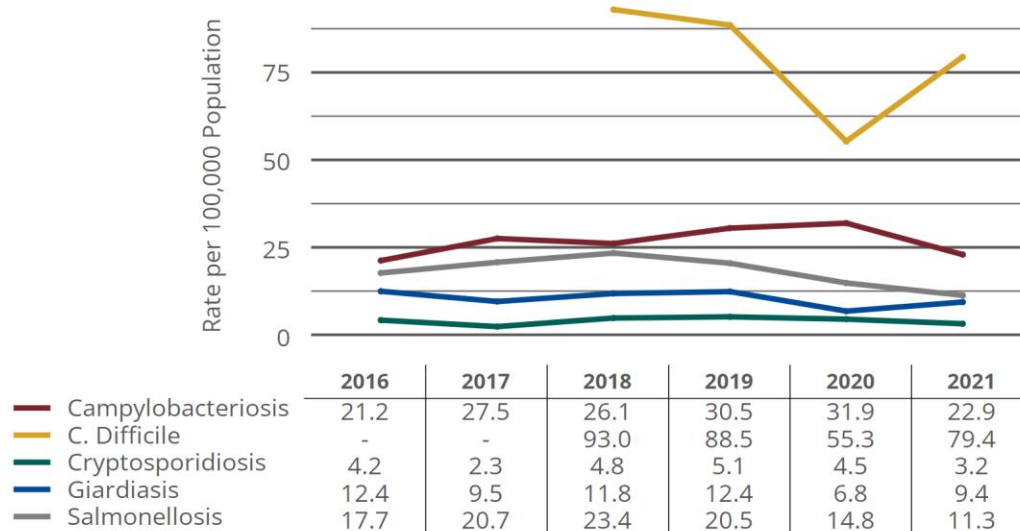
Enteric diseases are, for the most part, associated with food. However, cases are sometimes linked to contaminated water, secondary transmission from humans, and direct contact with animals, including exotic pets.

In 2021, *Clostridium difficile* infections (CDI) accounted for the largest percentage of enteric, food and waterborne diseases reported in New Brunswick, followed by campylobacteriosis, salmonellosis and giardiasis.



**Figure 25: Percent Distribution of the most prevalent Enteric, Food and Water Borne Diseases in New Brunswick, 2021**

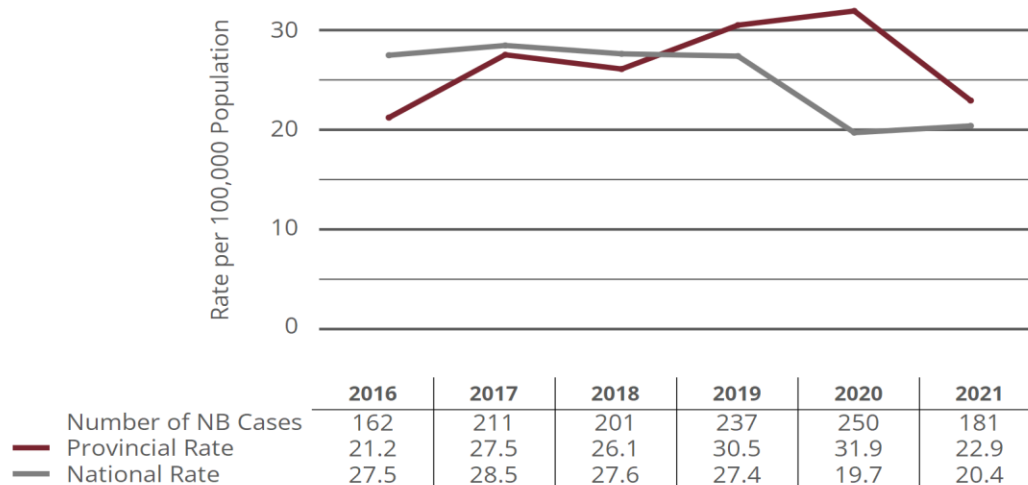




**Figure 26: Incidence Rates of the most prevalent Enteric, Food and Water Borne Diseases in New Brunswick per 100,000 population, 2016-2021**

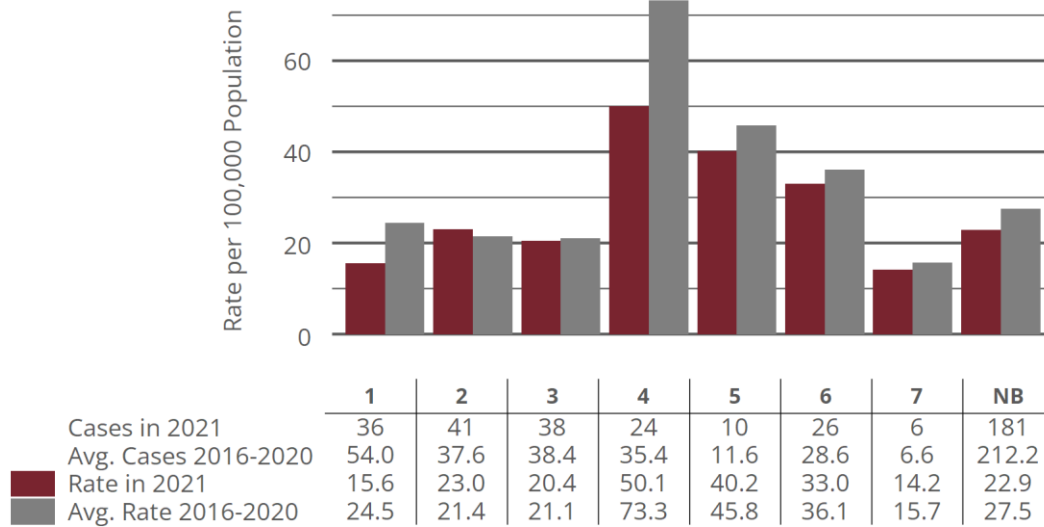
## CAMPYLOBACTERIOSIS

In 2021, a total of 181 cases (76 females and 105 males) of campylobacteriosis were reported to Public Health New Brunswick, with an incidence rate of 22.9 cases per 100,000 population. During the previous five years, an average of 212.2 cases were reported each year, with an average annual incidence rate of 27.5 cases per 100,000 population. In the past five years, the annual incidence rate has been lower than the national rate until 2019, where it became higher than the national rate.



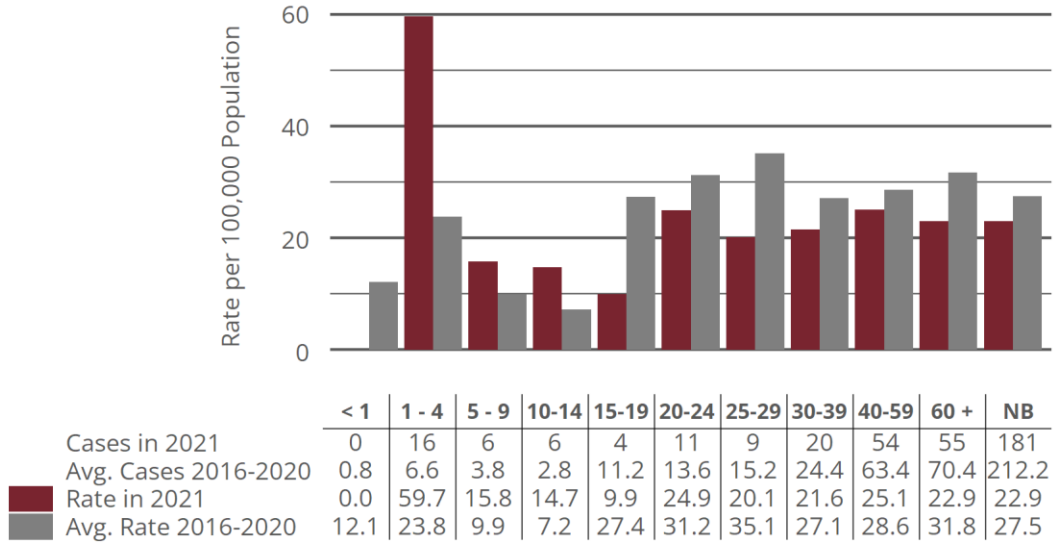
**Figure 27: Number of Reported Cases of Campylobacteriosis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

The highest incidence rate of campylobacteriosis in 2021 was in Region 4 (50.1 cases per 100,000 population), followed by Region 5 (40.2 cases per 100,000 population) and Region 6 (33.0 cases per 100,000 population). During the previous five years, the highest average incidence rate was also observed in Region 4, followed by Region 5 and Region 6 (73.3, 45.8 and 36.1 cases per 100,000 population, respectively).



**Figure 28: Number of Reported Cases of Campylobacteriosis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

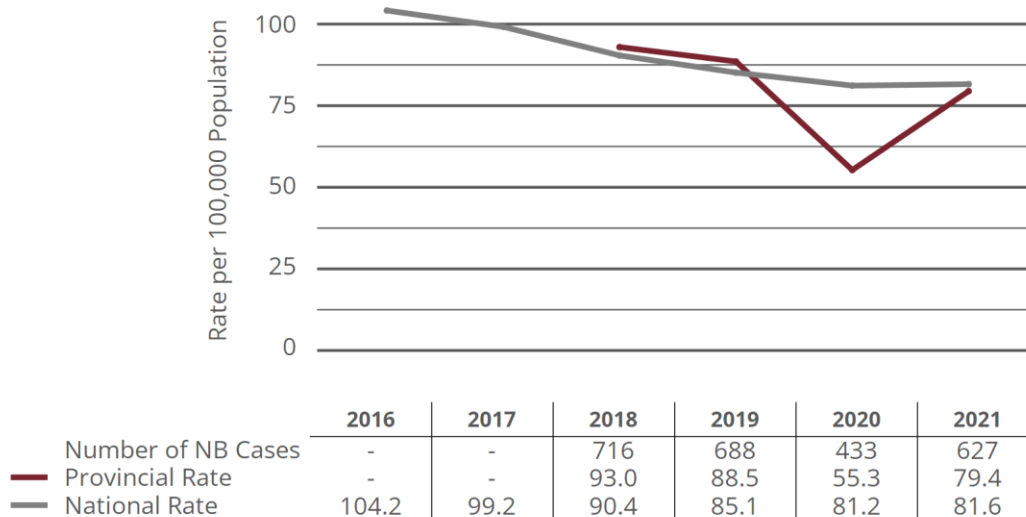
In 2021, the highest number of reported cases of campylobacteriosis were in the age groups 60 years and older (55 cases or 30%), 40-59 (54 cases or 30%) and 30-39 (20 cases or 11%), with incidence rates of 22.9, 25.1 and 21.6 cases per 100,000 population, respectively. During the previous five years, the highest average annual incidence rate was in the 25-29 age group, followed by the 60 and older age group and the 20-24 age group (35.1, 31.8 and 31.2 cases per 100,000 population, respectively).



**Figure 29: Number of Reported Cases of Campylobacteriosis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

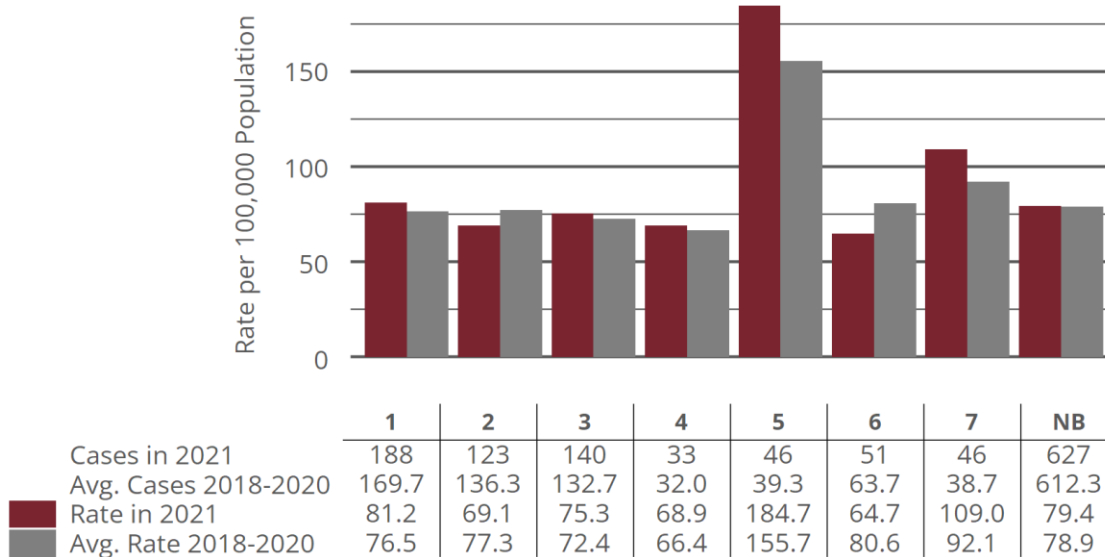
## CLOSTRIDIUM DIFFICILE INFECTION

In 2021, 627 cases (363 females and 264 males) of Clostridium Difficile Infections (CDI) were reported to Public Health New Brunswick, with an incidence rate of 79.4 cases per 100,000 population. During the previous three years, an average of 612.3 cases were reported in New Brunswick each year for an average annual incidence rate of 78.9 cases per 100,000 population.



**Figure 30: Number of Reported Cases of Clostridium difficile Infection and Incidence Rates per 100,000 population, New Brunswick<sup>7</sup> 2018-2021, and Canada, 2016-2021.**

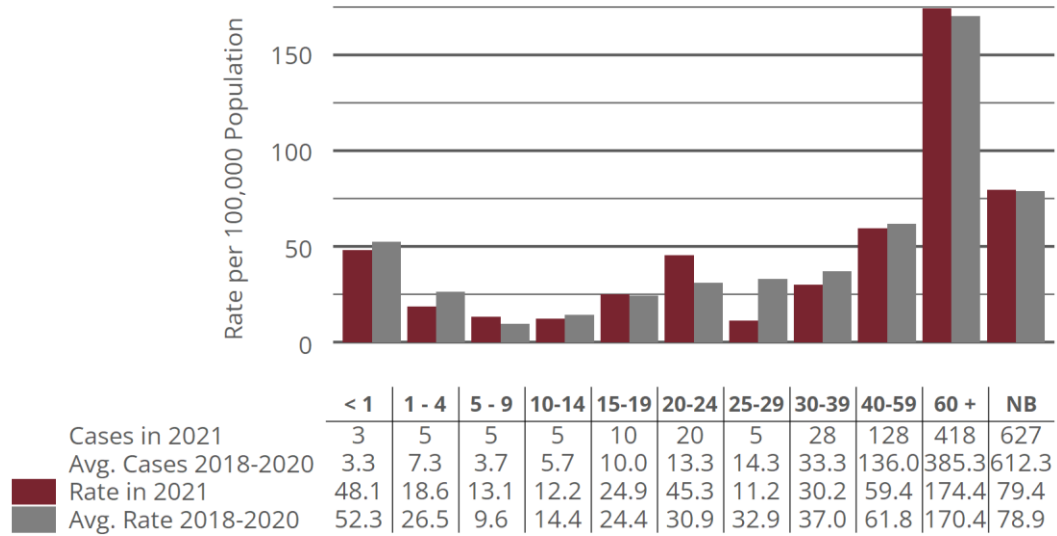
The highest number of reported cases was in Region 1 (188 cases or 30%), followed by Region 3 (140 cases or 22%) and Region 2 (123 cases or 20%). However, the highest incidence rate of CDI was observed in Region 5, followed by Region 7 and Region 1 (184.7, 109.0.3 and 81.2 cases per 100,000 population, respectively).



**Figure 31: Number of Reported Cases of Clostridium difficile Infection and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2018 to 2020 Three-year Averages**

<sup>7</sup> CDI have become reportable to Public Health New Brunswick as part of the Enteric database in 2018.

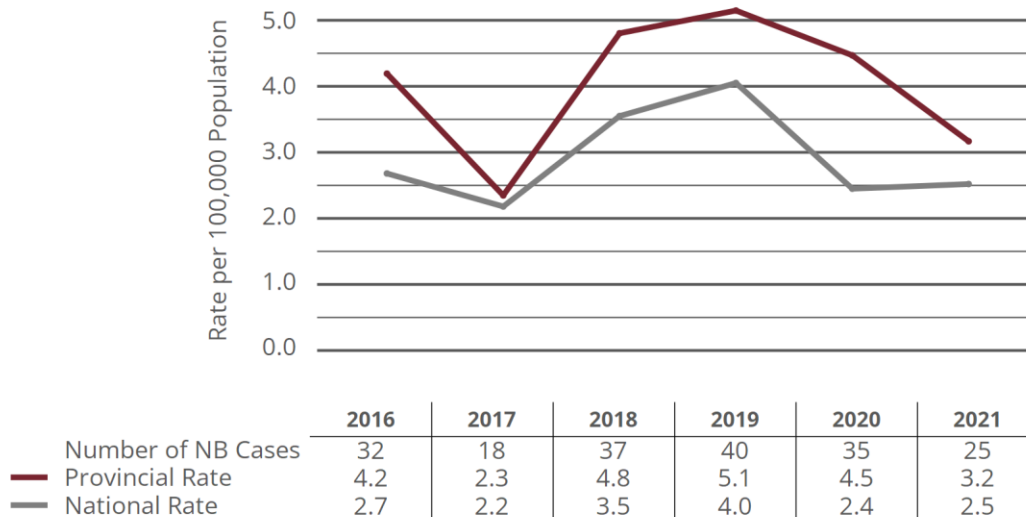
The majority of CDI cases reported were in the 60+ years age group (418 cases or 67%), followed by the 40-59 (128 cases or 20%) and the 30-39 (28 cases or 4%). The highest incidence rate was also in the 60+, followed by the 40-59 and the <1 year age groups (174.4, 59.4 and 48.1 cases per 100,000 population, respectively).



**Figure 32: Number of Reported Cases of Clostridium difficile Infection and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2018 to 2020 Three-year Averages**

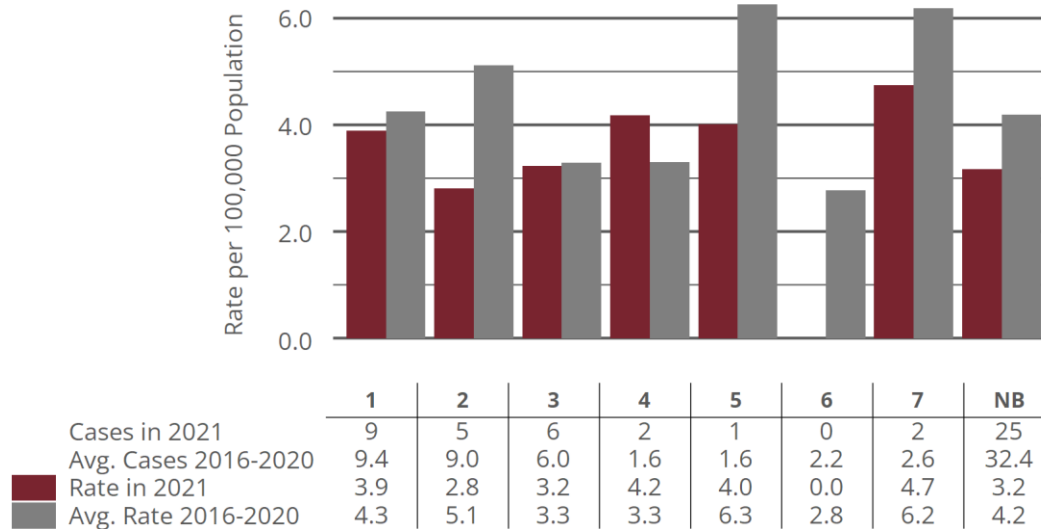
## CRYPTOSPORIDIOSIS

In 2021, a total of 25 cases (11 females and 14 males) of cryptosporidiosis were reported to Public Health New Brunswick, with an incidence rate of 3.2 cases per 100,000 population. During the previous five years, an average of 32.4 cases were reported each year, with an average annual incidence rate of 4.2 cases per 100,000 population. Overall, the Incidence rates for New Brunswick fluctuated over time and were higher than the national rates.



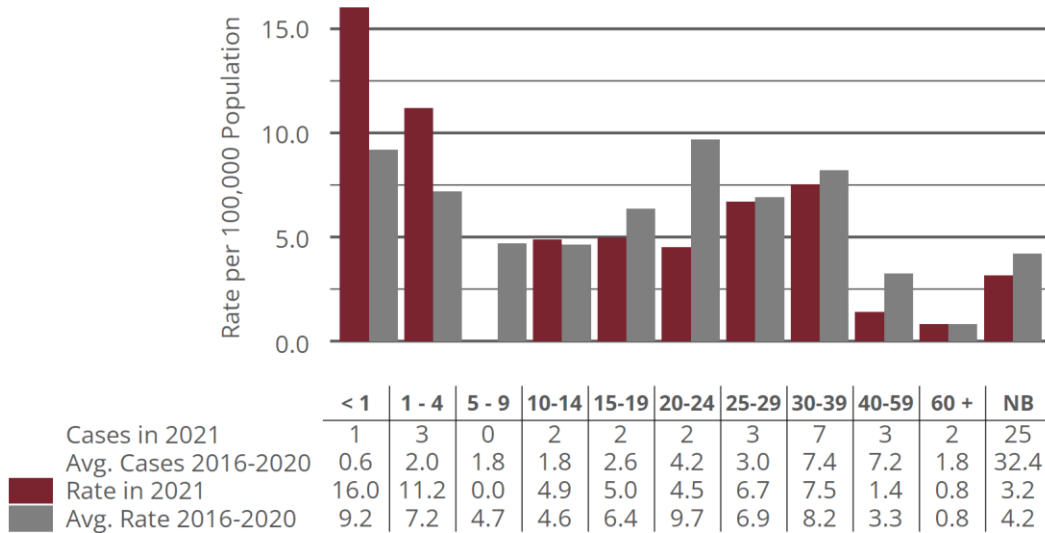
**Figure 33: Number of Reported Cases of Cryptosporidiosis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, the highest number of reported cases of cryptosporidiosis was in Region 1 (9 cases or 36%), followed by Region 3 (6 cases or 24%) and Region 2 (5 cases or 20%). However, the highest incidence rate was observed in Region 7, followed by Region 4 and Region 5 (4.7, 4.2 and 4.0 cases per 100,000 population, respectively). Overall, the incidence rate was lower than the previous 5-year average in all regions except for Region 4 where it was higher.



**Figure 34: Number of Reported Cases of Cryptosporidiosis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of cases was in the 30-39 years age group (7 cases or 28%), followed by the 40-59, 25-29- and 1-4-years age groups (3 cases or 12% each). The highest incidence rate was in the <1 year age group, followed by the 1-4 years age group and the 30-39 years age group (16.0, 11.2 and 7.5 cases per 100,000 population respectively).

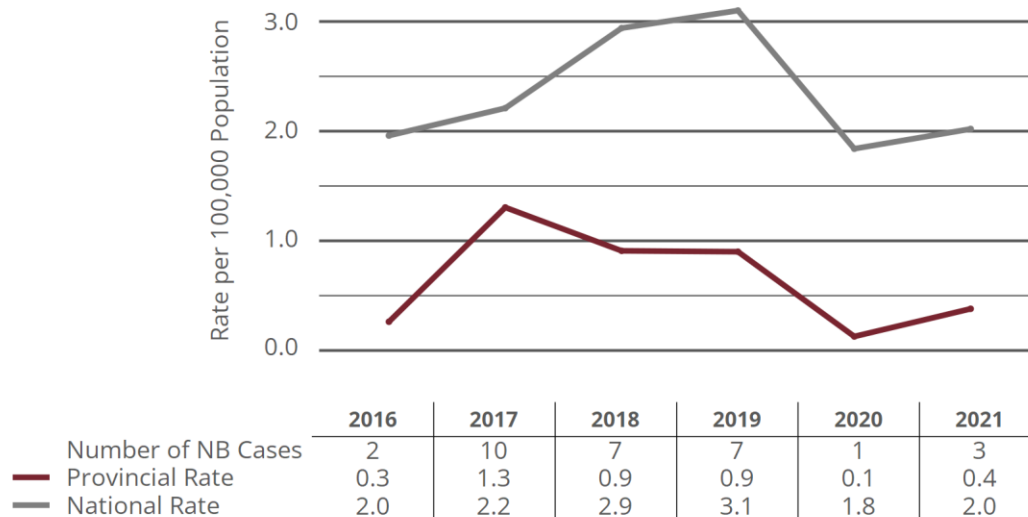


**Figure 35: Number of Reported Cases of Cryptosporidiosis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The annual differences in incidence rates by Health Region and by age group should be interpreted with caution because of the small numbers involved that can lead to major fluctuation in rates from year to year.

## E. COLI O157

In 2021, 3 cases of E.coli 0157:H7 infection was reported to Public Health New Brunswick. The incidence rate was 0.4 cases per 100,000 population. These figures are lower than the previous five years, with an average of 5.4 cases reported yearly and an average incidence rate of 0.7 cases per 100,000 population. From 2016 to 2021, New Brunswick rates were consistently lower than the national rates.



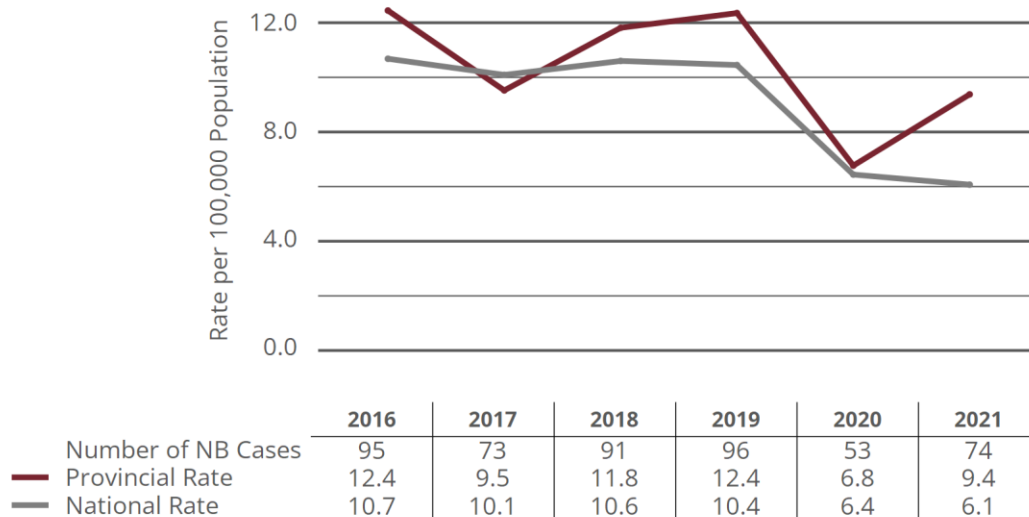
**Figure 36: Number of Reported Cases of *E. coli* O157 and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

## GIARDIASIS

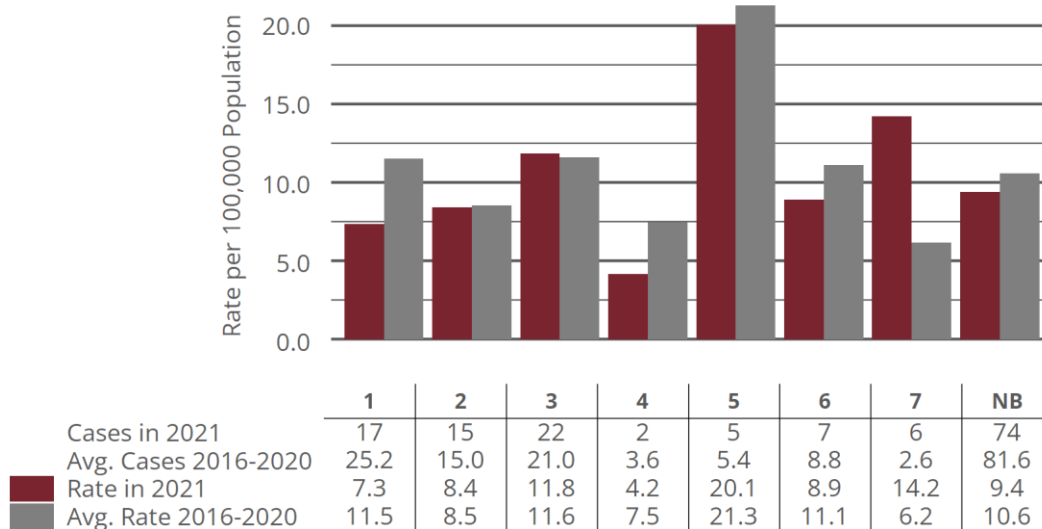
In 2021, a total of 74 cases (33 females and 41 males) of giardiasis were reported to Public Health New Brunswick, with an incidence rate of 9.4 cases per 100,000 population. During the previous five years, an average of 81.6 cases were reported each year, with a 5-year average incidence rate of 10.6 cases per 100,000 population. From 2016 to 2019, the incidence rates of giardiasis were relatively stable at the national level, followed by a decrease in 2020 and 2021. During the same period, New Brunswick rates were consistently higher than the national rates, except in 2017, when it was slightly lower than the national rate and in 2020 when the rates were approximately equal.





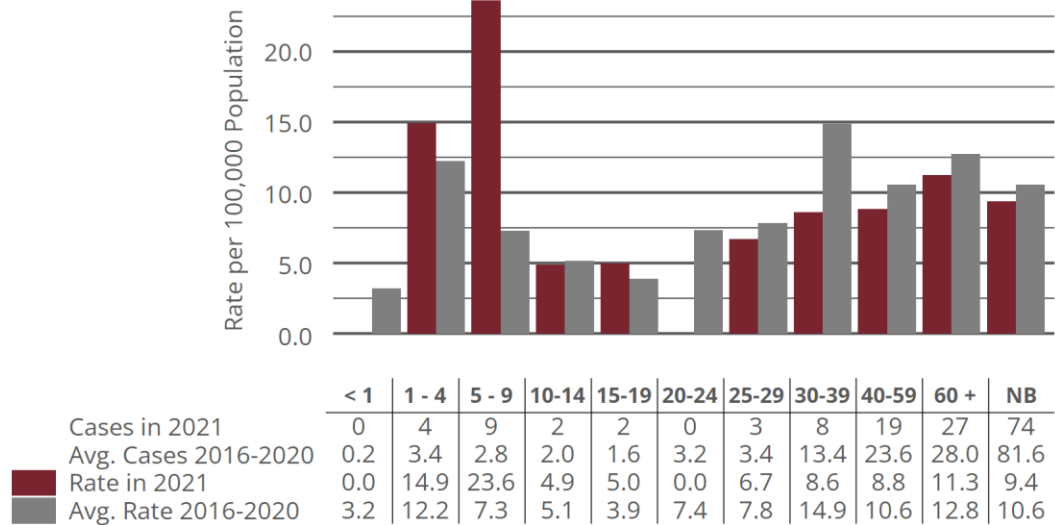
**Figure 37: Number of Reported Cases of Giardiasis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, the highest numbers of reported cases were in Region 3 (22 cases or 30%), followed by Region 1 (17 cases or 23%) and Region 2 (15 cases or 20%). However, the highest incidence rate was observed in Region 5, followed by Region 7 and Region 3 (20.1, 14.2 and 11.8 cases per 100,000 population, respectively). Overall, the incidence rate was lower than the previous 5-year average in all regions except for Region 3 and Region 7.



**Figure 38: Number of Reported Cases of Giardiasis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of reported cases of giardiasis was in the 60+ years age group (27 cases or 36%), followed by the 40-59 years age group (19 cases or 26%) and the 5-9 years age group (9 cases or 12%). The highest incidence rates were in the 5-9, 1-4 and 60+ years age groups (23.6, 14.9 and 11.3 cases per 100,000 population, respectively). Overall, the incidence rate was lower than the previous 5-year average in all age groups except for the 1-4, the 5-9, and 15-19-years age groups.

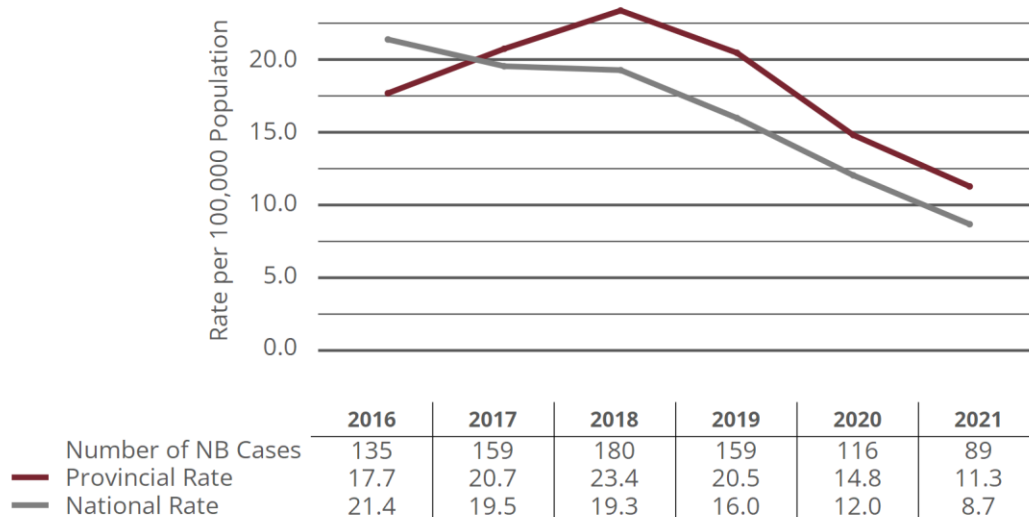


**Figure 39: Number of Reported Cases of Giardiasis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The annual changes in the giardiasis incidence rate by age group should be interpreted with caution; the relatively low number of cases can result in major fluctuations in the rate from year to year.

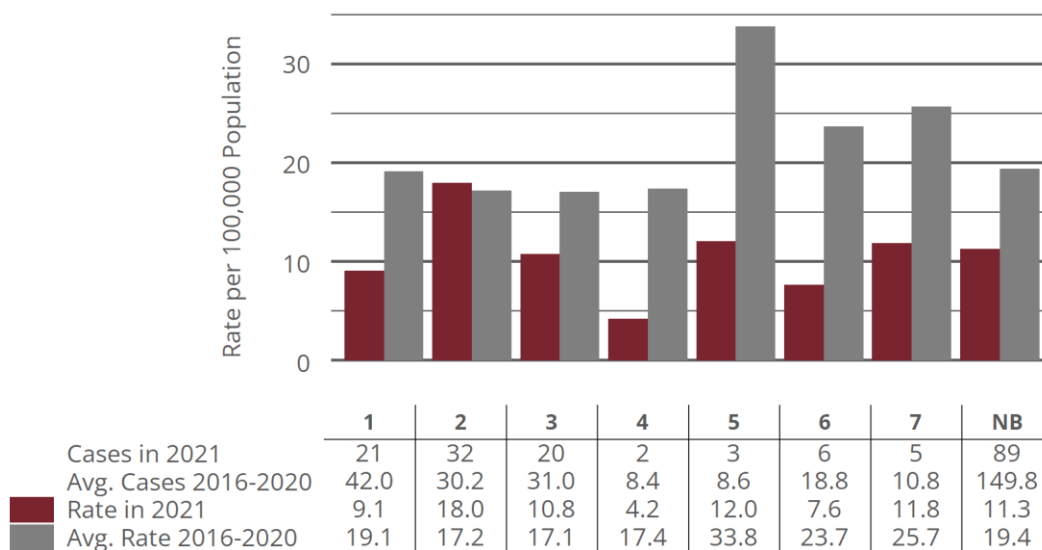
## SALMONELLOSIS

In 2021, there were 89 cases (52 females and 37 males) of salmonellosis reported to Public Health New Brunswick, with an incidence rate of 11.3 cases per 100,000 population. These figures are lower than the annual average for the previous five years (149.8 cases and 19.4 cases per 100,000 population). From 2016 to 2021, incidence rates were higher than the national rates, except for 2016, when the rate was lower.



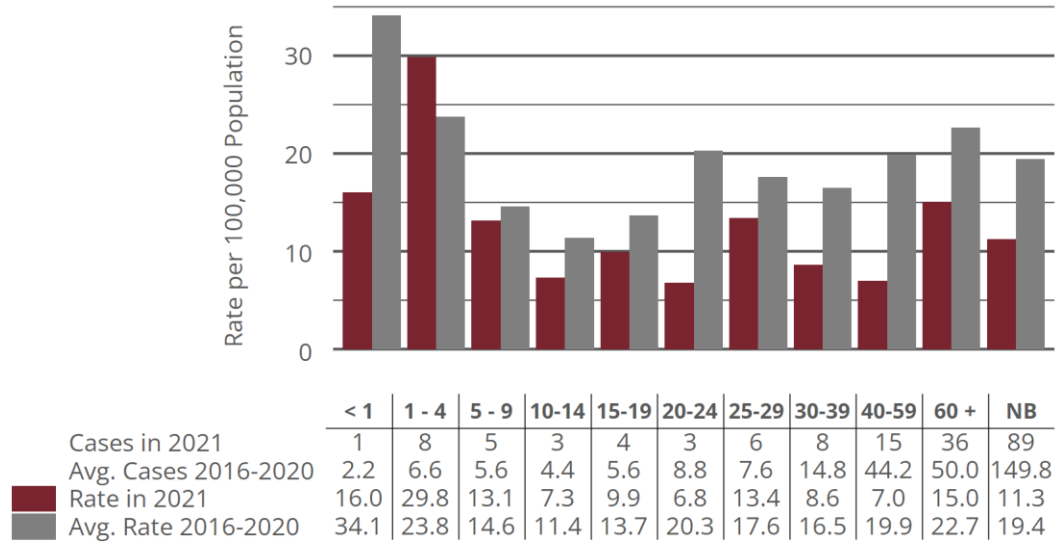
**Figure 40: Number of Reported Cases of Salmonellosis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, the highest number of reported cases was in Region 2 (32 cases or 36%), followed by Region 1 (21 cases or 23%) and Region 3 (20 cases or 22%). The highest incidence rate was also in Region 2, followed by Region 5 and Region 7 (18.0, 12.0 and 11.8 cases per 100,000 population, respectively). During the previous five years, the highest average incidence rate was observed in Region 5 (33.8 cases per 100,000 population), followed by Region 7 (25.7 cases per 100,000 population) and Region 6 (23.7 cases per 100,000 population). Overall, the incidence rate was lower than the previous 5-year average in all regions except for Region 2 where it was similar.



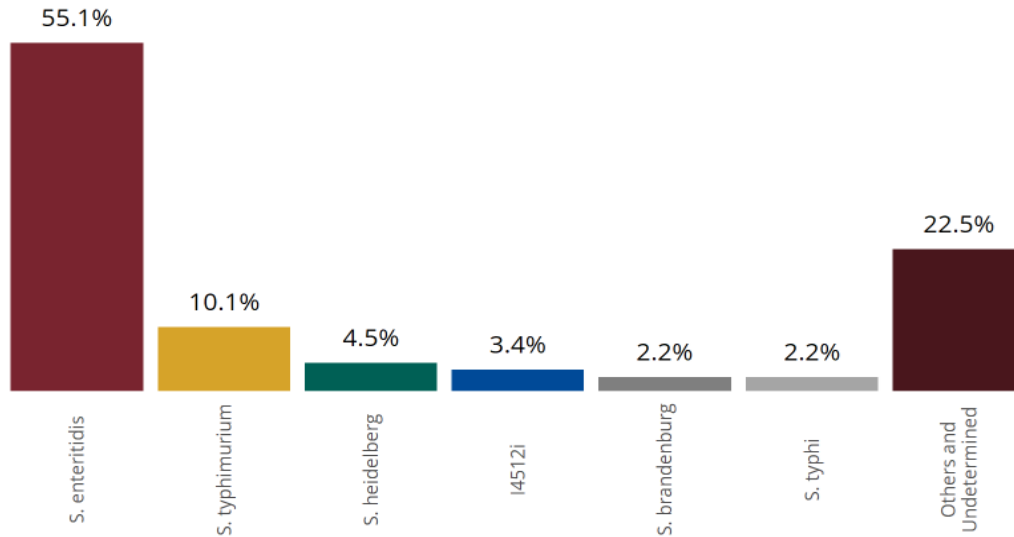
**Figure 41: Number of Reported Cases of Salmonellosis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Most reported salmonellosis cases were in the 60+ years age group (36 cases or 40%), followed by the 40-59 years age group (15 cases or 17%) and the 30-39 and the 1-4 years age group (8 cases or 9% each). However, the highest incidence rate was in the 1-4 years age group, followed by the <1 and the 60+ years age group (29.8, 16.0 and 15.0 cases per 100,000 population, respectively). During the previous five years, the highest average annual incidence rates was also in the <1 year, followed by the 1-4 and the 60+ years age groups (34.1, 23.8 and 22.7 cases per 100,000 population, respectively). The incidence rates in 2021 were lower than the previous five years averages for all the age groups except the 1-4 years age group where it was higher.



**Figure 42: Number of Reported Cases of Salmonellosis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The most prevalent *Salmonella* serotype in 2021 was *S. enteritidis* (49 cases or 55.1%), followed by *S. typhumirium* (9 cases or 10.1%) and *S. heidelberg* (4 cases or 4.5%). Twenty (20) cases of other or undetermined serotypes accounted for 22.5% of reported cases.

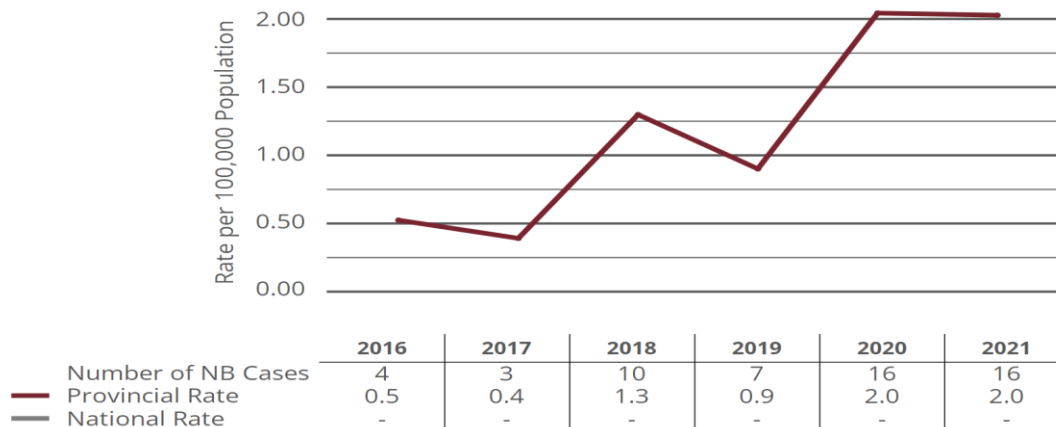


**Figure 43: Percent Distribution of Salmonellosis by Serotype in New Brunswick, 2021.**

The annual changes in the Salmonellosis incidence rate by age group should be interpreted with caution; the relatively low number of cases can result in major fluctuations in the rate from year to year.

## VIBRIO

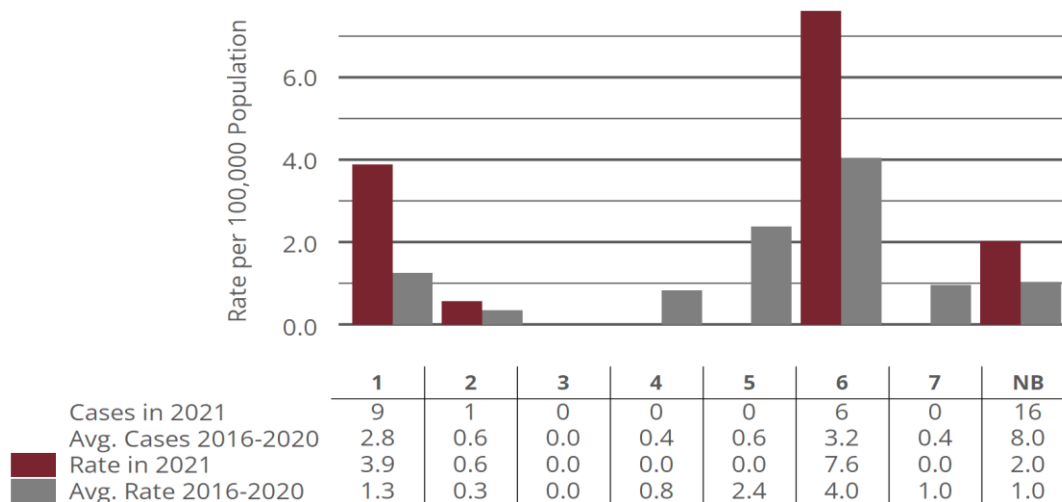
In 2021, 16 cases (4 females and 12 males) of Vibrio were reported to Public Health New Brunswick, with an incidence rate of 2.0 cases per 100,000 population. These figures are higher than the average of the previous five years, with 8.0 cases reported each year and an average annual incidence rate of 1.0 cases per 100,000 population.



**Figure 44: Number of Reported Cases of Vibrio and Incidence Rates per 100,000 population, New Brunswick<sup>8</sup>, 2016-2021**

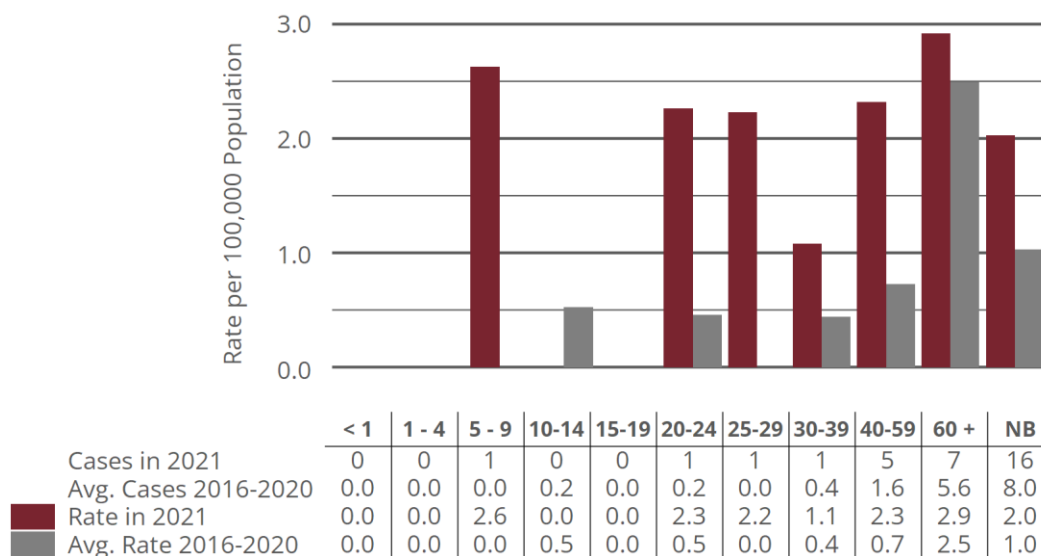
<sup>8</sup> Incidence rates at the national level are not available.

Out of the reported cases, 11 (69%) were linked to a *Vibrio parahaemolyticus* cluster, with occurrences in Region 1 (6 cases) and Region 6 (5 cases) related to raw shellfish consumption.



**Figure 45: Number of Reported Cases of Vibrio and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of reported cases of Vibrio was in the 60+ years age group (7 cases or 44%), followed by the 40-59 years age group (5 cases or 31%). The highest incidence rates was also in the 60+, followed by the 5-9 age group (2.9 and 2.6 cases per 100,000 population, respectively), followed by the 20-24 and 40-59 age groups (2.3 cases per 100,000 population, each).



**Figure 46: Number of Reported Cases of Vibrio and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

## OTHER ENTERIC, FOOD AND WATER BORNE DISEASES

Other enteric, food and waterborne diseases notifiable in New Brunswick include botulism, cholera, cyclosporiasis, hepatitis A and E, listeriosis, paralytic shellfish poisoning, shigellosis, *Staphylococcus Aureus* intoxications, typhoid fever, and yersiniosis.

In 2021, the number of reported cases and incidence rates of hepatitis A, yersiniosis, and listeriosis (hepatitis A: 3 cases; 0.4 cases per 100,000 population, yersiniosis: 2 cases; 0.1 cases per 100,000 population, and listeriosis: 7 cases, 0.9 cases per 100,000 population) were higher than the previous five years' average. The number of reported cases and the incidence rate for shigellosis (2 cases; 0.3 cases per 100,000 population) were lower than the previous five years' average. For the other Enteric diseases listed above, there were no cases reported in 2021.

For further details on case counts and rates for other enteric, food and waterborne diseases, please refer to Appendix B.

## SUMMARY OF ENTERIC OUTBREAKS

In 2021, 17 regional enteric, food and waterborne disease outbreaks were reported in New Brunswick. Fourteen (82%) of these occurred in institutional non-residential settings (all were in daycares), two (12%) in institutional residential settings (all were in long-term care facilities), and one in other settings. The largest number of outbreaks occurred in Region 2 (10 outbreaks), followed by Region 1 (7 outbreaks). No outbreaks were reported in Regions 3, 4, 5, 6 and 7.

The pathogenic microorganism was identified in 4 outbreaks (24%). Of those outbreaks with an identified organism, sapovirus was the most common pathogen (3 outbreaks), followed by *S. enteritidis* (1 outbreak).

For further details on settings and microorganisms' distribution, please refer to Appendix B.

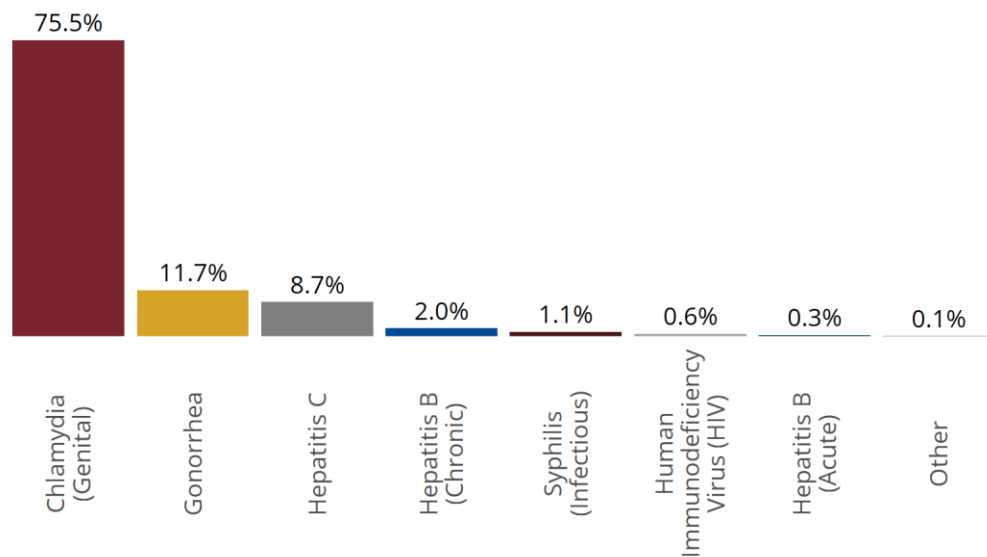
One multi-regional cluster of *Vibrio parahaemolyticus* was reported that was related to raw shellfish consumption. Cases were reported in Region 1 (6 cases) and Region 6 (5 cases) with symptom onset ranging from end of July to mid September of 2021. The majority of the cases (91%) were males. Ninety-one percent of the cases reported consuming raw shellfish.

New Brunswick was not involved in multi-provincial enteric outbreaks during this year.

# Sexually Transmitted and Blood Borne Infections

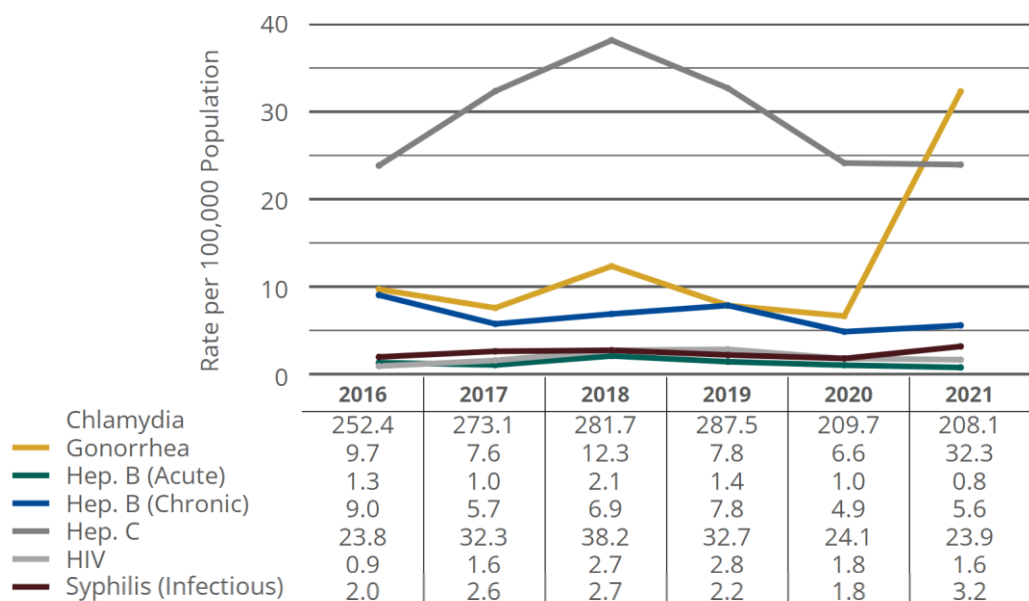
Sexually transmitted and bloodborne infections (STBBI) and their serious consequences can be prevented and mitigated through sexual health promotion, harm reduction strategies, early detection and treatment, and notification of sexual and drug use partners. Incidence rates for most STBBI in 2021 were lower than the annual average for the previous five years, which could be due to a change in behavior during the COVID-19 pandemic.

In 2021, the most commonly reported STBBI was chlamydia, followed by gonorrhea, hepatitis C, and chronic hepatitis B.



**Figure 47: Percent Distribution of the most prevalent Sexually Transmitted and Blood Borne Infections in New Brunswick, 2021**





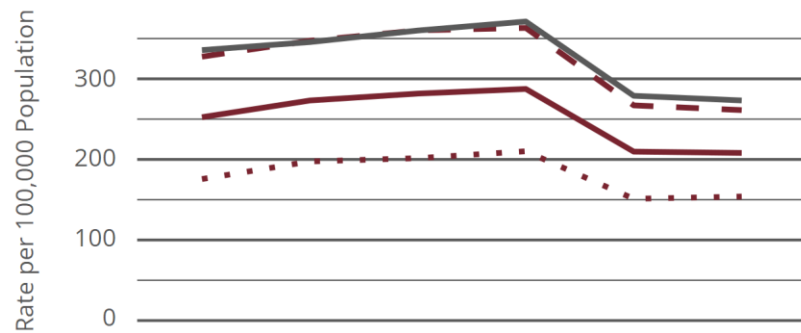
**Figure 48: Incidence Rates<sup>9</sup> of the most prevalent Sexually Transmitted and Blood Borne Infections in New Brunswick per 100,000 population, 2016-2021**

## CHLAMYDIA (GENITAL)

Chlamydia is the most commonly reported sexually transmitted infection in New Brunswick. In 2021, a total of 1,642 cases (1040 females and 602 males) were reported to Public Health New Brunswick, with an incidence rate of 208.1 cases per 100,000 population. These figures are lower than the annual average for the previous five years (2,013.4 cases and 260.9 cases per 100,000 population, respectively).

There was an upward trend in the number of chlamydia cases reported between 2016 and 2019, followed by a decrease in the number of reported cases in 2020. From 2016 to 2021, incidence rates for New Brunswick were overall lower than that for Canada.

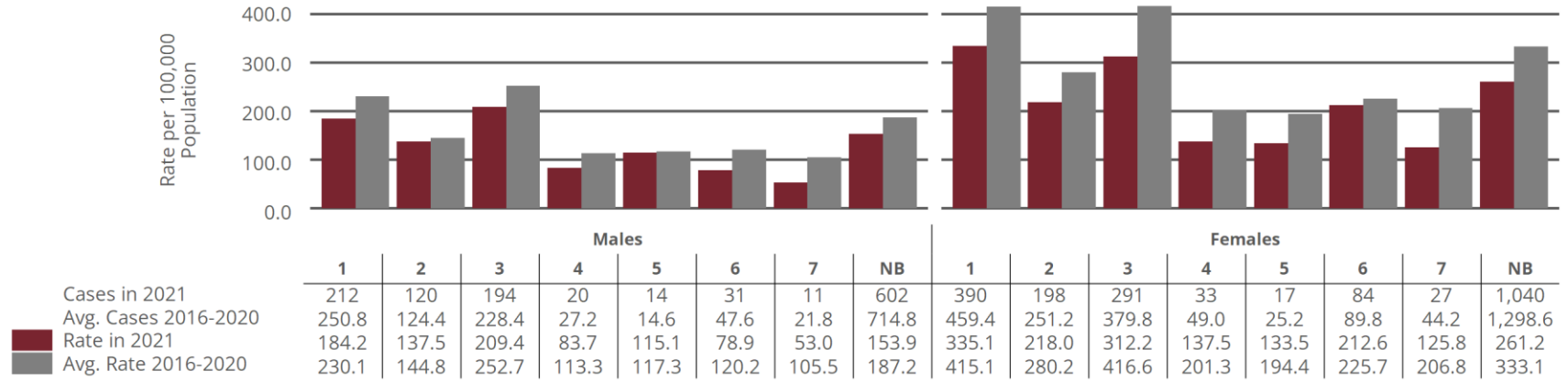
<sup>9</sup> Incidence rates for Chlamydia are included in the Table section of the Figure but are not represented on the graph section to allow for visualisation of STBBIs with lower rates.



	2016	2017	2018	2019	2020	2021
No. of Cases (Males)	663	749	768	808	586	602
No. of Cases (Females)	1,264	1,345	1,402	1,426	1,056	1,040
No. of Cases	1,927	2,094	2,170	2,234	1,642	1,642
■ ■ ■ NB Rate (Males)	175.6	197.5	201.6	210.1	151.1	153.9
■ ■ ■ NB Rate (Females)	327.6	347.3	360.2	363.2	267.1	261.2
■ NB Rate	252.4	273.1	281.7	287.5	209.7	208.1
■ National Rate	335.7	345.6	360.0	371.2	279.0	273.2

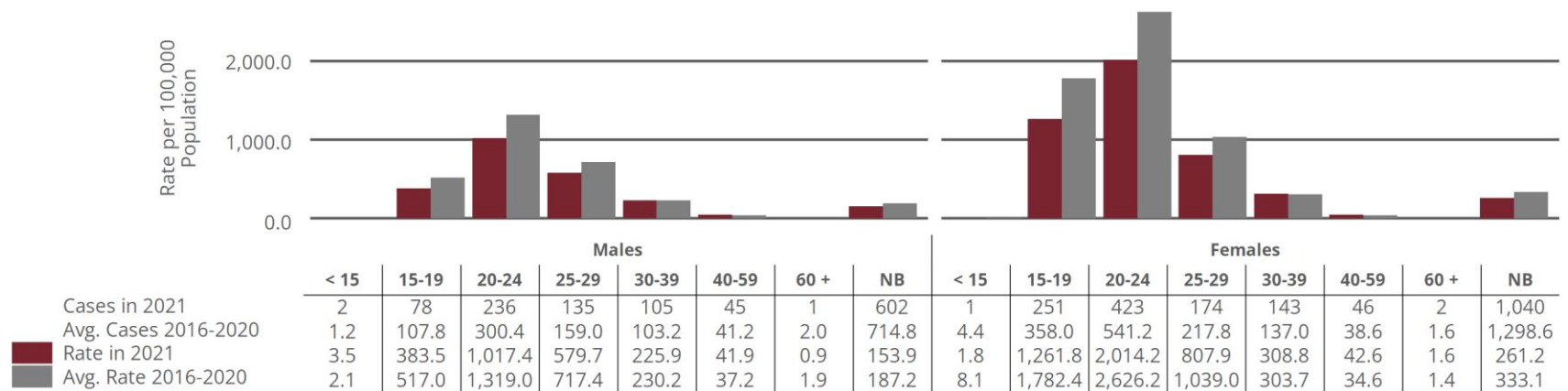
**Figure 49: Number of Reported Cases of Chlamydia (Genital) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

The highest incidence rate of chlamydia in 2021 was in Region 3 (261.0 cases per 100,000 population), followed by Region 1 (260.1 cases per 100,000 population) and Region 2 (178.5 cases per 100,000 population). During the previous five years, the highest average incidence rate was also in Region 3, followed by Region 1 and Region 2 (336.9, 323.2 and 214.2 cases per 100,000 population, respectively). The incidence rates for both males and females were lower than the previous five years averages in all regions.



**Figure 50: Number of Reported Cases of Chlamydia (Genital) and Incidence Rates per 100,000 population, by Health Region and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

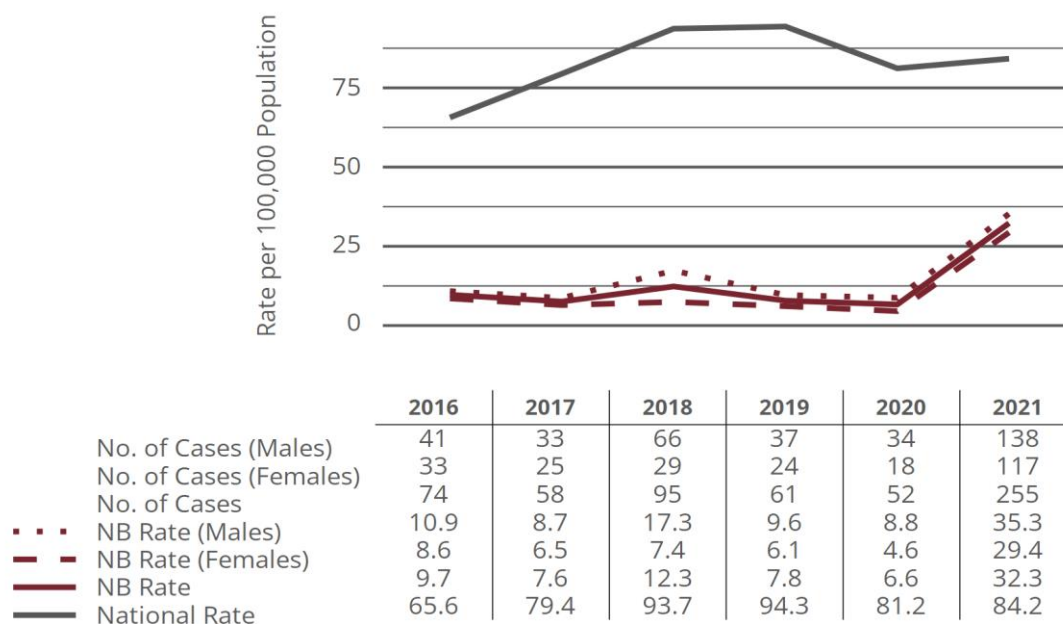
The majority of reported cases of chlamydia were in the 20-24 years age group (659 cases or 40%), followed by the 15-19 years age group (329 cases or 20%) and the 25-29 years age group (309 cases or 19%), with incidence rates of 1491.1, 817.8, and 689.4 cases per 100,000 population, respectively. Among females, the incidence rates were higher than the 5-year averages for the 30-39, 40-59 and 60+ age groups. Among males, the rates were higher in those <15 and 40-59 age groups compared to the 5-year averages.



**Figure 51: Number of Reported Cases of Chlamydia (Genital) and Incidence Rates per 100,000 population, by Age Group and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

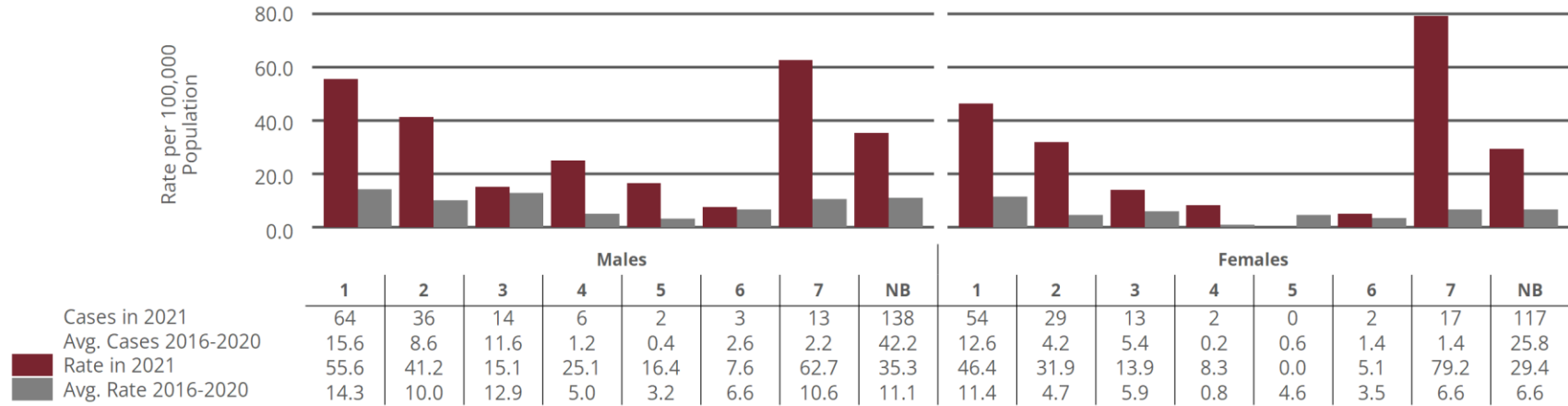
## GONORRHEA

In 2021, a total of 255 cases (117 females and 138 males) of gonorrhoea were reported to Public Health New Brunswick, with an incidence rate of 32.3 cases per 100,000 population. These figures are much higher than the annual average for the previous five years (68 cases and 8.8 cases per 100,000 population, respectively). Cases of Gonorrhoea have been increasing in New Brunswick since 2016 and a provincial outbreak has been declared since April 2019 due to sustained high levels of gonorrhoea activity in different Health Regions through 2018 and 2019. The decrease in cases from 2019 to 2020 may be due to change in human behavior during the COVID-19 pandemic. It was noted specifically for reported cases of Gonorrhoea, that a brief initial decline was observed during the early stages of the COVID-19 pandemic in 2020. Following the second quarter of 2020, the provincial rates, as well as rates by gender, started to continually increase throughout the remainder of the year. There was a sharp increase in the number of reported cases as well as provincial rates in 2021 which could probably be attributed to the progressive easing of social restrictions implemented during the year. From 2016 to 2021, New Brunswick incidence rates have been much lower than national rates.



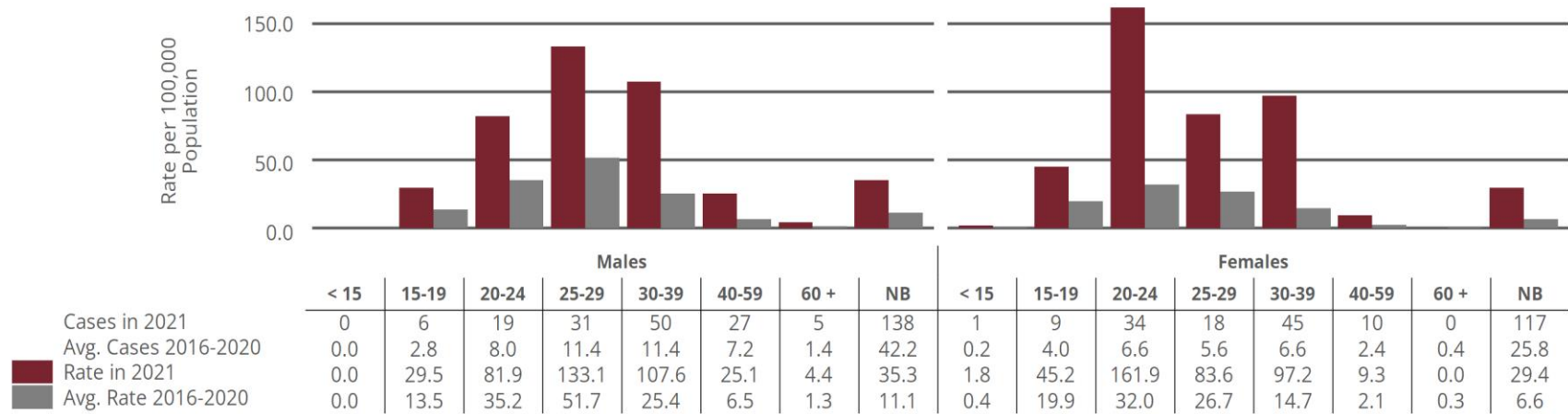
**Figure 52: Number of Reported Cases of Gonorrhoea and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

The highest number of cases reported in 2021 were in Region 1 (118 cases or 46%), followed by Region 2 (65 cases or 25%) and Region 7 (30 cases or 12%). Together, these three Health Regions accounted for 83% of cases. The total number of cases was higher than the previous 5-year annual averages in all Health Regions except Region 5 (lower for females) and Region 6 (equal for males).



**Figure 53: Number of Reported Cases of Gonorrhea and Incidence Rates per 100,000 population, by Health Region and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The male to female case ratio (M:F) was 1.18:1 which was lower than the average ratio of the 5 previous years (1.6:1). The highest incidence rate was in the 25-29 years age group for males and the 20-24 years age group for females.



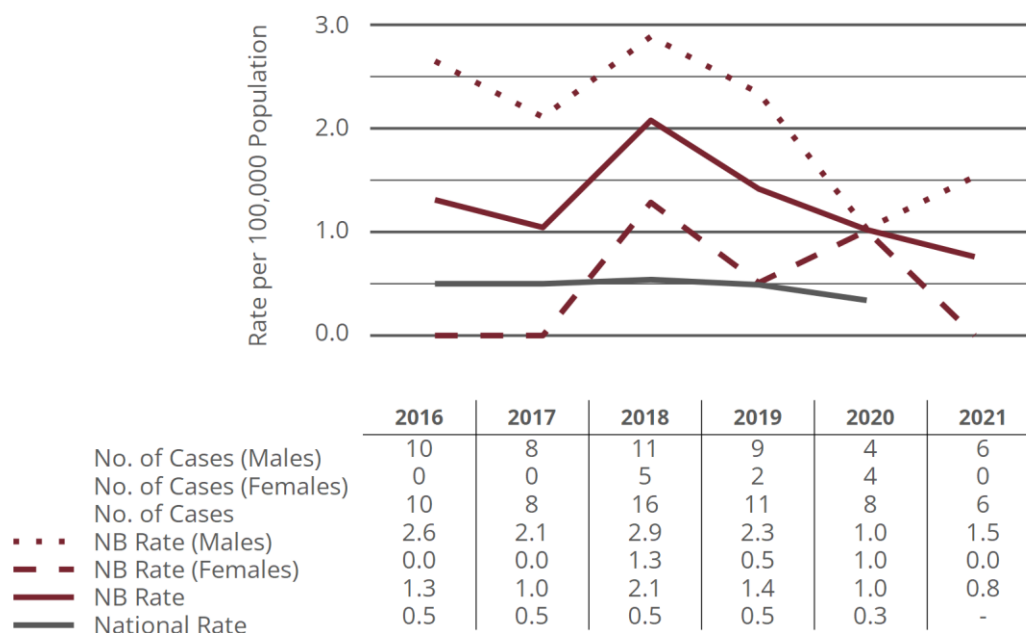
**Figure 54: Number of Reported Cases of Gonorrhea and Incidence Rates per 100,000 population, by Age Group and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Cases who identified themselves as straight or heterosexual accounted for 60% of all the cases. Cases identifying as gay or bisexual men accounted for 9% of the male cases. Among male and female cases with available risk factor information, 39% of the cases reported high risk sexual behaviors such as not using condoms while having sex (whether vaginal, anal, or oral), 29% reported having multiple partners, and 41 % reported having casual or anonymous partners in the 60 days before infection.

Annual variations in age and region-specific rates for gonorrhea should be interpreted with caution because of the small numbers involved that can lead to large fluctuations in rates.

## HEPATITIS B (ACUTE)

In 2021, a total of 6 cases (6 males) of acute hepatitis B were reported to Public Health New Brunswick, with an incidence rate of 0.8 cases per 100,000 population. These figures are lower than the annual average for the previous five years (10.4 cases and 1.3 cases per 100,000 population, respectively). In the past five years, incidence rate in New Brunswick has been higher than the national rate.



**Figure 55: Number of Reported Cases of Hepatitis B (Acute) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021<sup>10</sup>**

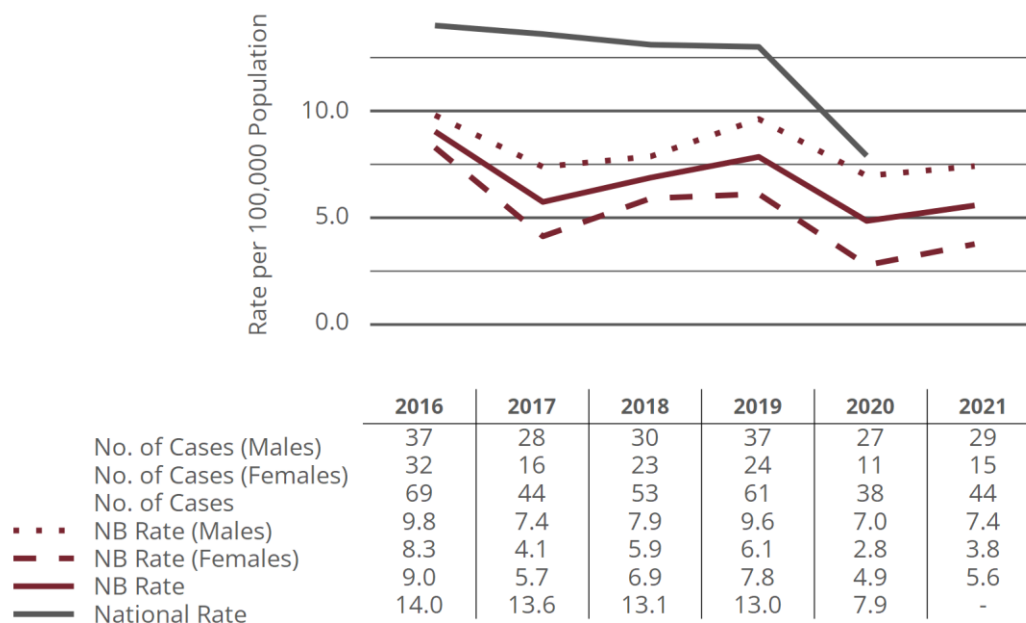
The highest number of reported cases in 2021 were in Region 1 (4 cases or 67%), followed by Region 3 and Region 6 (1 case or 17% each). Half of reported cases were in the 60+ years age group (3 cases or 50%), followed by the 40-59 (2 cases or 33%) and the 30-39 (1 case).

Half of the cases (50%) reported being heterosexual and 17% of the cases reported having casual or anonymous partners. Other risk behaviours included tattooing (17%), use of street drugs (50%), use of intravenous drugs (17%), and sharing needles or other equipment (17%). No case had previously received the hepatitis B vaccine.

<sup>10</sup> The 2021 national rate for acute Hepatitis B was not available at the time of reporting.

## HEPATITIS B (CHRONIC)

In 2021, a total of 44 new cases (15 females and 29 males) of diagnosed chronic hepatitis B were reported to Public Health New Brunswick, with an incidence rate of 5.6 cases per 100,000 population. These figures are lower than the annual average for the previous five years (53.2 cases and 6.8 cases per 100,000 population, respectively). In the past five years, incidence rate in New Brunswick has been lower than the national rate.

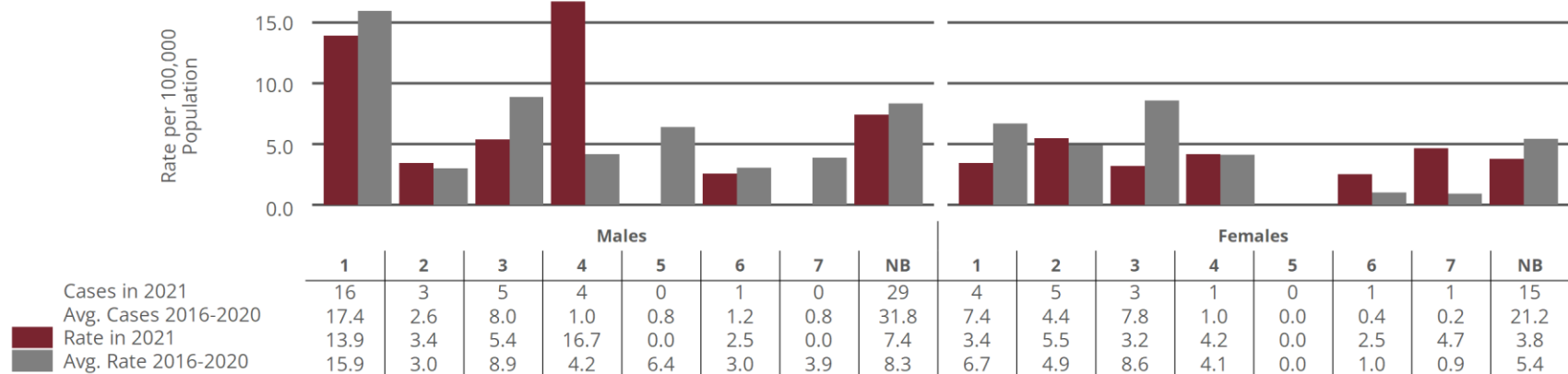


**Figure 56: Number of Reported Cases of Hepatitis B (Chronic) and Incidence Rates per 100,000 population, New Brunswick and Canada<sup>11</sup>, 2016-2021**

The highest number of reported cases of diagnosed chronic hepatitis B in 2021 were in Region 1 (20 cases or 45%), followed by Region 2 and Region 3 (8 cases or 18% each). Together, these three Regions accounted for 82% of cases. The highest incidence rate was in Region 4, followed by Region 1 (10.4 and 8.6 cases per 100,000 population, respectively).

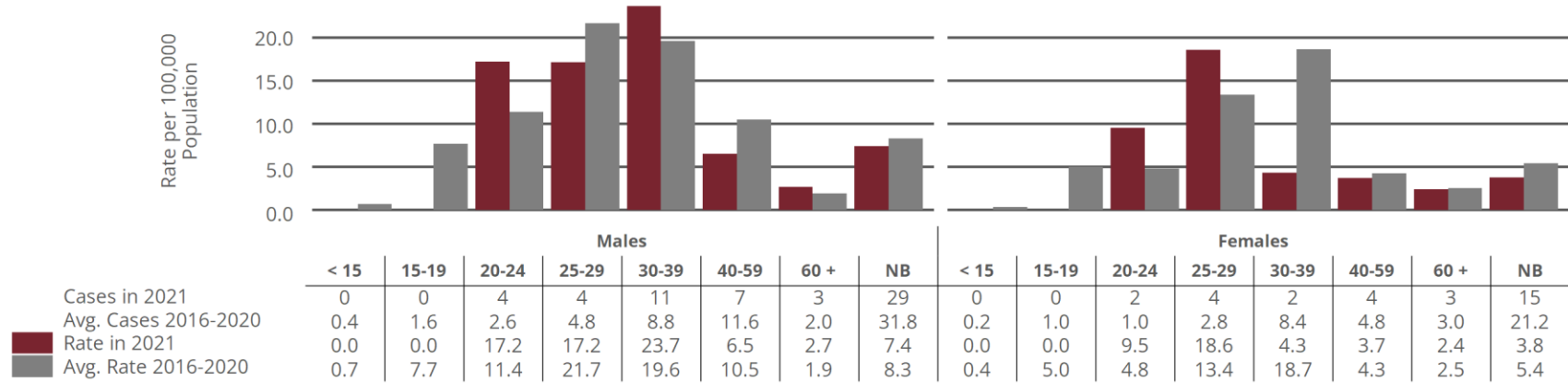
<sup>11</sup> The 2021 national rate for Chronic Hepatitis B was not available at the time of reporting.





**Figure 57: Number of Reported Cases of Hepatitis B (Chronic) and Incidence Rates per 100,000 population, by Health Region and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of reported cases was in the 30-39 years age group (13 cases, 30%), followed by the 40-59 years age group (11 cases, 25%) while the highest incidence rates were reported in the 25-29 years age group followed by the 30-39 years age group (17.8 cases and 14.0 cases per 100,000 population, respectively). In males, the largest proportion of cases (38%) was in the 30-39 years age group, followed by the 40-59 years age group (24%), whereas in females it was the 25-29 and the 40-59 years age group (27%), followed by the 60+ years age groups (20%). The highest incidence rate was in the 30-39 years age group for males and in the 25-29 years age group for females (23.7 cases and 18.6 cases per 100,000, respectively).



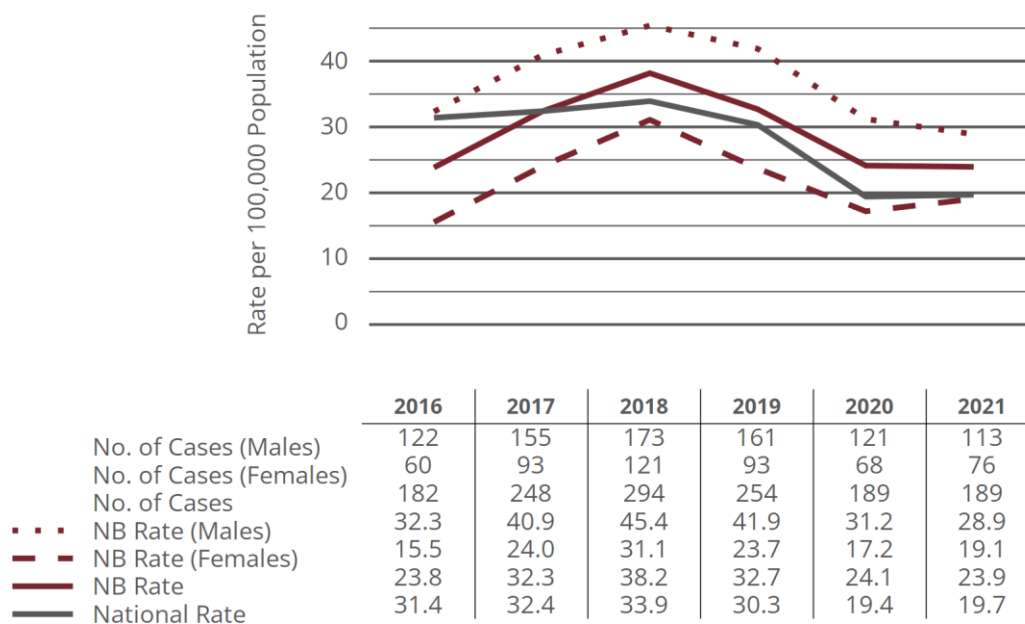
**Figure 58: Number of Reported Cases of Hepatitis B (Chronic) and Incidence Rates per 100,000 population, by Age Group and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Consistent with previous years, new residents arriving from endemic areas of the world accounted for a high proportion of the reported cases (52%).

Annual variations in Hep B (Chronic) incidence rates should be interpreted with caution because of the small numbers involved that can lead to major fluctuations in rates from year to year

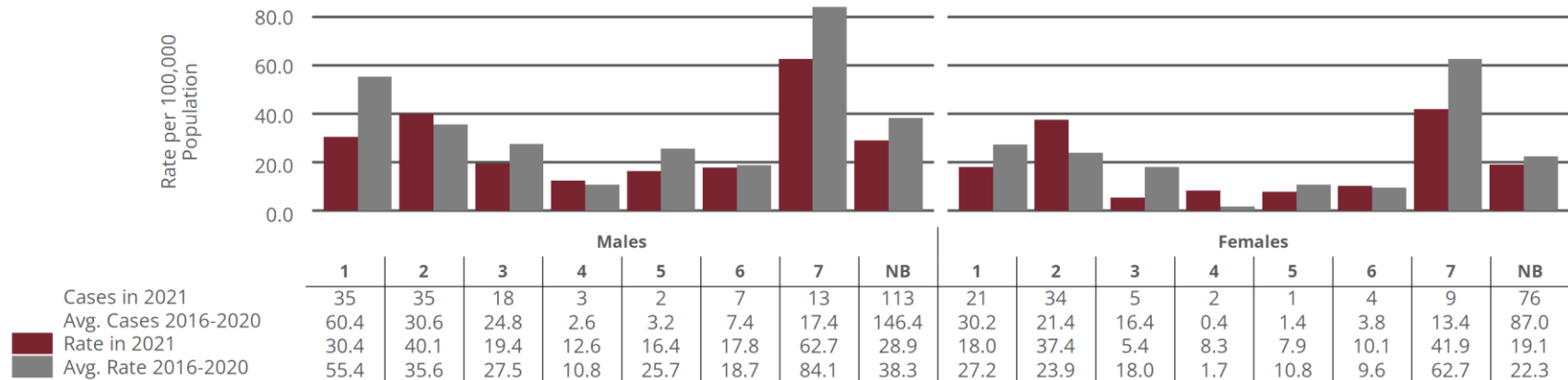
## HEPATITIS C

In 2021, a total of 189 cases (76 females and 113 males) of diagnosed hepatitis C were reported to Public Health New Brunswick, with an incidence rate of 23.9 cases per 100,000 population. Six (6 or 3%) of these cases were confirmed as new infections (i.e., documented HCV antibody seroconversion within the last 12 months in a previously seronegative person). The 2021 figures are lower than the annual average for the previous five years (233.8 cases per year and an average incidence rate of 30.2 cases per 100,000 population). From 2016 to 2021, New Brunswick rates were higher than the national rates, except for 2016 when the rate was lower than the national rate and for 2017 when the rate comparable to the national rate.



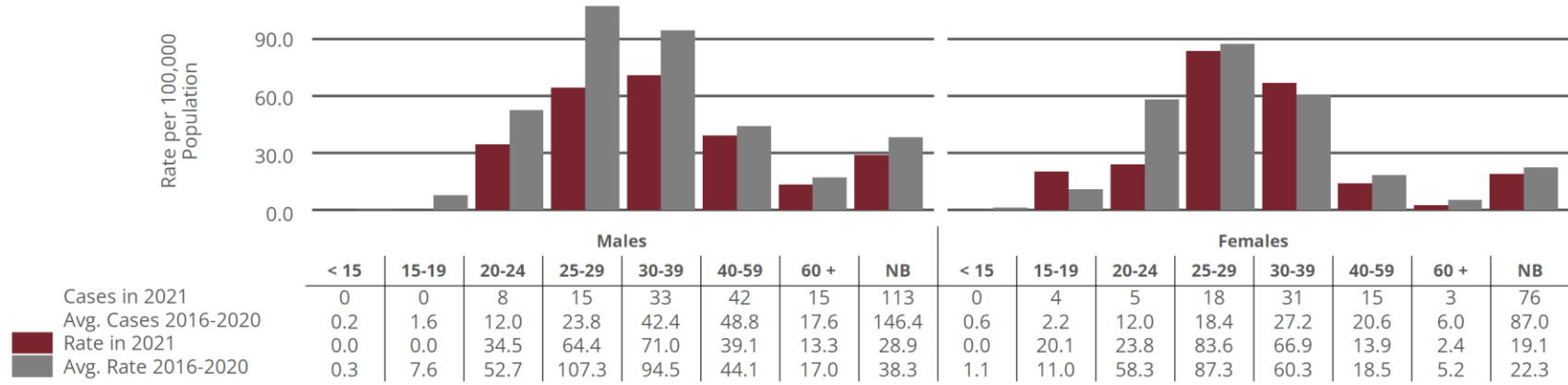
**Figure 59: Number of Reported Cases of Hepatitis C and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

The highest number of cases were in Region 2 (69 cases or 37%), followed by Region 1 (56 cases or 30%), Region 3 (23 cases or 12%) and Region 7 (22 cases, 12%). Together, these four Regions accounted for 90% of reported cases in 2021.



**Figure 60: Number of Reported Cases of Hepatitis C and Incidence Rates per 100,000 population, by Health Region and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of reported cases (64 cases or 34%) were in the 30-39 years age group, followed by the 40-59 years age group (57 cases or 30%). In males, the highest percentage (37%) was in the 40-59 years age group, followed by the 30-39 years age group (29%); whereas in females, it was the 30-39 years age group (41%), followed by the 25-29 years age group (24%). The highest incidence rate was in the 30-39 for males and the 25-29 years age group for females (71.0 cases and 83.6 cases per 100,000, respectively).



**Figure 61: Number of Reported Cases of Hepatitis C and Incidence Rates per 100,000 population, by Age Group and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

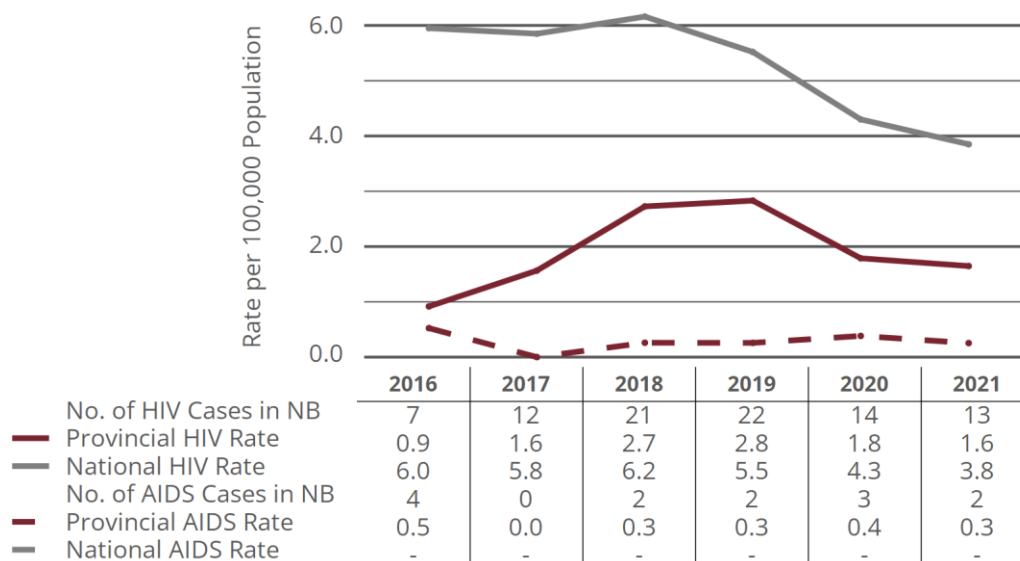
Among the cases that provided information on drug use (71%, 135 cases), 119 cases (90%) answered that they were using drugs with the majority (84 %) using both injection and non-injection drugs. Among the intravenous drug users, 57% admitted sharing needles, and 66% indicated sharing other snorting, sniffing, or smoking equipment.

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

# HUMAN IMMUNODEFICIENCY VIRUS (HIV) AND ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

## HUMAN IMMUNODEFICIENCY VIRUS (HIV)

In 2021, a total of 13 cases (2 females and 11 males) of diagnosed HIV infection were reported to Public Health New Brunswick, with an incidence rate of 1.6 cases per 100,000 population. These figures are lower than the annual average number of cases and average rate for the previous five years (15.2 cases and 1.9 cases per 100,000 population, respectively). HIV incidence rates in New Brunswick fall below national rates.



**Figure 62: Number of Reported Cases of HIV and AIDS and Incidence Rates per 100,000 population, New Brunswick, 2016-2021**<sup>12</sup>

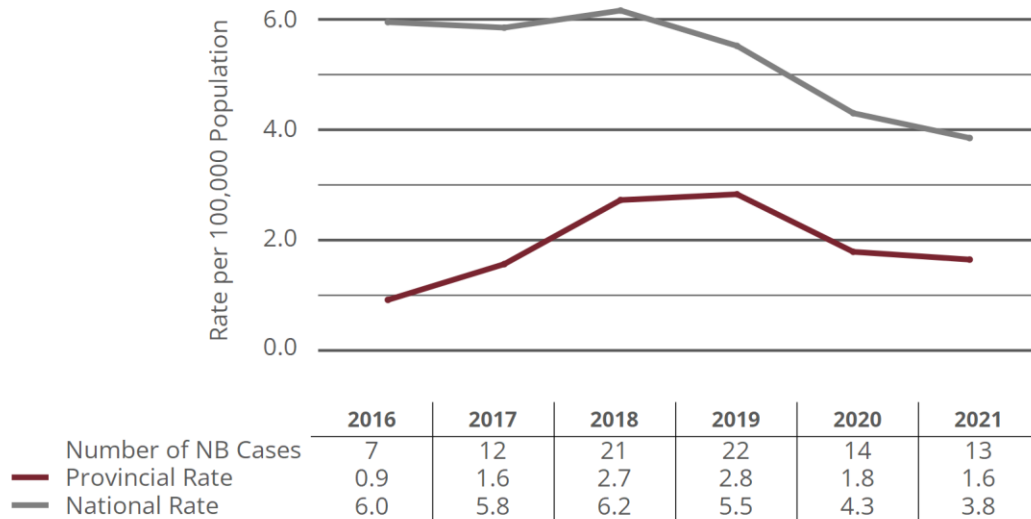
The highest number of cases were in Region 3 and Region 6 (4 cases or 31% each), followed by Region 1 (3 cases or 23%). Together, these four Regions accounted for 85% of reported cases in 2021.

The majority of HIV cases reported in 2021 were in the 30-39 years age group (7 cases, 54%), followed by the 40-59 years age group (3 cases, 23%).

Among the cases reported in 2021, 8 acquired the infection in Canada and 5 would have acquired the infection prior to their arrival in Canada.

In 2021, most HIV cases (64%) in males implicated men having sex with men (MSM), whereas in females, the risk factors reported for HIV infection was coming from an endemic country and no identifiable risk (1 case each). Similarly, in the past 5 years (2016-2020), the most common risk factor reported in males was again MSM (66%), whereas, in females, it was coming from an endemic country (65%).

<sup>12</sup> The national rates for AIDS are not available.



**Figure 63: Number of Reported Cases of Human Immunodeficiency Virus (HIV) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

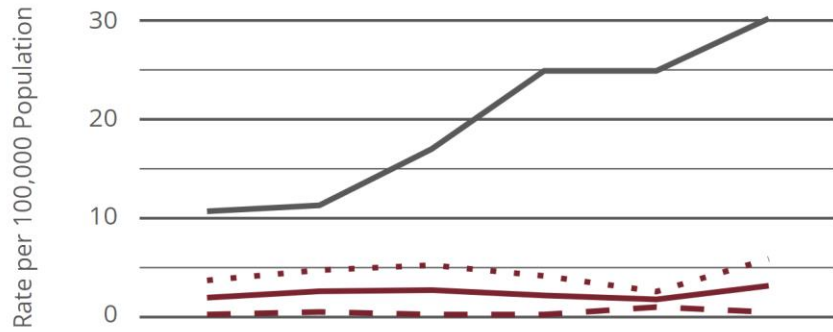
### ACQUIRED IMMUNODEFICIENCY SYNDROME (AIDS)

In 2021, there were two cases of AIDS (1 female and 1 male) reported to Public Health New Brunswick, with an incidence rate of 0.3 cases per 100,000 population. These figures are comparable to the 5-year annual averages for the previous five years (2.2 cases and 0.3 cases per 100,000 population).

Annual variations in HIV and AIDS incidence rates should be interpreted with caution because of the small numbers involved that can lead to major fluctuations in rates from year to year.

### SYPHILIS (INFECTIOUS)

In 2021, there were 25 cases (2 females and 23 males) of infectious syphilis reported to Public Health New Brunswick, with an incidence rate of 3.2 cases per 100,000 population. During the previous five years, an average of 17.4 cases were reported each year, with a 5-year average incidence rate of 2.2 cases per 100,000 population. From 2016 to 2021, incidence rates of infectious syphilis in New Brunswick have been lower than national rates.

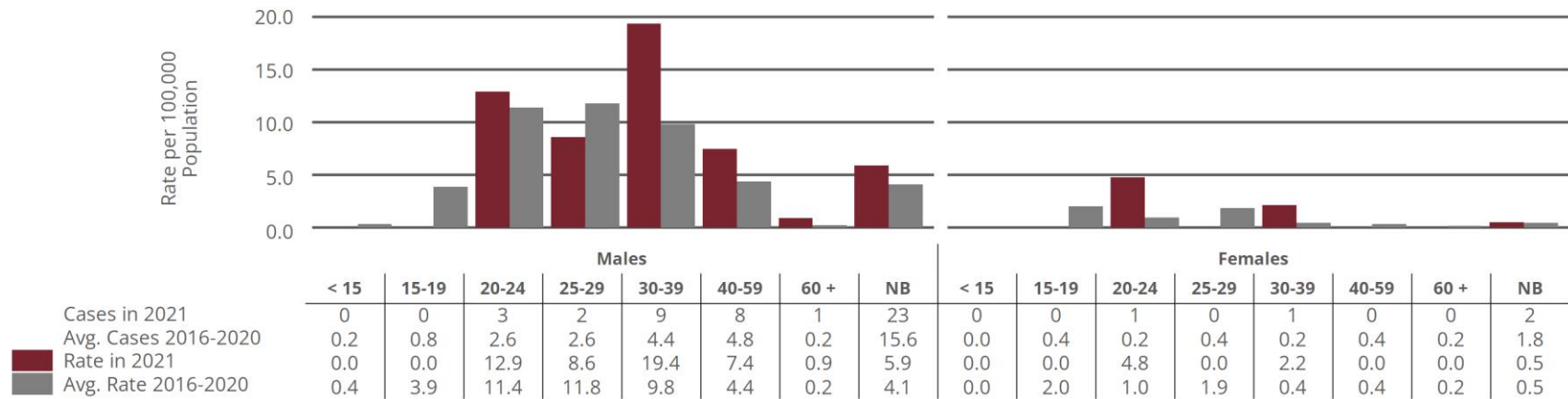


	2016	2017	2018	2019	2020	2021
No. of Cases (Males)	14	18	20	16	10	23
No. of Cases (Females)	1	2	1	1	4	2
No. of Cases	15	20	21	17	14	25
• • • NB Rate (Males)	3.7	4.7	5.2	4.2	2.6	5.9
- - - NB Rate (Females)	0.3	0.5	0.3	0.3	1.0	0.5
— NB Rate	2.0	2.6	2.7	2.2	1.8	3.2
— National Rate	10.7	11.3	17.0	24.9	24.9	30.2

**Figure 64: Number of Reported Cases of Syphilis (Infectious) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, cases were reported in all Health Regions except Region 4 and Region 5. Region 1 and Region 2 accounted for most of the cases (20 cases or 80%).





**Figure 65: Number of Reported Cases of Syphilis (Infectious) and Incidence Rates per 100,000 population, by Age Group and Sex, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of cases were in the 30-39 years age group (10 cases or 40%), followed by the 40-59 years age group (8 cases or 32%). The highest incidence rates were observed in the 30-39 and 20-24-years age groups (10.8 cases and 9.1 cases per 100,000, respectively).

Nineteen cases were diagnosed as primary or secondary syphilis and six were early latent syphilis. In addition, 83% of the male cases that provided information on their sexual orientation identified themselves as men having sex with men.

Annual variations in incidence rates of infectious syphilis should be interpreted with caution because of the small numbers involved, which can lead to large fluctuations in rates from year to year.

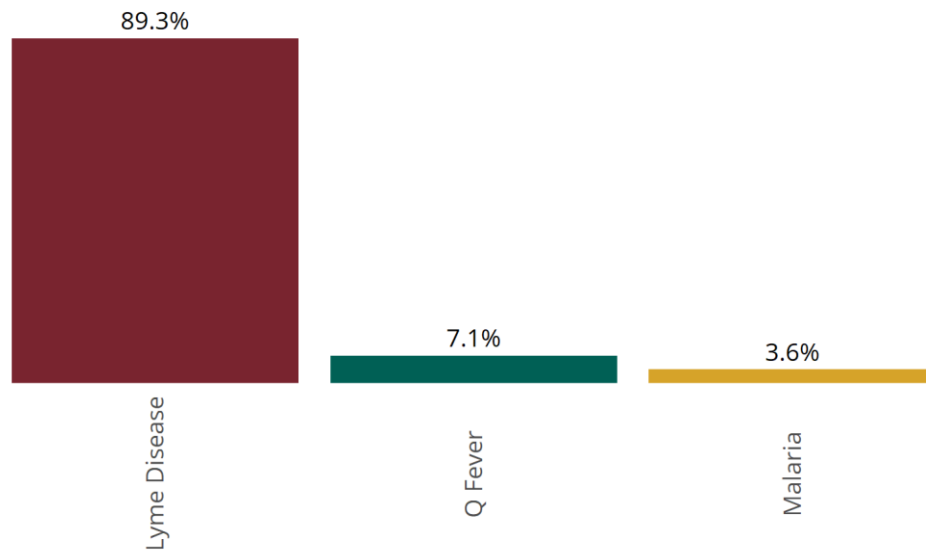
## **OTHER SEXUALLY TRANSMITTED AND BLOOD BORNE INFECTIONS**

No other sexually transmitted and blood-borne infections were reported in 2021: no cases of Herpes (Congenital/ Neonatal), or Cytomegalovirus (Congenital/ Neonatal).

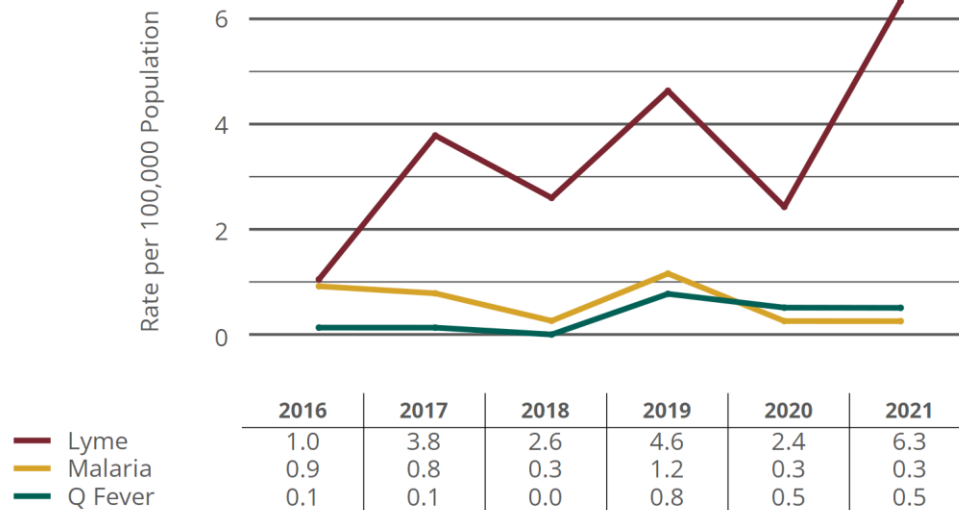
Please refer to Appendix B for further details on counts and incidence rates of notifiable STBBIs in New Brunswick.

# Vectorborne and Zoonotic Diseases

Vectorborne diseases are transmitted by insects (vectors) like mosquitoes, ticks and fleas to humans while zoonotic diseases are transmitted from vertebrate animals to humans. New Brunswick continues to generally have sporadic cases and low incidence rates of vectorborne and zoonotic diseases, with the exception of Lyme disease which has shown an overall increase from 2016 onwards though remains below the national average.



*Figure 66: Percent Distribution of the most prevalent Vectorborne and Zoonotic Diseases in New Brunswick, 2021*



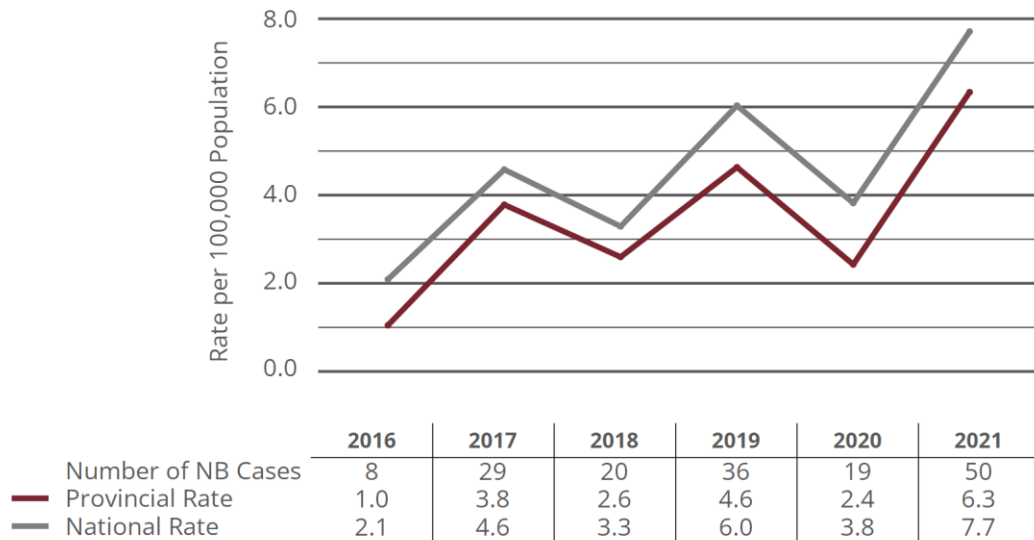
**Figure 67: Incidence Rates of the most prevalent Vectorborne and Zoonotic Diseases in New Brunswick per 100,000 population, 2016-2021**

## LYME DISEASE

National Lyme disease surveillance began in 2009 and has evolved to enhanced Lyme disease surveillance since 2011. The disease is transmitted by the bite of an infected black-legged tick, commonly known as the deer tick. It is treatable with antibiotics, but treatment is more effective if begun early during the course of the disease. However, delayed treatment may lead to disseminated illness with more serious symptoms and complications.

Although it is possible to be bitten by an infected deer tick anywhere in New Brunswick, the risk is much greater in areas where tick populations are established or appear to be established. Based on provincial tick surveillance and reports of human disease, tick populations were established or emerging in the following counties in 2021: Saint John, Kings, Queens, Charlotte (including Grand Manan Island), Westmorland, Albert, York, Sunbury, and Kent.

A total of 50 confirmed cases (18 females and 32 males) of Lyme disease were reported to Public Health New Brunswick in 2021, with an incidence rate of 6.3 cases per 100,000 population. During the previous five years, an average of 22.4 cases were reported each year, with a 5-year average incidence rate of 2.9 cases per 100,000 population. Since 2016, the incidence rate of Lyme disease has consistently been lower than the national rate; however, it has shown an overall upward trend both nationally and within New Brunswick.



**Figure 68: Number of Reported Cases of Lyme Disease and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

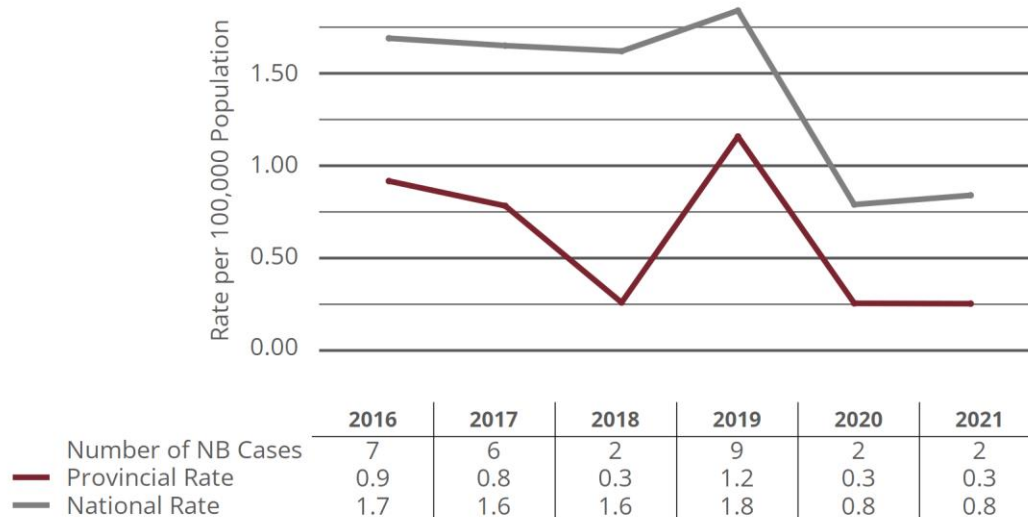
All the reported cases in 2021 were locally acquired and the majority were from Region 2 (44 cases or 88%), followed by Region 1 and Region 3 (3 cases or 6% each).

Of the 50 reported cases of Lyme disease, 19 cases (38%) were in the 60+ years age group and 12 cases (24%) in the 40-59 age group. The remaining cases were in the 10-14 (5 cases or 10%), the 15-19 and 30-39 (4 cases or 8% each), 1-4, 5-9 and 25-29 (2 cases or 4% each) years age groups.

Annual variations in Lyme disease incidence rates should be interpreted with caution because of the small numbers involved that can lead to major fluctuations in rates from year to year.

## OTHER VECTORBORNE AND ZONOTIC DISEASES

In 2021, two malaria cases were reported to Public Health New Brunswick. Both cases were related to travel. The incidence rate in 2021 was 0.3 cases per 100,000 population, which is a decrease compared to the average counts and rates reported in the previous five years (5.2 cases, and 0.7 per 100,000 population, respectively). Overall, incidence rates in New Brunswick during the previous five years were consistently lower than the national rates.



**Figure 69: Number of Reported Cases of Malaria and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

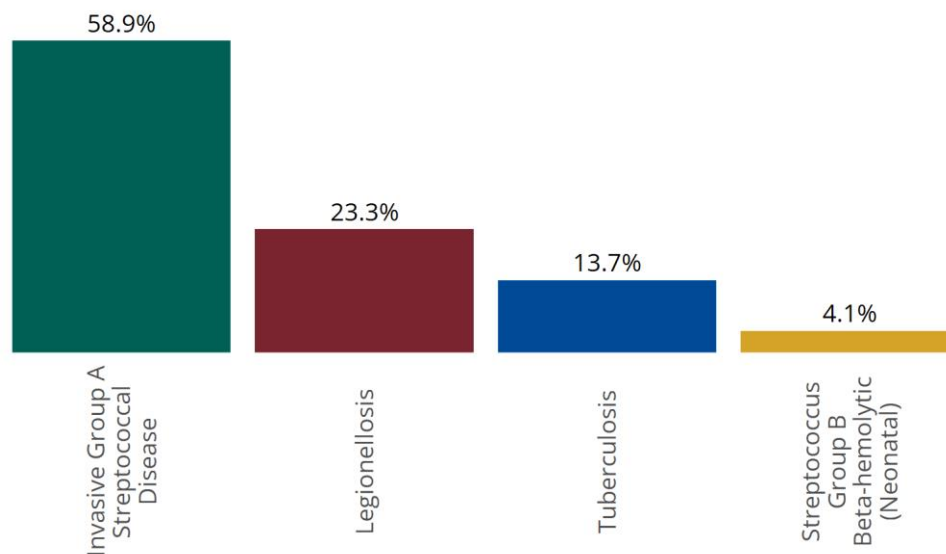
Other vectorborne and zoonotic diseases reported in 2021 included 4 cases of Q-fever. The incidence rate of Q fever in 2021 was 0.5 cases per 100,000 population. During the previous five years, an average of 2.4 cases were reported each year, with a 5-year average incidence rate of 0.3 cases per 100,000 population.

For further details on counts and rates of different vectorborne and zoonotic diseases, please refer to Appendix B.

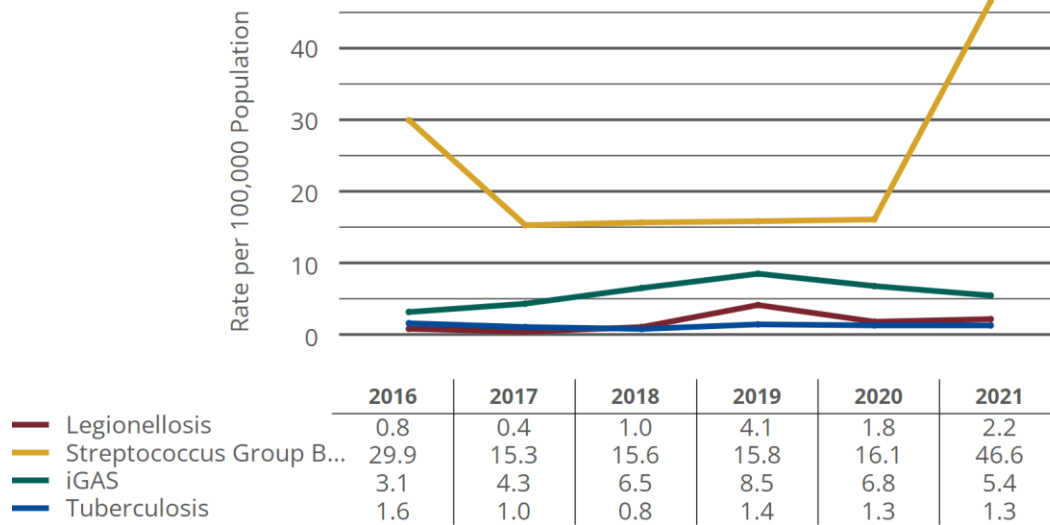
# Diseases Transmitted via the Respiratory Route and Direct Contact

Respiratory infections are spread by direct or indirect transmission or airborne routes. Pathogens may also be transmitted through aerosolization of the microbe (e.g., cooling towers).

Diseases that can be transmitted by direct contact are considered contagious. These diseases can also be transmitted by sharing a towel or items of clothing in close contact with the body (e.g., socks) if they are not washed thoroughly between uses.



**Figure 70: Percent Distribution of the most prevalent Diseases Transmitted via the Respiratory Route and Direct Contact in New Brunswick, 2021**



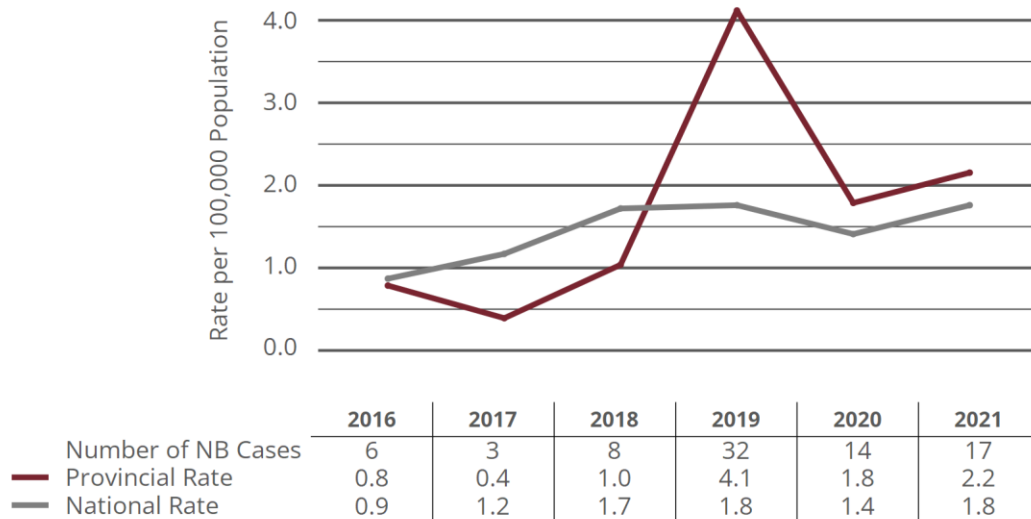
**Figure 71: Incidence Rates of the most prevalent Diseases Transmitted via the Respiratory Route and Direct Contact in New Brunswick per 100,000 population, 2016-2021**

## LEGIONELLOSIS

In 2021, a total of 17 cases (6 females and 11 males) of legionellosis were reported to Public Health New Brunswick, with an incidence rate of 2.2 cases per 100,000 population. During the previous five years, an average of 12.6 cases were reported each year, with an average annual incidence rate of 1.6 cases per 100,000 population. Overall, the incidence rate for New Brunswick was lower than the national rate, except for 2019 and 2020, when it was higher.

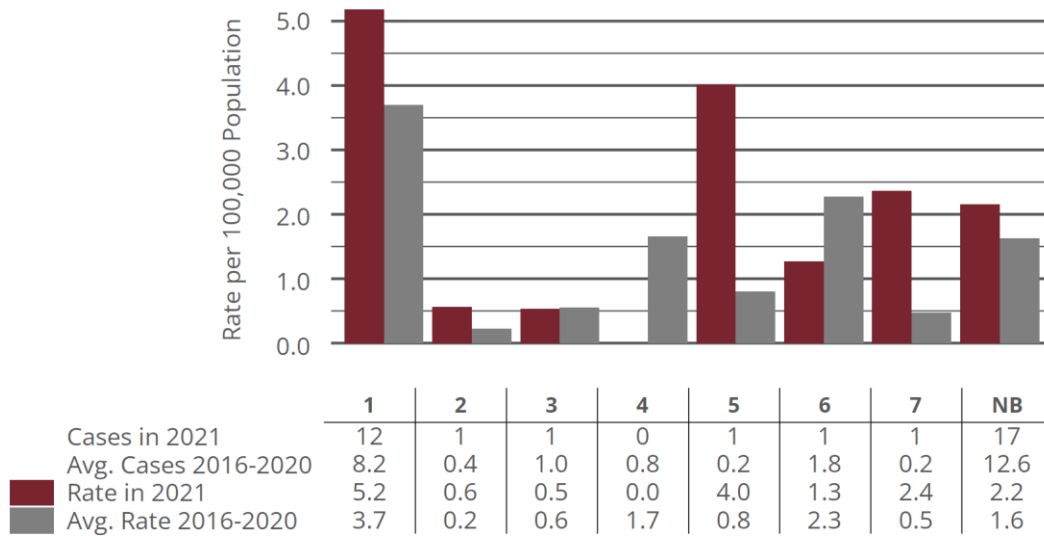
In the summer of 2019, an outbreak of Legionellosis was declared in Region 1 which resulted in 15 cases identified. Fourteen cases required hospitalization, and no deaths were reported. The source of the outbreak was identified as a cooling tower in the city's west side with very high levels of legionella bacteria.





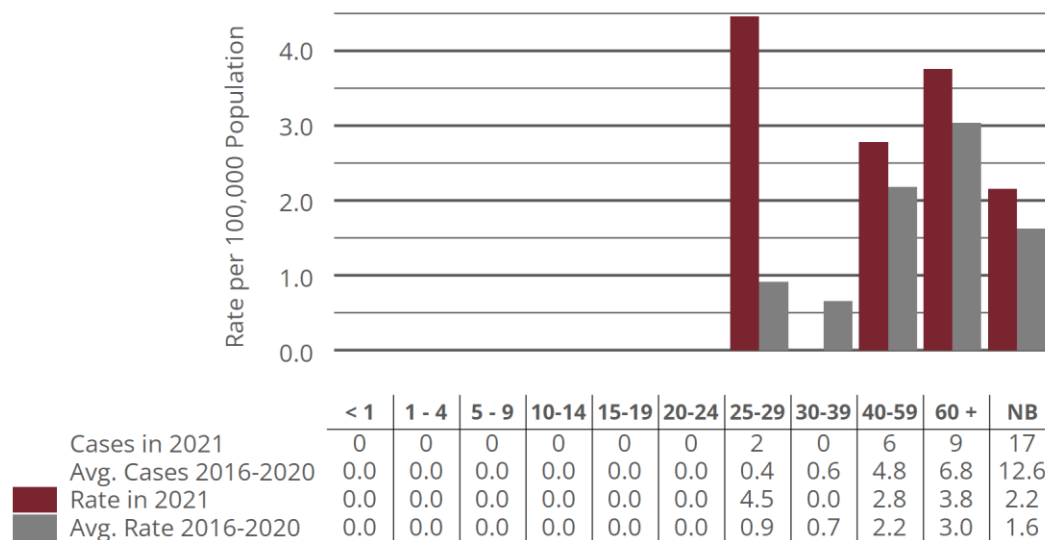
**Figure 72: Number of Reported Cases of Legionellosis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, the majority of reported cases of legionellosis were in Region 1 (12 cases or 71%), and the other cases were distributed among the other regions (1 case each), except for Region 4 were no cases were reported.



**Figure 73: Number of Reported Cases of Legionellosis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of cases were in the 60+ years (9 cases or 53%), followed by the 40-59 years (6 cases or 35%), and the 25-29 years (2 cases or 12%) age groups. However, the highest incidence rate was in the 25-29 years age group, followed by the 60+ years age group and the 40-59 years age group (4.5, 3.8 and 2.8 cases per 100,000 population, respectively).

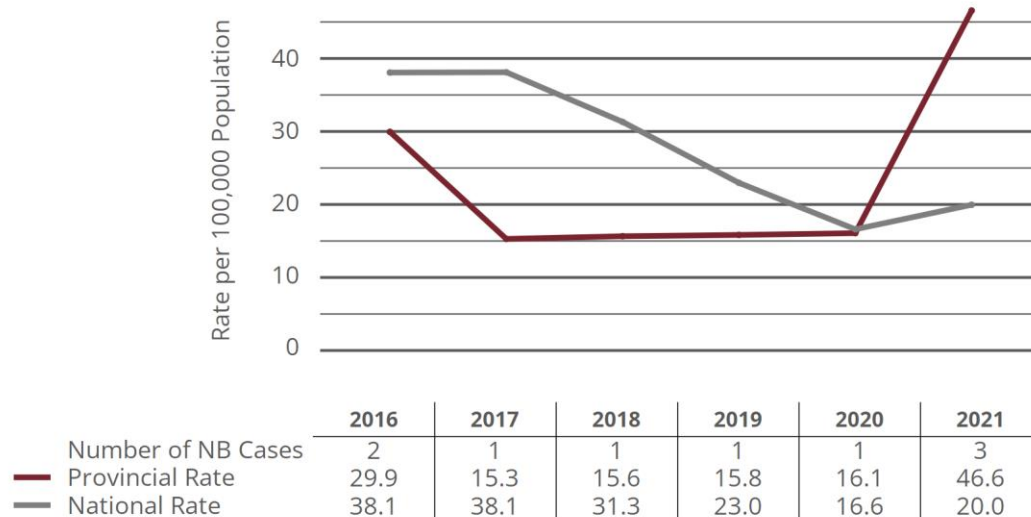


**Figure 74: Number of Reported Cases of Legionellosis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

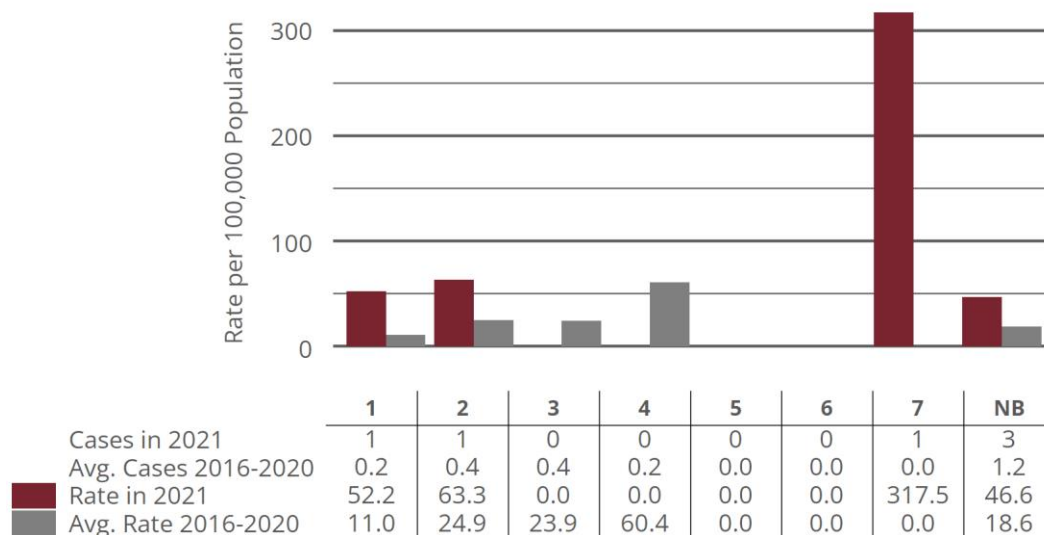
## **STREPTOCOCCUS GROUP B BETA-HEMOLYTIC (NEONATAL)**

In 2021, 3 cases (1 female, 2 males) of group B streptococcal infection of the newborn were reported to Public Health New Brunswick, with an incidence rate of 46.6 cases per 100,000 population. During the period 2016-2020, an average of one case was reported each year (range: 1 to 2), with an average annual incidence rate of 18.6 cases per 100,000 population. Overall, the incidence rate for New Brunswick was lower than the national rate, except for 2020, when it was higher.



**Figure 75: Number of Reported Cases of Streptococcus Group B Beta-hemolytic (Neonatal) and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, cases were reported in Region 1, Region 2 and Region 7 (1 case each). However, the highest incidence rate was in Region 7, followed by Region 2 and Region 1 (317.5, 63.3 and 52.2 cases per 100,000 population, respectively).

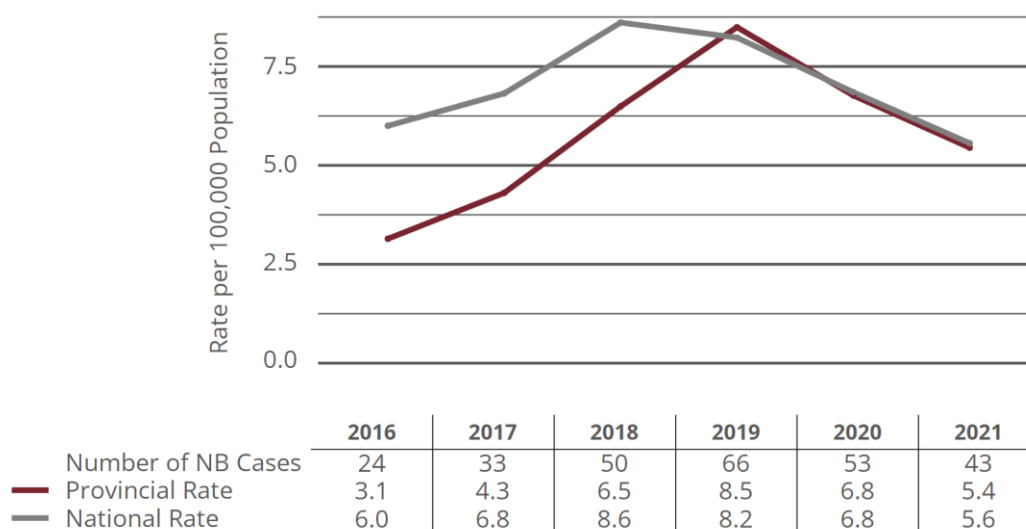


**Figure 76: Number of Reported Cases of Streptococcus Group B Beta-hemolytic (Neonatal) and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

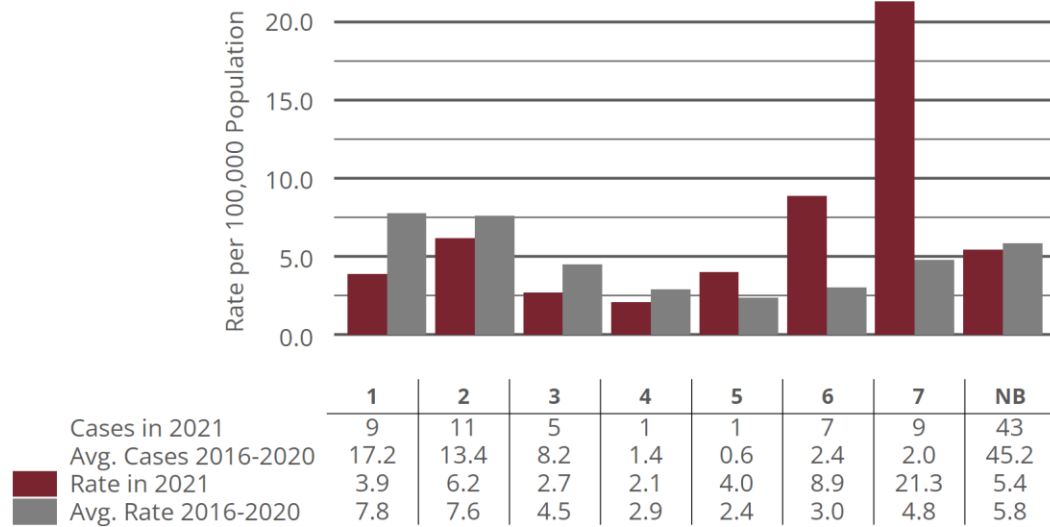
## INVASIVE GROUP A STREPTOCOCCAL DISEASE

In 2021, a total of 43 confirmed cases (11 females and 32 males) of invasive group A streptococcal disease (iGAS) were reported to Public Health New Brunswick, with an incidence rate of 5.4 cases per 100,000 population. During the previous five years, an average of 45 cases were reported each year, with an average annual incidence rate of 5.8 cases per 100,000 population. Overall, the incidence rates of iGAS in New Brunswick were lower than the national rates, except for 2019, 2020 and 2021 where New Brunswick rates and national rates were comparable.



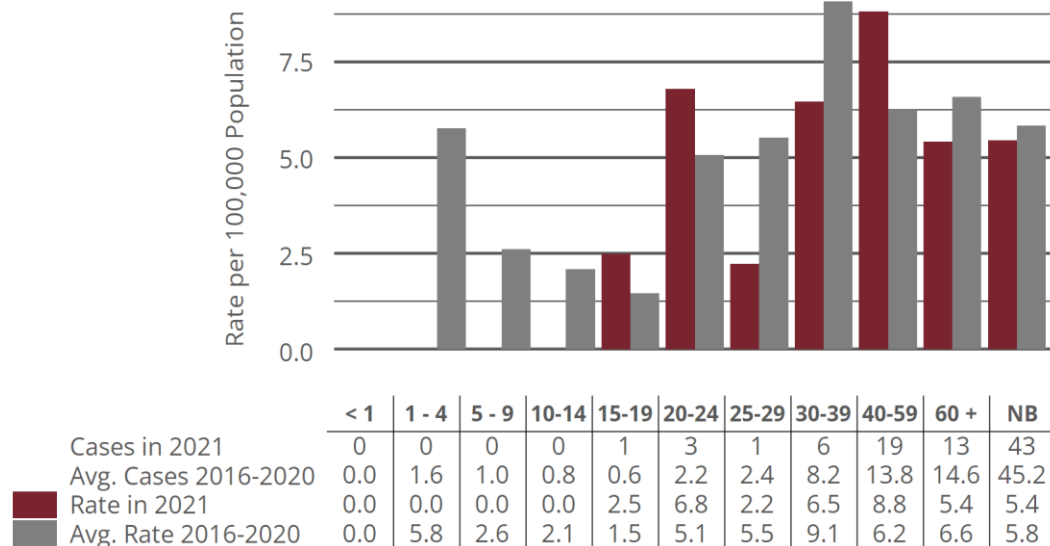
**Figure 77: Number of Reported Cases of Invasive Group A Streptococcal Disease and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

In 2021, the highest number of cases was reported in Region 2 (11 cases or 26%), followed by Region 1 and Region 7 (9 cases or 21% each). However, the highest incidence rate was observed in Region 7, followed by Region 6 and Region 2 (21.3, 8.9 and 6.2 cases per 100,000 population).



**Figure 78: Number of Reported Cases of Invasive Group A Streptococcal Disease and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of cases was in the 40-59 years age group (19 cases or 44%), followed by the 60+ (13 cases or 30%) and the 30-39 years age groups (6 cases or 14%). The highest incidence rate was also in the 40-59 years age group, followed by the 20-24 years age group and the 30-39 years age group (8.8, 6.8 and 6.5 cases per 100,000 population).



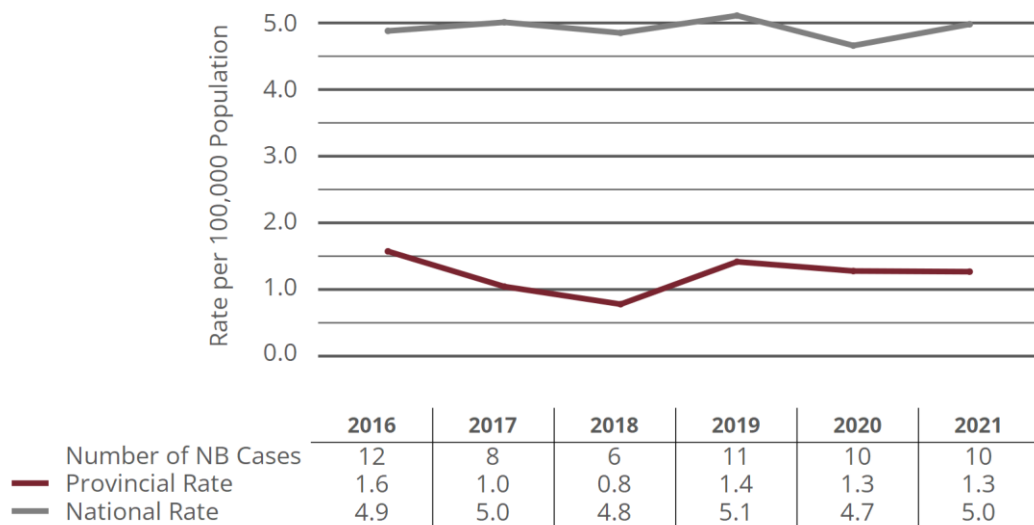
**Figure 79: Number of Reported Cases of Invasive Group A Streptococcal Disease and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The most frequently reported serotype was serotype M49 (32 cases), followed by serotypes M11 and M76 (3 cases each). These three serotypes accounted for 88% of all reported cases.

Annual differences in incidence rates should be interpreted with caution because of the small number of reported cases, which can lead to major fluctuation in rates yearly.

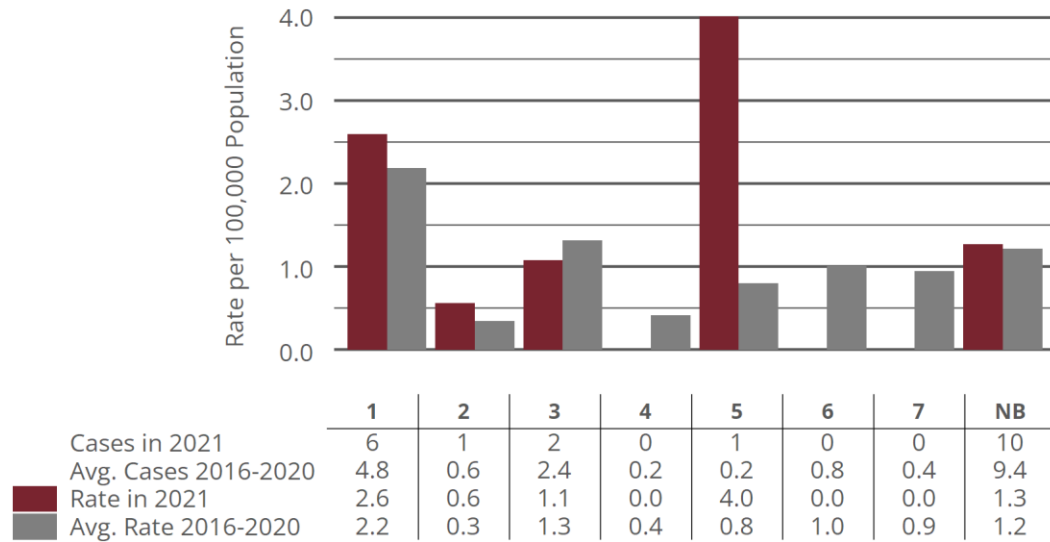
## TUBERCULOSIS

In 2021, there were 10 confirmed cases (8 females and 2 males) of active tuberculosis (TB) reported to Public Health New Brunswick, with an incidence rate of 1.3 cases per 100,000 population. During the previous five years, an average of 9 cases were reported yearly, with an average annual incidence rate of 1.2 cases per 100,000 population. New Brunswick incidence rates fall below national rates.



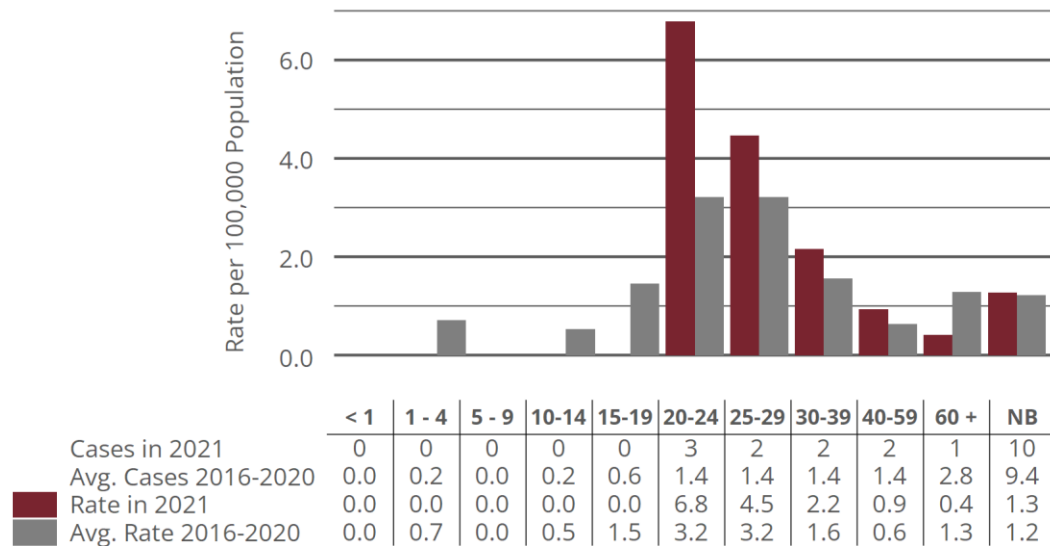
**Figure 80: Number of Reported Cases of Tuberculosis and Incidence Rates per 100,000 population, New Brunswick and Canada, 2016-2021**

The majority of cases were reported in Region 1 (6 cases or 60%), followed by Region 3 (2 cases or 20%) and Regions 2 and 5 (1 case or 10% each).



**Figure 81: Number of Reported Cases of Tuberculosis and Incidence Rates per 100,000 population, by Health Region, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

The highest number of cases were in the 20-24 years age group (3 cases or 30%), followed by the 25-29, 30-39, and 40-59 years age groups (2 cases or 20% each).



**Figure 82: Number of Reported Cases of Tuberculosis and Incidence Rates per 100,000 population, by Age Group, New Brunswick, 2021 and 2016 to 2020 Five-year Averages**

Pulmonary TB accounted for half of the cases (5 cases or 50%). The other cases were: 1 other respiratory TB (pleural), 1 peripheral lymph nodes TB and 3 other TB. The majority of TB cases (9 cases or 90%) were foreign-born. One case was Canadian-born and was not of aboriginal origin.

Looking at the 2020 treatment outcomes for the ten reported cases that year, one was cured (negative culture at the end of treatment), five had completed their treatment, but no culture was done at the end of treatment, one died before or during treatment and the outcome was unknown for three cases.

Annual variations in TB incidence rates should be interpreted with caution because of the small numbers involved that can lead to major fluctuations in rates from year to year.

## **OTHER DISEASES TRANSMITTED VIA THE RESPIRATORY ROUTE AND DIRECT CONTACT**

No cases of Leprosy or Acute Respiratory Syndrome (SARS) were reported between 2016 and 2021.

For further details on case counts and rates of different diseases transmitted via the respiratory route or direct contact, please refer to Appendix B.



# Appendix A List of Notifiable Diseases and Events

## Notifiable Disease and Reportable Events Public Health New Brunswick



Timeline	Notifiable diseases and events	To be reported by	
		Laboratory	Clinicians (clinical illness)
<p><b>Verbally within one hour</b></p> <p>Please attach a label for your region that specifies the telephone number to be used during and after business hours</p> <p><b>AND</b></p> <p><b>In writing by the end of the next working day</b></p> <p>Please attach a label for your region that specifies mailing address and fax number</p>	Anthrax	✓	✓
	Botulism	✓	✓
	Cholera	✓	✓
	Clusters of illness thought to be food, water-borne or enteric	✓	✓
	Clusters of severe or atypical illness thought to be respiratory borne	✓	✓
	COVID-19	✓	✓
	Diphtheria	✓	✓
	Hemorrhagic fever (viral)	✓	✓
	Influenza caused by a new subtype	✓	✓
	Measles	✓	✓
	Meningococcal disease (invasive)	✓	✓
	Multisystem inflammatory syndrome in children (MIS-C)	✓	✓
	Plague	✓	✓
	Poliomyelitis due to wild type poliovirus	✓	✓
Severe acute respiratory syndrome	✓	✓	
Smallpox	✓	✓	
Unusual clusters of suspect notifiable disease cases	✓	✓	
Yellow fever	✓	✓	
<p><b>Verbally within 24 hours</b></p> <p>Please attach a label for your region that specifies the telephone number to be used during and after business hours</p> <p><b>AND</b></p> <p><b>In writing within seven days</b></p> <p>Please attach a label for your region that specifies mailing address and fax number</p>	Brucellosis	✓	✓
	Campylobacteriosis	✓	✓
	Cryptosporidiosis	✓	✓
	Cyclosporiasis	✓	✓
	Escherichia coli infection (Verotoxigenic)	✓	✓
	Exposure to a suspected rabid animal	✓	✓
	Giardiasis	✓	✓
	Guillain-Barré syndrome	✓	✓
	Hantavirus pulmonary syndrome	✓	✓
	Haemophilus influenzae infection– all serotypes (invasive)	✓	✓
	Hepatitis A	✓	✓
	Hepatitis B	✓	✓
	Hepatitis E	✓	✓
	Legionellosis	✓	✓
	Listeriosis (invasive)	✓	✓
	Mumps	✓	✓
	Paralytic shellfish poisoning	✓	✓
	Pertussis	✓	✓
	Q fever	✓	✓
	Rabies	✓	✓
	Rubella (including congenital)	✓	✓
	Salmonellosis	✓	✓
	Shigellosis	✓	✓
	Staphylococcus aureus foodborne intoxications	✓	✓
	Streptococcus group A infection(invasive)	✓	✓
	Tularemia	✓	✓
	Tuberculosis (active)	✓	✓
	Typhoid	✓	✓
	Unusual illness as per one of the following criteria: - presence of symptoms that do not fit any recognizable clinical picture - known aetiology but not expected to occur in New Brunswick - known aetiology that does not behave as expected - clusters presenting with unknown aetiology	✓	✓
	Varicella	✓	✓
Vibrio species pathogenic to humans (other than Cholera)	✓	✓	
West Nile Virus infection	✓	✓	
Yersiniosis	✓	✓	
<p><b>In writing within seven days</b></p> <p>Please attach a label for your region that specifies mailing address and fax number</p>	Adverse reaction to a vaccine or other immunizing agent	✓	✓
	Chlamydial infection (genital)	✓	✓
	Clostridium difficile associated diarrhea	✓	✓
	Creutzfeld-Jacob disease (Classic and New Variant)	✓	✓
	Cytomegalovirus (congenital/neonatal)	✓	✓
	Gonococcal infection	✓	✓
	Hepatitis C and G	✓	✓
	Hepatitis (other viral)	✓	✓
	Herpes (congenital/neonatal)	✓	✓
	Human Immunodeficiency Virus infection/Acquired Immunodeficiency Syndrome	✓	✓
	Influenza (laboratory confirmed)	✓	✓
	Leprosy	✓	✓
	Leptospirosis	✓	✓
	Lyme borreliosis	✓	✓
	Malaria	✓	✓
	Methicillin-resistant Staphylococcus aureus	✓	✓
	Pneumococcal infection (invasive)	✓	✓
	Psittacosis	✓	✓
	Rickettsial infection	✓	✓
	Streptococcus group B infection (neonatal)	✓	✓
Syphilis(including congenital)	✓	✓	
Tetanus	✓	✓	
Toxoplasmosis	✓	✓	
Vancomycin-resistant Enterococci	✓	✓	

# Appendix B Tables of Provincial Counts and Rates

## TABLES RELATED TO VACCINE PREVENTABLE DISEASES

Table 1: Number of Cases of Vaccine Preventable Diseases reported in New Brunswick and Incidence Rates per 100,000 population, 2016-2021

Vaccine Preventable Diseases	2016		2017		2018		2019		2020		2021	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenza Type B and Non-B	9	1.2	15	2.0	14	1.8	13	1.7	14	1.8	4	0.5
Measles <sup>†</sup>	0	0.0	1	0.1	0	0.0	12	1.5	0	0.0	0	0.0
Invasive Meningococcal Disease <sup>‡</sup>	0	0.0	1	0.1	6	0.8	4	0.5	0	0.0	2	0.3
Mumps <sup>§</sup>	1	0.1	3	0.4	8	1.0	0	0.0	1	0.1	0	0.0
Pertussis (Whooping Cough)	66	8.6	74	9.7	31	4.0	104	13.4	101	12.9	0	0.0
Invasive Pneumococcal Disease <sup>  </sup>	63	8.3	60	7.8	79	10.3	78	10.0	49	6.3	53	6.7
Poliomyelitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella <sup>¶</sup>	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
Varicella	11	2.6	17	4.0	20	4.7	18	4.2	12	2.8	6	1.4
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

<sup>†</sup>Measles enhanced surveillance database. OCMOHE

<sup>‡</sup>Invasive Meningococcal Disease enhanced surveillance database. OCMOHE

<sup>§</sup>Mumps enhanced surveillance database. OCMOHE

<sup>||</sup>Invasive Pneumococcal Disease enhanced surveillance database. OCMOHE

<sup>¶</sup>Includes congenital rubella

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 2: Number of Cases of Vaccine Preventable Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Health Region, 2021**

Vaccine Preventable Diseases	Region 1		Region 2		Region 3		Region 4		Region 5		Region 6		Region 7		NB	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Diphtheria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenza Type B and Non-B	3	1.3	0	0.0	0	0.0	0	0.0	1	4.0	0	0.0	0	0.0	4	0.5
Measles <sup>†</sup>	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Invasive Meningococcal Disease <sup>‡</sup>	1	0.4	0	0.0	0	0.0	0	0.0	1	4.0	0	0.0	0	0.0	2	0.3
Mumps <sup>§</sup>	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis (Whooping Cough)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Invasive Pneumococcal Disease <sup>  </sup>	18	7.8	9	5.1	13	7.0	4	8.3	2	8.0	4	5.1	3	7.1	53	6.7
Poliomyelitis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella <sup>¶</sup>	0	0.0	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	0	0.0
Varicella	3	2.3	1	1.0	1	0.9	1	4.2	0	0.0	0	0.0	0	0.0	6	1.4
Smallpox	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

<sup>†</sup>Measles enhanced surveillance database. OCMOHE

<sup>‡</sup>Invasive Meningococcal Disease enhanced surveillance database. OCMOHE

<sup>§</sup>Mumps enhanced surveillance database. OCMOHE

<sup>||</sup>Invasive Pneumococcal Disease enhanced surveillance database. OCMOHE

<sup>¶</sup>Includes congenital rubella

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 3: Number of Cases of Vaccine Preventable Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Age and Sex, 2021**

Vaccine Preventable Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Diphtheria <sup>a</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus Influenza Type B and Non-B	M	0	0.0	1	7.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
	F	1	32.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.6	3	0.8
	T	1	16.0	1	3.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.8	4	0.5
Measles <sup>b</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Invasive Meningococcal Disease <sup>c</sup>	M	1	31.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	2	0.5
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	1	16.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	0	0.0	2	0.3
Mumps <sup>d</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Vaccine Preventable Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Pertussis (Whooping Cough)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Invasive Pneumococcal Disease <sup>1</sup>	M	0	0.0	3	21.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	13	12.1	17	15.0	33	8.4
	F	1	32.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.6	0	0.0	7	6.5	11	8.7	20	5.0
	T	1	16.0	3	11.2	0	0.0	0	0.0	0	0.0	0	0.0	1	2.2	0	0.0	20	9.3	28	11.7	53	6.7
Poliomyelitis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rubella <sup>1</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Vaccine Preventable Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Varicella	M	0	0.0	0	0.0	0	0.0	2	9.6	0	0.0	1	4.3	0	0.0	0	0.0	1	0.9	0	0.0	4	1.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.8	1	4.6	0	0.0	0	0.0	0	0.0	2	0.5
	T	0	0.0	0	0.0	0	0.0	2	4.9	0	0.0	2	4.5	1	2.2	0	0.0	1	0.5	0	0.0	6	1.4
Smallpox	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

<sup>†</sup>Measles enhanced surveillance database. OCMOHE

<sup>‡</sup>Invasive Meningococcal Disease enhanced surveillance database. OCMOHE

<sup>§</sup>Mumps enhanced surveillance database. OCMOHE

<sup>||</sup>Invasive Pneumococcal Disease enhanced surveillance database. OCMOHE

<sup>¶</sup>Includes congenital rubella

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

## TABLES RELATED TO ENTERIC, FOOD AND WATER BORNE DISEASES

Table 4: Number of Cases of Enteric, Food and Water Borne Diseases reported in New Brunswick and Incidence Rates per 100,000 population, 2016-2021

Enteric, Food and Water Borne Diseases	2016		2017		2018		2019		2020		2021	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	162	21.2	211	27.5	201	26.1	237	30.5	250	31.9	181	22.9
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clostridium difficile Infection	-	-	-	-	716	93.0	688	88.5	433	55.3	627	79.4
Cryptosporidiosis	32	4.2	18	2.3	37	4.8	40	5.1	35	4.5	25	3.2
Cyclosporiasis	0	0.0	1	0.1	0	0.0	0	0.0	2	0.3	0	0.0
E. coli O157	2	0.3	10	1.3	7	0.9	7	0.9	1	0.1	3	0.4
Giardiasis	95	12.4	73	9.5	91	11.8	96	12.4	53	6.8	74	9.4
Hepatitis A	1	0.1	1	0.1	2	0.3	4	0.5	3	0.4	3	0.4
Hepatitis E	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0
Listeriosis (Invasive)	5	0.7	4	0.5	5	0.6	5	0.6	6	0.8	7	0.9
Paralytic Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salmonellosis	135	17.7	159	20.7	180	23.4	159	20.5	116	14.8	89	11.3
Shigellosis	6	0.8	3	0.4	9	1.2	5	0.6	0	0.0	2	0.3
Staphylococcus Aureus Intoxications	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vibrio	4	0.5	3	0.4	10	1.3	7	0.9	16	2.0	16	2.0
Yersiniosis	0	0.0	1	0.1	1	0.1	5	0.6	1	0.1	2	0.3

Data sources: Enterics Database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 5: Number of Cases of Enteric, Food and Water Borne Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Health Region, 2021**

Enteric, Food and Water Borne Diseases	Region 1		Region 2		Region 3		Region 4		Region 5		Region 6		Region 7		NB	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	36	15.6	41	23.0	38	20.4	24	50.1	10	40.2	26	33.0	6	14.2	181	22.9
Cholera	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clostridium difficile Infection	188	81.2	123	69.1	140	75.3	33	68.9	46	184.7	51	64.7	46	109.0	627	79.4
Cryptosporidiosis	9	3.9	5	2.8	6	3.2	2	4.2	1	4.0	0	0.0	2	4.7	25	3.2
Cyclosporiasis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E. coli O157	1	0.4	0	0.0	0	0.0	0	0.0	1	4.0	1	1.3	0	0.0	3	0.4
Giardiasis	17	7.3	15	8.4	22	11.8	2	4.2	5	20.1	7	8.9	6	14.2	74	9.4
Hepatitis A	0	0.0	0	0.0	2	1.1	1	2.1	0	0.0	0	0.0	0	0.0	3	0.4
Hepatitis E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis (Invasive)	2	0.9	2	1.1	1	0.5	1	2.1	0	0.0	1	1.3	0	0.0	7	0.9
Paralytic Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salmonellosis	21	9.1	32	18.0	20	10.8	2	4.2	3	12.0	6	7.6	5	11.8	89	11.3
Shigellosis	1	0.4	1	0.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3
Staphylococcus Aureus Intoxications	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Typhoid	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vibrio	9	3.9	1	0.6	0	0.0	0	0.0	0	0.0	6	7.6	0	0.0	16	2.0
Yersiniosis	0	0.0	0	0.0	0	0.0	0	0.0	1	4.0	0	0.0	1	2.4	2	0.3

Data sources: Enterics Database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.



**Table 6: Number of Cases of Enteric, Food and Water Borne Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Age and Sex, 2021**

Enteric, Food and Water Borne Diseases		Age Groups																				Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +					
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Botulism	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	M	0	0.0	11	80.3	2	10.3	5	24.0	4	19.7	7	30.2	5	21.5	9	19.4	29	27.0	33	29.2	105	26.8		
	F	0	0.0	5	38.1	4	21.5	1	5.0	0	0.0	4	19.0	4	18.6	11	23.8	25	23.1	22	17.4	76	19.1		
	T	0	0.0	16	59.7	6	15.8	6	14.7	4	9.9	11	24.9	9	20.1	20	21.6	54	25.1	55	22.9	181	22.9		
Cholera	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Clostridium difficile Infection	M	2	62.8	4	29.2	0	0.0	2	9.6	3	14.8	5	21.6	1	4.3	10	21.5	56	52.1	181	160.0	264	67.5		
	F	1	32.8	1	7.6	5	26.9	3	15.0	7	35.2	15	71.4	4	18.6	18	38.9	72	66.6	237	187.3	363	91.2		
	T	3	48.1	5	18.6	5	13.1	5	12.2	10	24.9	20	45.3	5	11.2	28	30.2	128	59.4	418	174.4	627	79.4		
Cryptosporidiosis	M	1	31.4	3	21.9	0	0.0	1	4.8	1	4.9	1	4.3	0	0.0	4	8.6	2	1.9	1	0.9	14	3.6		
	F	0	0.0	0	0.0	0	0.0	1	5.0	1	5.0	1	4.8	3	13.9	3	6.5	1	0.9	1	0.8	11	2.8		
	T	1	16.0	3	11.2	0	0.0	2	4.9	2	5.0	2	4.5	3	6.7	7	7.5	3	1.4	2	0.8	25	3.2		

Enteric, Food and Water Borne Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59				60 +	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate			N	Rate
Cyclosporiasis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
E. coli O157	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.8	0	0.0	1	2.2	1	0.9	0	0.0	3	0.8
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.3	0	0.0	1	1.1	1	0.5	0	0.0	3	0.4
Giardiasis	M	0	0.0	2	14.6	5	25.7	2	9.6	2	9.8	0	0.0	2	8.6	2	4.3	10	9.3	16	14.1	41	10.5
	F	0	0.0	2	15.3	4	21.5	0	0.0	0	0.0	0	0.0	1	4.6	6	13.0	9	8.3	11	8.7	33	8.3
	T	0	0.0	4	14.9	9	23.6	2	4.9	2	5.0	0	0.0	3	6.7	8	8.6	19	8.8	27	11.3	74	9.4
Hepatitis A	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	1	7.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	1	0.8	3	0.8
	T	0	0.0	1	3.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	1	0.4	3	0.4
Hepatitis E	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Enteric, Food and Water Borne Diseases		Age Groups																				Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +					
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Listeriosis (Invasive)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.8	2	0.5
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	5	4.0	5	1.3
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	7	2.9	7	0.9
Paralytic Shellfish Poisoning	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Salmonellosis	M	0	0.0	2	14.6	1	5.1	0	0.0	3	14.8	2	8.6	2	8.6	4	8.6	11	10.2	12	10.6	37	9.5		
	F	1	32.8	6	45.8	4	21.5	3	15.0	1	5.0	1	4.8	4	18.6	4	8.6	4	3.7	24	19.0	52	13.1		
	T	1	16.0	8	29.8	5	13.1	3	7.3	4	9.9	3	6.8	6	13.4	8	8.6	15	7.0	36	15.0	89	11.3		
Shigellosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	1	0.9	2	0.5
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	1	0.4	2	0.3
Staphylococcus Aureus Intoxications	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Enteric, Food and Water Borne Diseases		Age Groups																		Total					
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59				60 +			
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate			N	Rate		
Typhoid	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Vibrio	M	0	0.0	0	0.0	1	5.1	0	0.0	0	0.0	1	4.3	0	0.0	1	2.2	3	2.8	6	5.3	12	3.1		
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.6	0	0.0	2	1.9	1	0.8	4	1.0		
	T	0	0.0	0	0.0	1	2.6	0	0.0	0	0.0	1	2.3	1	2.2	1	1.1	5	2.3	7	2.9	16	2.0		
Yersiniosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	1	0.3		
	F	1	32.8	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3		
	T	1	16.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	2	0.3		

Data sources:

Enterics Database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 7: Number of Regional Enteric Clusters or Outbreaks Reported in New Brunswick, by Type of Setting and Health Region, 2021**

Type of Setting	Clusters / Outbreaks							NB
	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	
Institutional – Non Residential	5	9	0	0	0	0	0	14
Institutional – Residential	2	0	0	0	0	0	0	2
Community	0	0	0	0	0	0	0	0
Food Service Establishment	0	0	0	0	0	0	0	0
Private function	0	0	0	0	0	0	0	0
Facility, various	0	0	0	0	0	0	0	0
Other settings	0	1	0	0	0	0	0	1
More than one setting	0	0	0	0	0	0	0	0
Travel Related	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0
<b>Total</b>	<b>7</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>

Data source: Outbreak Summaries database within the Canadian Network for Public Health Intelligence (CNPHI)

**Table 8: Number of Regional Enteric Clusters or Outbreaks Reported in New Brunswick, by Causative Agent and Health Region, 2021**

Causative Agent	Clusters / Outbreaks							NB
	Region 1	Region 2	Region 3	Region 4	Region 5	Region 6	Region 7	
Salmonella enteritidis	0	1	0	0	0	0	0	1
Sapovirus	0	3	0	0	0	0	0	3
No organisms identified	7	6	0	0	0	0	0	13
Total	7	10	0	0	0	0	0	17

Data source: Outbreak Summaries database within the Canadian Network for Public Health Intelligence (CNPHI)

## TABLES RELATED TO SEXUALLY TRANSMITTED AND BLOOD BORNE INFECTIONS

**Table 9: Number of Cases of Sexually Transmitted and Blood Borne Infections reported in New Brunswick and Incidence Rates per 100,000 population, 2016-2021**

Sexually Transmitted and Blood Borne Infections	2016		2017		2018		2019		2020		2021	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Chlamydia (Genital)	1927	252.4	2094	273.1	2170	281.7	2234	287.5	1642	209.7	1642	208.1
Cytomegalovirus (Congenital and Neonatal)	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	0	0.0
Gonorrhea*	74	9.7	58	7.6	95	12.3	61	7.8	52	6.6	255	32.3
Hepatitis B (Acute)†	10	1.3	8	1.0	16	2.1	11	1.4	8	1.0	6	0.8
Hepatitis B (Chronic)†	69	9.0	44	5.7	53	6.9	61	7.8	38	4.9	44	5.6
Hepatitis C‡	182	23.8	248	32.3	294	38.2	254	32.7	189	24.1	189	23.9
Herpes (Congenital and Neonatal)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Human Immunodeficiency Virus (HIV) §	7	0.9	12	1.6	21	2.7	22	2.8	14	1.8	13	1.6
Acquired Immunodeficiency Syndrome (AIDS) §	4	0.5	0	0.0	2	0.3	2	0.3	3	0.4	2	0.3
Syphilis (All)¶	32	4.2	33	4.3	56	7.3	40	5.1	32	4.1	60	7.6
Syphilis (Infectious)¶	15	2.0	20	2.6	21	2.7	17	2.2	14	1.8	25	3.2

**Data sources:**

Reportable Disease Surveillance System (RDSS) database Reportable Disease Surveillance System (RDSS) database

\*Gonorrhea enhanced surveillance database. OCMOHE

†Hepatitis B enhanced surveillance database. OCMOHE

‡Hepatitis C enhanced surveillance database. OCMOHE

§HIV/AIDS enhanced surveillance database. OCMOHE

¶Syphilis enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 10: Number of Cases of Sexually Transmitted and Blood Borne Infections reported in New Brunswick and Incidence Rates per 100,000 population, by Health Region, 2021**

Sexually Transmitted and Blood Borne Infections	Region 1		Region 2		Region 3		Region 4		Region 5		Region 6		Region 7		NB	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Chlamydia (Genital)	602	260.1	318	178.5	485	261.0	53	110.6	31	124.5	115	146.0	38	90.1	1642	208.1
Cytomegalovirus (Congenital and Neonatal)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Gonorrhea*	118	51.0	65	36.5	27	14.5	8	16.7	2	8.0	5	6.3	30	71.1	255	32.3
Hepatitis B (Acute)†	4	1.7	0	0.0	1	0.5	0	0.0	0	0.0	1	1.3	0	0.0	6	0.8
Hepatitis B (Chronic)†	20	8.6	8	4.5	8	4.3	5	10.4	0	0.0	2	2.5	1	2.4	44	5.6
Hepatitis C‡	56	24.2	69	38.7	23	12.4	5	10.4	3	12.0	11	14.0	22	52.1	189	23.9
Herpes (Congenital and Neonatal)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Human Immunodeficiency Virus (HIV) §	3	1.3	0	0.0	4	2.2	0	0.0	1	4.0	4	5.1	1	2.4	13	1.6
Acquired Immunodeficiency Syndrome (AIDS) §	0	0.0	1	0.6	1	0.5	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3
Syphilis (All)¶	28	12.1	18	10.1	11	5.9	0	0.0	0	0.0	1	1.3	2	4.7	60	7.6
Syphilis (Infectious)¶	9	3.9	11	6.2	3	1.6	0	0.0	0	0.0	1	1.3	1	2.4	25	3.2

**Data sources:**

Reportable Disease Surveillance System (RDSS) database Reportable Disease Surveillance System (RDSS) database

\*Gonorrhea enhanced surveillance database. OCMOHE

†Hepatitis B enhanced surveillance database. OCMOHE

‡Hepatitis C enhanced surveillance database. OCMOHE

§HIV/AIDS enhanced surveillance database. OCMOHE

¶Syphilis enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.



**Table 11: Number of Cases of Sexually Transmitted and Blood Borne Infections reported in New Brunswick and Incidence Rates per 100,000 population, by Age and Sex, 2021**

Sexually Transmitted and Blood Borne Infections		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Chlamydia (Genital)	M	0	0.0	0	0.0	1	5.1	1	4.8	78	383.5	236	1017.4	135	579.7	105	225.9	45	41.9	1	0.9	602	153.9
	F	0	0.0	0	0.0	0	0.0	1	5.0	251	1261.8	423	2014.2	174	807.9	143	308.8	46	42.6	2	1.6	1040	261.2
	T	0	0.0	0	0.0	1	2.6	2	4.9	329	817.8	659	1491.1	309	689.4	248	267.2	91	42.2	3	1.3	1642	208.1
Cytomegalovirus (Congenital and Neonatal)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Gonorrhoea*	M	0	0.0	0	0.0	0	0.0	0	0.0	6	29.5	19	81.9	31	133.1	50	107.6	27	25.1	5	4.4	138	35.3
	F	1	32.8	0	0.0	0	0.0	0	0.0	9	45.2	34	161.9	18	83.6	45	97.2	10	9.3	0	0.0	117	29.4
	T	1	16.0	0	0.0	0	0.0	0	0.0	15	37.3	53	119.9	49	109.3	95	102.4	37	17.2	5	2.1	255	32.3
Hepatitis B (Acute)†	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.2	2	1.9	3	2.7	6	1.5
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	1.1	2	0.9	3	1.3	6	0.8
Hepatitis B (Chronic)†	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	17.2	4	17.2	11	23.7	7	6.5	3	2.7	29	7.4
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	9.5	4	18.6	2	4.3	4	3.7	3	2.4	15	3.8
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	13.6	8	17.8	13	14.0	11	5.1	6	2.5	44	5.6

Sexually Transmitted and Blood Borne Infections		Age Groups																		Total					
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59				60 +			
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate			N	Rate		
Hepatitis C <sup>†</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	8	34.5	15	64.4	33	71.0	42	39.1	15	13.3	113	28.9		
	F	0	0.0	0	0.0	0	0.0	0	0.0	4	20.1	5	23.8	18	83.6	31	66.9	15	13.9	3	2.4	76	19.1		
	T	0	0.0	0	0.0	0	0.0	0	0.0	4	9.9	13	29.4	33	73.6	64	69.0	57	26.4	18	7.5	189	23.9		
Herpes (Congenital and Neonatal)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0		
Human Immunodeficiency Virus (HIV) <sup>†</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.3	1	4.3	6	12.9	3	2.8	0	0.0	11	2.8		
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.6	1	2.2	0	0.0	0	0.0	2	0.5		
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.3	2	4.5	7	7.5	3	1.4	0	0.0	13	1.6		
Acquired Immunodeficiency Syndrome (AIDS) <sup>†</sup>	M	1	31.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	1	0.3		
	T	1	16.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.5	0	0.0	2	0.3		
Syphilis (All) <sup>*</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	6	25.9	8	34.4	19	40.9	13	12.1	5	4.4	51	13.0		
	F	0	0.0	0	0.0	0	0.0	0	0.0	1	5.0	1	4.8	1	4.6	1	2.2	4	3.7	1	0.8	9	2.3		
	T	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5	7	15.8	9	20.1	20	21.6	17	7.9	6	2.5	60	7.6		

Sexually Transmitted and Blood Borne Infections		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59				60 +	
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Syphilis (infectious) <sup>†</sup>	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	12.9	2	8.6	9	19.4	8	7.4	1	0.9	23	5.9
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.8	0	0.0	1	2.2	0	0.0	0	0.0	2	0.5
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	9.1	2	4.5	10	10.8	8	3.7	1	0.4	25	3.2

Data sources:

Reportable Disease Surveillance System (RDSS) database Reportable Disease Surveillance System (RDSS) database

<sup>\*</sup>Gonorrhoea enhanced surveillance database. OCMOHE

<sup>†</sup>Hepatitis B enhanced surveillance database. OCMOHE

<sup>‡</sup>Hepatitis C enhanced surveillance database. OCMOHE

<sup>§</sup>HIV/AIDS enhanced surveillance database. OCMOHE

<sup>¶</sup>Syphilis enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

## TABLES RELATED TO VECTORBORNE AND ZOOONOTIC DISEASES

Table 12: Number of Cases of Vectorborne and Zoonotic Diseases reported in New Brunswick and Incidence Rates per 100,000 population, 2016-2021

Vectorborne and Zoonotic Diseases	2016		2017		2018		2019		2020		2021	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Leptospirosis	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Brucellosis	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Heamorrhagic Fevers	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme Disease*	8	1.0	29	3.8	20	2.6	36	4.6	19	2.4	50	6.3
Malaria	7	0.9	6	0.8	2	0.3	9	1.2	2	0.3	2	0.3
Plague (Pneumonic and Bubonic)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Q Fever	1	0.1	1	0.1	0	0.0	6	0.8	4	0.5	4	0.5
Rabies	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rickettsiosis	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
West Nile Virus	1	0.1	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
Zika	2	0.3	2	0.3	1	0.1	0	0.0	0	0.0	0	0.0

Data sources:

Reportable Disease Surveillance System (RDSS) database

\*Lyme Disease enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 13: Number of Cases of Vectorborne and Zoonotic Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Health Region, 2021**

Vectorborne and Zoonotic Diseases	Region 1		Region 2		Region 3		Region 4		Region 5		Region 6		Region 7		NB	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Leptospirosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Anthrax	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Brucellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Heamorrhagic Fevers	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme Disease*	3	1.3	44	24.7	3	1.6	0	0.0	0	0.0	0	0.0	0	0.0	50	6.3
Malaria	2	0.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.3
Plague (Pneumonic and Bubonic)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Q Fever	1	0.4	3	1.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.5
Rabies	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rickettsiosis	0	0.0	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	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	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	0	0.0
Zika	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

\*Lyme Disease enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 14: Number of Cases of Vectorborne and Zoonotic Diseases reported in New Brunswick and Incidence Rates per 100,000 population, by Age and Sex, 2021**

Vectorborne and Zoonotic Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Leptospirosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Anthrax	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Brucellosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Hantavirus	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Vectorborne and Zoonotic Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Hemorrhagic Fevers	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Lyme Disease*	M	0	0.0	1	7.3	1	5.1	1	4.8	4	19.7	0	0.0	0	0.0	3	6.5	10	9.3	12	10.6	32	8.2
	F	0	0.0	1	7.6	1	5.4	4	20.0	0	0.0	0	0.0	2	9.3	1	2.2	2	1.9	7	5.5	18	4.5
	T	0	0.0	2	7.5	2	5.3	5	12.2	4	9.9	0	0.0	2	4.5	4	4.3	12	5.6	19	7.9	50	6.3
Malaria	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.2	0	0.0	0	0.0	1	0.3
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.8	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	2.3	0	0.0	1	1.1	0	0.0	0	0.0	2	0.3
Plague (Pneumonic and Bubonic)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Psittacosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Vectorborne and Zoonotic Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Q Fever	M	0	0.0	0	0.0	0	0.0	0	0.0	1	4.9	0	0.0	0	0.0	0	0.0	1	0.9	1	0.9	3	0.8
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.9	0	0.0	1	0.3
	T	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5	0	0.0	0	0.0	0	0.0	2	0.9	1	0.4	4	0.5
Rabies	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Rickettsiosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tularemia	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
West Nile Virus	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0



Vectorborne and Zoonotic Diseases		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Yellow Fever	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Zika	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

\*Lyme Disease enhanced surveillance database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

## TABLES RELATED TO DISEASES TRANSMITTED VIA THE RESPIRATORY ROUTE AND DIRECT CONTACT

*Table 15: Number of Cases of Diseases Transmitted via the Respiratory Route and Direct Contact reported in New Brunswick and Incidence Rates per 100,000 population, 2016-2021*

Diseases Transmitted via the Respiratory Route and Direct Contact	2016		2017		2018		2019		2020		2021	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Legionellosis	6	0.8	3	0.4	8	1.0	32	4.1	14	1.8	17	2.2
Leprosy	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
Streptococcus Group B Beta-hemolytic (Neonatal)	2	29.9	1	15.3	1	15.6	1	15.8	1	16.1	3	46.6
Invasive Group A Streptococcal Disease*	24	3.1	33	4.3	50	6.5	66	8.5	53	6.8	43	5.4
Tuberculosis <sup>†</sup>	12	1.6	8	1.0	6	0.8	11	1.4	10	1.3	10	1.3

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

\*iGAS enhanced database. OCMOHE

<sup>†</sup>Active TB enhanced database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 16: Number of Cases of Diseases Transmitted via the Respiratory Route and Direct Contact reported in New Brunswick and Incidence Rates per 100,000 population, by Health Region, 2021**

Diseases Transmitted via the Respiratory Route and Direct Contact	Region 1		Region 2		Region 3		Region 4		Region 5		Region 6		Region 7		NB	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
Legionellosis	12	5.2	1	0.6	1	0.5	0	0.0	1	4.0	1	1.3	1	2.4	17	2.2
Leprosy	0	0.0	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	0	0.0
Streptococcus Group B Beta-hemolytic (Neonatal)	1	52.2	1	63.3	0	0.0	0	0.0	0	0.0	0	0.0	1	317.5	3	46.6
Invasive Group A Streptococcal Disease*	9	3.9	11	6.2	5	2.7	1	2.1	1	4.0	7	8.9	9	21.3	43	5.4
Tuberculosis <sup>†</sup>	6	2.6	1	0.6	2	1.1	0	0.0	1	4.0	0	0.0	0	0.0	10	1.3

Data sources:

Reportable Disease Surveillance System (RDSS) database

\*iGAS enhanced database. OCMOHE

<sup>†</sup>Active TB enhanced database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

**Table 17: Number of Cases of Diseases Transmitted via the Respiratory Route and Direct Contact reported in New Brunswick and Incidence Rates per 100,000 population, by Age and Sex, 2021**

Diseases Transmitted via the Respiratory Route and Direct Contact		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Legionellosis	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	8.6	0	0.0	4	3.7	5	4.4	11	2.8
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	1.9	4	3.2	6	1.5
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	4.5	0	0.0	6	2.8	9	3.8	17	2.2
Leprosy	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	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)	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Streptococcus Group B Beta-hemolytic (Neonatal)	M	2	31.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	31.0
	F	1	15.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	15.5
	T	3	46.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	46.6

Diseases Transmitted via the Respiratory Route and Direct Contact		Age Groups																		Total			
		< 1		1 - 4		5 - 9		10-14		15-19		20-24		25-29		30-39		40-59		60 +		N	Rate
		N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate				
Invasive Group A Streptococcal Disease*	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.3	1	4.3	4	8.6	15	14.0	11	9.7	32	8.2
	F	0	0.0	0	0.0	0	0.0	0	0.0	1	5.0	2	9.5	0	0.0	2	4.3	4	3.7	2	1.6	11	2.8
	T	0	0.0	0	0.0	0	0.0	0	0.0	1	2.5	3	6.8	1	2.2	6	6.5	19	8.8	13	5.4	43	5.4
Tuberculosis†	M	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	4.3	0	0.0	0	0.0	0	0.0	1	0.9	2	0.5
	F	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	9.5	2	9.3	2	4.3	2	1.9	0	0.0	8	2.0
	T	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	6.8	2	4.5	2	2.2	2	0.9	1	0.4	10	1.3

**Data sources:**

Reportable Disease Surveillance System (RDSS) database

\*iGAS enhanced database. OCMOHE

†Active TB enhanced database. OCMOHE

Note: Rates are based on population estimates from Statistics Canada, Demography Division, released March 2022.

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