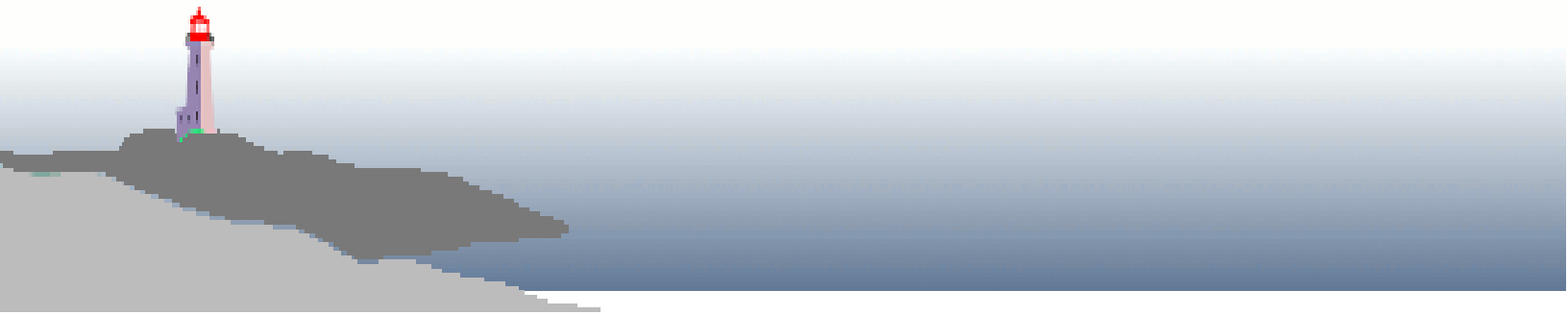




NOTIFIABLE DISEASES IN NOVA SCOTIA 2014 SURVEILLANCE REPORT

Population Health Assessment and Surveillance



ACKNOWLEDGEMENTS

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

For questions regarding this report, contact:

Population Health Assessment and Surveillance
Nova Scotia Health and Wellness
PO Box 488
Halifax, NS B3J 2R8

Phone: 902-424-0443

Fax: 902-424-0550

Email: surveillancedhw@novascotia.ca

TABLE OF CONTENTS

2014 HIGHLIGHTS	4
INTRODUCTION	6
METHODS	7
LIMITATIONS	8
DISEASE REPORTS IN NOVA SCOTIA BY DISEASE GROUP.....	9
Bloodborne Pathogens.....	9
HIV & AIDS.....	9
Hepatitis B (Acute and Chronic)	9
Hepatitis C	9
Other Bloodborne Pathogens.....	12
Direct Contact, Respiratory Routes, and Through the Provision of Health Care.....	12
Health Care Associated Infections.....	12
Clostridium difficile	13
Methicillin Resistant Staphylococcus Aureus (MRSA)	13
Vancomycin-Resistant Enterococcus.....	13
Direct Contact and Respiratory Routes	13
Invasive Pneumococcal Disease	13
Invasive Meningococcal Disease	13
Invasive Group A Streptococcal Disease	13
Tuberculosis	14
Viral Meningitis	14
Other Direct Contact and Respiratory Route Pathogens	14
Outbreaks of Direct Contact, Respiratory Routes, and Through the Provision of Health Care Infections	14
Enteric, Foodborne, and Waterborne Diseases	15
Salmonellosis.....	15
Campylobacteriosis	15
Giardiasis	15
Verotoxigenic E.coli	16
Other Reportable Enteric Diseases.....	16
Sexually Transmitted Infections	16
Chlamydia.....	16
Gonorrhea	18
Syphilis.....	20
Vaccine Preventable Diseases	22
Vectorborne and Other Zoonoses.....	22
Lyme Disease	22
REFERENCES	26
APPENDIX A – Notifiable Diseases in Nova Scotia.....	27
APPENDIX B – List of Tables	28

2014 HIGHLIGHTS

A total of 5,539 cases of notifiable diseases (including influenza) were reported in Nova Scotia in 2014. 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/>).

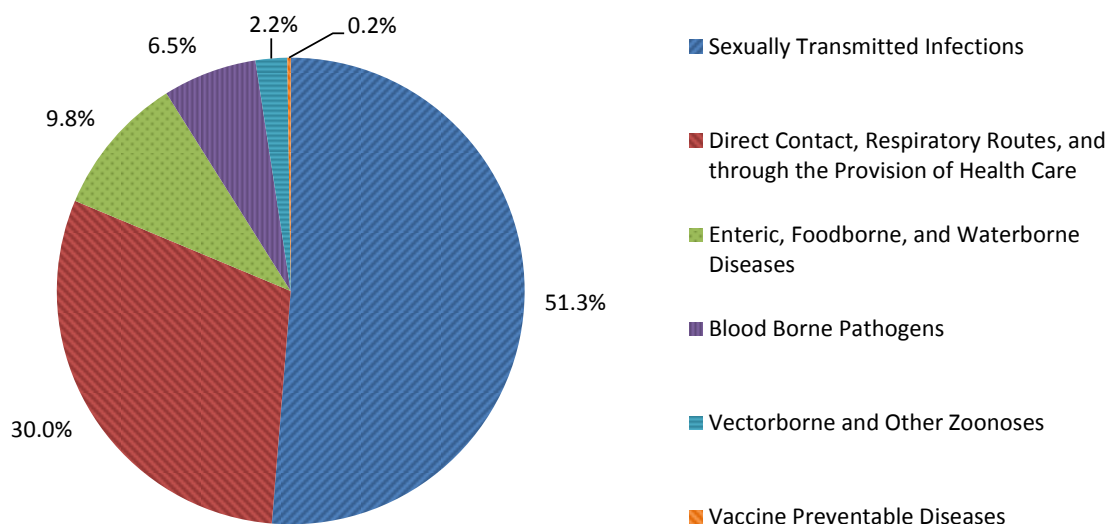
Chlamydia, a sexually transmitted infection, was the most frequently reported disease (49.9%), followed by two healthcare associated infections, methicillin resistant staphylococcus aureus (MRSA) (12.2%) and Clostridium difficile (11.6%) (Figure 2).

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 Population Health Assessment and Surveillance (PHAS) website: (<http://novascotia.ca/dhw/populationhealth/>).

An outbreak of syphilis has been ongoing in the Capital District Health Authority since 2008. There was a decrease in the number of infectious syphilis cases in 2014 (n=63, 6.7/100,000 population in 2014; n=84, 8.9/100,000 population in 2013) and discussions are ongoing about the next steps related to the outbreak.

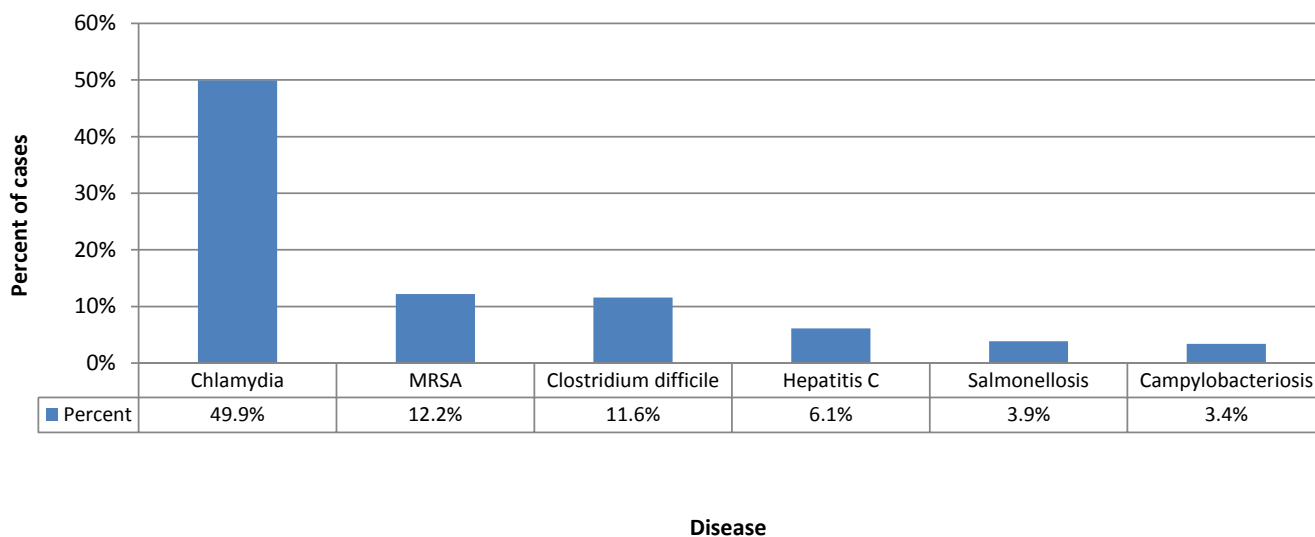
After a three-fold increase in the number of cases in 2013, the number of cases of Lyme disease reported in 2014 decreased from 156 to 115.

Figure 1: Distribution of notifiable diseases reported in Nova Scotia by disease category, 2014



Note: The “Direct Contact, Respiratory Routes, and through the Provision of Health Care” category in this figure includes influenza cases (n=272). Influenza cases are not described further in this report.

Figure 2: Summary of most frequently reported notifiable diseases in Nova Scotia, 2014



INTRODUCTION

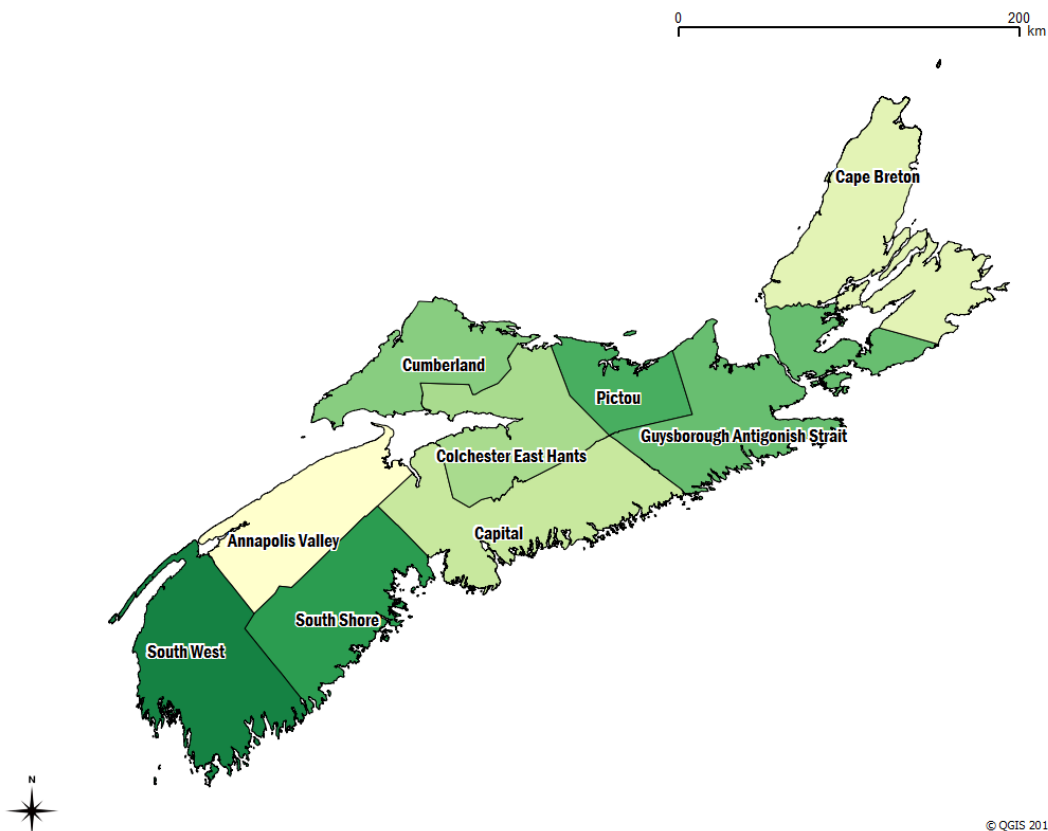
Surveillance is defined as the “systematic ongoing collection, collation, and analysis of data and the timely dissemination of information to those who need to know so that action can be taken” (1).

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 2014. The report was compiled by PHAS, Nova Scotia Department of Health and Wellness (DHW). It includes highlights of notifiable disease data for 2014, examines important trends between 2005-2014 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. Rates of notifiable diseases broken down by each of the nine District Health Authorities (DHA) (Figure 3), sex, and age groups are also provided for 2014.

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 2014 was collected under the previous DHA structure, and here is reported as such.

Figure 3: Map of District Health Authority 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 (either 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 2015). 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 2013. Therefore, comparisons between Nova Scotia and Canada are based on 2013 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 PHAS website (<http://novascotia.ca/dhw/populationhealth/>).

All case data are current as of September 2nd, 2015.

LIMITATIONS

The numbers cited in this report reflect only those cases that are reported to Public Health Services 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 September 2nd, 2015. 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 DHA can be found in Appendix B.

Bloodborne Pathogens

HIV & AIDS

There were 10 newly diagnosed cases of HIV in Nova Scotia in 2014 (rate of 1.1/100,000 population) bringing the cumulative number of new diagnoses since 1985 (when the first case was reported) to 811. The Canadian rate of reported HIV cases in 2013 was 5.9/100,000 population (5). For 2013, the reported rate of HIV in Nova Scotia (1.7/100,000 population) was below the national rate.

In 2014, 100% of HIV cases were male and all cases were over the age of 20. The reported exposure categories were men who have sex with men (MSM, 90.0% of cases) and men who have had sex with men and injected drugs (MSM/IDU, 10.0%).

There were two new cases of AIDS reported in Nova Scotia in 2014 (0.2/100,000 population). This is an increase from 2013 because no cases were reported but is similar to rates reported in 2011 and 2012 (0.4/100,000 and 0.2/100,000 respectively).

Hepatitis B (Acute and Chronic)

The number of reported cases of acute hepatitis B in 2014 was 4 (rate of 0.4/100,000 population). There were 20 cases of chronic hepatitis B reported in 2014 (rate of 2.1/100,000 population). The overall rate for hepatitis B (acute and chronic) in 2014 was 2.6/100,000 population.

Cases were reported in all age groups except the 0-4 year age group. The majority of cases reported were male (70.1%).

Nationally, the rates of hepatitis B are reported for acute and chronic cases combined. The 2013 Canadian rate of hepatitis B was 15.2/100,000 population (5). The rate of all acute and chronic hepatitis B in Nova Scotia for 2013 (1.6/100,000 population) was lower compared to the Canadian rate.

Hepatitis C

In 2014, 323 cases of hepatitis C were reported in Nova Scotia (rate of 34.4/100,000 population). This rate is higher compared to the 2012 and 2013 rate (Figure 4). The national rate of reported hepatitis C cases in 2013 was 29.5/100,000 population (5). For 2013, the Nova Scotia rate (30.6/100,000 population) was slightly higher compared to the national rate.

Cumberland Health Authority (CHA) had the highest rate of hepatitis C compared to the other DHAs with a rate of 111.4/100,000 population (Figure 5). Cumberland Health Authority has the largest federal correctional facility in Nova Scotia and inmates are tested for hepatitis C on admission to the institution

(6). The rate among incarcerated cases continues to influence the high rate in this district. In 2014, 55% of reported cases in CHA were incarcerated.

Cape Breton District Health Authority (CBDHA, 85.3/100,000), Colchester East Hants Health Authority (CEHHA, 48.1/100,000) and Capital District Health Authority (CDHA, 25.9/100,000) had the next highest rates of hepatitis C.

Figure 4: Reported rates of hepatitis C in Nova Scotia, 2005-2014

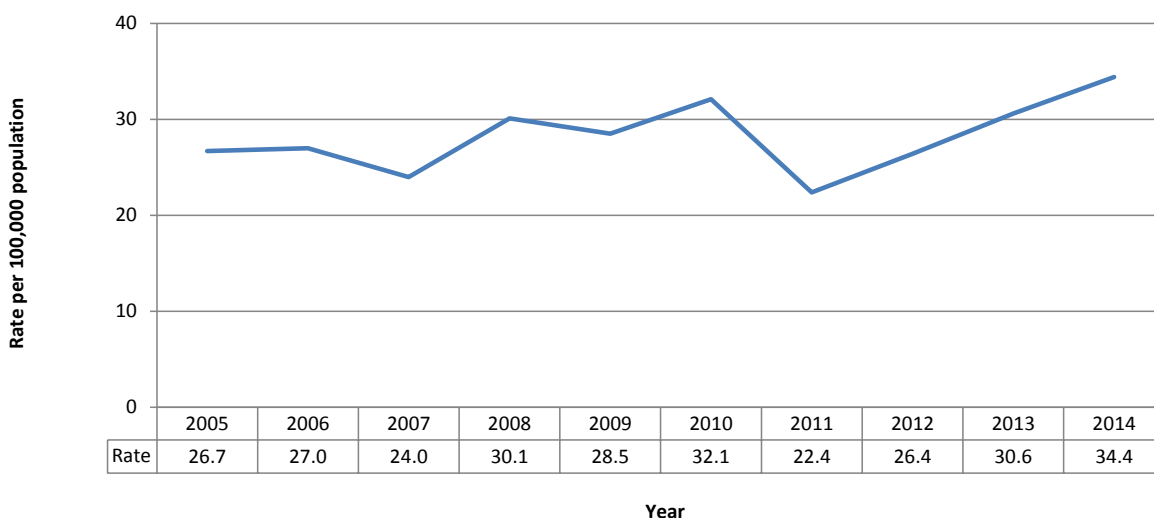
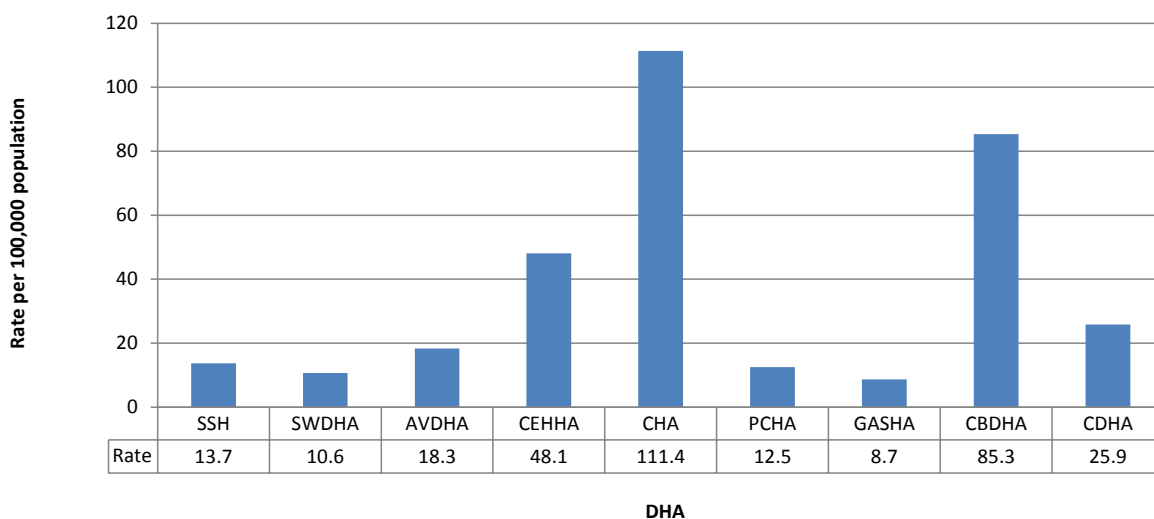


Figure 5: Reported rates of hepatitis C in Nova Scotia by District Health Authority (DHA), 2014

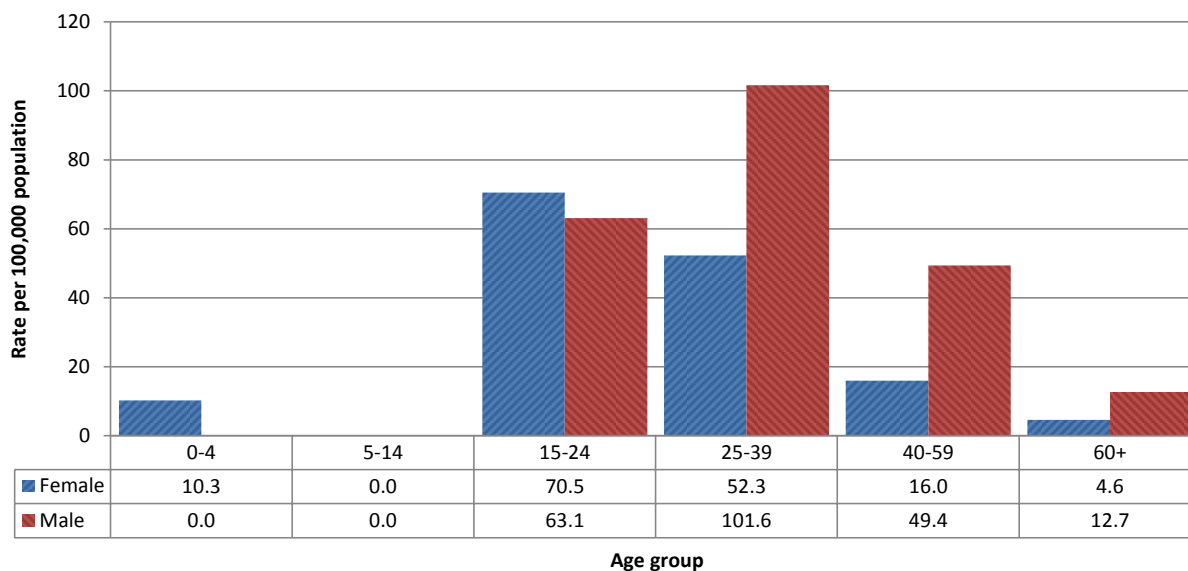


Notes: SSH = South Shore Health, SWDHA = South West District Health Authority, AVDHA = Annapolis Valley District Health Authority, CEHHA = Colchester East Hants Health Authority, CHA = Cumberland Health Authority, PCHA = Pictou County Health Authority, GASHA = Guysborough Antigonish Strait Health Authority, CBDHA = Cape Breton District Health Authority, CDHA = Capital District Health Authority.

The majority of reported hepatitis C cases (93.2%) were between the ages of 15-59 years and 64.1% of the cases were male. The rate was highest among males aged 25-39 at 101.6/100,000 population (Figure 6).

The Canadian hepatitis C rate for 2013 was highest among males in the 40-59 age group at 61.4/100,000 population. Similar to Nova Scotia, the rates among males are higher than females for cases 25 years and older (5).

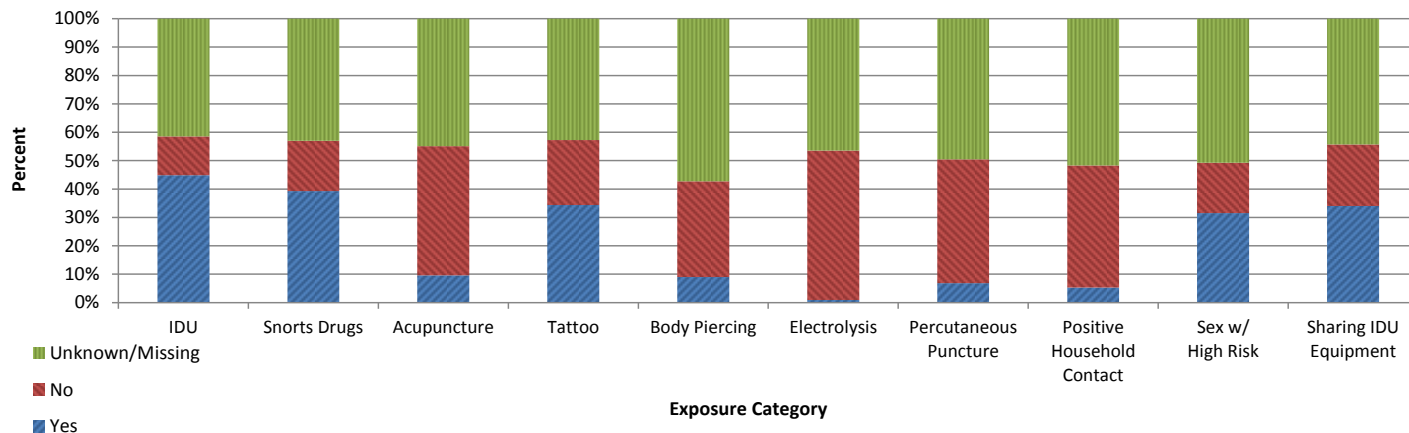
Figure 6: Reported rates of hepatitis C in Nova Scotia by age group and sex, 2014



Injection drug use continues to be the most commonly reported risk factor among hepatitis C cases. In 2014, 44.9% 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 (39.3% of cases), having a tattoo (34.4%), sharing IDU equipment (34.1%), sex with a person at high risk for hepatitis C (31.6%), having acupuncture (9.6%), having a body piercing (9.0%), percutaneous puncture (6.8%), having positive household contact (5.3%) and electrolysis (0.9%).

Figure 7: Distribution of hepatitis C cases by reported risk factors, Nova Scotia, 2013



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 2005 and 2014.

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

There were a total of 1391 cases of respiratory, direct contact, and health care-associated infections reported in 2014 (excluding influenza, n=272).

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.

Infection Prevention and Control Nova Scotia (IPCNS) 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 1st, 2012. The number of cases reported in 2014 was 609 (rate of 64.9/100,000 population). The majority of the cases were female (56.7%) and 62.1% were aged 60 years and older. Two small outbreaks of *C.difficile* (n=7 cases) were reported in 2014. One outbreak occurred in an acute care facility and one in a long term care facility.

Methicillin Resistant Staphylococcus Aureus (MRSA)

There were 644 reported cases of MRSA in Nova Scotia in 2014. The rate was 68.6/100,000 population which is lower compared to the rate in 2013 (84.1/100,000 population). Canadian rates are not available because MRSA is not nationally reportable. The highest rate in the province in 2014 was reported in the Southwest District Health Authority (SWDHA, 193.4/100,000 population).

The majority of cases occurred in those aged 60 years and older (63.5%, n=409). This was a rate of 170.8/100,000 population. The rate among males was higher compared to females (71.8/100,000 vs. 65.5/100,000 population).

There were eight small outbreaks of MRSA (n=32) reported in 2014. All occurred in acute care settings.

Vancomycin-Resistant Enterococcus

In 2014, 17 cases of vancomycin-resistant enterococcus (VRE) were reported in Nova Scotia (rate of 1.8/100,000 population). This is lower compared to the 2013 rate of 4.6/100,000. Ninety-four percent of cases were over the age of 40 and 58.8% of the cases were female.

No outbreaks of VRE were reported in 2014.

Direct Contact and Respiratory Routes

Invasive Pneumococcal Disease

In 2014, there were 66 cases of invasive pneumococcal disease reported (rate of 7.0/100,000 population). This was only one additional case compared to 2013 (n=65, 6.9/100,000). The 2013 Nova Scotia rate of 6.9/100,000 population is lower compared to the 2013 national rate of 9.0/100,000 (5). The majority of cases reported in 2014 were over the age of 40 (89.4%) and 60.1% were male.

Invasive Meningococcal Disease

Three cases of invasive meningococcal disease were reported in 2014 (rate of 0.3/100,000 population). Two of the cases were serogroup B and one was serogroup W-135. This is an increase from 2013 when no cases were reported.

Invasive Group A Streptococcal Disease

The overall rate of invasive group A streptococcal disease for 2014 was 2.3/100,000 (n=22). The number of severe cases reported in 2014 was 8 (rate of 0.9/100,000 population). The number of non-severe cases reported in 2014 was 14 (rate of 1.5/100,000 population). The 2013 rate for Nova Scotia (2.2/100,000) is lower compared to the 2013 national rate of 4.7/100,000 (5).

Tuberculosis

Seven cases of laboratory confirmed tuberculosis were reported in 2014 (5 pulmonary and 2 extra pulmonary). This represented a rate of 0.7/100,000 population. The majority of cases were between the ages of 25-59 (85.7%) and 87.5% were male. The 2013 provincial rate is lower than the 2013 Canadian rate (0.9/100,000 vs. 4.7/100,000 population) (5).

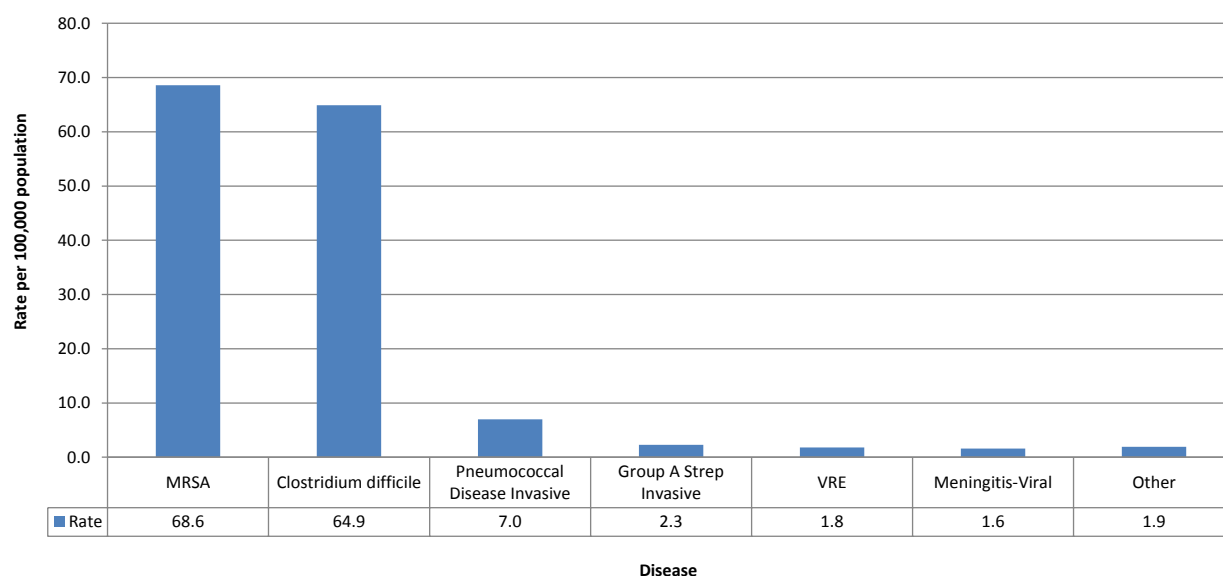
Viral Meningitis

For 2014, 15 cases of viral meningitis were reported which represents a rate of 1.6/100,000 population. This was a decrease from the 2013 rate of 2.1/100,000. Forty percent of the reported cases were in the 0-4 age group and 60.0% were male.

Other Direct Contact and Respiratory Route Pathogens

Two cases of Creutzfeldt-Jacob Disease, one case of group B streptococcal of a newborn and 3 cases of legionellosis were reported in 2014.

Figure 8: Reported rates of diseases transmitted by direct contact, respiratory routes, and through the provision of health care in Nova Scotia, 2014



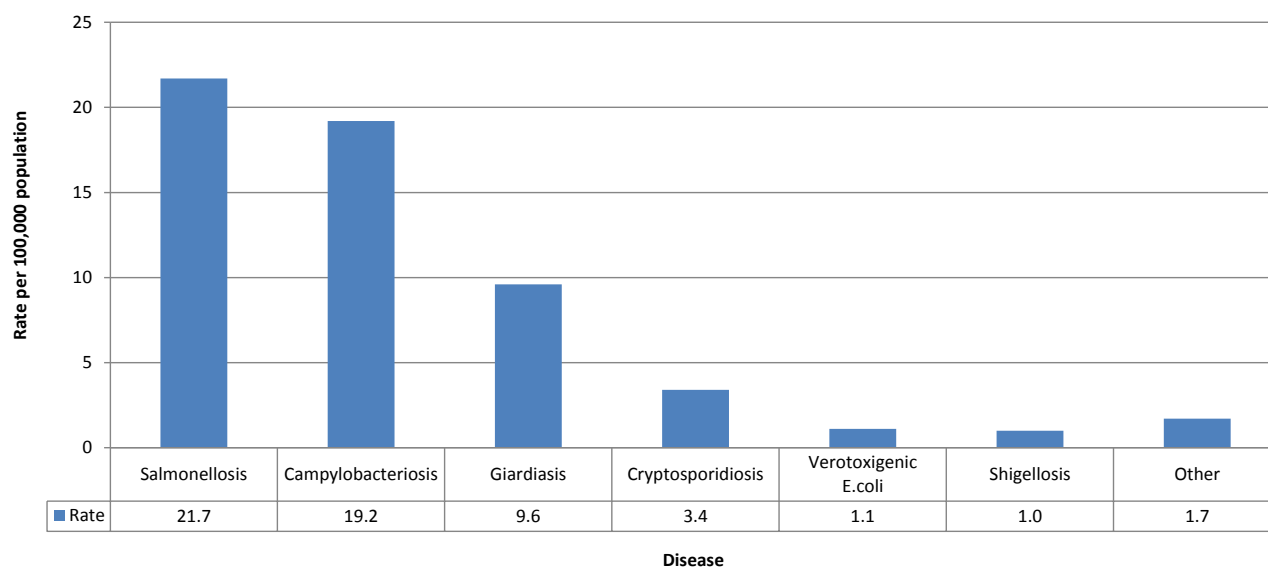
Outbreaks of Direct Contact, Respiratory Routes, and Through the Provision of Health Care Infections

The Annual Influenza Surveillance report provides a summary for direct contact and respiratory infection outbreaks. One hundred forty respiratory related outbreaks were reported during the 2014-2015 influenza season. The report can be found on the PHAS website (<http://novascotia.ca/dhw/populationhealth/>).

Enteric, Foodborne, and Waterborne Diseases

There were 541 cases of enteric pathogens reported in Nova Scotia in 2014. Travel was associated with 133 (24.6%) of reported enteric infections overall. Figure 9 presents the enteric disease rates for 2014.

Figure 9: Reported rates of enteric, foodborne, and waterborne diseases in Nova Scotia, 2014



Salmonellosis

Salmonella infections were the most frequently reported enteric pathogen in Nova Scotia in 2014 (204 cases; 21.7/100,000 population). Fifty-eight of the reported cases were associated with travel (28.4%). Seventy-four percent of cases reported in 2014 were in adults over the age of 25 and 53.4% were female. The rate of salmonella infections in Nova Scotia in 2013 (18.0/100,000 population) is slightly higher than the 2013 Canadian rate of 17.6/100,000 population (5).

Campylobacteriosis

In 2014, campylobacteriosis infections were the second most frequently reported enteric pathogen (180 cases; rate of 19.2/100,000 population). Forty-five (25%) of the cases were travel related. The SSHA had the highest rate among DHAs with a rate of 30.9/100,000 population. More than half of reported cases (n=99) were aged 40 years or older. The rate for campylobacteriosis continues to be higher among males than females (20.5/100,000 for males vs. 17.9/100,000 for females). The 2013 provincial rate is lower compared to the 2013 national rate (18.3/100,000 vs. 29.1/100,000) (5).

The most commonly reported risk factors for campylobacteriosis were contact with farm animals or wildlife (n=52/180, 28.9%) and exposure to chickens (work or other) (n=34/180, 18.9%). Seventeen cases were missing information on these risk factors.

Giardiasis

A total of 90 cases of giardiasis were reported in Nova Scotia in 2014, representing a rate of 9.6/100,000 population. Of the cases reported, 20 (22.2%) were associated with travel. The 2013 rate of giardiasis infections reported in Nova Scotia (10.2/100,000 population) is lower compared to the 2013 Canadian

rate of 10.8/100,000 population (5). Seventy-eight percent of cases (n=70) were reported in people aged 25 years and older. The rate of illness was higher among males compared to females (12.2/100,000 for males vs. 7.1/100,000 population for males).

Verotoxigenic E.coli

A total of ten cases of Verotoxigenic E.coli were reported in 2014 (1.1/100,000 population). The rate among females was higher than males (1.3/100,000 vs. 0.9/100,000).

Other Reportable Enteric Diseases

The rate of other reportable enteric diseases in Nova Scotia in 2014 remained low (See Appendix B, Table 1 for details).

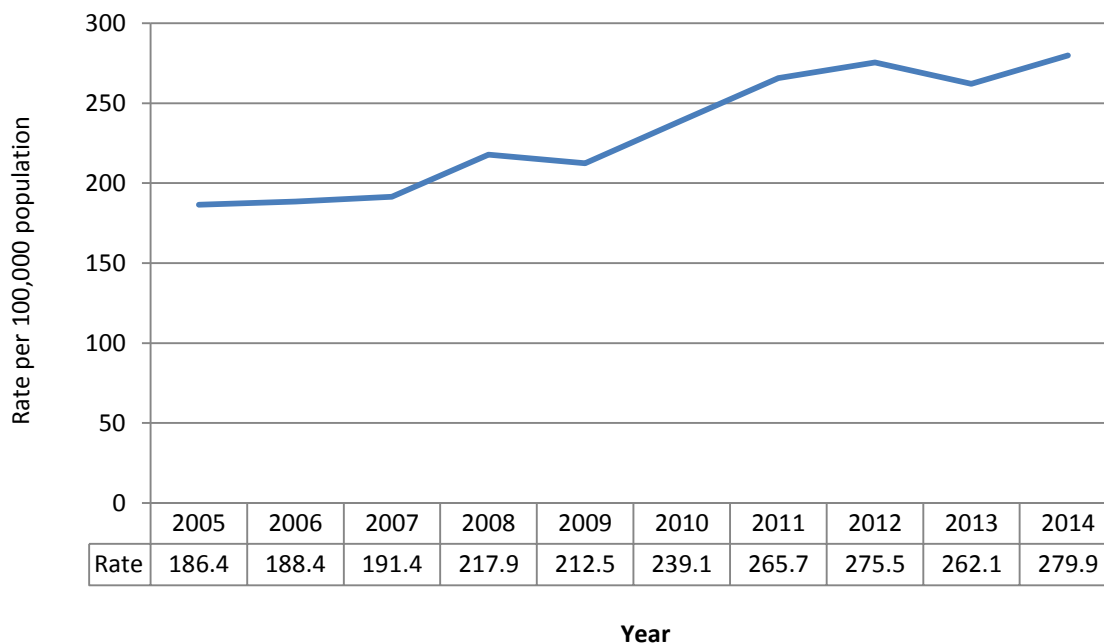
Sexually Transmitted Infections

There were 2,841 notifications of bacterial sexually transmitted infections (STI) in Nova Scotia in 2014. The rates of chlamydia and gonorrhea both increased in 2014, while the rate of infectious syphilis decreased for the first time since 2010.

Chlamydia

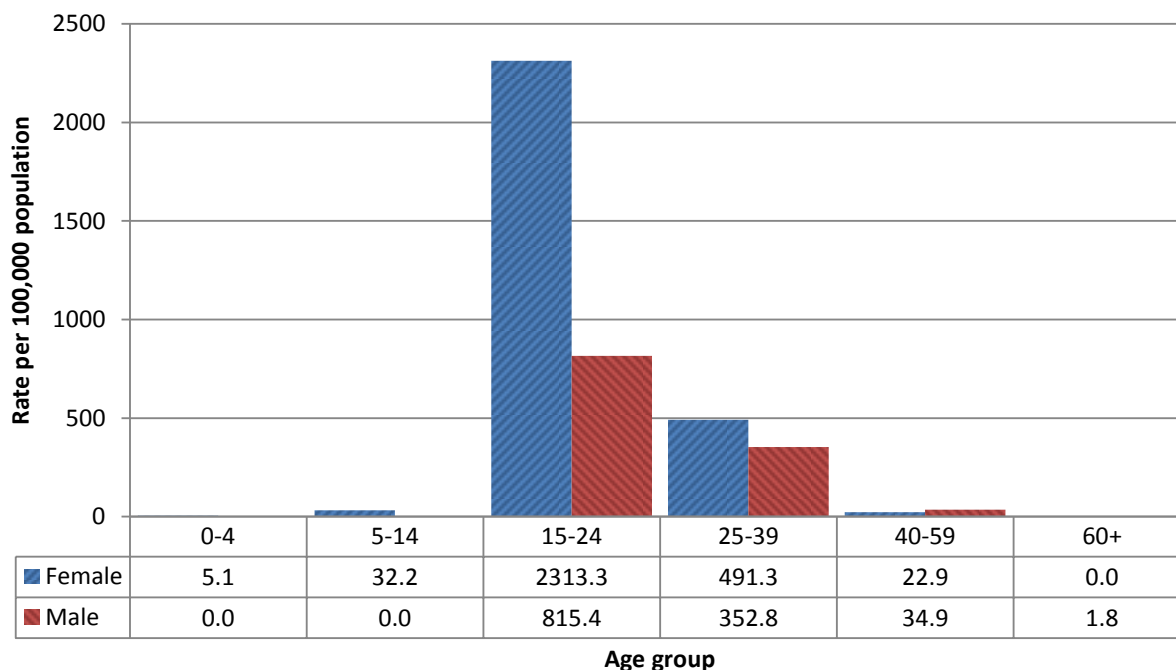
Chlamydia was the most frequently reported notifiable disease in Nova Scotia in 2014 (n=2,628, rate=279.9/100,000 population). Although there was a decrease in the rate from 2012 to 2013, the rate increased again in 2014. The number of reported cases and the associated rate of chlamydia has showed an increasing trend from 2005 to 2014 (Figure 10). The 2013 Nova Scotia chlamydia rate was lower compared to the national rate (262.1/100,000 vs. 295.7/100,000 population) (5).

Figure 10: Reported rates of chlamydia in Nova Scotia, 2005-2014



Similar to the overall rate, the rates of chlamydia among females and males has increased in 2014. The decrease in the overall and sex-specific rates that happened in 2013 did not continue into 2014. The 2014 rate for females is 372.1/100,000 compared to 183.4/100,000 for males. The highest rate of chlamydia in Nova Scotia for 2014 was reported among females aged 15 to 24 years (2,313.3/100,000 population) (Figure 11). There was an increase in the rate of chlamydia for males aged 15-24 (721.6/100,000 vs. 815.4/100,000 population) and for both males and females aged 25-39 years (females: 482.2/100,000 vs. 491.3/100,000 population; males: 295.3/100,000 vs. 352.8/100,000 population). Similarly, 2013 national data show the highest rates of chlamydia in females aged 15 to 19 years (1735.0/100,000 population) and 20 to 24 years (2093.3/100,000 population) (5).

Figure 11: Reported rates of chlamydia in Nova Scotia by age group and sex, 2014



Gonorrhoea

For 2014, 113 cases of gonorrhoea were reported in Nova Scotia (rate of 12.0/100,000 population). This is an increase from the rate of 10.3/100,000 population in 2013 which is also lower compared to the 2013 Canadian rate of 39.2/100,000 population (5).

The reported rates of gonorrhoea for 2014 among females and males were 7.1/100,000 population and 17.2/100,000 population, respectively.

In 2014 the highest rate of gonorrhoea in Nova Scotia was reported among males aged 15 to 24 years (64.8/100,000 population) (Figure 13). This is a change from 2013 where females aged 15-24 years had the highest rate. The rate for males in both the 15-24 and 25-39 age groups increased from 2013 to 2014 (15-24: 42.4/100,000 vs. 64.8/100,000 population; 25-39: 29.5/100,000 vs. 37.4/100,000 population).

CDHA reported the highest rate of gonorrhoea for 2014 compared to the other DHAs (21.3 /100,000 population), followed by AVDHA (11.0/100,000 population).

In 2014, Nova Scotia continued to participate in the Enhanced Surveillance of Antimicrobial Resistant Gonorrhoea (ESAG) project through the Public Health Agency of Canada (PHAC). The purpose of this project is to improve the evidence available to inform the Canadian STI guidelines and to guide the development of public health interventions to minimize the spread of antimicrobial resistant *N. gonorrhoeae* (ESAG protocol). Once the project is completed, a report of the results will be available.

Figure 12: Reported rates of gonorrhoea in Nova Scotia, 2005-2014

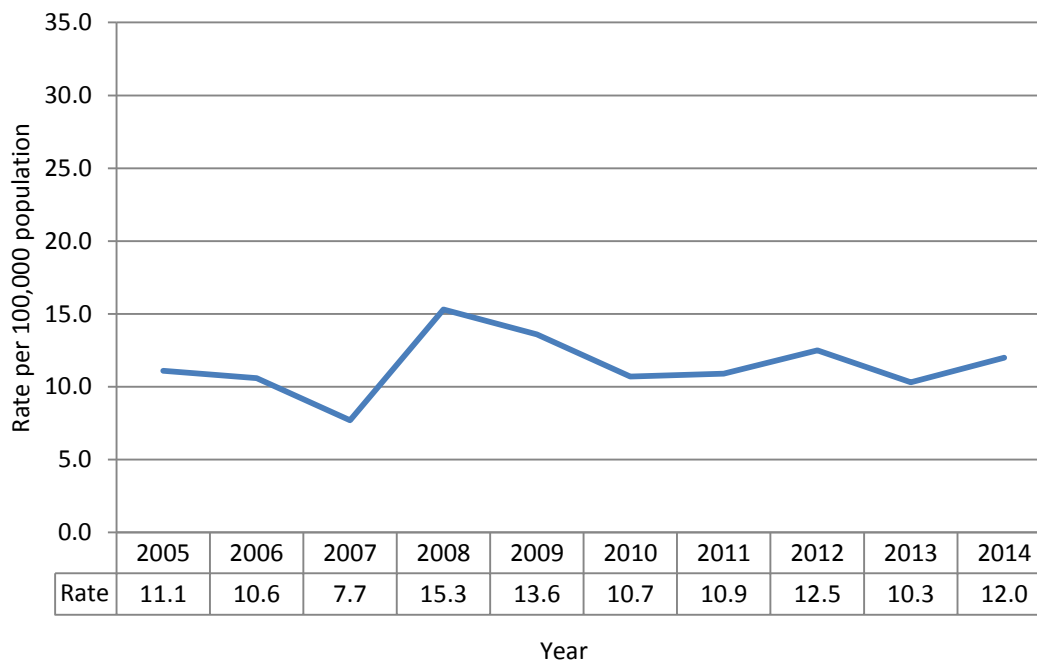
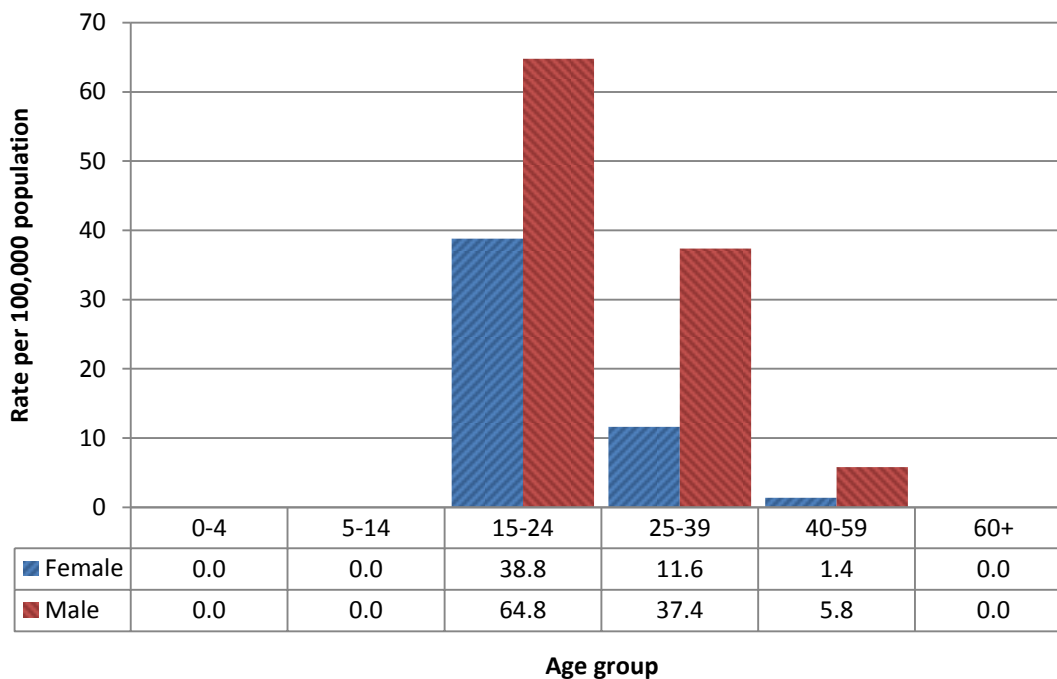


Figure 13: Reported rates of gonorrhoea in Nova Scotia by age group and sex, 2014



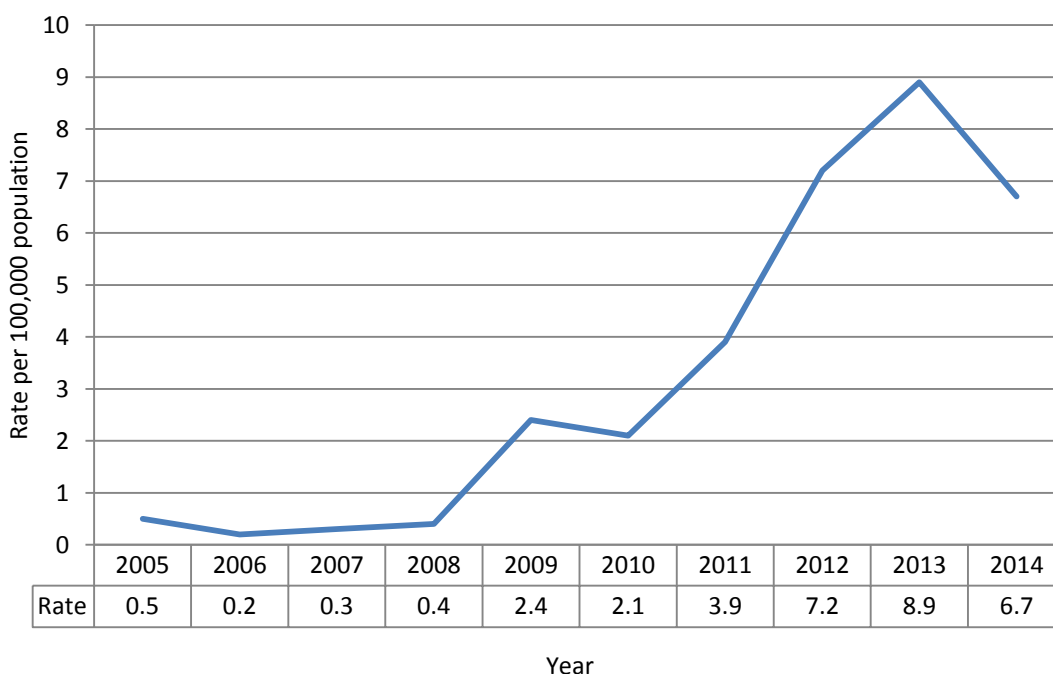
Syphilis

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 (7). Infectious syphilis cases comprise those of public health significance, and will be described in more detail below.

In 2014 there were 63 cases of infectious syphilis and 37 cases of non-infectious syphilis reported in Nova Scotia. The reported rate of infectious syphilis cases in Nova Scotia was 6.7/100,000 population for 2014. This is the first time the rate has decreased since 2010 (Figure 14). Between 2010 and 2013, the rate of infectious syphilis increased from 2.1/100,000 to 8.9/100,000 due to an outbreak in CDHA.

The Canadian rates for syphilis include both infectious and non-infectious cases. The national rate for 2013 was 9.3/100,000 population (5). The 2013 Nova Scotia rate for infectious syphilis and non-infectious syphilis combined (11.4/100,000 population) was higher compared to the Canadian rate (9.3/100,000 population).

Figure 14: Reported rates of infectious syphilis in Nova Scotia, 2005-2014



Since 2005, 299 out of 307 (97.4%) infectious syphilis cases in Nova Scotia have been male. Also, 259 out of 307 (84.4%) of infectious syphilis cases in that ten year period are associated with CDHA. All cases of infectious syphilis reported in 2014 were over the age of 15. The highest rate was reported for males in the 25-39 year age group (30.4/100,000 population) (Figure 15). The most commonly reported risk factor for infectious syphilis cases was MSM.

Figure 16 presents rates of infectious syphilis among males in CDHA and outside of CDHA, reflecting the ongoing outbreak in this district.

Figure 15: Reported rates of infectious syphilis in Nova Scotia by age group and sex, 2014

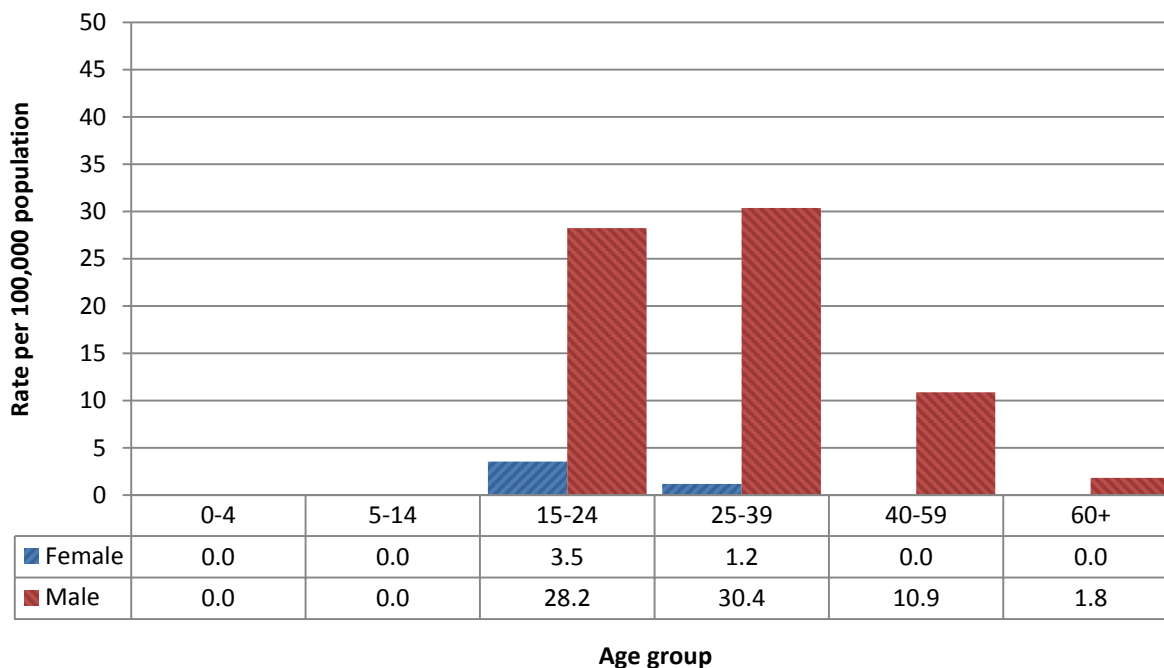
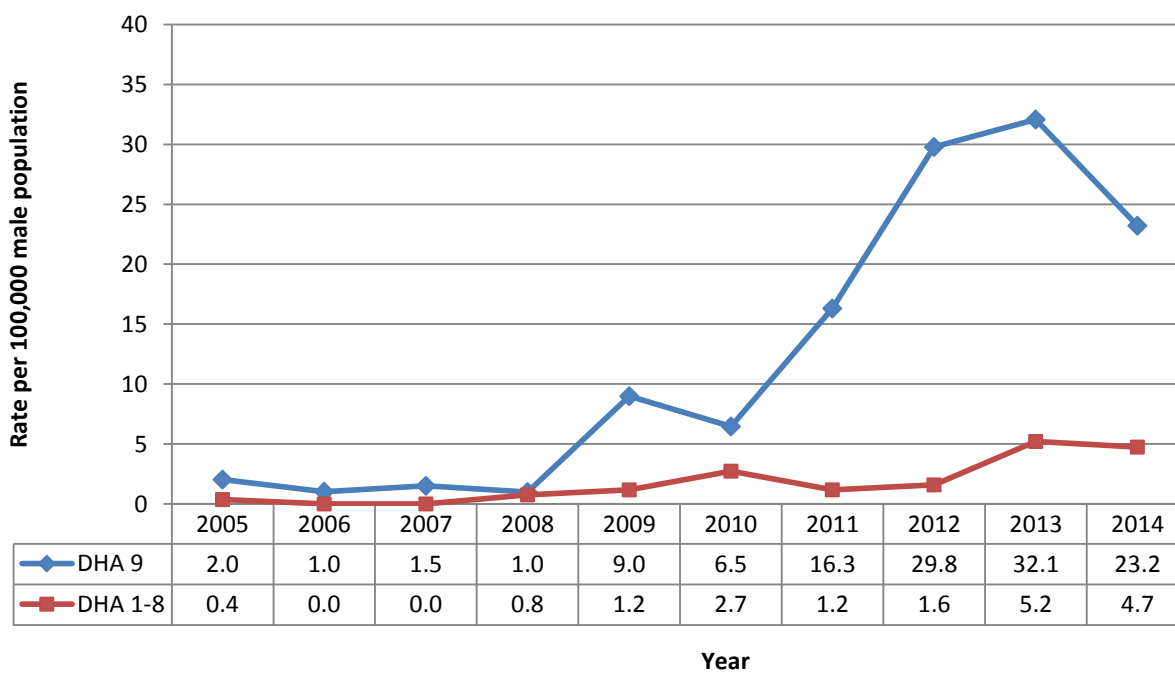


Figure 16: Reported rates of infectious syphilis among males residing in DHA 9 and outside of DHA 9, 2005-2014



Vaccine Preventable Diseases

There were 13 cases of vaccine preventable diseases reported in Nova Scotia in 2014. This is an increase from seven cases in 2013.

The vaccine preventable diseases reported in 2014 included 11 cases of pertussis, one case of acute flaccid paralysis and one case of mumps.

Vectorborne and Other Zoonoses

There were 121 cases of vectorborne and other zoonotic diseases reported in Nova Scotia in 2014:

- There were 115 cases of Lyme disease reported.
- There were 3 cases of malaria reported. None of these cases were acquired in Nova Scotia.
- There were three cases of toxoplasmosis reported.

See Appendix B for tables containing numbers and rates of reported cases of vectorborne and other zoonotic diseases from 2005 to 2014.

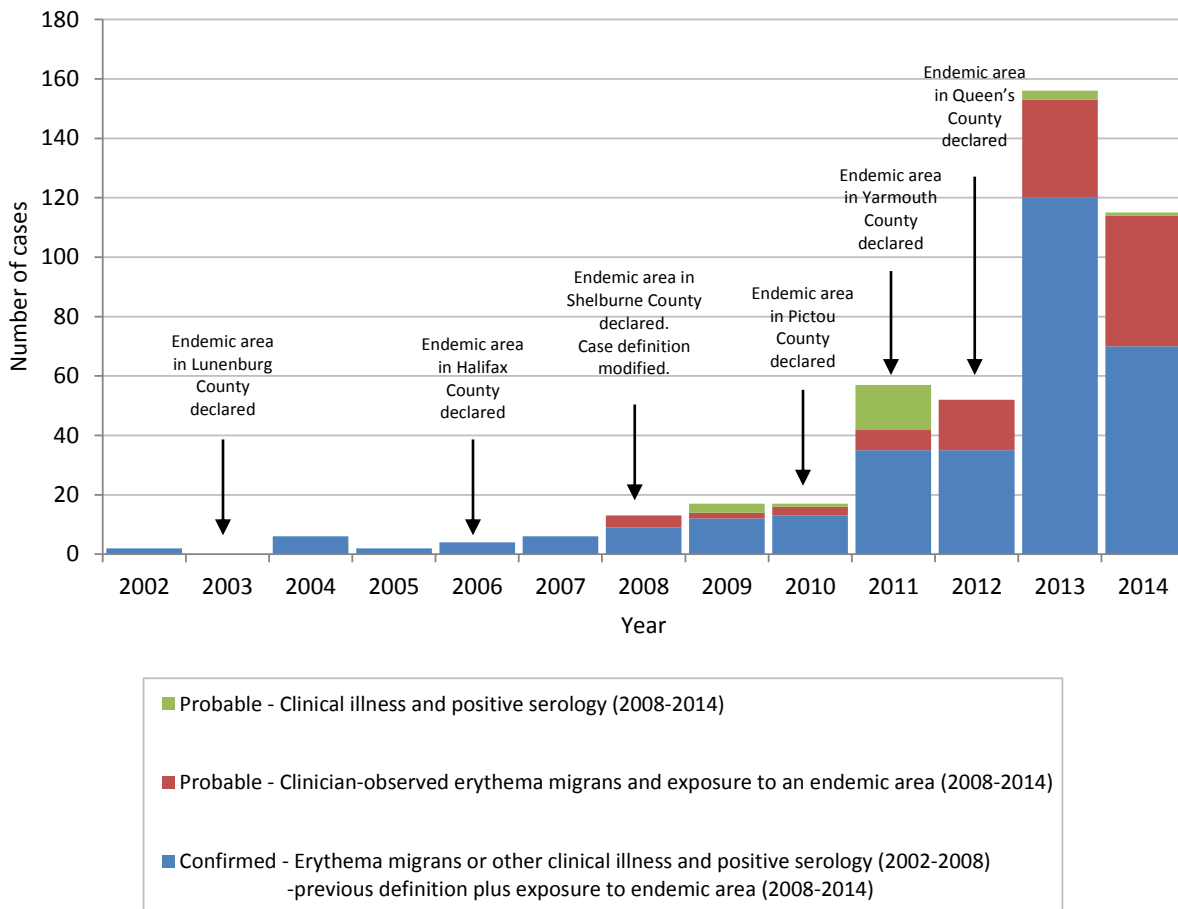
Lyme Disease

Since the first cases reported in 2002, the annual number of reported cases of Lyme disease in Nova Scotia displayed an increasing trend until 2013 but there was a decrease in 2014 (Figure 17).

There were 115 cases of Lyme disease reported in 2014, which is a decrease from 2013 (n=156). 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.

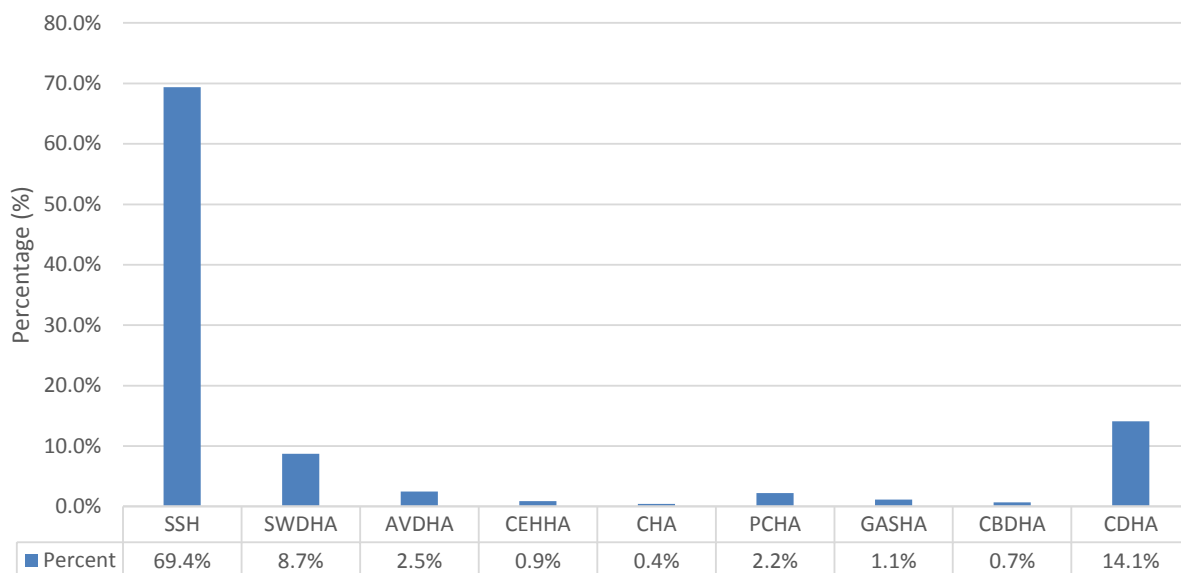
There are currently six endemic areas identified in Nova Scotia but blacklegged ticks have been found across the province. It is important to be aware that there is a risk of encountering blacklegged ticks anywhere in Nova Scotia.

Figure 17: Number of reported cases of Lyme disease by case classification and year, Nova Scotia, 2002-2014



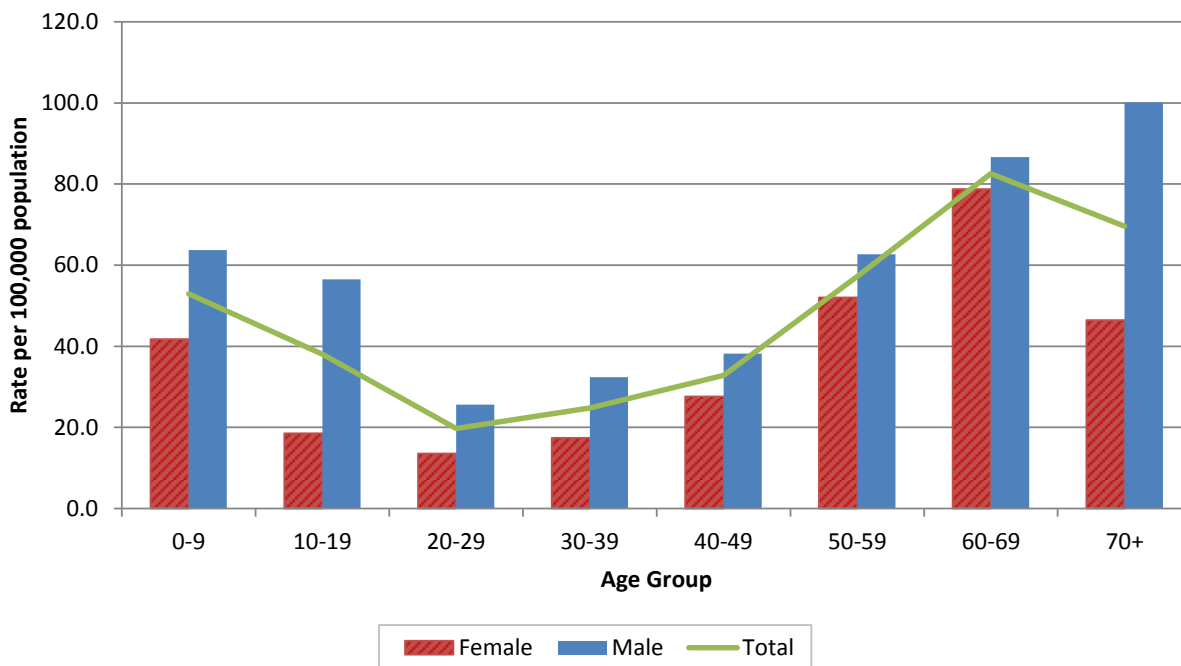
From 2002 to 2014 there have been 447 cases of Lyme disease reported in Nova Scotia, of which 424 (94.8%) were likely to have been acquired within the province. Currently, 75.9% of cases classified as likely to have been acquired in Nova Scotia (were associated with exposure in the endemic area in Lunenburg County. The percentage of total cases reported (by DHA is presented in Figure 18. There were cases in all age groups and cases ranged in age from zero to 85 years and were 58.8% male (Figure 19).

Figure 18: Percentage of cases reported by DHA, 2002-2014



Notes: SSH = South Shore Health, SWDHA = South West District Health Authority, AVDHA = Annapolis Valley District Health Authority, CEHHA = Colchester East Hants Health Authority, CHA = Cumberland Health Authority, PCHA = Pictou County Health Authority, GASHA = Guysborough Antigonish Strait Health Authority, CBDHA = Cape Breton District Health Authority, CDHA = Capital District Health Authority.

Figure 19: Rates of reported cases of Lyme disease per 100,000 population, by sex and age group, Nova Scotia, 2002-2014



Active tick surveillance was conducted in 2014 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. Population Health Assessment and Surveillance, 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. (2015). Retrieved from <http://dsol-smed.phac-aspc.gc.ca/dsol-smed/ndis/index-eng.php>
6. Correctional Services Canada. (2014) Institutional Profiles, Atlantic Region: Springhill Institution, Springhill, Nova Scotia. Retrieved from <http://www.csc-scc.gc.ca/text/facilit/institutprofiles/springhill-eng.shtml>
7. 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)	Meningococcal Disease Invasive (IMD)
Acute Flaccid Paralysis (AFP)	Methicillin-resistant Staphylococcus aureus (MRSA)
Amebiasis	Mumps
Anthrax	Pertussis
Botulism (Foodborne, Wound, Infant, & Colonization Botulism)	Plague
Brucellosis	Pneumococcal Disease, Invasive
Campylobacteriosis	Poliomyelitis
Chancroid	Q fever
Chlamydia (genital, extra-genital, and perinatally acquired)	Rabies
Cholera	Relapsing Fever
Clostridium difficile	Rocky Mountain Spotted Fever
Creutzfeldt-Jakob Disease – Classic (sporadic, iatrogenic, Genetic Prion Disease) and Variant	Rubella (Non-Congenital, Congenital Rubella Syndrome)
Cryptosporidiosis	Salmonellosis
Cyclosporiasis	Severe Acute Respiratory Syndrome (SARS)
Diphtheria	Shellfish Poisoning (Paralytic & Domoic)
Ebola Virus Disease	Shigellosis
Encephalitis (viral)	Smallpox
Giardiasis	Syphilis (primary, secondary, early latent, late latent, infectious neurosyphilis, non-infectious neurosyphilis, tertiary other than neurosyphilis, and early congenital)
Gonorrhea (genital, extra-genital, and perinatally acquired)	Tetanus
Group A Streptococcal Disease, Invasive	Toxoplasmosis
Group B Streptococcal Disease of Newborn	Trichinellosis
Haemophilus Influenzae type b (Hib) Invasive Disease	Tuberculosis
Hantavirus Pulmonary Syndrome (HPS)	Tularemia
Hepatitis A	Typhoid
Hepatitis B (Acute Case and Chronic Carrier)	Vancomycin Resistant Enterococcus (VRE)
Hepatitis C	Verotoxigenic Escherichia coli
Hepatitis D	Viral Hemorrhagic Fevers (Lassa, Marburg, Crimean-Congo, Other)
Hepatitis E	West Nile Virus (WNV) (West Nile Asymptomatic Infection, West Nile Neurological Syndrome, West Nile Non-Neurological Syndrome)
HTLV I & II	Yellow Fever
Human Granulocytic Ehrlichiosis	Yersiniosis
Human Immunodeficiency Virus (HIV)	
Influenza (laboratory confirmed)	
Invasive Listeriosis	
Legionellosis	
Leprosy (Hansen's Disease)	
Lyme Disease	
Lymphogranuloma venereum	
Malaria (Plasmodium falciparum, Plasmodium malariae, Plasmodium ovale, Plasmodium vivax)	
Measles	
Meningitis (bacterial)	
Meningitis (viral)	

APPENDIX B – List of Tables

TABLE 1: Notifiable diseases reported in Nova Scotia from 2005-2014: Number of reports and crude rates per 100,000 population	29
TABLE 2a: Notifiable diseases reported in Nova Scotia in 2014 by District Health Authority (DHA): Number of reports	30
TABLE 2b: Notifiable diseases reported in Nova Scotia in 2014 by District Health Authority (DHA): Crude rates per 100,000 population.....	31
TABLE 3: Notifiable diseases reported in Nova Scotia in 2014 by age group: Number of reports and age specific rates per 100,000 population	32
TABLE 4: Notifiable diseases reported in Nova Scotia in 2014: Number of reports and sex-specific rates per 100,000 population	33

TABLE 1: Notifiable diseases reported in Nova Scotia from 2005-2014: Number of reports and crude rates per 100,000 population

Condition	Year																		All Years			
	2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		n	Average Rate
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate				
Bloodborne Pathogens																						
Acquired Immune Deficiency Syndrome (AIDS)	5	0.5	13	1.4	5	0.5	6	0.6	2	0.2	5	0.5	4	0.4	2	0.2	0	0.0	2	0.2	44	0.5
Hepatitis B - Acute	10	1.1	8	0.9	9	1.0	7	0.8	5	0.5	3	0.3	4	0.4	1	0.1	2	0.2	4	0.4	53	0.6
Hepatitis B-Chronic*	0	0	0	0	0	0	0	0	16	1.7	15	1.6	11	1.2	9	0.9	13	1.4	20	2.1	68	1.1
Hepatitis B-Chronic or Unspecified*	22	2.4	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	82	1.8
Hepatitis C	250	26.7	252	27.0	224	24.0	281	30.1	266	28.5	299	32.1	209	22.4	250	26.4	288	30.6	323	34.4	2642	28.2
Human Immunodeficiency Virus (HIV)	21	2.2	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	171	1.8
Direct Contact, Respiratory Routes, and Through the Provision of Health Care																						
Clostridium difficile	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	501	52.8	677	72	609	64.9	1788	68.5
Creutzfeldt-Jakob Disease - Classic	1	0.1	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	16	0.2
Encephalitis - Viral	1	0.1	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	11	0.1
Group A Streptococcal Disease Invasive*	26	2.8	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	83	0.9
Group A Streptococcal Disease Invasive-Severe*	0	0.0	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	50	0.5
Group A Streptococcal Disease Invasive-non-Severe*	0	0.0	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	72	0.8
Group B Streptococcal Disease of the Newborn	0	0.0	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	19	0.2
Legionellosis	2	0.2	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	11	0.1
Meningitis - Bacterial	4	0.4	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	23	0.2
Meningitis - Viral	6	0.6	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	122	1.3
Meningococcal Disease Invasive	2	0.2	4	0.4	4	0.4	8	0.9	4	0.4	3	0.3	3	0.3	3	0.3	0	0.0	3	0.3	34	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	759	81.1	849	90.8	951	101.8	1013	108.6	888	95.2	917	98.3	840	90.1	838	88.3	791	84.1	644	68.6	8490	90.7
Pneumococcal Disease Invasive	27	2.9	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	377	4.0
Tuberculosis	6	0.6	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	77	0.8
Vancomycin resistant Enterococcus (VRE)	35	3.7	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	256	2.7
Enteric, Foodborne, and Waterborne Diseases																						
Amebiasis	10	1.1	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	69	0.8
Botulism	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
Campylobacteriosis	125	13.4	132	14.1	133	14.2	159	17.0	123	13.2	151	16.2	185	19.8	188	19.8	172	18.3	180	19.2	1548	16.5
Cryptosporidiosis	18	1.9	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	166	1.8
Cyclosporiasis	0	0.0	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	13	0.1
Giardiasis	108	11.5	106	11.3	74	7.9	107	11.5	76	8.1	68	7.3	66	7.1	96	10.1	96	10.2	90	9.6	887	9.5
Hepatitis A	5	0.5	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	48	0.5
Hepatitis E	0	0.0	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	1	0.0
Listeriosis - Invasive	5	0.5	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	52	0.5
Salmonellosis	123	13.1	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	1421	15.2
Shellfish Poisoning	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
Shigellosis	19	2.0	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	91	1.0
Typhoid	0	0.0	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	10	0.1
Verotoxigenic E. coli	14	1.5	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	136	1.5
Yersiniosis	2	0.2	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	29	0.3
Sexually Transmitted Infections																						
Chlamydia	1745	186.4	1762	188.4	1788	191.4	2033	217.9	1982	212.5	2230	239.1	2478	265.7	2614	275.5	2466	262.1	2628	279.9	21726	231.9
Gonorrhea	104	11.1	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	1076	11.5
Lymphogranuloma Venereum	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	0	0.0	1	0.0
Syphilis - Infectious	5	0.5	2	0.2	3	0.3	4	0.4	22	2.4	20	2.1	36	3.9	68	7.2	84	8.9	63	6.7	307	3.3
Syphilis - Non-Infectious or Stage Pending	10	1.1	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	123	1.3
Vaccine Preventable Diseases																						
Acute Flaccid Paralysis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.0
Haemophilus influenzae Type b Invasive Disease	1	0.1	0	0.0	0	0.0	1	1.0	0.0	0.0	1	0.1	1	0.1	1	0.1	1	0.1	0	0.0	6	0.2
Mumps	30	3.2	6	0.6	595	63.7	5	5.0	1.0	0.1	1	0.1	0	0.0	0	0.0	2	0.2	1	0.1	641	7.3
Pertussis	25	2.7	48	5.1	33	3.5	14	14.0	18.0	1.9	6	0.6	3	0.3	22	2.3	4	0.4	11	1.2	184	3.2
Rubella	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	0.0	0	0.0	1	0.0
Tetanus	0	0.0	0	0.0	0	0.0	0	0.0	0.0	0.0	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.0
Vectorborne and Other Zoonoses																						
Lyme Disease - Confirmed	2	0.2	4	0.4	6	0.6	9	1.0	12	1.3	13	1.4	35	3.8	35	3.7	121	12.9	68	7.2	305	3.3
Lyme Disease - Probable	0	0.0	0	0.0	0	0.0	4	0.4	5	0.5	4	0.4	22	2.4	17	1.8	35	3.7	47	5.0	134	1.4
Malaria	3	0.3	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	27	0.3
Q-Fever	5	0.5	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	36	0.4
Toxoplasmosis	0	0.0	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	16	0.2
West Nile Virus	1	0.1	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	3	0.0
Total Number	3538		3642		4217		4123		3766		4167		4387		5181		5278		5267		43550	

Notes: *From 2009-2014, hepatitis B cases are reported as either Chronic or Acute. From 2005-2008, unspecified hepatitis B cases were also reported. Severe and non-Severe cases of Group A Streptococcal Disease Invasive are reported together for 2005-2008. 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 2a: Notifiable diseases reported in Nova Scotia in 2014 by District Health Authority (DHA): Number of reports

Condition	Region and District Health Authority												Total	
	Western Region				Northern Region				Eastern Region			Capital Region		
	SSH	SWDHA	AVDHA	Total	CEHHA	CHA	PCHA	Total	GASHA	CBDHA	Total	CDHA		
Bloodborne Pathogens														
Acquired Immune Deficiency Syndrome (AIDS)	0	0	0	0	0	0	0	0	0	0	1	1	1	2
Hepatitis B - Acute	0	1	0	1	0	0	0	0	0	0	2	2	1	4
Hepatitis B - Chronic	0	1	0	1	0	1	0	1	1	1	2	16	20	
Hepatitis C	8	6	15	29	35	38	6	79	4	102	106	109	323	
Human Immunodeficiency Virus (HIV)	0	0	0	0	0	0	0	0	1	0	1	9	10	
Direct Contact, Respiratory Routes, and Through the Provision of Health Care														
Clostridium difficile	47	45	42	134	35	8	19	62	14	144	158	255	609	
Creutzfeldt-Jakob Disease - Classic	1	0	0	1	0	0	0	0	0	0	0	1	2	
Encephalitis - Viral	0	0	0	0	0	0	1	1	0	0	0	0	1	
Group A Streptococcal Disease Invasive-Severe	1	1	0	2	3	0	0	3	0	2	2	1	8	
Group A Streptococcal Disease Invasive-Non-Severe	0	1	1	2	4	0	2	6	0	1	1	5	14	
Group B Streptococcal Disease of the Newborn	0	1	0	1	0	0	0	0	0	0	0	0	1	
Legionellosis	0	0	0	0	0	0	0	0	0	0	0	3	3	
Meningitis - Bacterial	0	0	0	0	0	0	1	1	0	0	0	1	2	
Meningitis - Viral	0	0	1	1	1	1	1	3	0	0	0	11	15	
Meningococcal Disease Invasive	0	0	1	1	0	0	0	0	2	0	2	0	3	
Methicillin Resistant Staphylococcus Aureus (MRSA)	55	109	50	214	55	24	30	109	16	103	119	202	644	
Pneumococcal Disease Invasive	4	4	13	21	6	1	3	10	0	11	11	24	66	
Tuberculosis	0	0	0	0	1	0	0	1	0	0	0	6	7	
Vancomycin resistant Enterococcus (VRE)	0	1	0	1	5	0	2	7	1	1	0	1	17	
Enteric, Foodborne, and Waterborne Diseases														
Amebiasis	0	1	0	1	0	0	0	0	0	0	0	2	3	
Botulism	0	0	0	0	0	0	0	0	0	0	0	0	0	
Campylobacteriosis	18	13	24	55	16	4	7	27	8	4	12	86	180	
Cryptosporidiosis	1	0	6	7	8	0	6	14	1	1	2	9	32	
Cyclosporiasis	0	0	0	0	0	0	0	0	0	0	0	1	1	
Giardiasis	10	7	9	26	5	5	2	12	3	8	11	41	90	
Hepatitis A	0	0	0	0	0	0	0	0	1	0	1	2	3	
Hepatitis E	0	0	0	0	0	0	0	0	0	0	0	0	0	
Listeriosis - Invasive	1	0	0	1	0	0	0	0	0	0	0	4	5	
Salmonellosis	21	20	14	55	15	12	8	35	13	23	36	78	204	
Shellfish Poisoning	0	0	0	0	0	0	0	0	0	0	0	0	0	
Shigellosis	0	1	0	1	2	0	0	2	0	0	0	6	9	
Typhoid*	0	0	0	0	0	0	0	0	0	1	1	1	2	
Verotoxigenic E. coli	1	0	1	2	0	0	3	3	1	0	1	4	10	
Yersiniosis	0	0	0	0	0	1	0	1	0	0	0	1	2	
Sexually Transmitted Infections														
Chlamydia	100	97	198	395	175	59	27	261	96	196	292	1680	2628	
Gonorrhoea	1	3	9	13	3	1	5	9	1	0	1	90	113	
Lymphogranuloma Venereum	0	0	0	0	0	0	0	0	0	0	0	0	0	
Syphilis - Infectious	1	0	3	4	2	2	1	5	0	4	4	50	63	
Syphilis - Non-Infectious or Stage Pending	1	2	0	3	0	1	0	1	0	4	4	29	37	
Vaccine Preventable Diseases														
Acute Flaccid Paralysis	0	0	0	0	1	0	0	1	0	0	0	0	1	
Haemophilus influenzae Type b Invasive Disease	0	0	0	0	0	0	0	0	0	0	0	0	0	
Mumps	0	0	0	0	0	0	0	0	0	0	0	1	1	
Pertussis	0	1	1	2	1	0	0	1	0	0	0	8	11	
Rubella	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	
Vectorborne and Other Zoonoses														
Lyme Disease - Confirmed	40	9	2	51	0	0	2	2	1	1	2	13	68	
Lyme Disease - Probable	32	9	0	41	0	1	0	1	0	0	0	5	47	
Malaria	0	1	1	2	0	0	0	0	0	0	0	1	3	
Q-Fever	0	0	0	0	0	0	0	0	0	0	0	0	0	
Toxoplasmosis	0	0	0	0	0	0	0	0	0	1	1	2	3	
West Nile Virus	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	343	334	391	1068	373	159	126	658	164	610	774	2767	5267	

Notes: Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table. SSH = South Shore Health, SWDHA = South West District Health Authority, AVDHA = Annapolis Valley District Health Authority, CEHHA = Colchester East Hants Health Authority, CHA = Cumberland Health Authority, PCHA = Pictou County Health Authority, GASHA = Guysborough Antigonish Strait Health Authority, CBDHA = Cape Breton District Health Authority, CDHA = Capital District Health Authority.

TABLE 2b: Notifiable diseases reported in Nova Scotia in 2014 by District Health Authority (DHA): Crude rates per 100,000 population

Condition	Region and District Health Authority													Total NS
	Western Region				Northern Region				Eastern Region			Capital Region		
	SSH	SWDHA	AVDHA	Total	CEHHA	CHA	PCHA	Total	GASHA	CBDHA	Total	CDHA		
Bloodborne Pathogens														
Acquired Immune Deficiency Syndrome (AIDS)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.2	0.2	0.2
Hepatitis B - Acute	0.0	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	1.7	1.2	0.2	0.2	0.4
Hepatitis B - Chronic	0.0	1.8	0.0	0.5	0.0	2.9	0.0	0.6	2.2	0.8	1.2	3.8	2.1	2.1
Hepatitis C	13.7	10.6	18.3	14.7	48.1	111.4	12.5	51.0	8.7	85.3	64.0	25.9	34.4	34.4
Human Immunodeficiency Virus (HIV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.6	2.1	1.1	1.1
Direct Contact, Respiratory Routes, and Through the Provision of Health Care														
Clostridium difficile	80.6	79.9	51.2	68.1	48.1	23.4	39.6	40.0	30.3	120.4	95.3	60.5	64.9	64.9
Creutzfeldt-Jakob Disease - Classic	1.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Encephalitis - Viral	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	0.0	0.0	0.0	0.1	0.1
Group A Streptococcal Disease Invasive-Severe	1.7	1.8	0.0	1.0	4.1	0.0	0.0	1.9	0.0	1.7	1.2	0.2	0.9	0.9
Group A Streptococcal Disease Invasive-Non-Severe	0.0	1.8	1.2	1.0	5.5	0.0	4.2	3.9	0.0	0.8	0.6	1.2	1.5	1.5
Group B Streptococcal Disease of the Newborn	0.0	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Legionellosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.3
Meningitis - Bacterial	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.6	0.0	0.0	0.0	0.2	0.2	0.2
Meningitis - Viral	0.0	0.0	1.2	0.5	1.4	2.9	2.1	1.9	0.0	0.0	0.0	2.6	1.6	1.6
Meningococcal Disease Invasive	0.0	0.0	1.2	0.5	0.0	0.0	0.0	0.0	4.3	0.0	1.2	0.0	0.3	0.3
Methicillin Resistant Staphylococcus Aureus (MRSA)	94.3	193.4	61.0	108.8	75.6	70.3	62.6	70.4	34.7	86.1	71.8	47.9	68.6	68.6
Pneumococcal Disease Invasive	6.9	7.1	15.9	10.7	8.2	2.9	6.3	6.5	0.0	9.2	6.6	5.7	7.0	7.0
Tuberculosis	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.6	0.0	0.0	0.0	1.4	0.7	0.7
Vancomycin resistant Enterococcus (VRE)	0.0	1.8	0.0	0.5	6.9	0.0	4.2	4.5	2.2	0.0	0.6	1.9	1.8	1.8
Enteric, Foodborne, and Waterborne Diseases														
Amebiasis	0.0	1.8	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.3
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	0.0	0.0
Campylobacteriosis	30.9	23.1	29.3	28.0	22.0	11.7	14.6	17.4	17.3	3.3	7.2	20.4	19.2	19.2
Cryptosporidiosis	1.7	0.0	7.3	3.6	11.0	0.0	12.5	9.0	2.2	0.8	1.2	2.1	3.4	3.4
Cyclosporiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Giardiasis	17.1	12.4	11.0	13.2	6.9	14.7	4.2	7.8	6.5	6.7	6.6	9.7	9.6	9.6
Hepatitis A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.6	0.5	0.3	0.3
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	0.0	0.0
Listeriosis - Invasive	1.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	0.5
Salmonellosis	36.0	35.5	17.1	28.0	20.6	35.2	16.7	22.6	28.2	19.2	21.7	18.5	21.7	21.7
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	0.0	0.0
Shigellosis	0.0	1.8	0.0	0.5	2.7	0.0	0.0	1.3	0.0	0.0	0.0	1.4	1.0	1.0
Typhoid*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.2	0.2	0.2
Verotoxigenic E. coli	1.7	0.0	1.2	1.0	0.0	0.0	6.3	1.9	2.2	0.0	0.6	0.9	1.1	1.1
Yersiniosis	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.6	0.0	0.0	0.0	0.2	0.2	0.2
Sexually Transmitted Infections														
Chlamydia	171.4	172.1	241.6	200.9	240.4	172.9	56.3	168.6	208.0	163.9	176.2	398.5	279.9	279.9
Gonorrhoea	1.7	5.3	11.0	6.6	4.1	2.9	10.4	5.8	2.2	0.0	0.6	21.3	12.0	12.0
Lymphogranuloma Venereum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Syphilis - Infectious	1.7	0.0	3.7	2.0	2.7	5.9	2.1	3.2	0.0	3.3	2.4	11.9	6.7	6.7
Syphilis - Non-Infectious or Stage Pending	1.7	3.5	0.0	1.5	0.0	2.9	0.0	0.6	0.0	3.3	2.4	6.9	3.9	3.9
Vaccine Preventable Diseases														
Acute Flaccid Paralysis	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.1	0.1
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	0.0	0.0	0.0	0.0
Mumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1
Pertussis	0.0	1.8	1.2	1.0	1.4	0.0	0.0	0.6	0.0	0.0	0.0	1.9	1.2	1.2
Rubella	0.0	0.0	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	0.0	0.0
Vectorborne and Other Zoonoses														
Lyme Disease - Confirmed	68.6	16.0	2.4	25.9	0.0	0.0	4.2	1.3	2.2	0.8	1.2	3.1	7.2	7.2
Lyme Disease - Probable	54.8	16.0	0.0	20.8	0.0	2.9	0.0	0.6	0.0	0.0	0.0	1.2	5.0	5.0
Malaria	0.0	1.8	1.2	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3
Q-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	0.0	0.0
Toxoplasmosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.5	0.3	0.3
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	0.0	0.0

Notes: Notifiable diseases with no reported cases in the last 10 years and influenza cases are not included in this table. SSH = South Shore Health, SWDHA = South West District Health Authority, AVDHA = Annapolis Valley District Health Authority, CEHHA = Colchester East Hants Health Authority, CHA = Cumberland Health Authority, PCHA = Pictou County Health Authority, GASHA = Guysborough Antigonish Strait Health Authority, CBDHA = Cape Breton District Health Authority, CDHA = Capital District Health Authority.

TABLE 3: Notifiable diseases reported in Nova Scotia in 2014 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
Bloodborne Pathogens														
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.4	2	0.2
Hepatitis B - Acute	0	0.0	0	0.0	0	0.0	1	0.6	2	0.7	1	0.4	4	0.4
Hepatitis B - Chronic	0	0.0	1	1.1	3	2.6	10	5.8	3	1.1	3	1.3	20	2.1
Hepatitis C	2	5.1	0	0.0	78	66.7	132	76.9	91	32.3	20	8.4	323	34.4
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	3	2.6	2	1.2	5	1.8	0	0.0	10	1.1
Direct Contact, Respiratory Routes, and Through the Provision of Health Care														
Clostridium difficile	14	35.6	15	16.7	23	19.7	51	29.7	127	45.1	378	157.8	609	64.9
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.8	2	0.2
Encephalitis - Viral	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1
Group A Streptococcal Disease Invasive-Severe	1	2.5	0	0.0	1	0.9	1	0.6	2	0.7	3	1.3	8	0.9
Group A Streptococcal Disease Invasive-Non-Severe	2	5.1	1	1.1	0	0.0	0	0.0	3	1.1	8	3.3	14	1.5
Group B Streptococcal Disease of the Newborn	1	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Legionellosis	0	0.0	0	0.0	0	0.0	0	0.0	3	1.1	0	0.0	3	0.3
Meningitis - Bacterial	1	2.5	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	2	0.2
Meningitis - Viral	6	15.3	1	1.1	1	0.9	4	2.3	3	1.1	0	0.0	15	1.6
Meningococcal Disease Invasive	1	2.5	0	0.0	1	0.9	0	0.0	1	0.4	0	0.0	3	0.3
Methicillin Resistant Staphylococcus Aureus (MRSA)	18	45.8	13	14.5	30	25.7	56	32.6	117	41.5	409	170.8	644	68.6
Pneumococcal Disease Invasive	0	0.0	0	0.0	2	1.7	5	2.9	24	8.5	35	14.6	66	7.0
Tuberculosis	0	0.0	0	0.0	1	0.9	5	2.9	1	0.4	0	0.0	7	0.7
Vancomycin resistant Enterococcus (VRE)	0	0.0	0	0.0	0	0.0	1	0.6	5	1.8	11	4.6	17	1.8
Enteric, Foodborne, and Waterborne Diseases														
Amebiasis	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	1	0.4	3	0.3
Botulism	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Campylobacteriosis	10	25.5	8	8.9	26	22.2	37	21.5	61	21.7	38	15.9	180	19.2
Cryptosporidiosis	2	5.1	4	4.5	7	6.0	9	5.2	8	2.8	2	0.8	32	3.4
Cyclosporiasis	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Giardiasis	5	12.7	6	6.7	9	7.7	22	12.8	31	11.0	17	7.1	90	9.6
Hepatitis A	0	0.0	0	0.0	3	2.6	0	0.0	0	0.0	0	0.0	3	0.3
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	1	2.5	0	0.0	0	0.0	0	0.0	0	0.0	4	1.7	5	0.5
Salmonellosis	16	40.7	17	19.0	20	17.1	32	18.6	64	22.7	55	23.0	204	21.7
Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shigellosis	0	0.0	0	0.0	2	1.7	2	1.2	4	1.4	1	0.4	9	1.0
Typhoid*	0	0.0	1	1.1	0	0.0	0	0.0	0	0.0	1	0.4	2	0.2
Verotoxigenic E. coli	0	0.0	2	2.2	2	1.7	2	1.2	2	0.7	2	0.8	10	1.1
Yersiniosis	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	1	0.4	2	0.2
Sexually Transmitted Infections														
Chlamydia	1	2.5	14	15.6	1805	1543.6	725	422.2	81	28.7	2	0.8	2628	279.9
Gonorrhoea	0	0.0	0	0.0	61	52.2	42	24.5	10	3.5	0	0.0	113	12.0
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Syphilis - Infectious	0	0.0	0	0.0	19	16.2	27	15.7	15	5.3	2	0.8	63	6.7
Syphilis - Non-Infectious or Stage Pending	0	0.0	0	0.0	6	5.1	14	8.2	13	4.6	4	1.7	37	3.9
Vaccine Preventable Diseases														
Acute Flaccid Paralysis	1	2.5	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
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	0	0.0	1	0.9	0	0.0	0	0.0	0	0.0	1	0.1
Pertussis	6	15.3	0	0.0	2	1.7	0	0.0	3	1.1	0	0.0	11	1.2
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
Vectorborne and Other Zoonoses														
Lyme Disease - Confirmed	0	0.0	7	7.8	2	1.7	8	4.7	20	7.1	31	12.9	68	7.2
Lyme Disease - Probable	2	5.1	5	5.6	3	2.6	7	4.1	11	3.9	19	7.9	47	5.0
Malaria	0	0.0	0	0.0	0	0.0	3	1.7	0	0.0	0	0.0	3	0.3
Q-Fever	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Toxoplasmosis	0	0.0	0	0.0	1	0.9	1	0.6	0	0.0	1	0.4	3	0.3
West Nile Virus	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	90		95		2112		1201		715		1052		5267	

Notes: Excludes 1 *C. difficile* and 1 MRSA 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 2014: Number of reports and sex-specific rates per 100,000 population

Condition	Sex				Total NS	
	Female		Male		n	Rate
	n	Rate	n	Rate		
Bloodborne Pathogens						
Acquired Immune Deficiency Syndrome (AIDS)	0	0.0	2	0.4	2	0.2
Hepatitis B - Acute	1	0.2	3	0.7	4	0.4
Hepatitis B - Chronic	6	1.3	14	3.0	20	2.1
Hepatitis C	116	24.2	207	45.0	323	34.4
Human Immunodeficiency Virus (HIV)	0	0.0	10	2.2	10	1.1
Direct Contact, Respiratory Routes, and Through the Provision of Health Care						
Clostridium difficile	345	72.0	264	57.4	609	64.9
Creutzfeldt-Jakob Disease - Classic	1	0.2	1	0.2	2	0.2
Encephalitis - Viral	0	0.0	1	0.2	1	0.1
Group A Streptococcal Disease Invasive-Severe	5	1.0	3	0.7	8	0.9
Group A Streptococcal Disease Invasive-Non-Severe	9	1.9	5	1.1	14	1.5
Group B Streptococcal Disease of the Newborn	1	0.2	0	0.0	1	0.1
Legionellosis	1	0.2	2	0.4	3	0.3
Meningitis - Bacterial	1	0.2	1	0.2	2	0.2
Meningitis - Viral	6	1.3	9	2.0	15	1.6
Meningococcal Disease Invasive	0	0.0	3	0.6	3	0.3
Methicillin Resistant Staphylococcus Aureus (MRSA)	314	65.5	330	71.8	644	68.6
Pneumococcal Disease Invasive	26	5.4	40	8.7	66	7.0
Tuberculosis	1	0.2	6	1.3	7	0.7
Vancomycin resistant Enterococcus (VRE)	10	2.1	7	1.5	17	1.8
Enteric, Foodborne, and Waterborne Diseases						
Amebiasis	2	0.4	1	0.2	3	0.3
Botulism	0	0.0	0	0.0	0	0.0
Campylobacteriosis	86	17.9	94	20.5	180	19.2
Cryptosporidiosis	22	4.6	10	2.2	32	3.4
Cyclosporiasis	1	0.2	0	0.0	1	0.1
Giardiasis	34	7.1	56	12.2	90	9.6
Hepatitis A	0	0.0	3	0.7	3	0.3
Hepatitis E	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	3	0.6	2	0.4	5	0.5
Salmonellosis	109	22.7	95	20.7	204	21.7
Shellfish Poisoning	0	0.0	0	0.0	0	0.0
Shigellosis	3	0.6	6	1.3	9	1.0
Typhoid*	2	0.4	0	0.0	2	0.2
Verotoxigenic E. coli	6	1.3	4	0.9	10	1.1
Yersiniosis	2	0.4	0	0.0	2	0.2
Sexually Transmitted Infections						
Chlamydia	1783	372.1	843	183.4	2628	279.9
Gonorrhea	34	7.1	79	17.2	113	12.0
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0
Syphilis - Infectious	3	0.6	60	13.1	63	6.7
Syphilis - Non-Infectious or Stage Pending	9	1.9	28	6.1	37	3.9
Vaccine Preventable Diseases						
Acute Flaccid Paralysis	1	0.2	0	0.0	1	0.1
Haemophilus influenzae Type b Invasive Disease	0	0.0	0	0.0	0	0.0
Mumps	1	0.2	0	0.0	1	0.1
Pertussis	4	0.8	7	1.5	11	1.2
Rubella	0	0.0	0	0.0	0	0.0
Tetanus	0	0.0	0	0.0	0	0.0
Vectorborne and Other Zoonoses						
Lyme Disease - Confirmed	33	6.9	35	7.6	68	7.2
Lyme Disease - Probable	22	4.6	25	5.4	47	5.0
Malaria	0	0.0	3	0.7	3	0.3
Q-Fever	0	0.0	0	0.0	0	0.0
Toxoplasmosis	1	0.2	2	0.4	3	0.3
West Nile Virus	0	0.0	0	0.0	0	0.0
TOTAL	3004		2261		5267	

Notes: Excludes 2 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.