



# **NOTIFIABLE DISEASES IN NOVA SCOTIA 2015 SURVEILLANCE REPORT**

# ACKNOWLEDGEMENTS

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

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## 2015 HIGHLIGHTS

A total of 6,576 cases of notifiable diseases (including influenza) were reported in Nova Scotia in 2015. Figure 1 represents the frequency of diseases reported by disease category. A summary of the diseases included in each disease category can be found in the Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions (<http://novascotia.ca/dhw/populationhealth/surveillanceguidelines/>).

Chlamydia, a sexually transmitted infection, was the most frequently reported disease (48.8%), followed by two healthcare associated infections, Clostridium difficile (13.9%) and methicillin resistant staphylococcus aureus (MRSA) (10.7%) (Figure 2).

After a decrease in the number of Lyme Disease cases in 2014, there was an increase in 2015 from 115 to 254 cases.

There was an increase in the number of pertussis cases in 2015 (n=110) due to a number of family clusters of disease that occurred in late 2014 and early 2015.

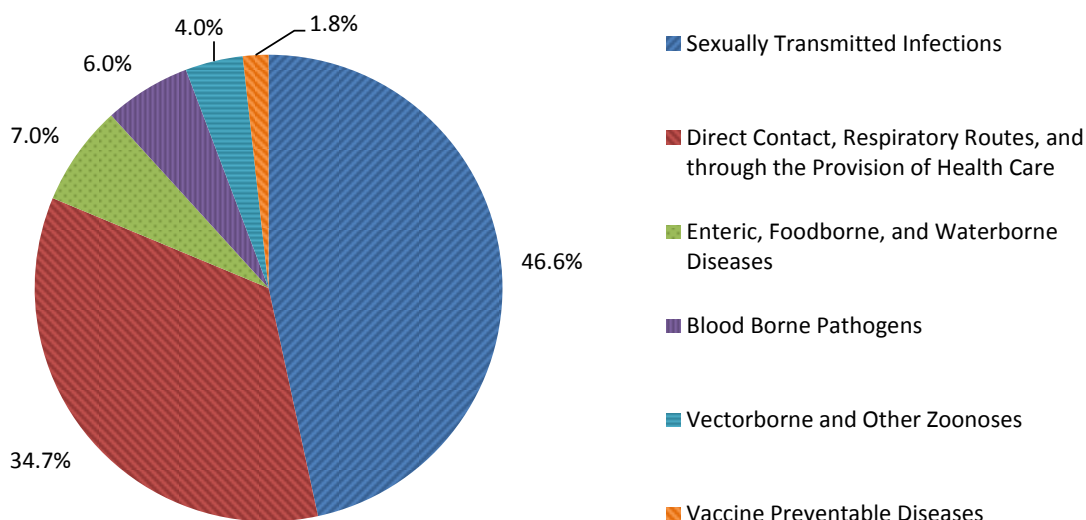
The number of legionellosis cases increased in 2015 due to an outbreak that occurred in a multi-unit building in Central Zone (n=5). An environmental source was identified within the building.

An increase in Invasive Meningococcal Disease occurred in 2015 due to an institutional outbreak and other sporadic cases throughout the province (n=7). Three cases were Serogroup B and 4 were Serogroup Y.

For the second consecutive year, the number of syphilis cases has decreased (2013: n=85, 9.0/100,000; 2014: n=63, 6.7/100,000; 2015: n=43, 4.6/100,000). This trend was also seen in Central Zone where an outbreak of syphilis has been ongoing since 2008.

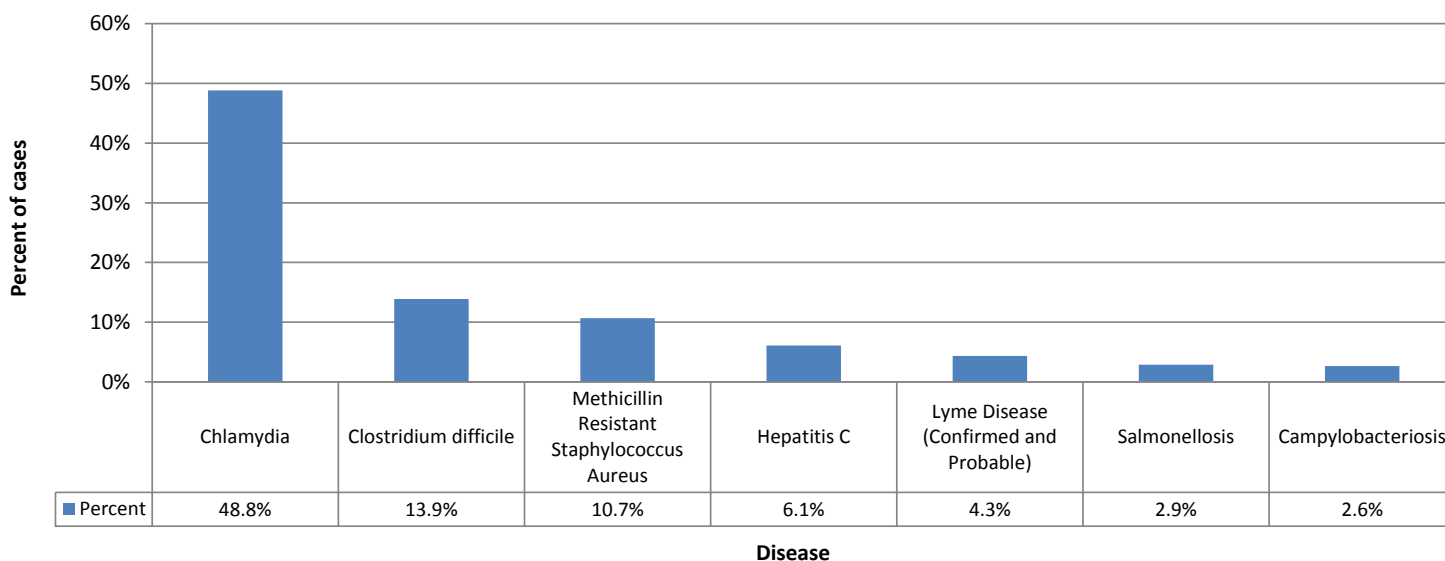
Influenza cases are not described any further in this report. Information on influenza can be obtained from the Annual Influenza Surveillance Report, which can be found on the Department of Health and Wellness website: (<http://novascotia.ca/dhw/populationhealth/>).

**Figure 1: Distribution of notifiable diseases reported in Nova Scotia by disease category, 2015**



**Note:** The “Direct Contact, Respiratory Routes, and through the Provision of Health Care” category in this figure includes influenza cases (n=721). Influenza cases are not described further in this report.

**Figure 2: Summary of most frequently reported notifiable diseases in Nova Scotia, 2015**



# INTRODUCTION

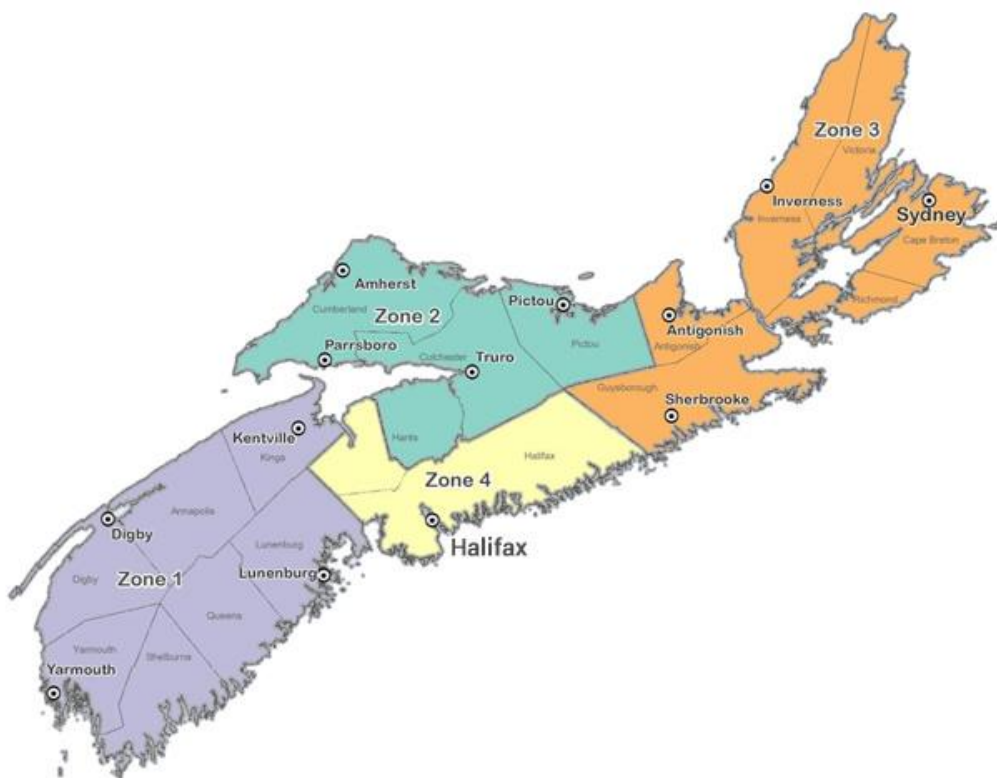
Surveillance is defined as the “systematic ongoing collection, collation, and analysis of data and the timely dissemination of information to those who need to know so that action can be taken” (1).

In Nova Scotia, surveillance of notifiable diseases is governed by the provincial *Health Protection Act*, which mandates the reporting of diseases by many partners within the public health system and the health system as a whole (2). The list of notifiable diseases in Nova Scotia can be found in Appendix A.

The purpose of this report is to provide a summary of notifiable diseases reported in Nova Scotia in 2015. The report was compiled by the Nova Scotia Department of Health and Wellness (DHW). It includes highlights of notifiable disease data for 2015, examines important trends between 2006-2015 and provides some comparisons with national data. In Appendix B, numbers and rates of notifiable diseases are presented for a 10 year period for the province.

On April 1, 2015, Nova Scotia launched a new health system structure to create a foundation for better health and health care. The nine previous district health authorities have come together as the Nova Scotia Health Authority, with the IWK Health Centre as a separate entity. Data for 2015 was collected under both the previous District Health Authority structure and the current Health Management Zone structure. Rates of notifiable diseases will be presented for each off the four Health Management Zones (Figure 3), sex, and age groups.

**Figure 3: Map of Health Management Zone boundaries, Nova Scotia**



## METHODS

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

Cases are classified based on standardized case definitions and are reported to DHW, for provincial surveillance purposes, through the Application for Notifiable Disease Surveillance (ANDS) and case report forms. Further information on the case definitions, reporting procedures, and forms can be found in the Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions (3). Information on public health case management and control measures in Nova Scotia can be found in the Nova Scotia Communicable Disease Control Manual (4).

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

Dates presented in this report are based on the episode date assigned to the case. The episode date is the earliest known date, reflecting symptom onset or the closest available date (specimen collection date, clinical diagnosis date, or test result date).

Only cases meeting a confirmed case definition are included in this report, with the exception of Lyme disease, where probable cases are also included.

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

Rates were calculated using Statistics Canada population counts based on the 2011 Census (accessed July 2016). All Canadian notifiable disease data were obtained from the Public Health Agency of Canada (PHAC) and are cited where used. The most recent year of Canadian data is for 2014. Therefore, comparisons between Nova Scotia and Canada are based on 2014 data (5).

This report does not contain any influenza surveillance data as there is a separate annual report on this topic, which can be found on the DHW website (<http://novascotia.ca/dhw/populationhealth/>).

All case data are current as of August 2<sup>nd</sup>, 2016.

## LIMITATIONS

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

Changes in case finding procedures (e.g. changes to laboratory testing methods) may result in an increase or decrease in the number of reported cases that may not be reflective of true changes in disease occurrence within the province. Any changes are noted within the report.

Numbers and rates presented in this report are based on notifications received by DHW as of August 2<sup>nd</sup>, 2016. As new information is received, these numbers and rates may be subject to minor changes in future reports. National notifiable disease data from PHAC that are used in this report are also subject to change.



# DISEASE REPORTS IN NOVA SCOTIA BY DISEASE GROUP

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

## Bloodborne Pathogens

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### *HIV & AIDS*

There were 17 newly diagnosed cases of HIV in Nova Scotia in 2015 (rate of 1.8/100,000 population) which is an increase from 2014 (n=10; 1.1/100,000 population). The cumulative number of new diagnoses since 1985 (when the first case was reported) is 828. The Canadian rate of reported HIV cases in 2014 was 5.7/100,000 population (5). For 2014, the reported rate of HIV in Nova Scotia was below the national rate.

In 2015, 88.2% of HIV cases were male and 64.7% of cases were between the ages of 20 and 29. The frequency of reporting the following exposures were: men who have sex with men (MSM, 70.6%), low risk heterosexual contact (HET-LR, 17.6%), high risk heterosexual contact (HET-IR, 5.9%), and injection drug use (IDU, 5.9%).

There were three new cases of AIDS reported in Nova Scotia in 2015 (0.3/100,000 population). This was a decrease from 2014 (0.4/100,000 population).

### *Hepatitis B (Acute and Chronic)*

The number of reported cases of acute hepatitis B in 2015 was 9 (rate of 1.0/100,000 population). There were 9 cases of chronic hepatitis B reported in 2015 (rate of 1.0/100,000 population). The overall rate for hepatitis B (acute and chronic) in 2015 was 1.9/100,000 population which is a decrease from the 2014 rate of 2.6/100,000 population.

The majority of cases were age 25 and older and 61.1% were male.

Nationally, the rates of hepatitis B are reported for acute and chronic cases combined. The 2014 Canadian rate of hepatitis B was 13.9/100,000 population which was higher compared to the 2014 Nova Scotia Rate (2.6/100,000 population) (5).

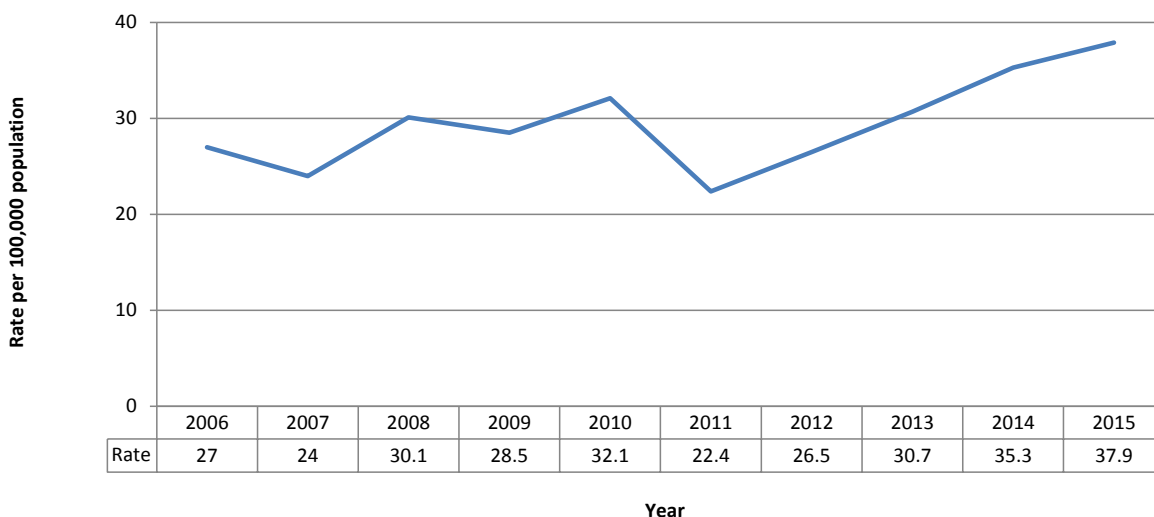
### *Hepatitis C*

In 2015, 357 cases of hepatitis C were reported in Nova Scotia (rate of 37.9/100,000 population). This rate is higher compared to the 2013 and 2014 rates (Figure 4). The national rate of reported hepatitis C cases in 2014 was 29.4/100,000 population (5). For 2014, the Nova Scotia rate (35.3/100,000 population) was higher compared to the national rate.

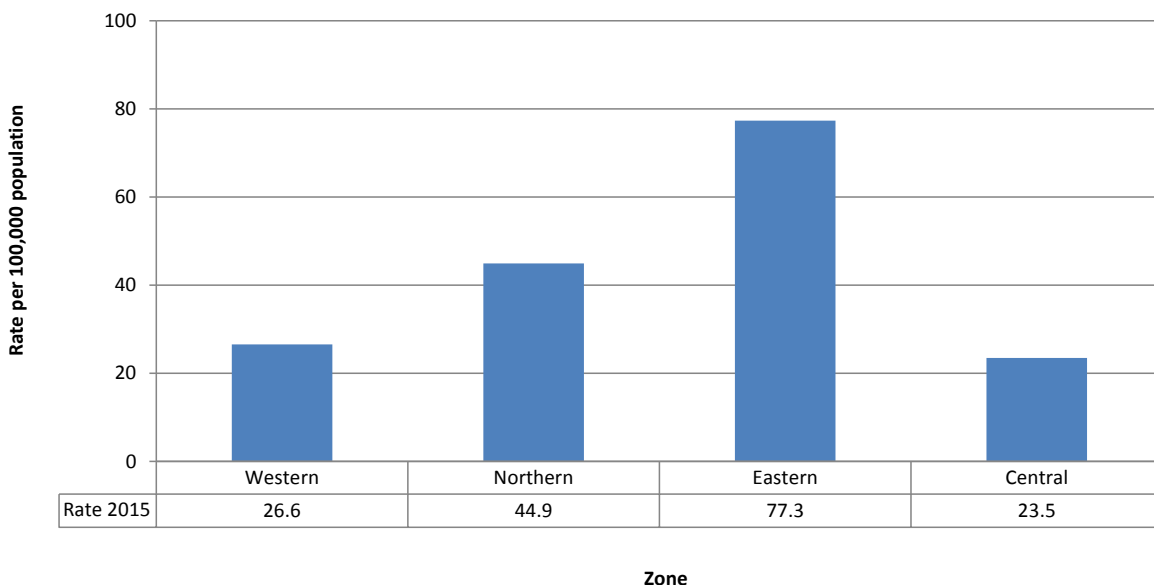
Eastern Zone had the highest rate of hepatitis C compared to the other zones with a rate of 76.7/100,000 population (Figure 5). In previous years, when reporting by DHA, the Cumberland Health Authority (now part of Northern Zone) consistently reported the highest rate of hepatitis C compared to the other DHAs. This was due to the fact that the largest federal correctional facility in Nova Scotia is located in that area of the province and inmates are tested for hepatitis C upon admission to the

institution. In 2015, 60% of cases from the previous Cumberland DHA were incarcerated. Cape Breton DHA (now part of Eastern Zone) had the second highest rate of hepatitis C in 2014.

**Figure 4: Reported rates of hepatitis C in Nova Scotia, 2006-2015**



**Figure 5: Reported rates of hepatitis C in Nova Scotia by Zone, 2015**

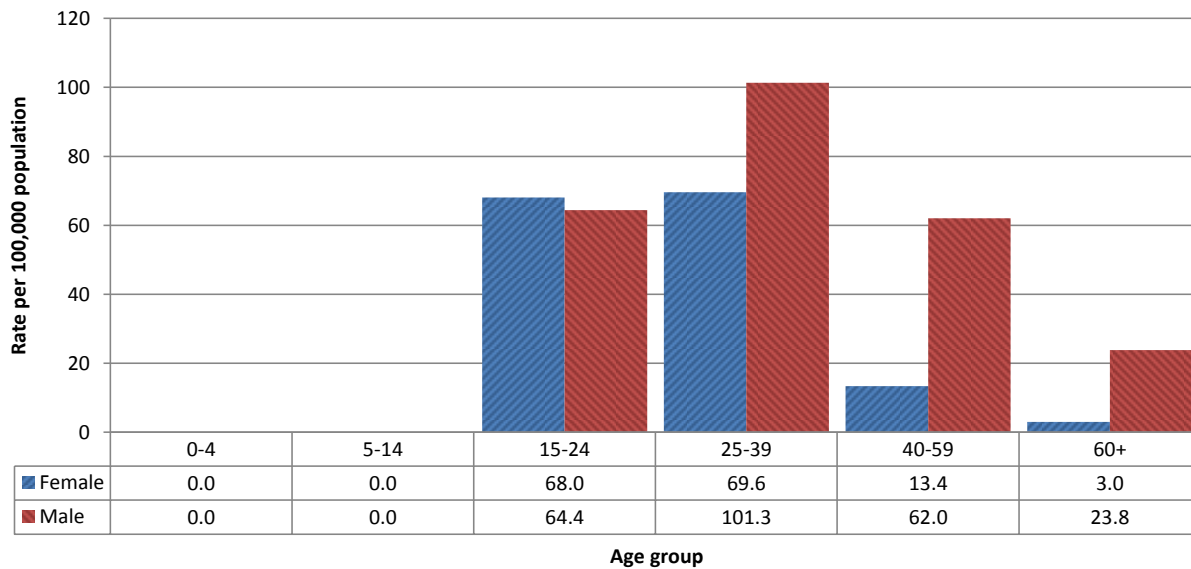


**Notes:** Western = Zone 1, Northern = Zone 2, Eastern = Zone 3, Central = Zone 4

The majority of reported hepatitis C cases (91.3%) were between the ages of 15-59 years and 66.1% of the cases were male. The rate was highest among males aged 25-39 at 101.3/100,000 population (Figure 6).

The Canadian hepatitis C rate for 2014 was highest among males in the 40-59 age group at 55.3/100,000 population. The rates among males are higher than females for cases 20 years and older (5).

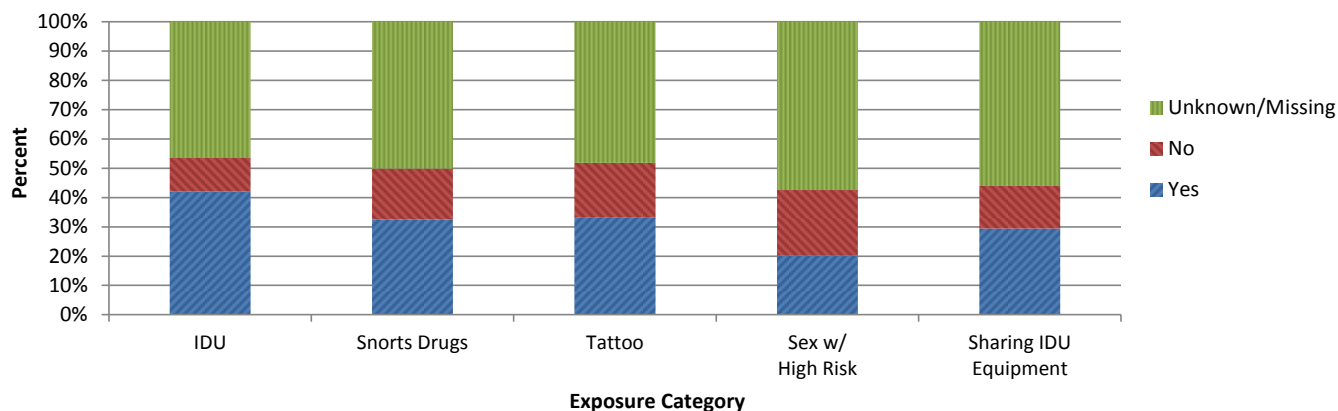
**Figure 6: Reported rates of hepatitis C in Nova Scotia by age group and sex, 2015**



Injection drug use continues to be the most commonly reported risk factor among hepatitis C cases. In 2015, 42.0% of hepatitis C cases reported injection drug use (IDU) (Figure 7).

Other reported risk factors that are associated with increased risk of hepatitis C infection included snorting drugs (32.5%), having a tattoo (33.3%), sharing IDU equipment (29.4%), sex with a person at high risk for hepatitis C (20.2%), having a body piercing (14.0%), having positive household contact (8.4%), having acupuncture (7.6%), and a percutaneous puncture (4.2%).

**Figure 7: Hepatitis C cases by most frequently reported risk factors, Nova Scotia, 2015**



**Notes:** Each case can report more than one risk factor. IDU = injection drug user, Sex w/high risk = sex with someone at high risk of HCV infection (IDU, person who snorts drugs, HCV positive person, sex trade worker).

### ***Other Bloodborne Pathogens***

No cases of hepatitis D have been reported in Nova Scotia between 2006 and 2015.

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

There were a total of 1560 cases of respiratory, direct contact, and health care-associated infections reported in 2015 (excluding influenza, n=721).

Rates of all other direct contact/respiratory route reports are presented in Figure 8 and Appendix B, Table 1.

### **Health Care Associated Infections**

The data presented in this report reflects the total number of health care-associated infections in the province (both health care and community acquired). The current process for reporting these infections to Public Health does not allow cases to be classified as health care or community acquired.

DHW also reports surveillance data of health care-associated *C.difficile* in acute care hospitals within the province. These data can be found at <http://novascotia.ca/dhw/hsg/public-reporting/c-difficile-data.asp>.

### ***Clostridium difficile***

*Clostridium difficile* became a reportable disease on April 1<sup>st</sup>, 2012. The number of cases reported in 2015 was 812 (rate of 86.1/100,000 population). This is an increase from 2014 (n=610; 65/100,000 population). The majority of the cases were female (59.1%) and 61.9% were aged 60 years and older.

### ***Methicillin Resistant Staphylococcus Aureus (MRSA)***

There were 625 reported cases of MRSA in Nova Scotia in 2015. The rate was 66.3/100,000 population which is lower compared to the rate in 2014 (68.6/100,000 population). Canadian rates are not available because MRSA is not nationally reportable. The highest rate in the province in 2015 was reported in the Western Zone (90.9/100,000 population).

The majority of cases occurred in those aged 60 years and older (66.2%, n=414). This was a rate of 168.2/100,000 population. The rate among males was higher compared to females (72.3/100,000 vs. 60.5/100,000 population).

There were five outbreaks of MRSA reported in 2015.

### ***Vancomycin-Resistant Enterococcus***

In 2015, 4 cases of vancomycin-resistant enterococcus (VRE) were reported in Nova Scotia (rate of 0.4/100,000 population). This is lower compared to the 2014 rate of 1.8/100,000. All cases were age 60 years or older.

## **Direct Contact and Respiratory Routes**

### ***Invasive Meningococcal Disease***

Seven cases of invasive meningococcal disease were reported in 2015 (rate of 0.7/100,000 population). This was an increase from 2014, when three cases were reported. In 2015, three of the cases were serogroup B and four were serogroup Y.

An institutional outbreak was declared at Acadia University in February, which included two students with serotype B. A publicly funded immunization program was delivered in response to the outbreak, in which 5,424 doses of vaccine were administered to the targeted campus population.

### ***Legionellosis***

There were seven cases of legionellosis reported in 2015 (rate of 0.7/100,000 population). This was an increase from the rate reported in 2014 (n=3, 0.3/100,000 population). This increase was due to an outbreak that occurred in a multi-unit building during the summer.

### ***Invasive Pneumococcal Disease***

In 2015, there were 52 cases of invasive pneumococcal disease reported (rate of 5.5/100,000 population). This was lower compared to the rate in 2014 (7.0/100,000). The 2014 Nova Scotia rate of 7.0/100,000 population is lower compared to the 2014 national rate of 8.9/100,000 population (5). The majority of cases reported in 2015 were over the age of 40 (76.9%) and 65.4% were male.

### ***Invasive Group A Streptococcal Disease***

The overall rate of invasive group A streptococcal disease for 2015 was 2.6/100,000 (n=25). The number of severe cases reported in 2015 was 10 (rate of 1.1/100,000 population). The number of non-severe cases reported in 2015 was 15 (rate of 1.6/100,000 population). The 2014 rate for Nova Scotia (2.3/100,000) is lower compared to the 2014 national rate (5.1/100,000) (5).

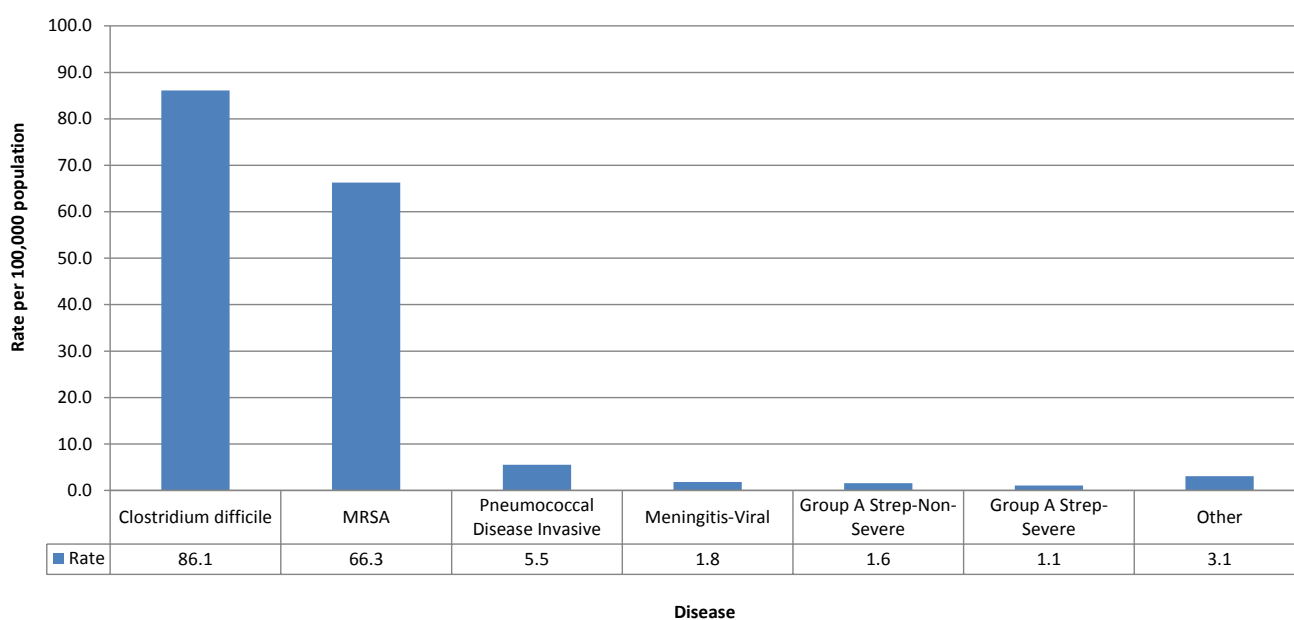
## Tuberculosis

Six cases of laboratory confirmed tuberculosis were reported in 2015 (1 pulmonary, 4 extra pulmonary and 1 unknown). This represented a rate of 0.6/100,000 population. Half of the cases were between the ages of 25-39 (50.0%) and 83.3% were male. The 2014 provincial rate is lower than the 2014 Canadian rate (0.7/100,000 vs. 4.4/100,000 population) (5).

## Other Direct Contact and Respiratory Route Pathogens

Three cases of group B streptococcal of a newborn and 17 cases of viral meningitis were reported in 2015.

**Figure 8: Reported rates of diseases transmitted by direct contact, respiratory routes, and through the provision of health care in Nova Scotia, 2015**



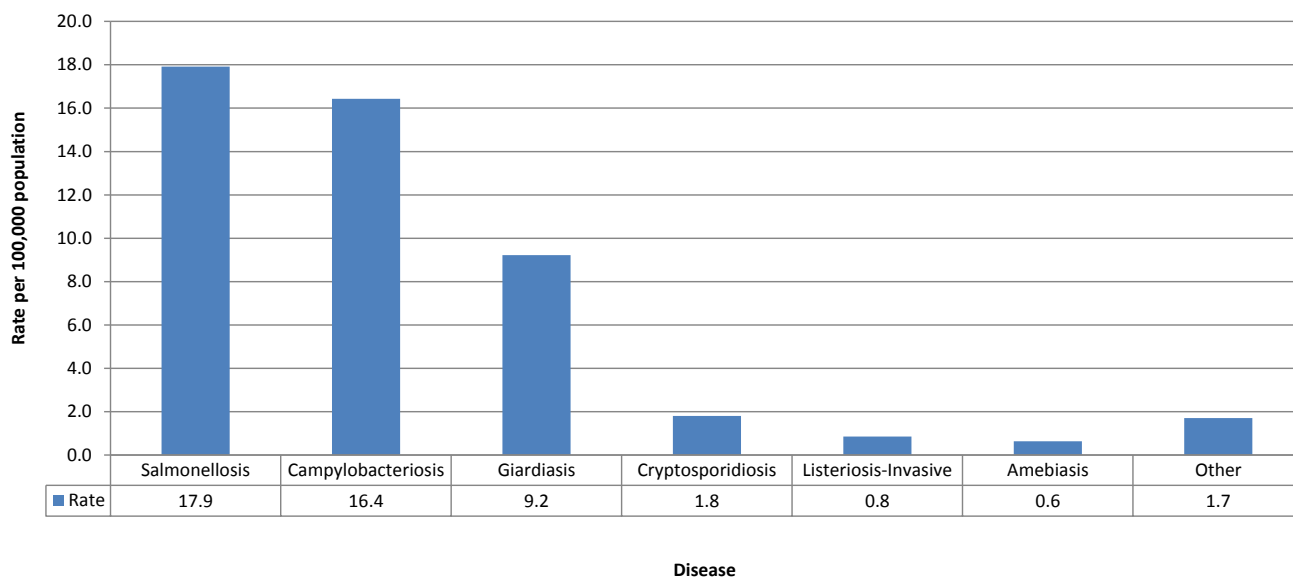
## Outbreaks of Direct Contact, Respiratory Routes, and Through the Provision of Health Care Infections

The Annual Influenza Surveillance report provides a summary for direct contact and respiratory infection outbreaks. One hundred thirty eight respiratory related outbreaks were reported during the 2015-2016 influenza season. The report can be found on the DHW website (<http://novascotia.ca/dhw/populationhealth/>).

## Enteric, Foodborne, and Waterborne Diseases

There were 458 cases of enteric disease reported in Nova Scotia in 2015. Travel was associated with 126 (27.5%) of these reported cases. Figure 9 presents the enteric disease rates for 2015.

**Figure 9: Reported rates of enteric, foodborne, and waterborne diseases in Nova Scotia, 2015**



### **Salmonellosis**

Salmonellosis was the most frequently reported enteric infection in Nova Scotia in 2015 (169 cases; 17.9/100,000 population). Forty-seven of the reported cases were associated with travel (27.8%). The Eastern Zone had the highest rate among zones with a rate of 23.9/100,000 population. Eighty-four percent of cases reported in 2015 were in adults over the age of 25 and 53.2% were female. The rate of salmonellosis infections in Nova Scotia in 2014 (21.7/100,000 population) is slightly higher than the 2014 Canadian rate of 21.4/100,000 population (5).

### **Campylobacteriosis**

In 2015, campylobacteriosis was the second most frequently reported enteric infection (155 cases; rate of 16.4/100,000 population). Thirty-nine (25%) of the cases were travel related. The Western Zone had the highest rate among zones with a rate of 28.6/100,000 population. More than half of reported cases (n=86) were aged 40 years or older. The rate for campylobacteriosis continues to be higher among males than females (20.6/100,000 for males vs. 12.5/100,000 for females). The 2014 provincial rate is lower compared to the 2014 national rate (19.3/100,000 vs. 28.4/100,000) (5).

### **Giardiasis**

A total of 87 cases of giardiasis were reported in Nova Scotia in 2015, representing a rate of 9.2/100,000 population. Of the cases reported, 16 (18.4%) were associated with travel. The 2014 rate of giardiasis infections reported in Nova Scotia (9.7/100,000 population) is lower compared to the 2014 Canadian rate of 10.3/100,000 population (5). Eighty-five percent of cases (n=74) were reported in people aged

25 years and older. The rate of illness was higher among males compared to females (11.5/100,000 for males vs. 7.1/100,000 population for males).

### **Verotoxigenic E.coli**

A total of five cases of Verotoxigenic E.coli were reported in 2015 (0.5/100,000 population). The rate among females was higher than males (0.6/100,000 vs. 0.4/100,000). Of the cases reported, 1 (20.0%) were associated with travel.

### **Other Reportable Enteric Diseases**

The rate of other reportable enteric diseases in Nova Scotia in 2015 remained low (See Appendix B, Table 1 for details).

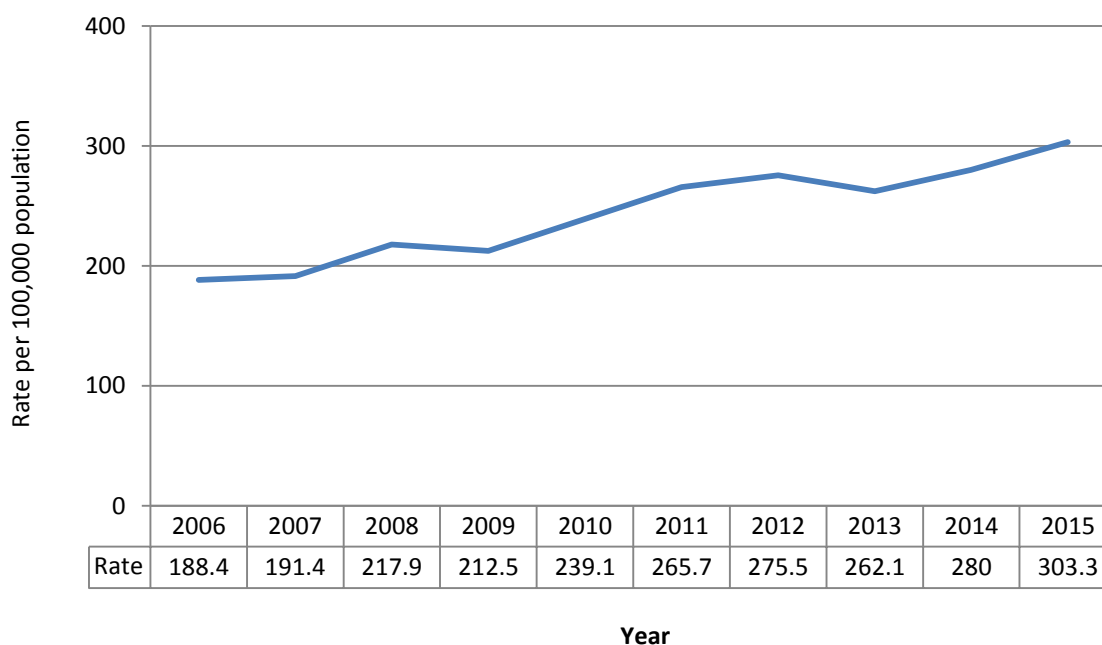
## **Sexually Transmitted Infections**

There were 3,065 notifications of bacterial sexually transmitted infections (STI) in Nova Scotia in 2015. The rates of chlamydia and gonorrhea both increased in 2015, while the rate of infectious syphilis decreased for the second consecutive year.

### **Chlamydia**

Chlamydia was the most frequently reported notifiable disease in Nova Scotia in 2015 (n=2,860, rate=303.3/100,000 population). The number of reported cases and the associated rate of chlamydia has shown an increasing trend from 2006 to 2015 (Figure 10). The 2014 Nova Scotia chlamydia rate was lower compared to the national rate (280.0/100,000 vs. 307.4/100,000 population) (5).

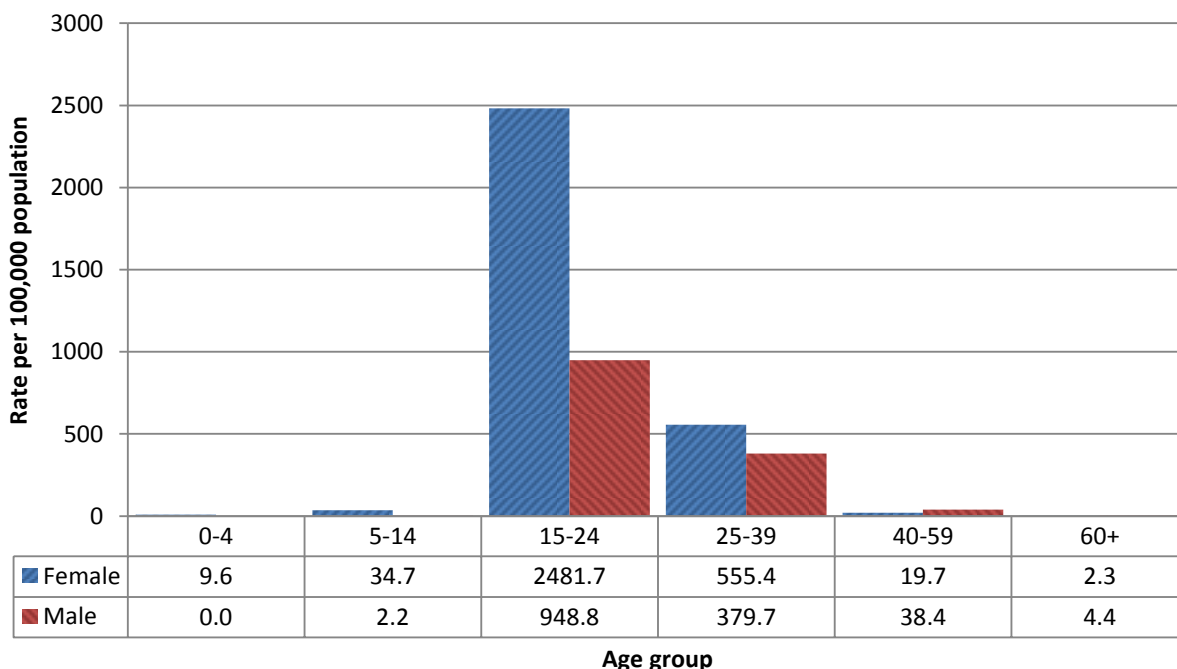
**Figure 10: Reported rates of chlamydia in Nova Scotia, 2006-2015**





Similar to the overall rate, the rates of chlamydia among females and males has increased in 2015. The 2015 rate for females is 397.7/100,000 compared to 204.3/100,000 for males. The highest rate of chlamydia in Nova Scotia for 2015 was reported among females aged 15 to 24 years (2,481.7/100,000 population) (Figure 11). There was an increase in the rate of chlamydia for males aged 15-24 (815.4/100,000 vs. 948.8/100,000 population) and for both males and females aged 25-39 years (females: 491.3/100,000 vs. 555.4/100,000 population; males: 352.8/100,000 vs. 379.7/100,000 population). Similarly, 2014 national data show the highest rates of chlamydia in females aged 15 to 19 years (1,624.3/100,000 population) and 20 to 24 years (2,037.7/100,000 population) (5).

**Figure 11: Reported rates of chlamydia in Nova Scotia by age group and sex, 2015**



### **Gonorrhoea**

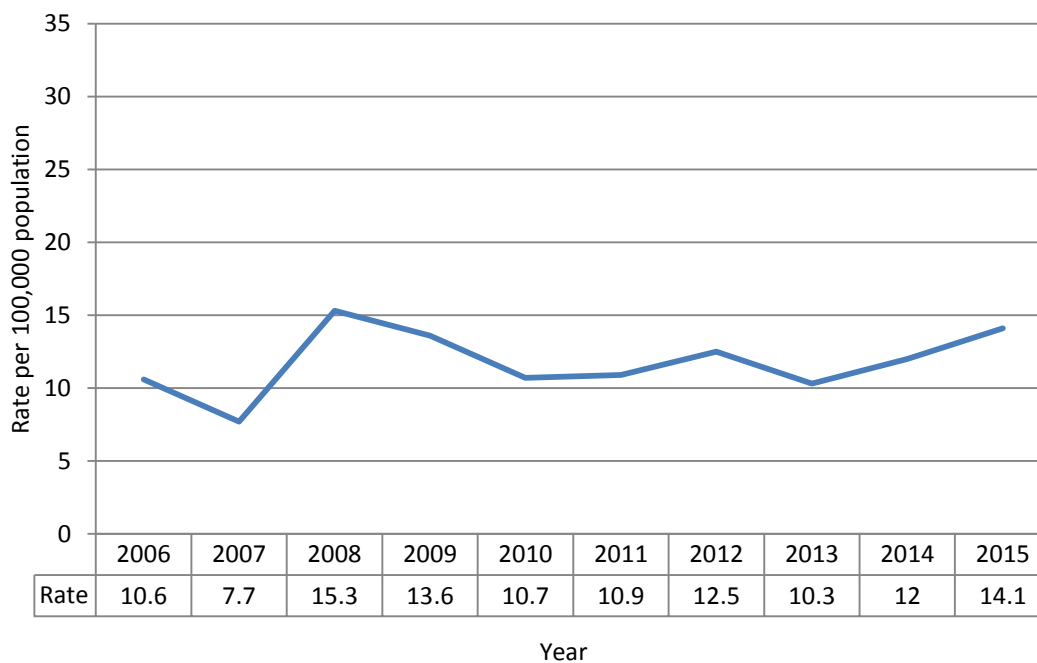
For 2015, 133 cases of gonorrhoea were reported in Nova Scotia (rate of 14.1/100,000 population). This is an increase from the rate of 12.0/100,000 population in 2014 but is lower compared to the 2014 Canadian rate of 45.8/100,000 population (5).

The reported rates of gonorrhoea for 2015 increased among females compared to 2014 (7.1/100,000 population vs. 11.4/100,000 population) and decreased among males (17.2/100,000 population vs. 16.9/100,000 population).

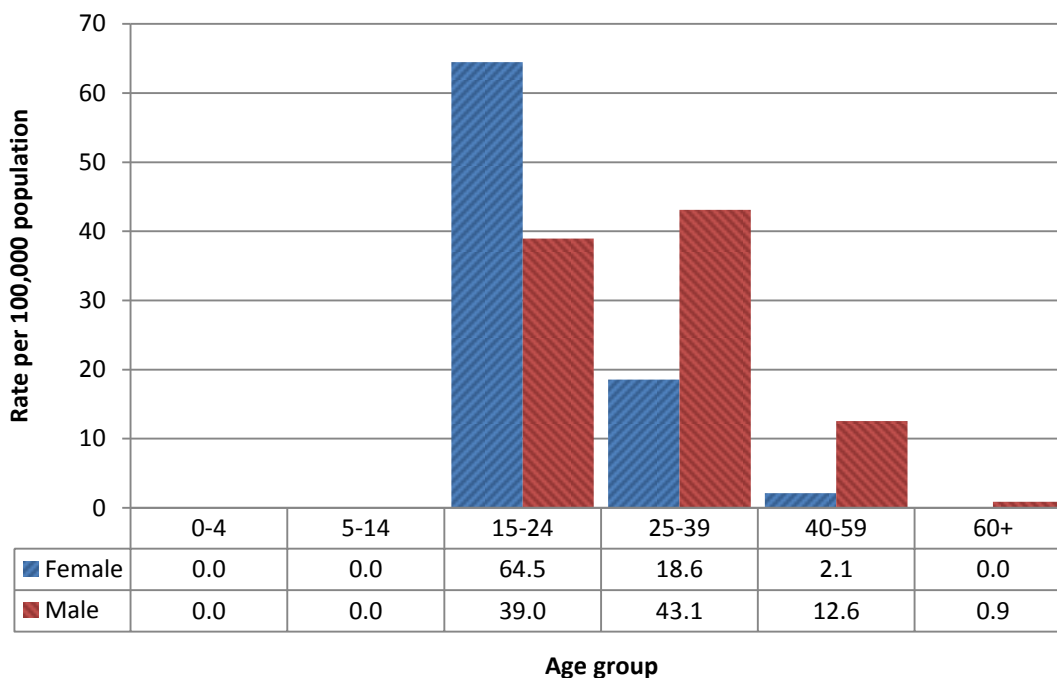
In 2015 the highest rate of gonorrhoea in Nova Scotia was reported among females aged 15 to 24 years (64.5/100,000 population) (Figure 13). The highest rate in 2014 was among males aged 15-24 years. The rate for males in the 15-24 year age group decreased while the rate for males in the 25-39 age group increased from 2014 to 2015 (15-24: 64.8/100,000 vs. 39.0/100,000 population; 25-39: 37.4/100,000 vs. 43.1/100,000 population).

Central Zone reported the highest rate of gonorrhoea for 2015 compared to the other zones (23.0 /100,000 population), followed by Western Zone (7.7/100,000 population).

**Figure 12: Reported rates of gonorrhoea in Nova Scotia, 2006-2015**



**Figure 13: Reported rates of gonorrhoea in Nova Scotia by age group and sex, 2015**



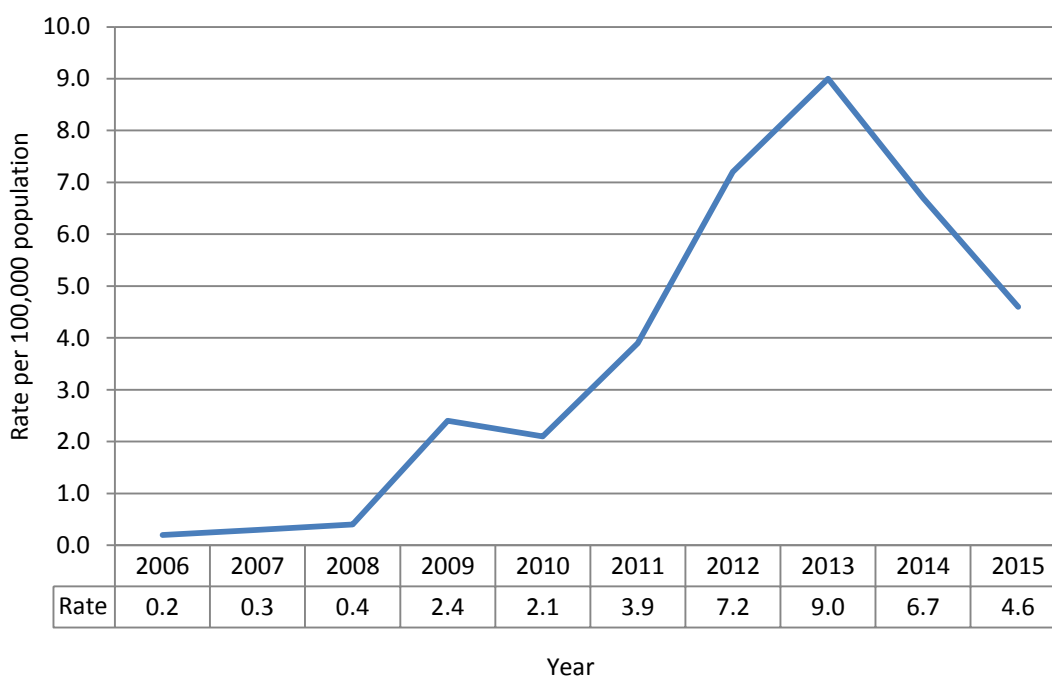
## Syphilis

Syphilis cases are categorized as infectious or non-infectious syphilis. The primary, secondary, and early-latent stages of disease are considered infectious. The late latent and tertiary stages of disease are considered non-infectious (6). Infectious syphilis cases comprise those of public health significance, and will be described in more detail below.

In 2015 there were 43 cases of infectious syphilis and 28 cases of non-infectious syphilis reported in Nova Scotia. The reported rate of infectious syphilis cases in Nova Scotia was 4.6/100,000 population for 2015. This is second consecutive year that the rate has decreased (Figure 14).

The Canadian rates for syphilis include both infectious and non-infectious cases. The national rate for 2014 was 10.1/100,000 population (5). The 2014 Nova Scotia rate for infectious syphilis and non-infectious syphilis combined (10.6/100,000 population) was higher compared to the Canadian rate (10.1/100,000 population).

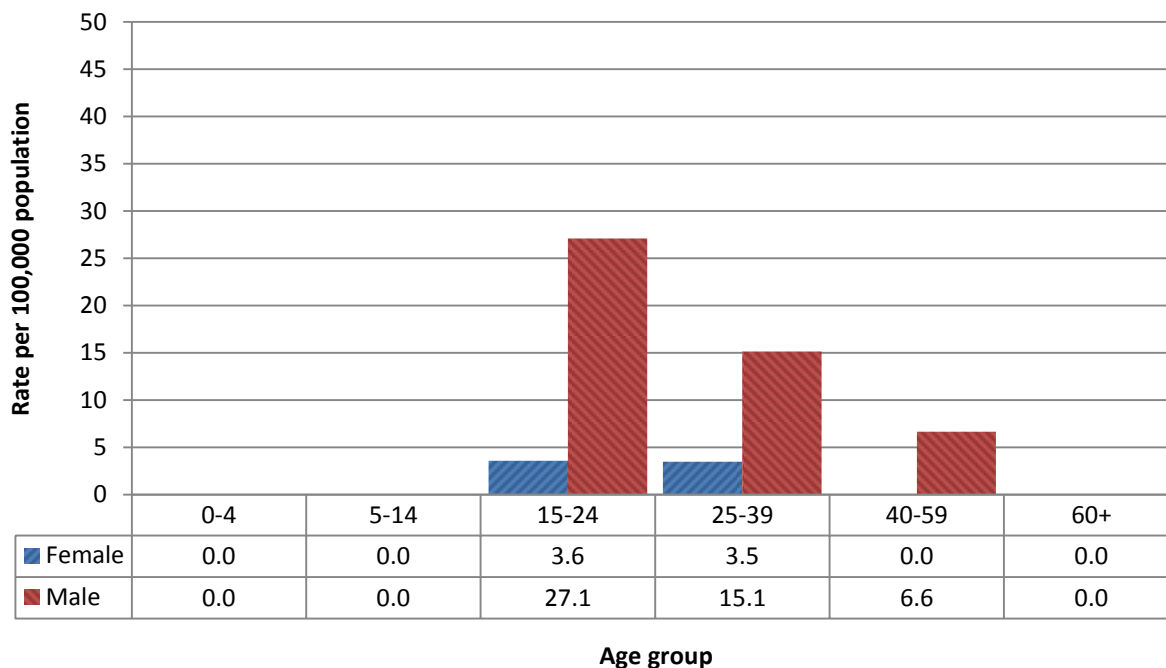
**Figure 14: Reported rates of infectious syphilis in Nova Scotia, 2006-2015**



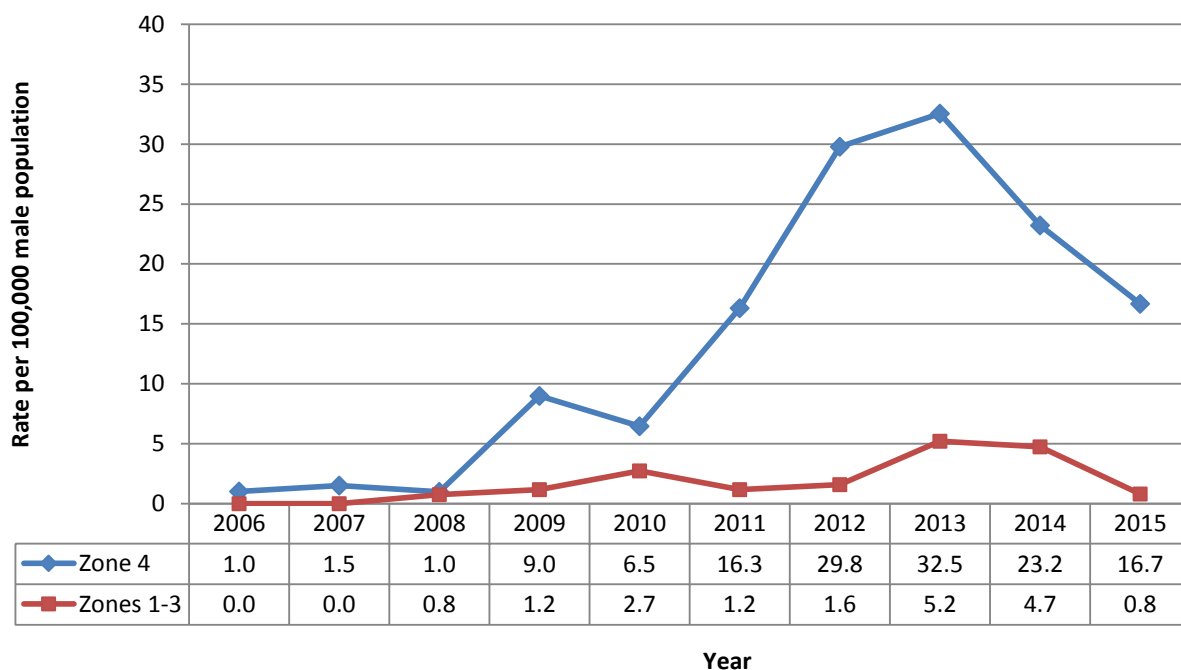
Since 2006, 333 out of 346 (96.2%) infectious syphilis cases in Nova Scotia have been male. Also, 295 out of 346 (85.3%) of infectious syphilis cases in that ten year period are associated with Central Zone. All cases of infectious syphilis reported in 2015 were over the age of 15. The highest rate was reported for males in the 15-24 year age group (27.1/100,000 population) (Figure 15).

Figure 16 presents rates of infectious syphilis among males in Central Zone and outside of Central Zone, reflecting the ongoing outbreak in this health management zone.

**Figure 15: Reported rates of infectious syphilis in Nova Scotia by age group and sex, 2015**



**Figure 16: Reported rates of infectious syphilis among males residing in Central Zone and outside of Central Zone, 2006-2015**



## Vaccine Preventable Diseases

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There were 116 cases of vaccine preventable diseases reported in Nova Scotia in 2015. This is an increase from thirteen cases in 2014.

The vaccine preventable diseases reported in 2015 included 110 cases of pertussis, and six cases of mumps.

### *Pertussis*

The increase in 2015 was influenced by clusters of pertussis that occurred across the province. There were 110 cases of pertussis reported in 2015 (11.7/100,000 population). The highest rate occurred in the Western Zone at 27.1/100,000 population (n=53). The majority of cases were in the 0-4 (n=31, 71.9/100,000 population) or 5-14 (n=36, 40.3/100,000 population) year age groups and 57.3% of the cases were male.

## Vectorborne and Other Zoonoses

---

There were 262 cases of vectorborne and other zoonotic diseases reported in Nova Scotia in 2015:

- There were 254 cases of Lyme disease reported.
- There were four cases of malaria reported. None of these cases were acquired in Nova Scotia.
- There were three cases of Q-fever
- There was one case of toxoplasmosis reported.

See Appendix B for tables containing numbers and rates of reported cases of vectorborne and other zoonotic diseases from 2006 to 2015.

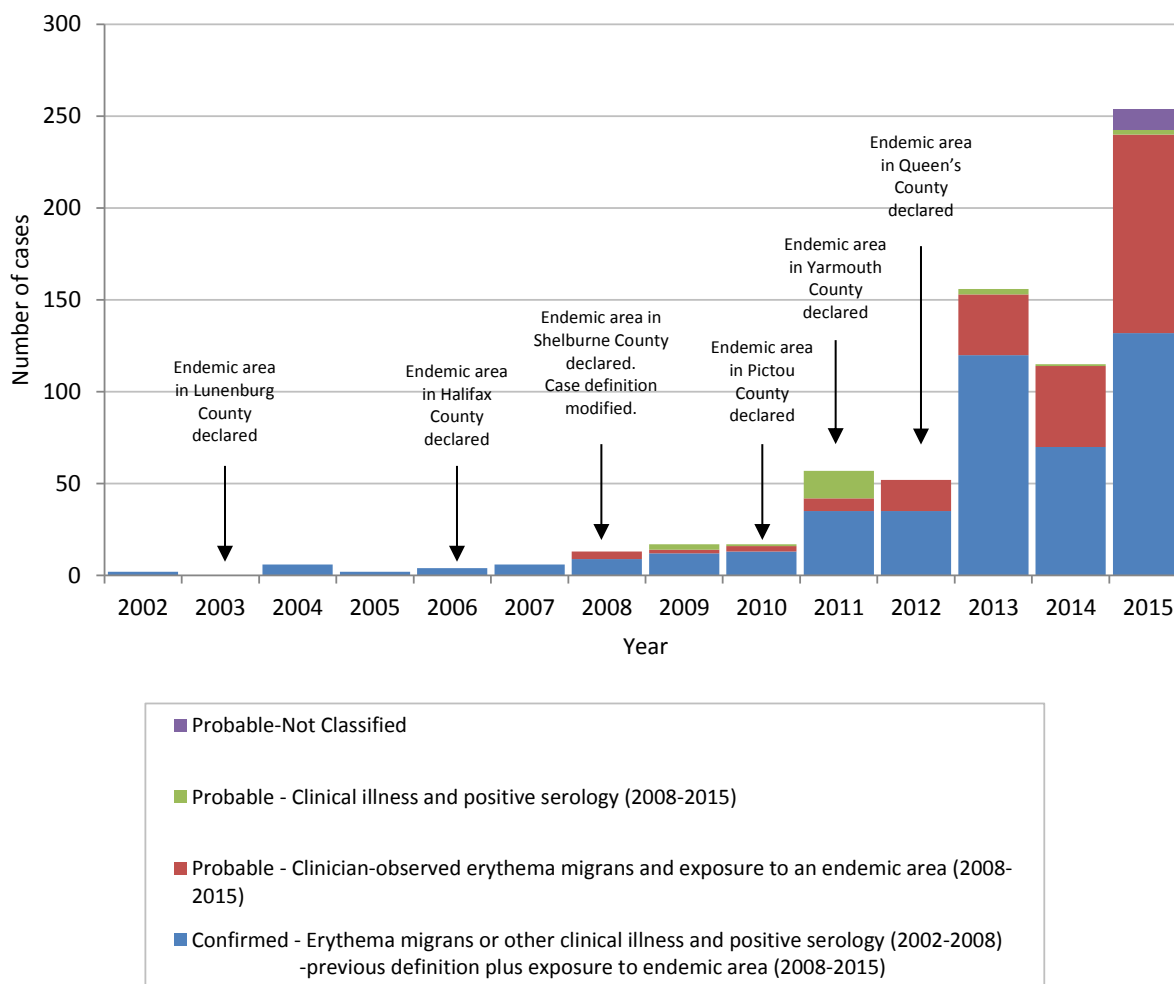
### *Lyme Disease*

Since the first cases reported in 2002, the annual number of reported cases of Lyme disease in Nova Scotia has displayed an increasing trend (Figure 17).

There were 254 cases of Lyme disease reported in 2015, which is an increase from 2014 (n=115). Figure 17 presents the number of reported cases by year, the years in which new areas were added to the list of known Lyme disease endemic areas, and when the surveillance case definition was modified.

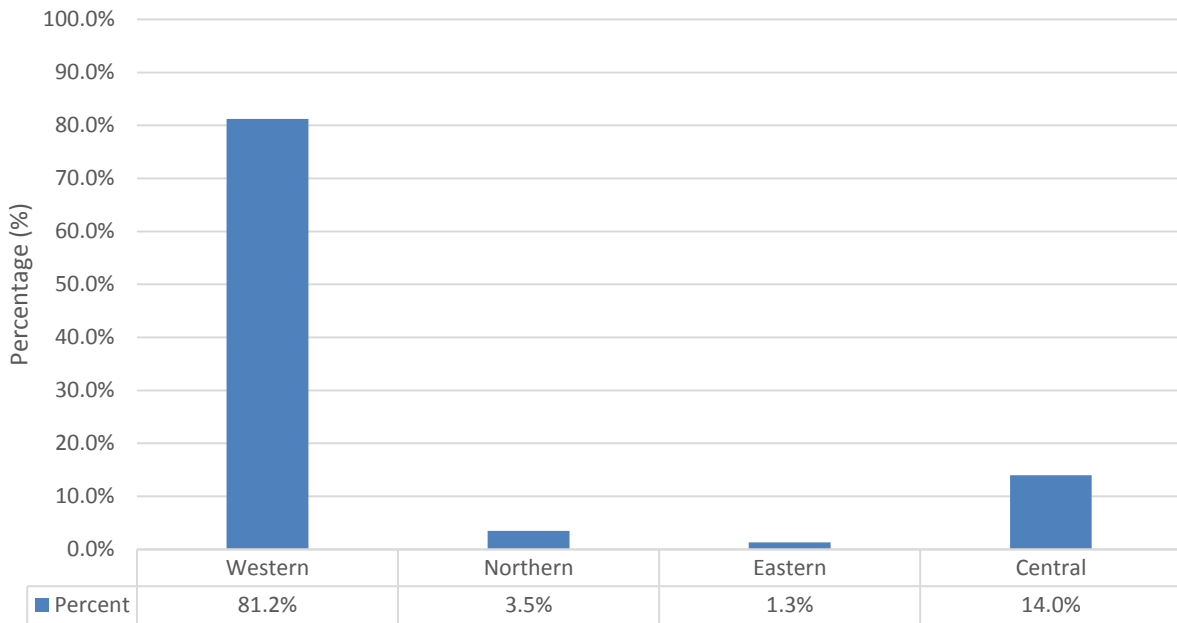
There are currently six endemic areas identified in Nova Scotia but blacklegged ticks have been found across the province. It is important to be aware that there is a risk of encountering blacklegged ticks anywhere in Nova Scotia.

**Figure 17: Number of reported cases of Lyme disease by case classification and year, Nova Scotia, 2002-2015**



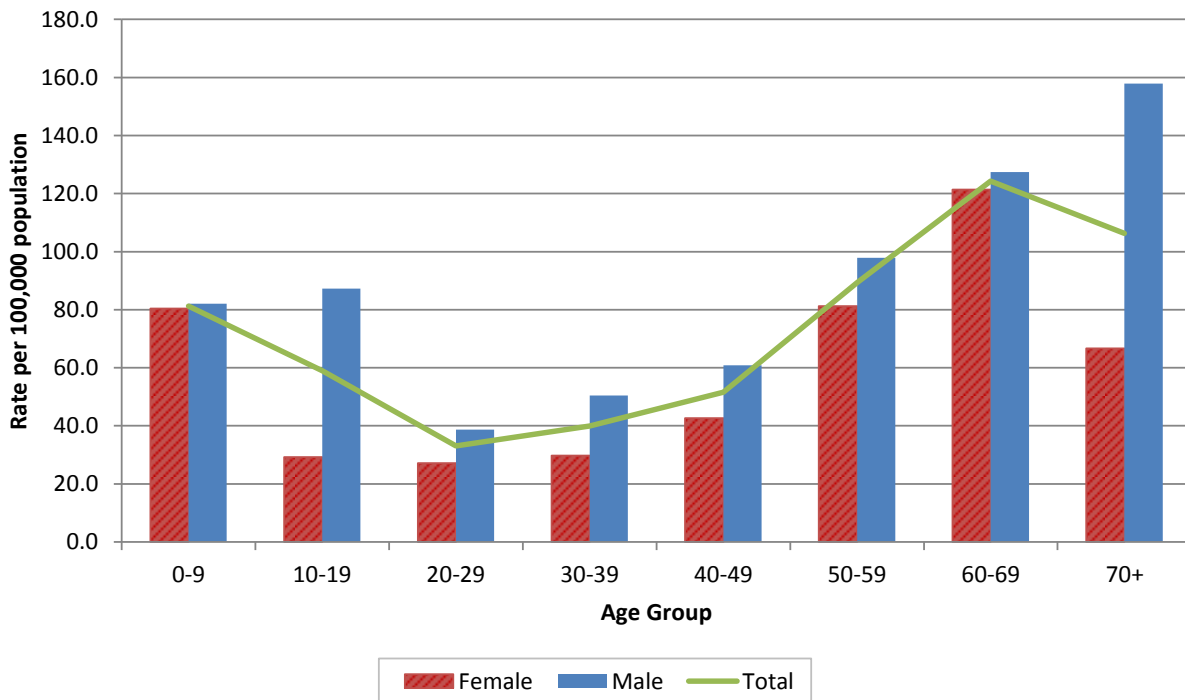
From 2002 to 2015 there have been 701 cases of Lyme disease reported in Nova Scotia, of which 655 (93.4%) were likely to have been acquired within the province. Currently, 72.3% of cases classified as likely to have been acquired in Nova Scotia were associated with exposure in the endemic area in Lunenburg County. The percentage of total cases reported by Zone is presented in Figure 18. There were cases in all age groups and cases ranged in age from zero to 90 years and 55.5% were male (Figure 19).

**Figure 18: Percentage of cases reported by Zone, 2002-2015**



**Notes:** Western = Zone 1, Northern = Zone 2, Eastern = Zone 3, Central = Zone 4

**Figure 19: Rates of reported cases of Lyme disease per 100,000 population, by sex and age group, Nova Scotia, 2002-2015**



Active tick surveillance was conducted in 2015 in collaboration with the Nova Scotia Department of Natural Resources. The data collected through this field work will help to track the tick populations in the province and will support the identification of new endemic areas.

For a current map of known endemic areas in the province, please see the map online:

<http://novascotia.ca/hpp/cdpc/lyme-map.asp>.



## REFERENCES

1. Last, J.M. (editor). (2001). A Dictionary of Epidemiology. Fourth Edition. Oxford University Press, New York.
2. Office of the Legislative Counsel, Nova Scotia House of Assembly. (2006). Nova Scotia Health Protection Act. 2004, c. 4, s. 1. Retrieved from <http://nslegislature.ca/legc/statutes/health%20protection.pdf>
3. Nova Scotia Department of Health and Wellness. (2013). Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions. Retrieved from <http://novascotia.ca/dhw/populationhealth/surveillanceguidelines/>
4. Communicable Disease Prevention and Control, Nova Scotia Department of Health and Wellness. (2013). Nova Scotia Communicable Disease Control Manual. Retrieved from <http://novascotia.ca/dhw/cdpc/cdcmanual.asp>
5. Notifiable Disease On-line, Canadian Notifiable Disease Surveillance System, Public Health Agency of Canada. (2016). Retrieved from <http://dsol-smed.phac-aspc.gc.ca/dsol-smed/ndis/index-eng.php>
6. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada. (2010). Canadian Guidelines on Sexually Transmitted Infections. Retrieved from <http://www.phac-aspc.gc.ca/std-mts/sti-its/guide-lignesdir-eng.php>

## APPENDIX A – Notifiable Diseases in Nova Scotia

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

## APPENDIX B – List of Tables

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**TABLE 1: Notifiable diseases reported in Nova Scotia from 2006-2015: Number of reports and crude rates per 100,000 population**

Condition	Year																		All Years			
	2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		n	Average Rate
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate				
<b>Bloodborne Pathogens</b>																						
Acquired Immune Deficiency Syndrome (AIDS)	13	1.4	5	0.5	6	0.6	2	0.2	5	0.5	4	0.4	2	0.2	0	0.0	4	0.4	3	0.3	44	0.5
Hepatitis B - Acute	8	0.9	9	1.0	7	0.8	5	0.5	3	0.3	4	0.4	1	0.1	2	0.2	3	0.3	9	1.0	51	0.6
Hepatitis B-Chronic*	0	0.0	0	0.0	0	0.0	16	1.7	15	1.6	11	1.2	9	0.9	13	1.4	21	2.2	9	1.0	63	1.1
Hepatitis B-Chronic or Unspecified*	36	3.9	10	1.1	14	1.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	60	1.3
Hepatitis C	252	27.0	224	24.0	281	30.1	266	28.5	299	32.1	209	22.4	251	26.5	289	30.7	331	35.3	357	37.9	2759	29.5
Human Immunodeficiency Virus (HIV)	23	2.5	20	2.1	21	2.3	13	1.4	15	1.6	15	1.6	17	1.8	16	1.7	10	1.1	17	1.8	167	1.8
<b>Direct Contact, Respiratory Routes, and Through the Provision of Health Care</b>																						
Clostridium difficile	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	500	52.7	676	71.9	610	65	812	86.1	2599	75.6
Creutzfeldt-Jakob Disease - Classic	2	0.2	2	0.2	2	0.2	1	0.1	0	0.0	2	0.2	3	0.3	1	0.1	2	0.2	0	0.0	15	0.2
Encephalitis - Viral	0	0.0	2	0.2	1	0.1	2	0.2	1	0.1	2	0.2	1	0.1	0	0.0	1	0.1	2	0.2	12	0.1
Group A Streptococcal Disease Invasive*	16	1.7	25	2.7	16	1.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	57	0.6
Group A Streptococcal Disease Invasive-Severe*	0	0.0	0	0.0	0	0.0	9	1.0	3	0.3	13	1.4	11	1.2	6	0.6	8	0.9	10	1.1	60	0.7
Group A Streptococcal Disease Invasive-non-Severe*	0	0.0	0	0.0	0	0.0	7	0.8	12	1.3	11	1.2	13	1.4	15	1.6	14	1.5	15	1.6	87	0.9
Group B Streptococcal Disease of the Newborn	0	0.0	1	0.1	2	0.2	2	0.2	6	0.6	3	0.3	1	0.1	3	0.3	1	0.1	3	0.3	22	0.2
Legionellosis	1	0.1	0	0.0	0	0.0	2	0.2	1	0.1	0	0.0	0	0.0	2	0.2	3	0.3	7	0.7	16	0.2
Meningitis - Bacterial	2	0.2	4	0.4	5	0.5	2	0.2	2	0.2	2	0.2	0	0.0	0	0.0	2	0.2	0	0.0	19	0.2
Meningitis - Viral	6	0.6	14	1.5	3	0.3	6	0.6	2	0.2	11	1.2	39	4.1	20	2.1	15	1.6	17	1.8	133	1.4
Meningococcal Disease Invasive	4	0.4	4	0.4	8	0.9	4	0.4	3	0.3	3	0.3	2	0.2	0	0.0	3	0.3	7	0.7	38	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	849	90.8	951	101.8	1013	108.6	887	95.1	914	98.0	839	90.0	835	88.0	789	83.9	644	68.6	625	66.3	8346	89.1
Pneumococcal Disease Invasive	22	2.4	26	2.8	14	1.5	20	2.1	35	3.8	51	5.5	51	5.4	65	6.9	66	7.0	52	5.5	402	4.3
Tuberculosis	10	1.1	8	0.9	4	0.4	7	0.8	10	1.1	9	1.0	8	0.8	8	0.9	7	0.7	6	0.6	77	0.8
Vancomycin resistant Enterococcus (VRE)	38	4.1	7	0.7	31	3.3	10	1.1	8	0.9	18	1.9	49	5.2	43	4.6	17	1.8	4	0.4	225	2.4
<b>Enteric, Foodborne, and Waterborne Diseases</b>																						
Amebiasis	13	1.4	11	1.2	9	1.0	1	0.1	7	0.8	8	0.9	4	0.4	3	0.3	3	0.3	6	0.6	65	0.7
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Campylobacteriosis	132	14.1	133	14.2	159	17.0	123	13.2	151	16.2	185	19.8	188	19.8	172	18.3	181	19.3	155	16.4	1579	16.8
Cryptosporidiosis	9	1.0	13	1.4	11	1.2	10	1.1	21	2.3	12	1.3	18	1.9	22	2.3	32	3.4	17	1.8	165	1.8
Cyclosporiasis	3	0.3	3	0.3	0	0.0	1	0.1	2	0.2	0	0.0	0	0.0	3	0.3	1	0.1	3	0.3	16	0.2
Giardiasis	106	11.3	74	7.9	107	11.5	76	8.1	68	7.3	66	7.1	96	10.1	96	10.2	91	9.7	87	9.2	867	9.2
Hepatitis A	18	1.9	5	0.5	4	0.4	2	0.2	3	0.3	4	0.4	2	0.2	2	0.2	3	0.3	1	0.1	44	0.5
Hepatitis E	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.0
Listeriosis - Invasive	4	0.4	6	0.6	2	0.2	3	0.3	9	1.0	6	0.6	4	0.4	8	0.9	5	0.5	8	0.8	55	0.6
Salmonellosis	108	11.6	121	13.0	137	14.7	94	10.1	145	15.5	170	18.2	150	15.8	169	18.0	204	21.7	169	17.9	1467	15.7
Shigellosis	6	0.6	6	0.6	4	0.4	11	1.2	11	1.2	13	1.4	11	1.2	1	0.1	9	1.0	5	0.5	77	0.8
Typhoid	0	0.0	0	0.0	3	0.3	0	0.0	3	0.3	1	0.1	0	0.0	1	0.1	2	0.2	0	0.0	10	0.1
Verotoxigenic E. coli	21	2.2	15	1.6	10	1.1	5	0.5	14	1.5	18	1.9	18	1.9	11	1.2	10	1.1	5	0.5	127	1.4
Yersiniosis	4	0.4	5	0.5	4	0.4	2	0.2	3	0.3	1	0.1	3	0.3	3	0.3	2	0.2	2	0.2	29	0.3
<b>Sexually Transmitted Infections</b>																						
Chlamydia	1762	188.4	1788	191.4	2033	217.9	1982	212.5	2230	239.1	2478	265.7	2614	275.5	2466	262.1	2629	280.0	2860	303.3	22842	243.6
Gonorrhoea	99	10.6	72	7.7	143	15.3	127	13.6	100	10.7	102	10.9	119	12.5	97	10.3	113	12.0	133	14.1	1105	11.8
Lymphogranuloma Venereum	1	0.1	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	0.1	2	0.0
Syphilis - Infectious	2	0.2	3	0.3	4	0.4	22	2.4	20	2.1	36	3.9	68	7.2	85	9.0	63	6.7	43	4.6	346	3.7
Syphilis - Non-Infectious or Stage Pending	6	0.6	6	0.6	8	0.9	2	0.2	8	0.9	13	1.4	10	1.1	23	2.4	37	3.9	28	3.0	141	1.5
<b>Vaccine Preventable Diseases</b>																						
Acute Flaccid Paralysis	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	0.1	0	0.0	1	0.0
Haemophilus influenzae type b Invasive Disease	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	1	0.1	1	0.1	0	0.0	0	0.0	5	0.1
Mumps	6	0.6	595	63.7	5	0.5	1	0.1	1	0.1	0	0.0	0	0.0	2	0.2	1	0.1	6	0.6	617	6.6
Pertussis	48	5.1	33	3.5	14	1.5	18	1.9	6.0	0.6	3	0.3	22	2.3	4	0.4	11	1.2	110	11.7	269	2.9
Rubella	1	0.1	0	0.0	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	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	0	0.0	1	0.0
<b>Vectorborne and Other Zoonoses</b>																						
Lyme Disease - Confirmed	4	0.4	6	0.6	9	1.0	12	1.3	13	1.4	35	3.8	35	3.7	121	12.9	69	7.3	124	13.1	428	4.6
Lyme Disease - Probable	0	0.0	0	0.0	4	0.4	5	0.5	4	0.4	22	2.4	17	1.8	35	3.7	46	4.9	130	13.8	263	2.8
Malaria	2	0.2	4	0.4	2	0.2	2	0.2	5	0.5	0	0.0	3	0.3	3	0.3	3	0.3	4	0.4	28	0.3
Q-Fever	3	0.3	4	0.4	17	1.8	2	0.2	3	0.3	2	0.2	0	0.0	0	0.0	0	0.0	3	0.3	34	0.4
Toxoplasmosis	2	0.2	1	0.1	3	0.3	3	0.3	1	0.1	2	0.2	0	0.0	1	0.1	3	0.3	1	0.1	17	0.2
West Nile Virus	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.0
<b>Total Number</b>	<b>3642</b>		<b>4217</b>		<b>4123</b>		<b>3765</b>		<b>4164</b>		<b>4386</b>		<b>5177</b>		<b>5277</b>		<b>5281</b>		<b>5856</b>		<b>45857</b>	

**Notes:** \*From 2009-2015, hepatitis B cases are reported as either Chronic or Acute. From 2006-2008, unspecified hepatitis B cases were also reported. Severe and non-Severe cases of Group A Streptococcal Disease Invasive are reported together for 2006-2008. Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table. Typhoid cases were categorized as Salmonella cases prior to 2008.

**TABLE 2: Notifiable diseases reported in Nova Scotia in 2015 by Health Management Zone: Number of reports and crude rates per 100,000 population**

Condition	Zone 1		Zone 2		Zone 3		Zone 4		Nova Scotia	
	Western		Northern		Eastern		Central		n	Rate
	n	Rate	n	Rate	n	Rate	n	Rate		
<b>Bloodborne Pathogens</b>										
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0	3	0.7	3	0.3
Hepatitis B - Acute	1	0.5	3	2.0	0	0.0	5	1.1	9	1.0
Hepatitis B - Chronic	1	0.5	2	1.3	0	0.0	6	1.4	9	1.0
Hepatitis C	52	26.6	75	50.3	122	76.7	108	23.5	357	37.9
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	0	0.0	12	2.7	17	1.8
<b>Direct Contact, Respiratory Routes, and Through the Provision of Health Care</b>										
Clostridium difficile	188	96.1	105	70.4	175	110.0	344	78.4	812	86.1
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis - Viral	1	0.5	1	0.7	0	0.0	0	0.0	2	0.2
Group A Streptococcal Disease Invasive-Severe	1	0.5	4	2.7	2	1.3	3	0.7	10	1.1
Group A Streptococcal Disease Invasive-Non-Severe	2	1.0	0	0.0	1	0.6	12	2.7	15	1.6
Group B Streptococcal Disease of the Newborn	0	0.0	0	0.0	1	0.6	2	0.5	3	0.3
Legionellosis	0	0.0	0	0.0	0	0.0	7	1.6	7	0.7
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Viral	1	0.5	0	0.0	0	0.0	16	3.6	17	1.8
Meningococcal Disease Invasive	2	1.0	1	0.7	3	1.9	1	0.2	7	0.7
Methicillin Resistant Staphylococcus Aureus (MRSA)	178	90.9	94	63.0	132	83.0	221	50.3	625	66.3
Pneumococcal Disease Invasive	10	5.1	10	6.7	10	6.3	22	5.0	52	5.5
Tuberculosis	0	0.0	0	0.0	0	0.0	6	1.4	6	0.6
Vancomycin resistant Enterococcus (VRE)	1	0.5	0	0.0	0	0.0	3	0.7	4	0.4
<b>Enteric, Foodborne, and Waterborne Diseases</b>										
Amebiasis	0	0.0	0	0.0	0	0.0	6	1.4	6	0.6
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	56	28.6	19	12.7	6	3.8	74	16.9	155	16.4
Cryptosporidiosis	2	1.0	2	1.3	3	1.9	10	2.3	17	1.8
Cyclosporiasis	1	0.5	0	0.0	0	0.0	2	0.5	3	0.3
Giardiasis	23	11.8	12	8.0	9	5.7	43	9.8	87	9.2
Hepatitis A	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Hepatitis E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	3	1.5	0	0.0	1	0.6	4	0.9	8	0.8
Salmonellosis	44	22.5	22	14.7	38	23.9	65	14.8	169	17.9
Shigellosis	1	0.5	0	0.0	1	0.6	3	0.7	5	0.5
Typhoid*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	1	0.5	1	0.7	0	0.0	3	0.7	5	0.5
Yersiniosis	0	0.0	0	0.0	0	0.0	2	0.5	2	0.2
<b>Sexually Transmitted Infections</b>										
Chlamydia	438	223.8	310	207.8	387	243.2	1725	392.7	2860	303.3
Gonorrhoea	15	7.7	11	7.4	6	3.8	101	23.0	133	14.1
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
Syphilis - Infectious	1	0.5	2	1.3	0	0.0	40	8.9	43	4.6
Syphilis - Non-Infectious or Stage Pending	1	0.5	1	0.7	1	0.6	25	5.7	28	3.0
<b>Vaccine Preventable Diseases</b>										
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus influenzae Type b Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mumps	0	0.0	0	0.0	1	0.6	5	1.1	6	0.6
Pertussis	53	27.1	10	6.7	12	7.5	35	8.0	110	11.7
Rubella	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Vectorborne and Other Zoonoses</b>										
Lyme Disease - Confirmed	103	52.6	4	2.7	1	0.6	16	3.2	124	13.1
Lyme Disease - Probable	106	54.2	6	4.0	0	0.0	18	4.1	130	13.8
Malaria	0	0.0	0	0.0	1	0.6	3	0.7	4	0.4
Q-Fever	0	0.0	2	1.3	0	0.0	1	0.2	3	0.3
Toxoplasmosis	0	0.0	0	0.0	0	0.0	1	0.2	1	0.1
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>TOTAL</b>	<b>1286</b>		<b>697</b>		<b>913</b>		<b>2955</b>		<b>5851</b>	

**Notes:** Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table.

**TABLE 3: Notifiable diseases reported in Nova Scotia in 2015 by age group: Number of reports and age specific rates per 100,000 population**

Condition	Age Group (Years)												Total NS	
	0-4		5-14		15-24		25-39		40-59		60+		n	Rate
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate		
<b>Bloodborne Pathogens</b>														
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0	2	1.2	1	0.4	0	0.0	3	0.3
Hepatitis B - Acute	0	0.0	0	0.0	1	0.9	2	1.2	4	1.4	2	0.8	9	1.0
Hepatitis B - Chronic	0	0.0	0	0.0	0	0.0	5	2.9	3	1.1	1	0.4	9	1.0
Hepatitis C	0	0.0	0	0.0	76	66.2	147	85.4	103	37.1	31	12.6	357	37.9
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	4	3.5	10	5.8	3	1.1	0	0.0	17	1.8
<b>Direct Contact, Respiratory Routes, and Through the Provision of Health Care</b>														
Clostridium difficile	19	44.1	14	15.7	41	35.7	70	40.7	165	59.5	503	204.3	812	86.1
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis - Viral	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	2	0.2
Group A Streptococcal Disease Invasive-Severe	0	0.0	0	0.0	0	0.0	3	1.7	5	1.8	2	0.8	10	1.1
Group A Streptococcal Disease Invasive-Non-Severe	0	0.0	2	2.2	0	0.0	4	2.3	3	1.1	6	2.4	15	1.6
Group B Streptococcal Disease of the Newborn	3	7.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.3
Legionellosis	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	5	2.0	7	0.7
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Viral	12	27.8	1	1.1	1	0.9	3	1.7	0	0.0	0	0.0	17	1.8
Meningococcal Disease Invasive	0	0.0	1	1.1	5	4.4	0	0.0	0	0.0	1	0.4	7	0.7
Methicillin Resistant Staphylococcus Aureus (MRSA)	15	34.8	13	14.6	31	27.0	45	26.1	105	37.8	414	168.2	625	66.3
Pneumococcal Disease Invasive	3	7.0	1	1.1	2	1.7	6	3.5	15	5.4	25	10.2	52	5.5
Tuberculosis	0	0.0	0	0.0	1	0.9	3	1.7	1	0.4	1	0.4	6	0.6
Vancomycin resistant Enterococcus (VRE)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	1.6	4	0.4
<b>Enteric, Foodborne, and Waterborne Diseases</b>														
Amebiasis	1	2.3	0	0.0	1	0.9	0	0.0	3	1.1	1	0.4	6	0.6
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	8	18.6	4	4.5	31	27.0	26	15.1	53	19.1	33	13.4	155	16.4
Cryptosporidiosis	0	0.0	0	0.0	5	4.4	7	4.1	4	1.4	1	0.4	17	1.8
Cyclosporiasis	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	1	0.4	3	0.3
Giardiasis	3	7.0	1	1.1	9	7.8	19	11.0	35	12.6	20	8.1	87	9.2
Hepatitis A	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Hepatitis E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	0	0.0	0	0.0	0	0.0	1	0.6	2	0.7	5	2.0	8	0.8
Salmonellosis	8	18.6	7	7.8	12	10.4	30	17.4	54	19.5	58	23.6	169	17.9
Shigellosis	0	0.0	0	0.0	0	0.0	1	0.6	3	1.1	1	0.4	5	0.5
Typhoid*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	2	4.6	0	0.0	1	0.9	2	1.2	0	0.0	0	0.0	5	0.5
Yersiniosis	0	0.0	0	0.0	0	0.0	2	1.2	0	0.0	0	0.0	2	0.2
<b>Sexually Transmitted Infections</b>														
Chlamydia	2	4.6	16	17.9	1948	1695.8	806	468.3	80	28.8	8	3.3	2860	303.3
Gonorrhoea	0	0.0	0	0.0	59	51.4	53	30.8	20	7.2	1	0.4	133	14.1
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
Syphilis - Infectious	0	0.0	0	0.0	18	15.7	16	9.3	9	3.2	0	0.0	43	4.6
Syphilis - Non-Infectious or Stage Pending	2	4.6	0	0.0	4	3.5	12	7.0	5	1.8	5	2.0	28	3.0
<b>Vaccine Preventable Diseases</b>														
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Haemophilus influenzae Type b Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Mumps	0	0.0	1	1.1	4	3.5	1	0.6	0	0.0	0	0.0	6	0.6
Pertussis	31	71.9	36	40.3	16	13.9	12	7.0	14	5.0	1	0.4	110	11.7
Rubella	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>Vectorborne and Other Zoonoses</b>														
Lyme Disease - Confirmed	4	9.3	12	13.4	12	10.4	11	6.4	34	12.3	51	20.7	124	13.1
Lyme Disease - Probable	5	11.6	11	12.3	9	7.8	15	8.7	35	12.6	54	21.9	130	13.8
Malaria	0	0.0	0	0.0	1	0.9	2	1.2	1	0.4	0	0.0	4	0.4
Q-Fever	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	1	0.4	3	0.3
Toxoplasmosis	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
<b>TOTAL</b>	<b>119</b>		<b>120</b>		<b>2292</b>		<b>1317</b>		<b>768</b>		<b>1237</b>		<b>5856</b>	

**Notes:** Excludes 2 MRSA cases and 1 Lyme-Probable case with no reported age. Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table.

**TABLE 4: Notifiable diseases reported in Nova Scotia in 2015: Number of reports and sex-specific rates per 100,000 population**

Condition	Sex				Total NS	
	Female		Male			
	n	Rate	n	Rate	n	Rate
<b>Bloodborne Pathogens</b>						
Acquired Immune Deficiency Syndrome (AIDS)	0	0	3	0.6	3	0.3
Hepatitis B - Acute	2	0.4	7	1.5	9	1.0
Hepatitis B - Chronic	5	1	4	0.9	9	1.0
Hepatitis C	121	25.2	236	51.1	357	37.9
Human Immunodeficiency Virus (HIV)	2	0.4	15	3.2	17	1.7
<b>Direct Contact, Respiratory Routes, and Through the Provision of Health Care</b>						
Clostridium difficile	480	99.8	332	71.9	812	86.1
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0
Encephalitis - Viral	1	0.2	1	0.2	2	0.2
Group A Streptococcal Disease Invasive-Severe	3	0.6	7	1.5	10	1.1
Group A Streptococcal Disease Invasive-Non-Severe	4	0.8	11	2.4	15	1.6
Group B Streptococcal Disease of the Newborn	1	0.2	2	0.4	3	0.3
Legionellosis	3	0.6	4	0.9	7	0.7
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0
Meningitis - Viral	7	1.5	10	2.2	17	1.8
Meningococcal Disease Invasive	4	0.8	3	0.6	7	0.7
Methicillin Resistant Staphylococcus Aureus (MRSA)	291	60.5	334	72.3	625	66.3
Pneumococcal Disease Invasive	18	3.7	34	7.4	52	5.5
Tuberculosis	1	0.2	5	1.1	6	0.6
Vancomycin resistant Enterococcus (VRE)	2	0.4	2	0.4	4	0.4
<b>Enteric, Foodborne, and Waterborne Diseases</b>						
Amebiasis	2	0.4	4	0.9	6	0.6
Botulism	0	0.0	0	0.0	0	0.0
Campylobacteriosis	60	12.5	95	20.6	155	16.4
Cryptosporidiosis	10	2.1	7	1.5	17	1.8
Cyclosporiasis	2	0.4	1	0.2	3	0.3
Giardiasis	34	7.1	53	11.5	87	9.2
Hepatitis A	1	0.2	0	0.0	1	0.1
Hepatitis E	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	2	0.4	6	1.3	8	0.8
Salmonellosis	90	18.7	79	17.1	169	17.9
Shigellosis	2	0.4	3	0.6	5	0.5
Typhoid*	0	0.0	0	0.0	0	0.0
Verotoxigenic E. coli	3	0.6	2	0.4	5	0.5
Yersiniosis	2	0.4	0	0.0	2	0.2
<b>Sexually Transmitted Infections</b>						
Chlamydia	1913	397.7	944	204.3	2860	303.3
Gonorrhea	55	11.4	78	16.9	133	14.1
Lymphogranuloma Venereum	0	0.0	1	0.2	1	0.1
Syphilis - Infectious	5	1.0	38	8.2	43	4.6
Syphilis - Non-Infectious or Stage Pending	5	1.0	23	5.0	28	3.0
<b>Vaccine Preventable Diseases</b>						
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0
Haemophilus influenzae Type b Invasive Disease	0	0.0	0	0.0	0	0.0
Mumps	1	0.2	5	1.1	6	0.6
Pertussis	47	9.8	63	13.6	110	11.7
Rubella	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0
<b>Vectorborne and Other Zoonoses</b>						
Lyme Disease - Confirmed	52	10.8	72	15.6	124	13.1
Lyme Disease - Probable	61	12.7	69	14.9	130	13.8
Malaria	3	0.6	1	0.2	4	0.4
Q-Fever	1	0.2	2	0.4	3	0.3
Toxoplasmosis	0	0.0	1	0.2	1	0.1
West Nile Virus	0	0.0	0	0.0	0	0.0
<b>TOTAL</b>	<b>3296</b>		<b>2557</b>		<b>5856</b>	

**Notes:** Excludes 3 chlamydia cases with no reported sex. Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table.