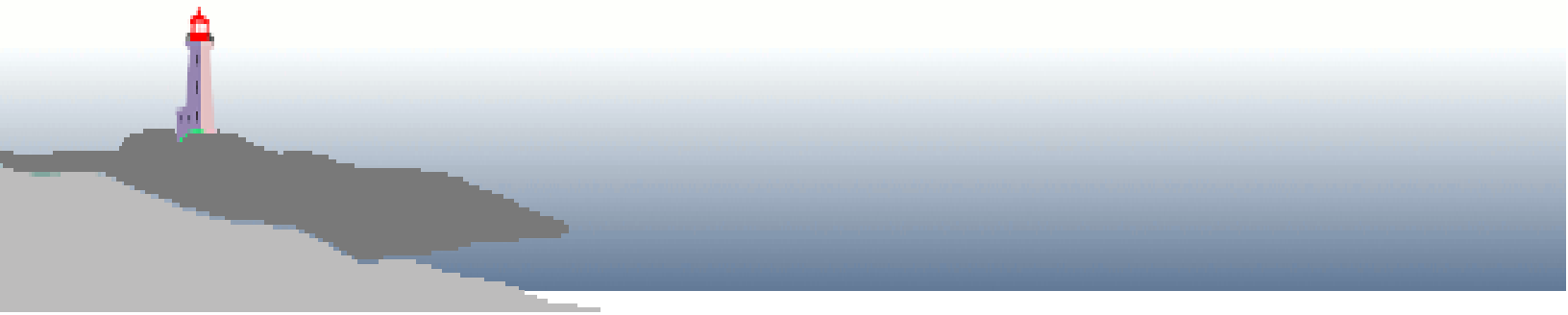




NOTIFIABLE DISEASES IN NOVA SCOTIA 2013 SURVEILLANCE REPORT

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.

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TABLE OF CONTENTS

2013 HIGHLIGHTS	4
INTRODUCTION	6
METHODS	7
LIMITATIONS	8
DISEASE REPORTS IN NOVA SCOTIA BY DISEASE GROUP.....	8
Bloodborne Pathogens.....	8
HIV & AIDS.....	8
Hepatitis B (Acute, Chronic, and Unspecified)	9
Hepatitis C	9
Other 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	14
Invasive Pneumococcal Disease	14
Invasive Meningococcal Disease	14
Invasive Group A Streptococcal Disease	14
Tuberculosis	14
Viral Meningitis	14
Other Pathogens	14
Outbreaks of Direct Contact, Respiratory Routes, and Through the Provision of Health Care	
Infections	14
Enteric, Foodborne, and Waterborne Diseases	15
Campylobacteriosis	15
Salmonellosis.....	15
Giardiasis	16
Verotoxigenic E.coli	16
Other Reportable Enteric Diseases.....	16
Sexually Transmitted Infections	16
Chlamydia.....	16
Gonorrhea	18
Syphilis.....	19
Vaccine Preventable Diseases	22
Vectorborne and Other Zoonoses.....	22
Lyme Disease	22
REFERENCES	25
APPENDIX A – Notifiable Diseases in Nova Scotia.....	26
APPENDIX B – List of Tables	27

2013 HIGHLIGHTS

A total of 5,723 cases of notifiable diseases were reported in Nova Scotia in 2013. 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 (46.7%), Methicillin Resistant Staphylococcus Aureus (MRSA) (15.2%) and Clostridium difficile (12.7%) were the three most frequently reported diseases (Figure 2). Two of the top three most frequently reported diseases were healthcare associated infections.

Influenza cases are not described 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 website: (<http://novascotia.ca/dhw/populationhealth/>).

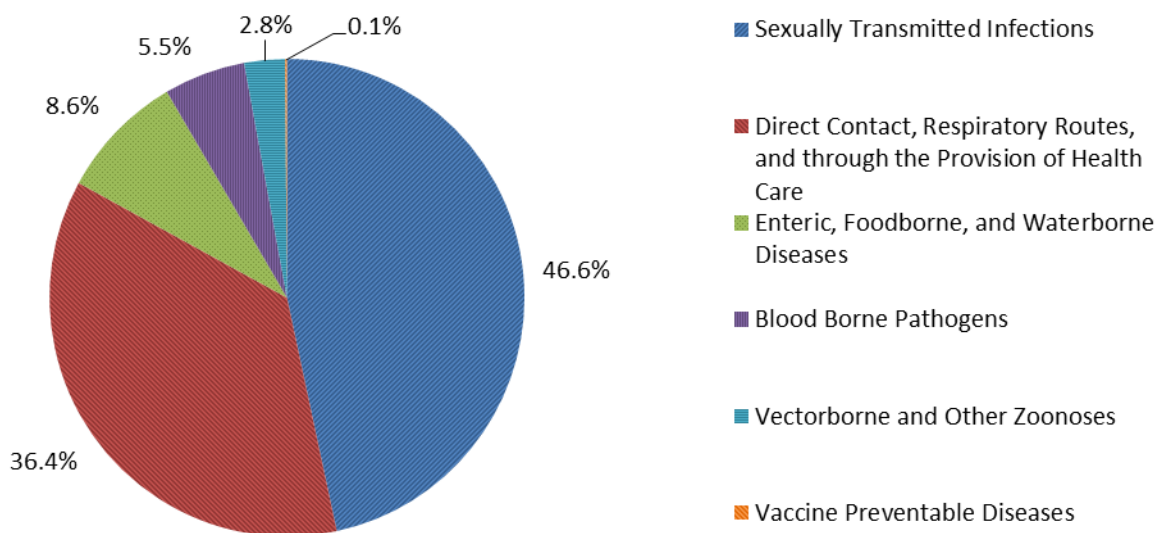
Lyme Disease

The number of cases of Lyme disease reported in 2013 was almost three times higher compared to 2012. The addition of another endemic area in 2012, along with increased awareness among the public and health professionals in DHAs 1, 2 and 3 likely contributed to this increase. Active surveillance of blacklegged tick populations in Nova Scotia continued in 2013 and will support the tracking of tick populations in the province.

Syphilis

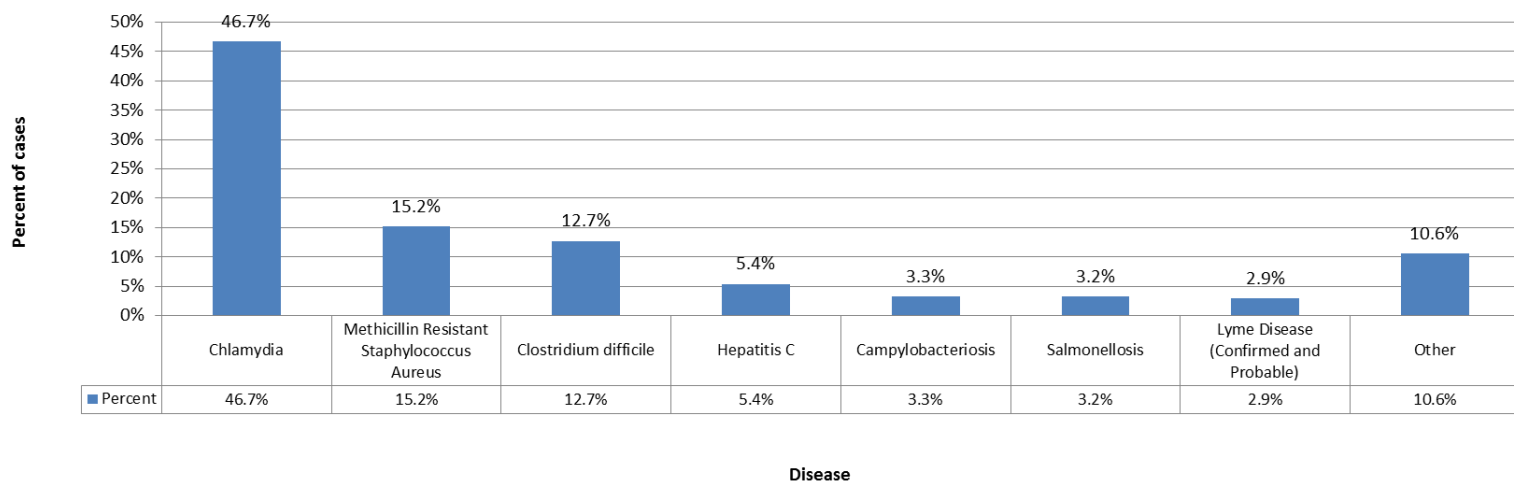
The outbreak of syphilis in Capital District Health Authority is still ongoing. The number of cases reported in 2013 was 70. An evaluation of the social media campaign related to this outbreak was completed in 2013.

Figure 1: Distribution of notifiable diseases reported in Nova Scotia by disease category, 2013



Note: The “Direct Contact, Respiratory Routes, and through the Provision of Health Care” category in this figure includes influenza cases (n=443). Influenza cases are not described further in this report.

Figure 2: Summary of most frequently reported notifiable diseases in Nova Scotia, 2013



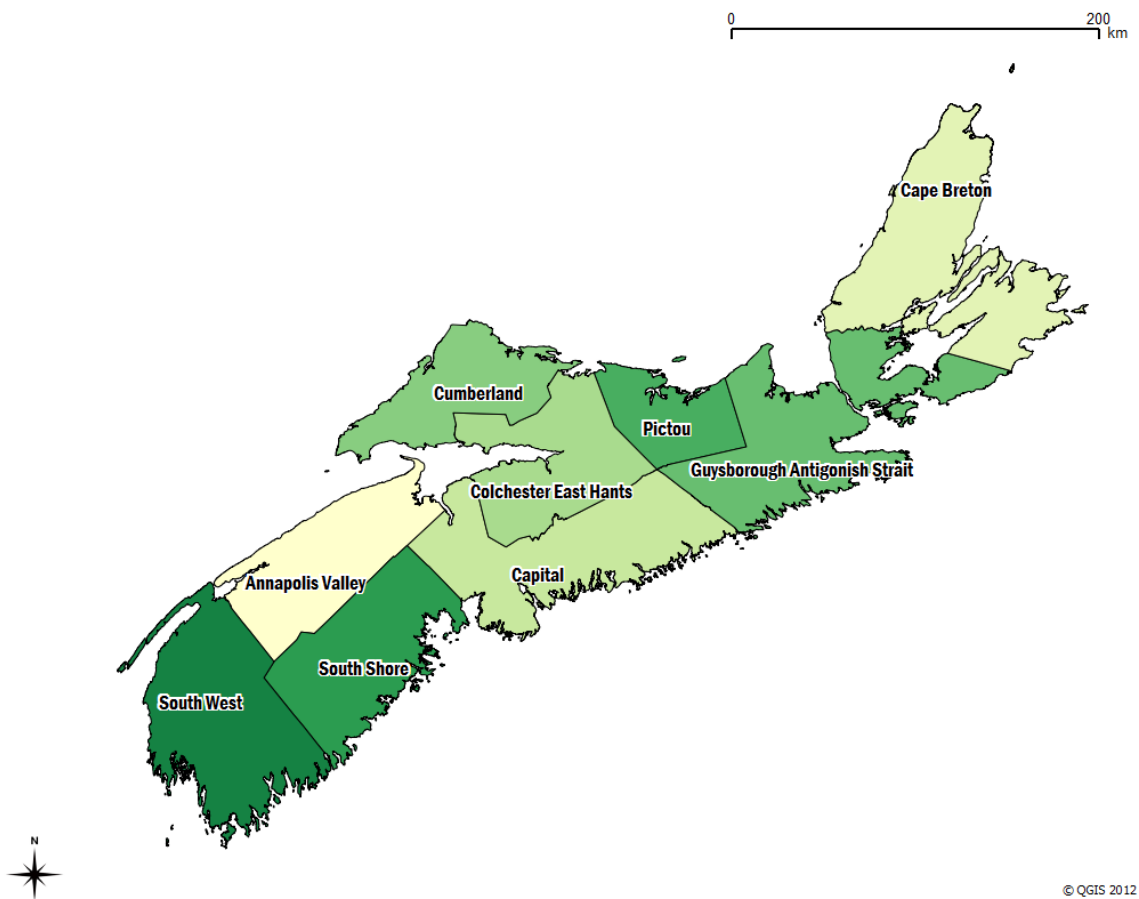
INTRODUCTION

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 2013. The report was compiled by the Population Health Assessment and Surveillance (PHAS) Division, Nova Scotia Department of Health and Wellness (DHW). It includes highlights of notifiable disease data for 2013, examines important trends between 2004-2013 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 (Figure 3), sex, and age groups are also provided for 2013.

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 demographic, clinical, exposure, treatment, and laboratory information about notifiable disease cases.

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 enhanced 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 Chapter 6 of 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 2014). 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 2012. Therefore, comparisons between Nova Scotia and Canada are based on 2012 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 Population Health Assessment and Surveillance website (<http://novascotia.ca/dhw/populationhealth/>).

All case data are current as of August 19, 2014.

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 and those that have a wide clinical spectrum. 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 19th, 2014. As surveillance data are provisional and may change 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 District Health Authority can be found in Appendix B.

Bloodborne Pathogens

HIV & AIDS

There were 16 newly diagnosed cases of HIV in Nova Scotia in 2013 (rate of 1.7/100,000 population) bringing the cumulative number of new diagnoses since 1985 (when the first case was reported) to 801. The Canadian rate of reported HIV cases in 2012 was 5.9/100,000 population (5). For 2012, the reported rate of HIV in Nova Scotia was below the national rate.

In 2013, 87.5% 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, 50.0% of cases), low-risk heterosexual contact (25.0%), heterosexual contact with someone at increased risk for HIV infection (HET-IR, 12.5%), injection drug use (IDU, 6.2%), and men who have had sex with men and have injected drugs (MSM/IDU, 6.2%).

No new cases of AIDS were reported in Nova Scotia in 2013.

Hepatitis B (Acute, Chronic, and Unspecified)

Previously, cases of chronic and unspecified hepatitis B were reported together. For this report, cases were reclassified into one of three categories (acute, chronic or unspecified). This reclassification was completed for cases retrospectively to 2009.

The number of reported acute cases of hepatitis B in 2013 was 5 (rate of 0.5/100,000 population).

There were 7 cases of chronic hepatitis B reported in 2013 (rate of 0.7/100,000 population) and 3 cases of unspecified hepatitis B (rate of 0.3/100,000). The overall rate for hepatitis B (acute, chronic, unspecified) in 2013 was 1.6/100,000 population.

All cases were over the age of 15 and 60% were male.

Nationally, the rates of hepatitis B are reported for acute and chronic cases combined. The 2012 Canadian rate of hepatitis B was 9.4/100,000 population (5). The rate of all acute, chronic and unspecified hepatitis B in Nova Scotia for 2012 (1.2/100,000 population) was lower compared to the Canadian rate.

Hepatitis C

In 2013, 286 cases of hepatitis C were reported in Nova Scotia (rate of 30.4/100,000 population). This rate is higher compared to the 2011 and 2012 rate (Figure 4). The national rate of reported hepatitis C cases in 2012 was 29.3/100,000 population (5). For 2012, the Nova Scotia rate was lower compared to the national rate (26.5/100,000 population).

Cumberland Health Authority (CHA) again had the highest rate of hepatitis C compared to the other district health authorities with a rate of 90.1/100,000 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 2013, 54% of reported cases in CHA were incarcerated.

Cape Breton District Health Authority (CBDHA, 66.6/100,000), Colchester East Hants Health Authority (CEHHA, 44.4/100,000) and Pictou County Health Authority (PCHA, 26.1/100,000) had the next highest rates.

Figure 4: Reported rates of hepatitis C in Nova Scotia, 2004-2013

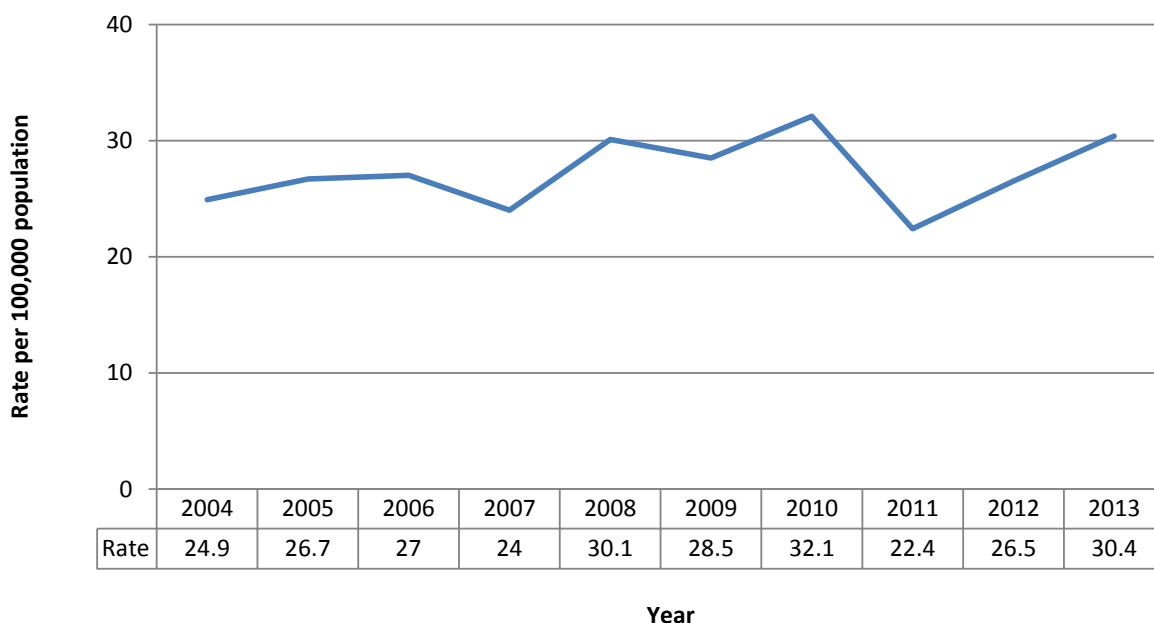
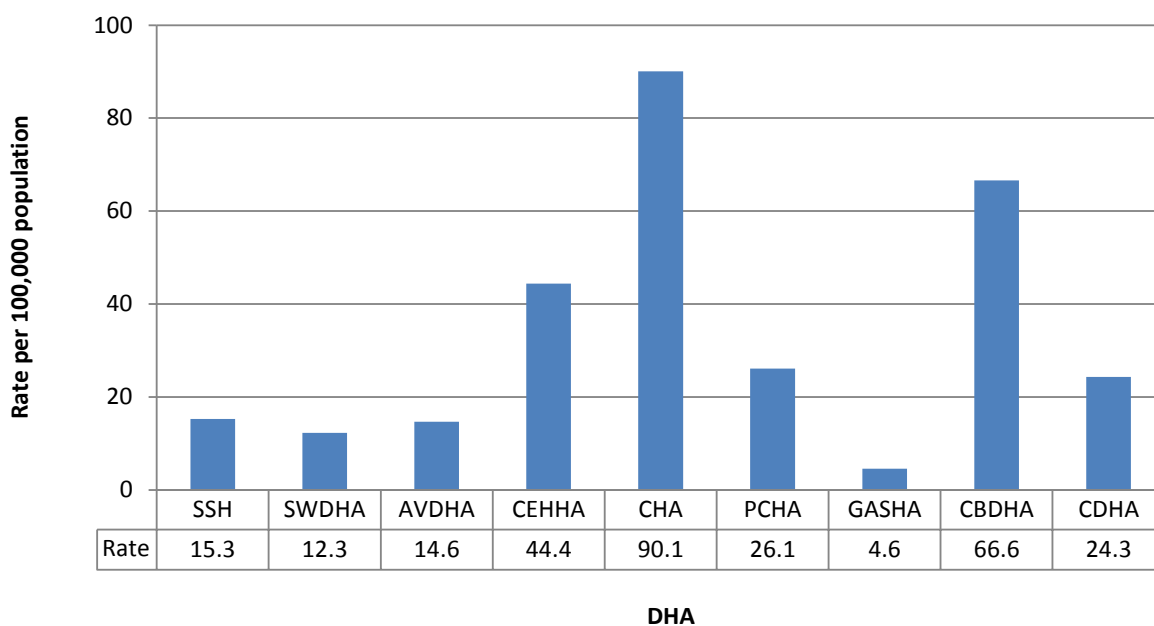


Figure 5: Reported rates of hepatitis C in Nova Scotia by District Health Authority (DHA), 2013

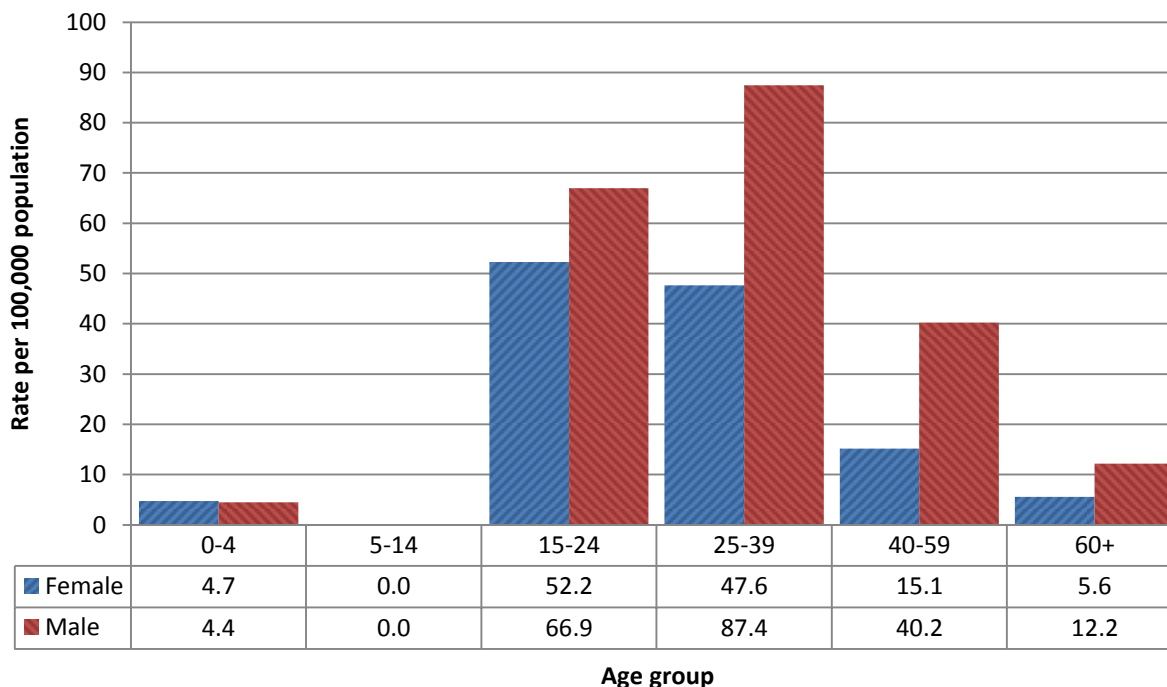


Notes: SSH = South Shore Health, SWDHA = South West District Health Authority, AVDHA = Annapolis Valley District Health Authority, CEHHA = Colchester East Hants Health Authority, CHA = Cumberland Health Authority, PCHA = Pictou County Health Authority, GASHA = Guysborough Antigonish Strait Health Authority,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

The majority of reported hepatitis C cases (92.3%) were between the ages of 15-59 years. Males had higher rates compared to females for all age groups except 0-4 years. The rate was highest among males aged 25-39 at 87.4/100,000 population (Figure 6).

The Canadian hepatitis C rate for 2012 was highest among males in the 40-59 age group at 64.4/100,000 population. Similar to Nova Scotia, the rates among males are higher than females for cases 25 years and older (5).

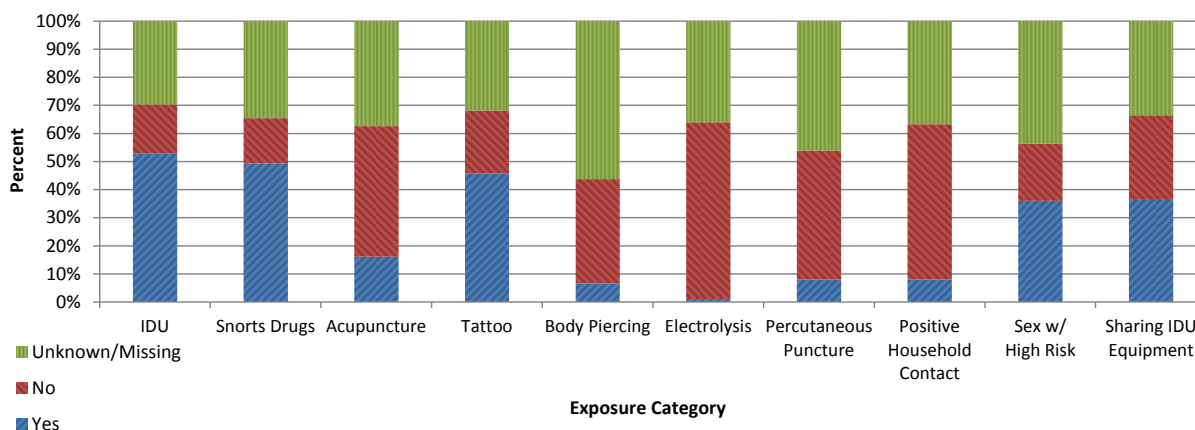
Figure 6: Reported rates of hepatitis C in Nova Scotia by age group and sex, 2013



Injection drug use continues to be the most commonly reported risk factor among hepatitis C cases. In 2013, 52.8% 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 (49.3% of cases), having a tattoo (45.8%), sex with a person at high risk for hepatitis C (36.0%), having acupuncture (16.1%), having a body piercing (6.6%), percutaneous puncture (8.0%), and having positive household contact (8.0%).

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 Pathogens

No cases of hepatitis D have been reported in Nova Scotia between 2004 and 2013.

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

There were a total of 1638 cases of respiratory, direct contact, and health care-associated infections reported in 2013.

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

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

Health Care Associated Infections

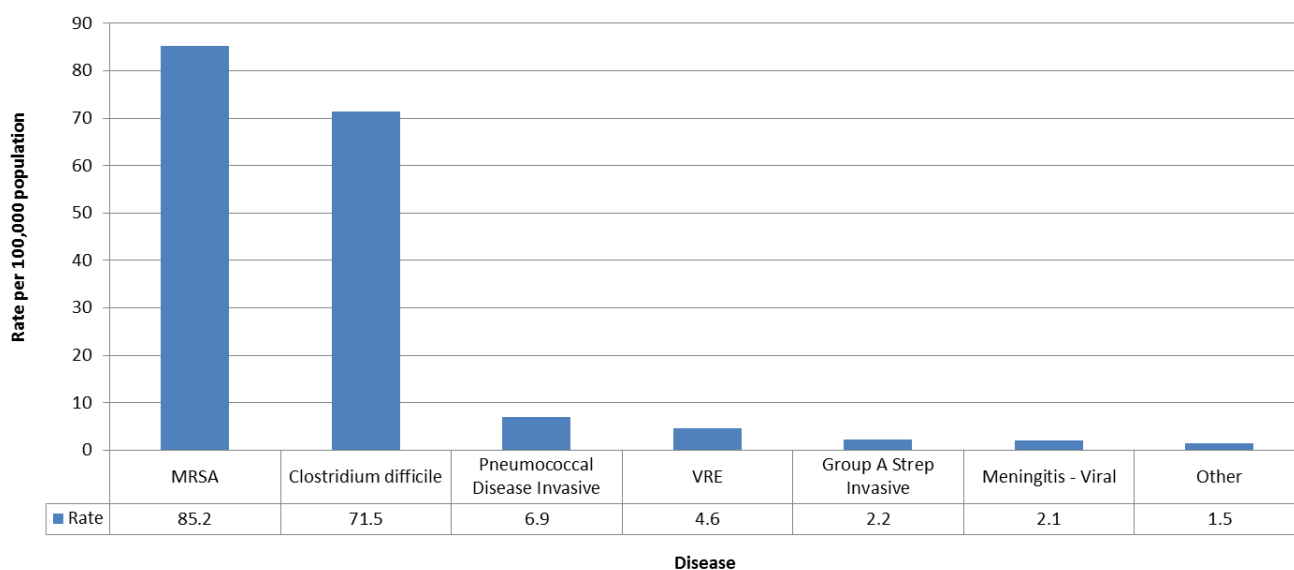
The data presented in this report reflects the total number of health care-associated infections in the province (both health care and community acquired). The current process for reporting these infections to Public Health, does not allow cases to be classified as health care or community acquired.

In 2013, Infection Prevention and Control Nova Scotia (IPCNS) implemented a protocol for the surveillance of health care-associated *C.difficile* in acute care hospitals within the province. Links to the protocol and public reporting can be found on the IPCNS website: <http://ipc.gov.ns.ca/public-reporting>.

Clostridium difficile

Clostridium difficile became a reportable disease on April 1st, 2012. The number of unique cases (> 8 weeks after the first toxin-positive assay) reported in 2013 was 673. The majority of the cases were female (59.6%) and 59.3% were aged 60 years and older. Two small outbreaks of *C.difficile* (n=9 cases) were reported in 2013.

Figure 8: Reported rates of diseases transmitted by direct contact, respiratory routes, and through the provision of health care in Nova Scotia, 2013



Methicillin Resistant Staphylococcus Aureus (MRSA)

There were 802 reported cases of MRSA in Nova Scotia in 2013. The rate was 85.2/100,000 population which is lower compared to the rate in 2012 (89.1/100,000 population). Canadian rates are not available because MRSA is not nationally reportable. The highest rate in the province in 2013 was reported in the Southwest District Health Authority (SWDHA, 233.4/100,000 population).

The majority of cases occurred in those aged 60 years and older (64.8%, n=520). This was a rate of 223.6/100,000 population. The rate among males was higher compared to females (93.7/100,000 vs. 77.1/100,000 population).

There were five small outbreaks of MRSA (n=37) reported in 2013.

Vancomycin-Resistant Enterococcus

In 2013, 43 cases of vancomycin-resistant enterococcus (VRE) were reported in Nova Scotia (rate of 4.6/100,000 population). This is lower compared to the 2012 rate of 5.2/100,000. Ninety-five percent of cases were over the age of 40 and 53.5% of the cases were male.

Two outbreaks of VRE (n=20 cases) were reported in 2013.

Direct Contact and Respiratory Routes

Invasive Pneumococcal Disease

For 2013, the rate of invasive pneumococcal disease was 6.9/100,000 (n=65). This is higher compared to the rate in 2012 (5.4/100,000, n=51). The 2012 Nova Scotia rate of 5.4/100,000 population is lower compared to the 2012 national rate of 9.8/100,000 (5). The majority of cases reported in 2013 were over the age of 40 (87.7%) and 55.4% were male.

Invasive Meningococcal Disease

There were zero cases of invasive meningococcal disease reported in 2013.

Invasive Group A Streptococcal Disease

Starting in 2013, cases of invasive group A streptococcal disease were reclassified into one of two categories: severe and non-severe. This reclassification was completed for all cases retrospectively to 2009. Previously, severe and non-severe cases were reported together.

The number of severe cases reported in 2013 was 6 (rate of 0.6/100,000 population). The number of non-severe cases reported in 2013 was 15 (rate of 1.6/100,000 population).

The overall rate of invasive group A streptococcal disease for 2013 was 2.2/100,000 (n=21) which was a slight decrease from the 2012 rate (2.5/100,000, n=25). The 2012 rate for Nova Scotia is lower compared to the 2012 national rate of 4.6/100,000 (5).

Tuberculosis

Eight cases of laboratory confirmed tuberculosis were reported in 2013 (4 pulmonary and 4 extra pulmonary). This represented a rate of 0.8/100,000 population. All cases were greater than 25 years of age and 75.0% were male. The 2012 provincial rate is lower than the 2012 Canadian rate (0.9/100,000 vs. 4.8/100,000 population) (5).

Viral Meningitis

For 2013, 20 cases of viral meningitis were reported which represents a rate of 2.1/100,000 population. This was a decrease from the 2012 rate of 4.1/100,000. Fifty percent of the reported cases were in the 0-4 age group and there was no difference between males and females.

Other Pathogens

One cases of Creutzfeldt-Jacob Disease, three cases of group B streptococcal of a newborn and 2 cases of legionellosis were reported in 2013.

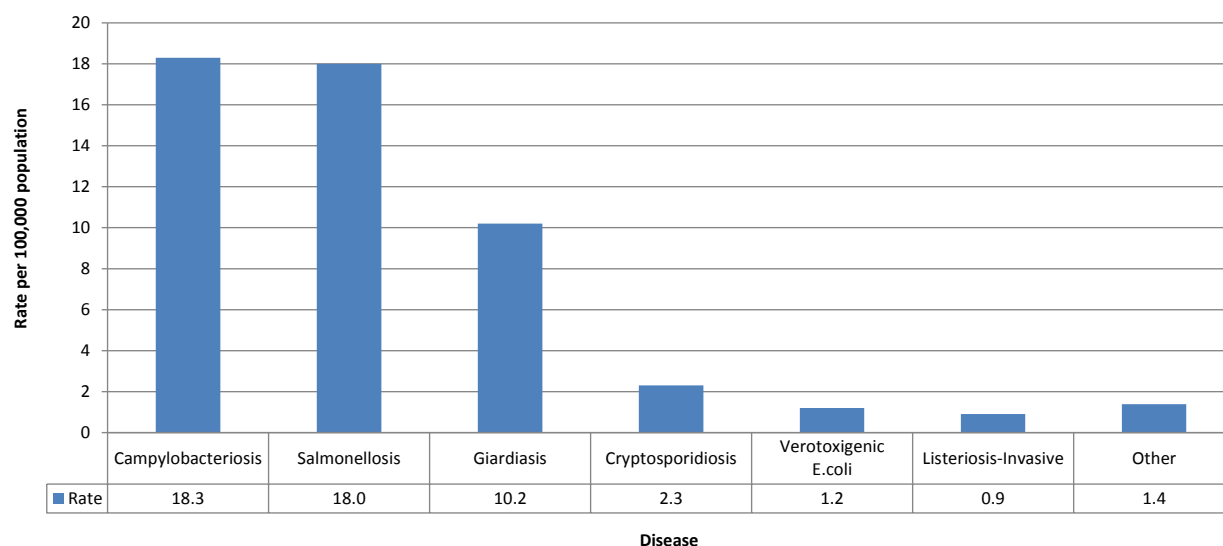
Outbreaks of Direct Contact, Respiratory Routes, and Through the Provision of Health Care Infections

The Annual Influenza Surveillance report summarizes some direct contact and respiratory infection outbreaks. Fifty-four respiratory related outbreaks were reported during the 2013-2014 influenza season. The report can be found on the Population Health Assessment and Surveillance website. (<http://novascotia.ca/dhw/populationhealth/>).

Enteric, Foodborne, and Waterborne Diseases

There were 491 cases of enteric pathogens reported in Nova Scotia in 2013. The most frequently reported enteric infections were campylobacteriosis (n=172), salmonellosis (n=169) and giardiasis (n=96). Travel was associated with 123 (25.0%) of reported enteric infections overall. Figure 9 presents the enteric disease rates for 2013.

Figure 9: Reported rates of enteric, foodborne, and waterborne diseases in Nova Scotia, 2013



Notes: Other category includes amebiasis, cyclosporiasis, yersiniosis, hepatitis A, shigellosis and typhoid.

Campylobacteriosis

As in previous years, campylobacteriosis infections were the most commonly reported enteric pathogen in Nova Scotia in 2013 (172 cases; rate of 18.3/100,000 population). This is lower compared to the rates in 2011 (19.7/100,000) and 2012 (19.7/100,000). The 2012 provincial rate is lower compared to the 2012 national rate (19.7/100,000 vs. 29.3/100,000) (5). The PCHA had the highest rate among DHAs with a rate of 30.4/100,000 population.

More than half of reported cases (n=101) were aged 40 years or older. The rate for campylobacteriosis continues to be higher among males than females (21.7/100,000 for males vs. 15.0/100,000 for females).

Salmonellosis

Salmonella infections were the second most frequently reported enteric pathogen in Nova Scotia in 2013 (169 cases; 18.0/100,000 population). The rate of salmonella infections in Nova Scotia in 2012 (15.8/100,000 population) is lower than the 2012 Canadian rate of 19.7/100,000 population (5). Seventy-six percent of cases reported in 2013 were in adults over the age of 25. The rate was higher among females compared to males (19.4/100,000 for females vs. 16.5/100,000 for males).

Giardiasis

A total of 96 cases of giardiasis were reported in Nova Scotia in 2013, representing a rate of 10.2/100,000 population. This is the same number of cases as reported in 2012. The 2012 rate of giardiasis infections reported in Nova Scotia is lower compared to the 2012 Canadian rate of 11.1/100,000 population (5). Seventy-seven percent of cases (74 of 96) were reported in people aged 25 years and older. The rate of illness was similar among males and females (10.4/100,000 for females vs. 10.0/100,000 population for males).

Verotoxigenic E.coli

A total of eleven cases of Verotoxigenic E.coli were reported in 2013 (1.2/100,000 population). The rate among females was higher than males (1.5/100,000 vs. 0.9/100,000).

Other Reportable Enteric Diseases

The rate of other reportable enteric diseases in Nova Scotia in 2013 remained low (See Appendix B, Table 1 for details).

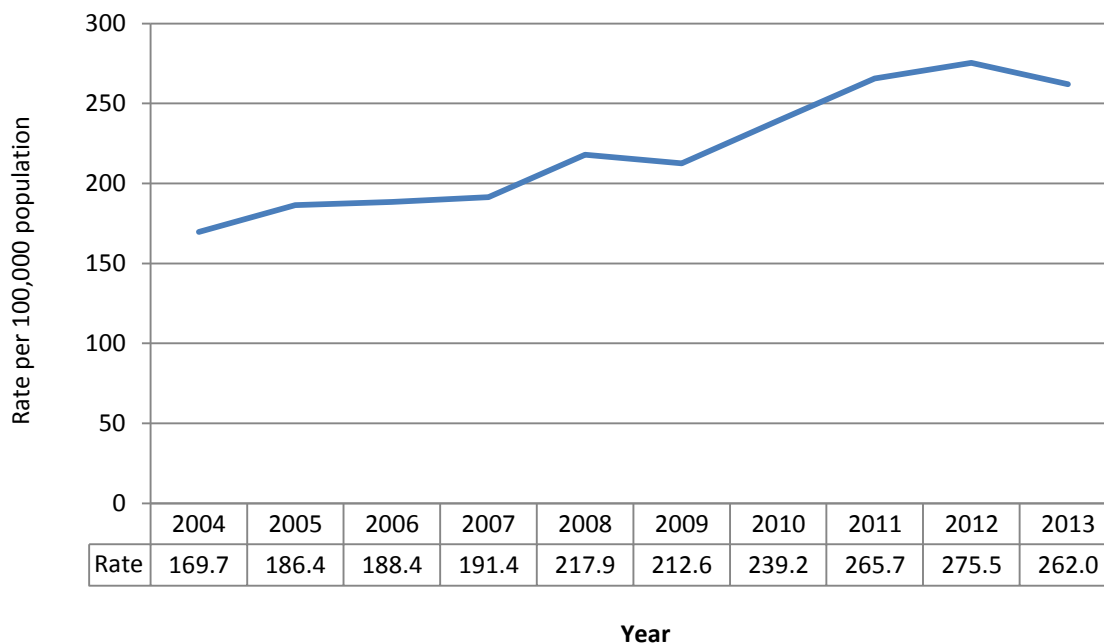
Sexually Transmitted Infections

There were 2,669 notifications of bacterial sexually transmitted infections (STI) in Nova Scotia in 2013. Chlamydia was the most frequently reported bacterial STI (n=2,465), followed by gonorrhea (n=97), then infectious syphilis (n=84). The rates of chlamydia and gonorrhea both decreased in 2013, while the rate of infectious syphilis continued to increase.

Chlamydia

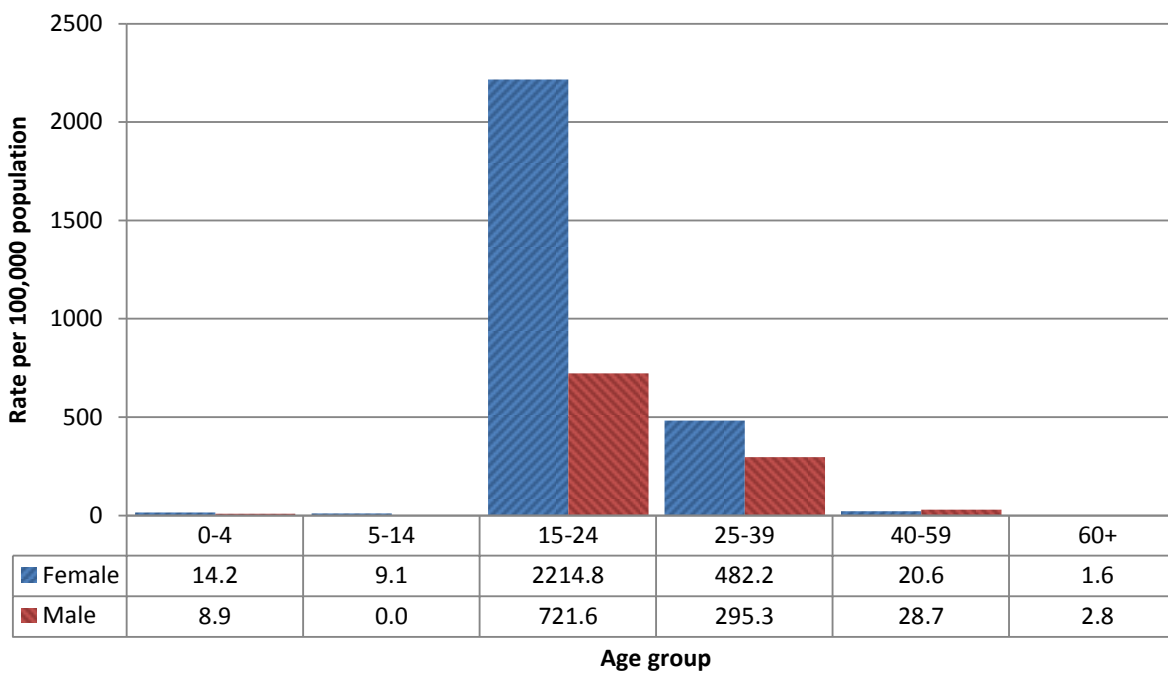
Chlamydia was the most frequently reported notifiable disease in Nova Scotia in 2013 (n=2,465, rate=262.0/100,000 population). The number of reported cases and the associated rate of chlamydia showed an increasing trend from 2004 to 2012 but the rate decreased in 2013 (Figure 10). The national rate of chlamydia continued to show an increasing trend in 2012 with a rate of 298.7/100,000 (5). The 2012 rate of reported chlamydia cases in Nova Scotia (275.5/100,000 population) was lower compared to the 2012 national rate.

Figure 10: Reported rates of chlamydia in Nova Scotia, 2004-2013



Similar to the overall rate, the rates of chlamydia among females and males has also decreased in 2013. This is the first decrease in the overall or sex-specific rates since 2009. The 2013 rate for females is 360.1/100,000 compared to 160.0/100,000 for males. As in 2012, the highest rate of chlamydia in Nova Scotia for 2013 was reported among females aged 15 to 24 years (2,214.8/100,000 population) (Figure 11). Similarly, 2012 national data show the highest rates of chlamydia in females aged 15 to 19 years (1800.4/100,000 population) and 20 to 24 years (2151.7/100,000 population) (5).

Figure 11: Reported rates of chlamydia in Nova Scotia by age group and sex, 2013



Gonorrhoea

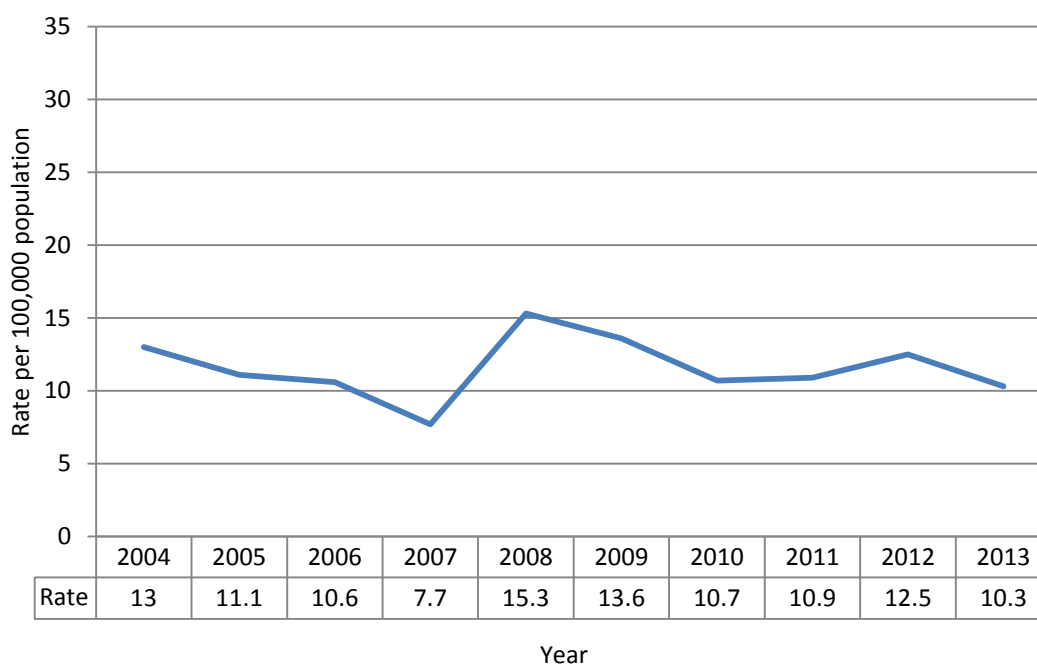
For 2013, 97 cases of gonorrhoea were reported in Nova Scotia (rate of 10.3/100,000 population). This is a decrease from the rate of 12.5/100,000 population in 2012 which is also lower compared to the 2012 Canadian rate of 36.2/100,000 population (5).

The reported rates of gonorrhoea for 2013 among females and males were 7.9/100,000 population and 12.8/100,000 population, respectively.

In 2013 the highest rate of gonorrhoea in Nova Scotia was reported among females aged 15 to 24 years (48.8/100,000 population) (Figure 13).

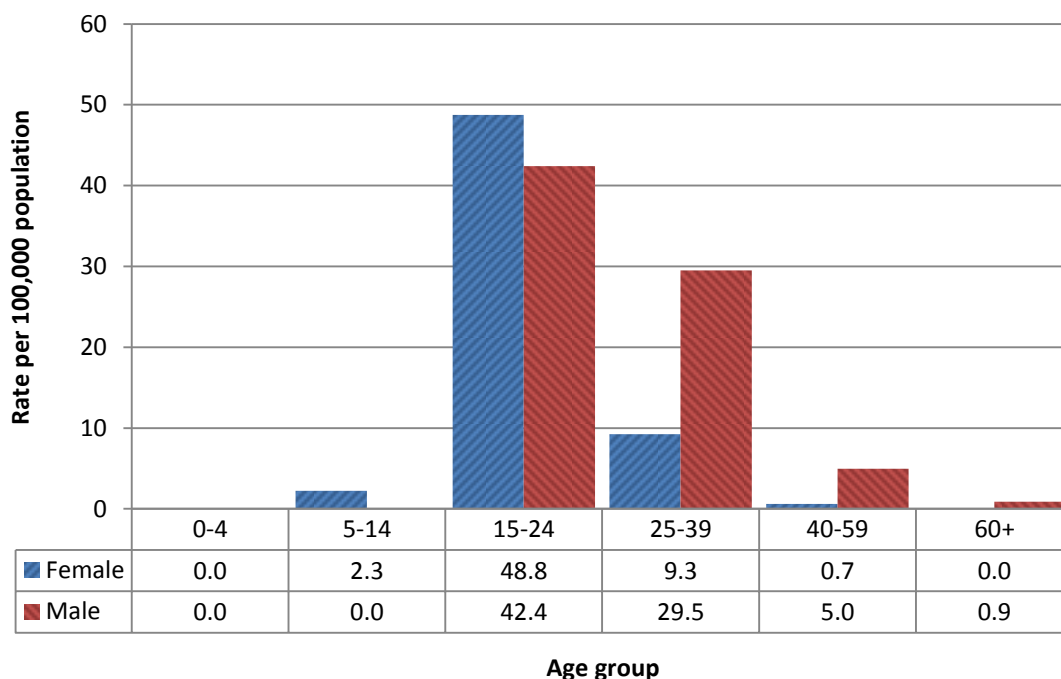
The GASHA reported the highest rate of gonorrhoea for 2013 compared to the other DHAs (27.5/100,000 population), followed by CDHA (15.1/100,000 population).

Figure 12: Reported rates of gonorrhoea in Nova Scotia, 2004-2013



Nova Scotia is currently participating 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 13: Reported rates of gonorrhoea in Nova Scotia by age group and sex, 2013



Syphilis

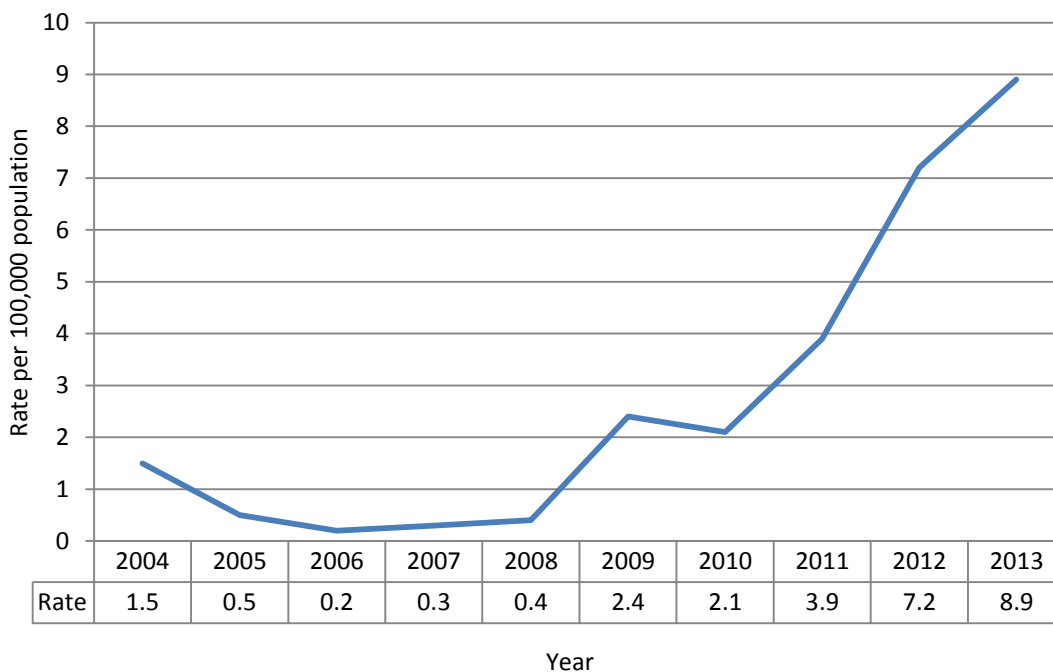
Syphilis cases are categorized as infectious or non-infectious syphilis. The primary, secondary, and early-latent stages of disease are considered infectious. The late latent and tertiary stages of disease are considered non-infectious (7). Infectious syphilis cases comprise those of public health significance, and will be described in more detail below.

In 2013 there were 84 cases of infectious syphilis and 23 cases of non-infectious syphilis reported in Nova Scotia. The reported rate of infectious syphilis cases in Nova Scotia increased again in 2013 to 8.9/100,000 population (Figure 14).

Between 2010 and 2013, the rate of reported infectious syphilis cases has increased from 2.1/100,000 population in 2010 to 8.9/100,000 population in 2013. This increase can be attributed to an outbreak of infectious syphilis in the CDHA that began in 2009 and a continued higher number of cases in that DHA.

The Canadian rates for syphilis include both infectious and non-infectious cases. The national rate for 2012 was 8.8/100,000 population (5) The 2012 Nova Scotia rate for infectious syphilis and non-infectious syphilis combined is similar to the Canadian rate at 8.2/100,000 population.

Figure 14: Reported rates of infectious syphilis in Nova Scotia, 2004-2013



Since 2004, 253 out of 258 (98.1%) total infectious syphilis cases in Nova Scotia have been male. Also, 223 out of 258 (86.4%) of the total cases in that ten year period are associated with CDHA. All cases of infectious syphilis reported in 2013 were over the age of 15. The highest rate was reported for males in the 25-39 year age group (46.1/100,000 population) (Figure 15).

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, 2013

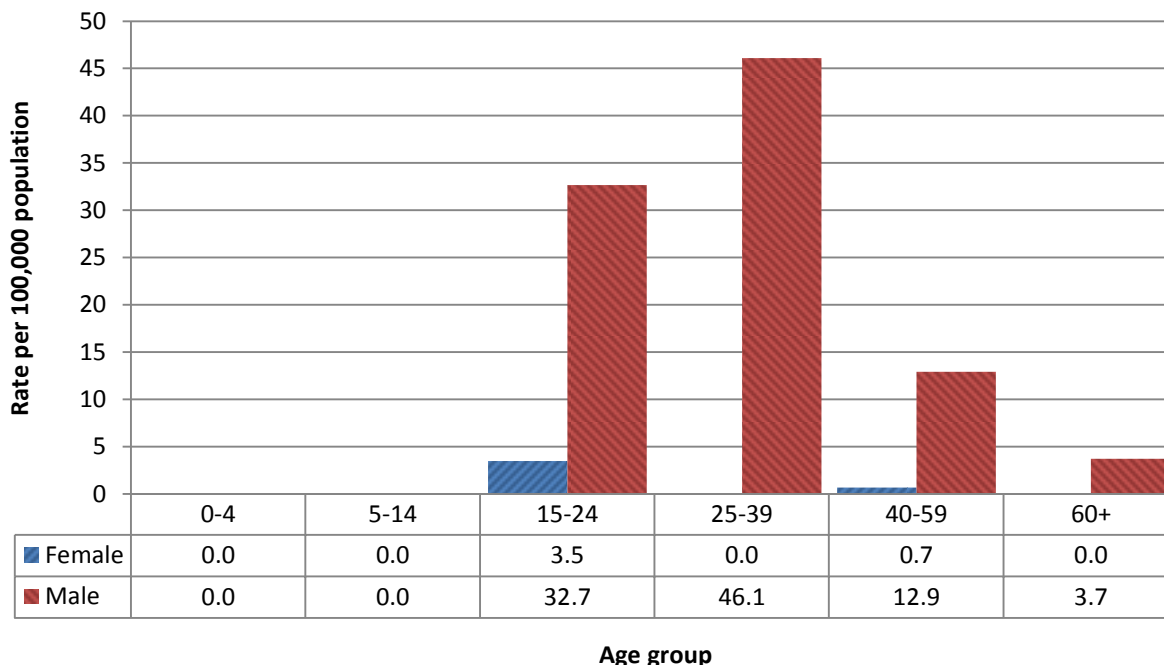
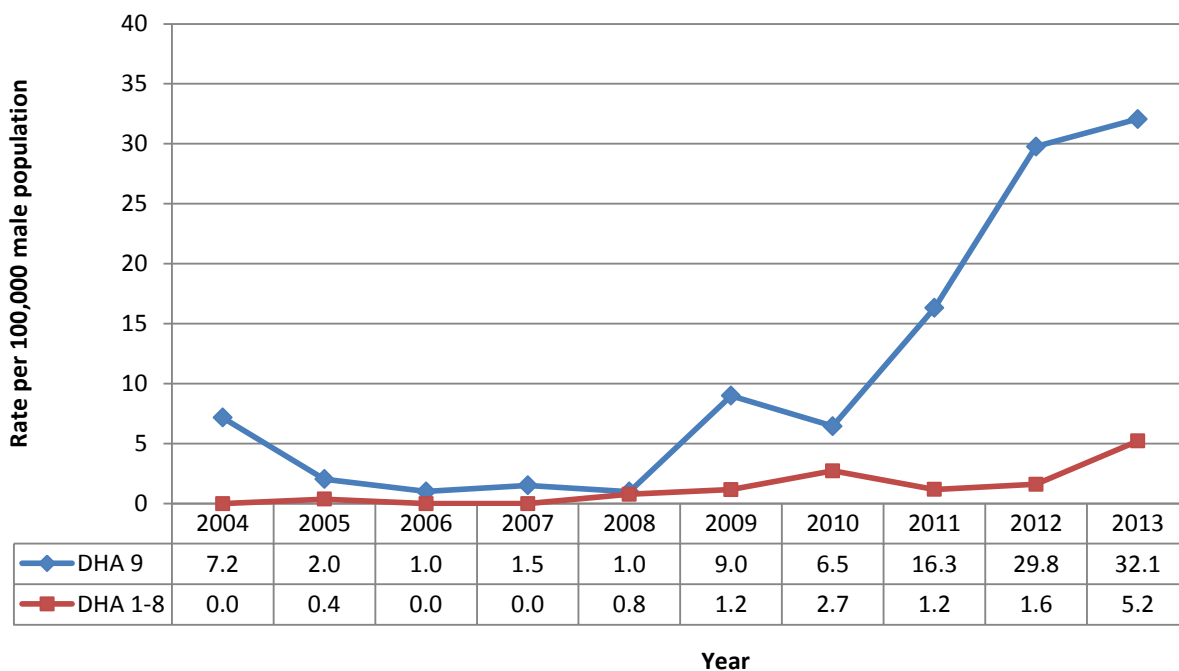


Figure 16: Reported rates of infectious syphilis among males residing in DHA 9 and outside of DHA 9, 2004-2013



Vaccine Preventable Diseases

There were seven cases of vaccine preventable diseases reported in Nova Scotia in 2013. This is a decrease from 24 cases in 2012.

The vaccine preventable diseases reported in 2013 included four cases of pertussis, one case of *Haemophilus influenzae*, type b and two cases of mumps.

Vectorborne and Other Zoonoses

There were 158 cases of vectorborne and other zoonotic diseases reported in Nova Scotia in 2013:

- There were 154 cases of Lyme disease reported.
- There were 3 cases of malaria reported. None of these cases were acquired in Nova Scotia.
- There was one case of toxoplasmosis reported.

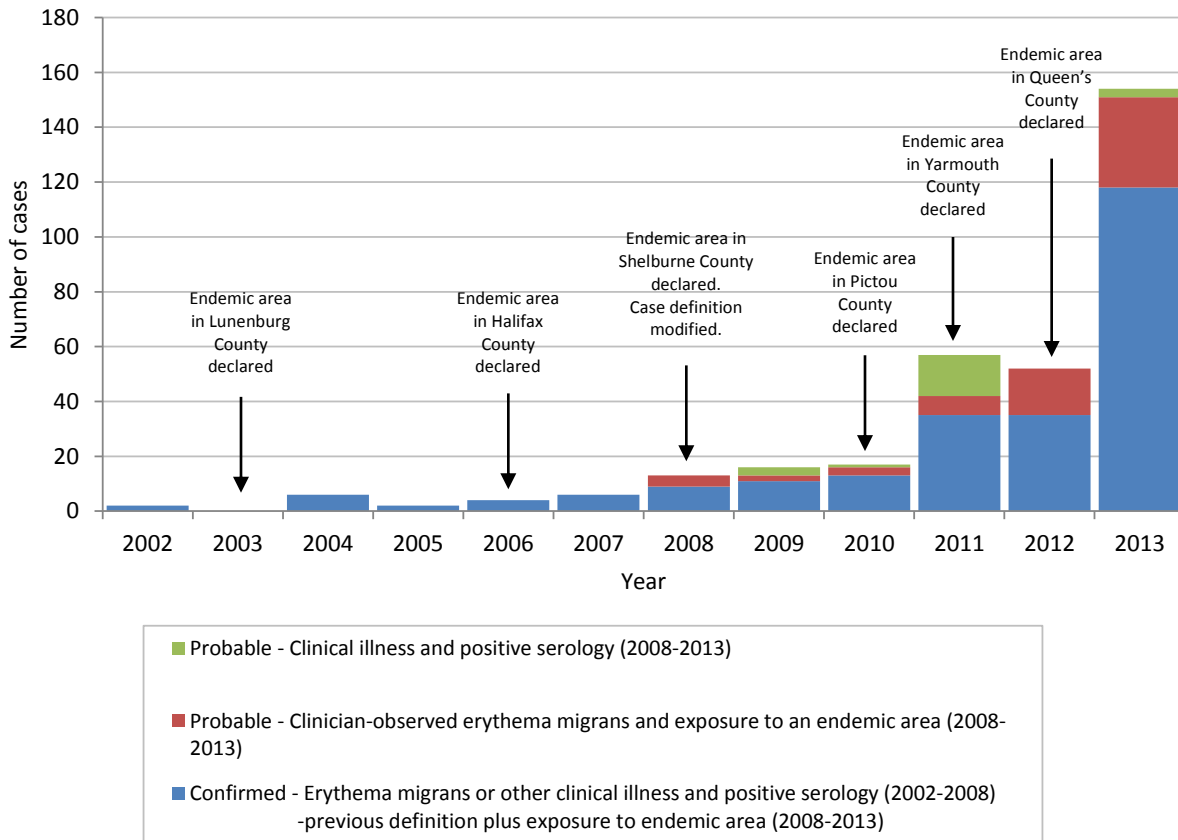
See Appendix B for tables containing numbers and rates of reported cases of vectorborne and other zoonotic diseases from 2004 to 2013.

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). The increase in cases is related to a number of factors including an increase in the number of blacklegged tick populations established in Nova Scotia, an increase in the sizes of the established populations of blacklegged ticks, and an increase in awareness among individuals and physicians leading to increased diagnosis and reporting of Lyme disease. Furthermore, a modification to the national surveillance case definition in 2008, which is used by Nova Scotia, included the addition of two probable case definitions, one of which captures clinically defined cases (Figure 17). For complete case definitions, please refer to the Nova Scotia Surveillance Guidelines for Notifiable Diseases and Conditions (<http://novascotia.ca/dhw/populationhealth/surveillanceguidelines/>).

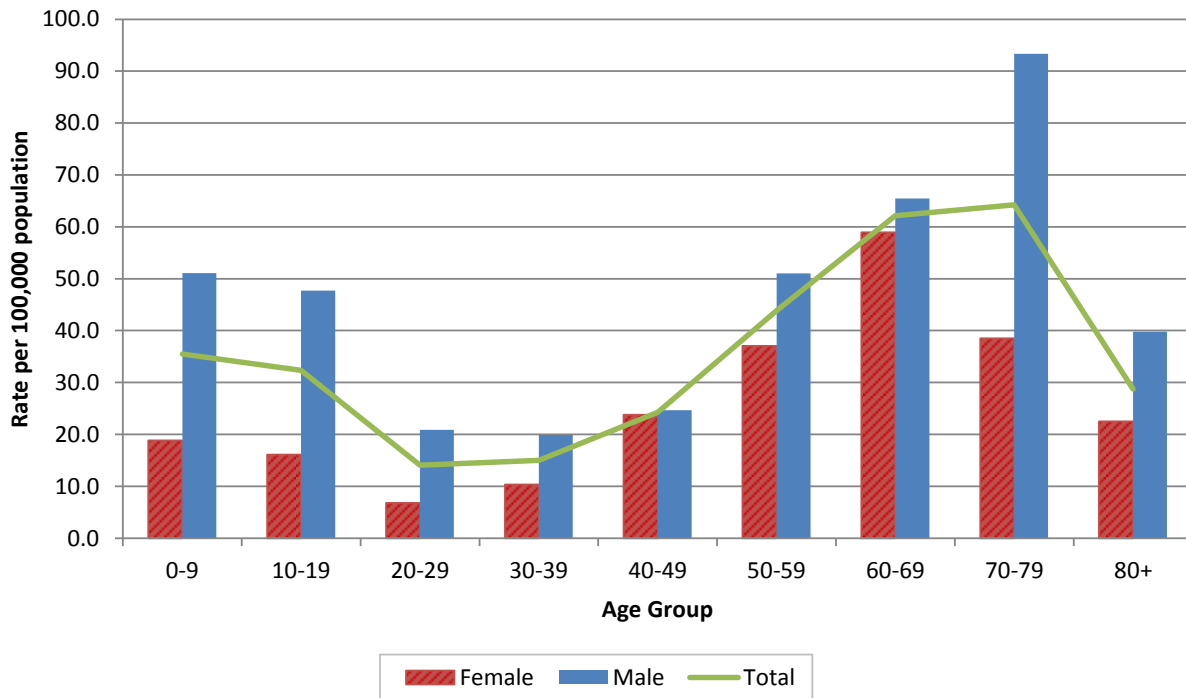
There were 154 cases of Lyme disease reported in 2013, which is almost three times the number of cases reported in 2012. Figure 17 presents the number of reported cases by year, showing the increase in cases over time, the years in which new areas were added to the list of known Lyme disease endemic areas, and when the surveillance case definition was modified. There are currently six endemic areas identified in Nova Scotia.

Figure 17: Number of reported cases of Lyme disease by case classification and year, Nova Scotia, 2002-2013 (n=329)



From 2002 to 2013 there have been 329 cases of Lyme disease reported in Nova Scotia, of which 307 (93.3%) were likely to have been acquired within the province. Currently, 71.4% of cases classified as likely to have been acquired in Nova Scotia were associated with exposure in the endemic area in Lunenburg County. Cases ranged in age from zero to 85 years and were 61.1% male (Figure 18).

Figure 18: Rates of reported cases of Lyme disease per 100,000 population, by sex and age group, Nova Scotia, 2002-2013 (n=329)



Active tick surveillance was conducted in 2013 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>.

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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)
Gonorrhoea (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, Chronic Carrier, Unspecified Case)	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

TABLE 1: Notifiable diseases reported in Nova Scotia from 2004-2013: Number of reports and crude rates per 100,000 population	28
TABLE 2a: Notifiable diseases reported in Nova Scotia in 2013 by District Health Authority (DHA): Number of reports	29
TABLE 2b: Notifiable diseases reported in Nova Scotia in 2013 by District Health Authority (DHA): Crude rates per 100,000 population.....	30
TABLE 3: Notifiable diseases reported in Nova Scotia in 2013 by age group: Number of reports and age specific rates per 100,000 population	31
TABLE 4: Notifiable diseases reported in Nova Scotia in 2013: Number of reports and sex-specific rates per 100,000 population	32

TABLE 1: Notifiable diseases reported in Nova Scotia from 2004-2013: Number of reports and crude rates per 100,000 population

Condition	Year																				All Years	
	2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		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)	10	1.1	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	52	0.5
Hepatitis B - Acute	11	1.2	10	1.1	8	0.9	9	1.0	7	0.8	3	0.3	1	0.1	3	0.3	1	0.1	5	0.5	58	0.6
Hepatitis B-Chronic*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7	0.8	7	0.8	8	0.9	8	0.8	7	0.7	37	0.6
Hepatitis B - Unspecified*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12	1.3	11	1.2	6	0.6	2	0.2	3	0.3	34	0.7
Hepatitis B-Chronic or Unspecified*	25	2.7	22	2.4	36	3.9	10	1.1	14	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	107	2.3	
Hepatitis C	234	24.9	250	26.7	252	27.0	224	24.0	281	30.1	266	28.5	299	32.1	209	22.4	251	26.5	286	30.1	2552	27.2
Human Immunodeficiency Virus (HIV)	33	3.5	21	2.2	23	2.5	20	2.1	21	2.3	13	1.4	15	1.6	15	1.6	19	2.0	16	1.7	196	2.1
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	0	499	52.7	673	71.5	1172	62.1
Creutzfeldt-Jakob Disease - Classic	2	0.2	1	0.1	2	0.2	2	0.2	2	0.2	1	0.1	0	0.0	1	0.1	3	0.3	1	0.1	15	0.2
Encephalitis - Viral	0	0.0	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	10	0.1
Group A Streptococcal Disease Invasive	20	2.1	26	2.8	16	1.7	25	2.7	16	1.7	16	1.7	15	1.6	24	2.6	24	2.5	21	2.2	203	2.2
Group B Streptococcal Disease of the Newborn	0	0.0	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	18	0.2
Legionellosis	0	0.0	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	8	0.1
Meningitis - Bacterial	3	0.3	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	24	0.2
Meningitis - Viral	1	0.1	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	108	1.1
Meningococcal Disease Invasive	7	0.7	2	0.2	4	0.4	4	0.4	8	0.9	4	0.4	3	0.3	3	0.3	2	0.2	0	0.0	37	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	417	44.5	759	81.1	849	90.8	951	101.8	1013	108.6	890	95.4	920	98.7	841	90.2	845	89.1	802	85.2	8287	88.5
Pneumococcal Disease Invasive	17	1.8	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	328	3.5
Tuberculosis	8	0.9	6	0.6	10	1.1	8	0.9	4	0.4	7	0.8	10	1.1	9	1.0	9	0.9	8	0.8	79	0.9
Vancomycin resistant Enterococcus (VRE)	16	1.7	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	255	2.7
Enteric, Foodborne, and Waterborne Diseases																						
Amebiasis	14	1.5	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	80	0.9
Botulism	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
Campylobacteriosis	150	16.0	125	13.4	132	14.1	133	14.2	159	17.0	123	13.2	151	16.2	185	19.8	187	19.7	172	18.3	1517	16.2
Cryptosporidiosis	9	1.0	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	143	1.5
Cyclosporiasis	2	0.2	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	14	0.1
Giardiasis	87	9.3	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	884	9.4
Hepatitis A	8	0.9	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	53	0.6
Hepatitis E	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	0	0.0	1	0.0
Listeriosis - Invasive	1	0.1	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	48	0.5
Salmonellosis	110	11.7	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	1327	14.2
Shellfish Poisoning	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
Shigellosis	8	0.9	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	90	1.0
Typhoid	0	0.0	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	8	0.1
Verotoxigenic E. coli	14	1.5	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	140	1.5
Yersiniosis	3	0.3	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	30	0.3
Sexually Transmitted Infections																						
Chlamydia	1592	169.7	1745	186.4	1762	188.4	1788	191.4	2033	217.9	1983	212.6	2231	239.2	2478	265.7	2614	275.5	2465	262.1	20691	220.9
Gonorrhea	122	13.0	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	1085	11.6
Lymphogranuloma Venereum	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
Syphilis - Infectious	14	1.5	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	258	2.7
Syphilis - Non-Infectious or Stage Pending	6	0.6	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	92	1.0
Vaccine Preventable Diseases																						
Haemophilus influenzae Type b Invasive Disease	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	1	0.1	1	0.1	6	0.1
Mumps	0	0.0	30	3.2	6	0.6	595	63.7	5	0.5	1	0.1	1	0.1	0	0.0	0	0.0	2	0.2	640	6.8
Pertussis	21	2.2	25	2.7	48	5.1	33	3.5	14	1.5	18	1.9	6	0.6	3	0.3	22	2.3	4	0.4	194	2.1
Rubella	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
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	1	0.1	0	0.0	1	0.0
Vectorborne and Other Zoonoses																						
Lyme Disease - Confirmed	6	0.6	2	0.2	4	0.4	6	0.6	9	1.0	12	1.3	13	1.4	35	3.8	35	3.7	118	12.5	240	2.6
Lyme Disease - Probable	0	0.0	0	0.0	0	0.0	0	0.0	4	0.4	5	0.5	4	0.4	22	2.4	17	1.8	36	3.8	88	0.9
Malaria	6	0.6	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	30	0.3
Q-Fever	2	0.2	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	38	0.4
Toxoplasmosis	0	0.0	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	13	0.1
West Nile Virus	0	0.0	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	3	0.0
Total Number	2979		3538		3642		4217		4123		3770		4171		4389		5189		5280		41298	

Notes: *Chronic and Unspecified cases of Hepatitis B were previously reported together. Case classifications were updated from 2009-2013. Chronic and Unspecified cases of Hepatitis B are reported together prior to 2009. 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 2013 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	0	0	0
Hepatitis B - Acute	0	0	0	0	1	0	0	1	0	0	0	0	4
Hepatitis B - Chronic	0	1	0	1	1	0	0	1	0	1	1	4	7
Hepatitis B - Unspecified	1	0	0	1	0	0	1	1	0	0	0	1	3
Hepatitis C	9	7	12	28	32	28	12	72	2	79	81	105	286
Human Immunodeficiency Virus (HIV)	0	0	0	0	0	0	0	0	0	0	0	16	16
Direct Contact, Respiratory Routes, and Through the Provision of Health Care													
Clostridium difficile	35	35	49	119	46	16	19	81	21	179	200	273	673
Creutzfeldt-Jakob Disease - Classic	0	0	1	1	0	0	0	0	0	0	0	0	1
Encephalitis - Viral	0	0	0	0	0	0	0	0	0	0	0	0	0
Group A Streptococcal Disease Invasive-Severe	2	1	0	3	0	0	0	0	0	1	1	2	6
Group A Streptococcal Disease Invasive-Non-Severe	0	1	1	2	1	0	1	2	0	1	1	10	15
Group B Streptococcal Disease of the Newborn	0	0	0	0	0	0	0	0	0	0	0	3	3
Legionellosis	0	0	0	0	0	0	0	0	0	0	0	2	2
Meningitis - Bacterial	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningitis - Viral	0	0	3	3	2	0	1	3	1	1	2	12	20
Meningococcal Disease Invasive	0	0	0	0	0	0	0	0	0	0	0	0	0
Methicillin Resistant Staphylococcus Aureus (MRSA)	64	133	89	286	71	31	44	146	27	131	158	212	802
Pneumococcal Disease Invasive	1	2	6	9	14	1	2	17	2	11	13	26	65
Tuberculosis	0	1	1	2	1	0	1	2	1	1	0	1	3
Vancomycin resistant Enterococcus (VRE)	4	4	5	13	4	1	3	8	2	6	8	14	43
Enteric, Foodborne, and Waterborne Diseases													
Amebiasis	0	0	0	0	0	0	0	0	0	0	0	3	3
Botulism	0	0	0	0	0	0	0	0	0	0	0	0	0
Campylobacteriosis	3	6	21	30	11	5	14	30	12	9	21	91	172
Cryptosporidiosis	1	0	3	4	1	0	1	2	2	1	3	13	22
Cyclosporiasis	0	0	0	0	0	0	0	0	0	0	0	3	3
Giardiasis	10	4	6	20	4	3	2	9	2	7	9	58	96
Hepatitis A	0	0	2	2	0	0	0	0	0	0	0	0	2
Hepatitis E	0	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis - Invasive	2	2	0	4	0	0	0	0	1	0	1	3	8
Salmonellosis	11	16	14	41	12	6	5	23	14	29	43	62	169
Shellfish Poisoning	0	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	0	0	0	0	0	0	0	0	0	0	0	1	1
Typhoid*	0	0	0	0	0	1	0	1	0	0	0	0	1
Verotoxigenic E. coli	0	0	0	0	0	1	0	1	3	1	4	6	11
Yersiniosis	0	0	0	0	0	0	0	0	1	0	1	2	3
Sexually Transmitted Infections													
Chlamydia	81	120	177	378	169	59	54	282	66	186	252	1553	2465
Gonorrhea	0	4	7	11	3	1	2	6	12	3	15	65	97
Lymphogranuloma Venereum	0	0	0	0	0	0	0	0	0	0	0	0	0
Syphilis - Infectious	0	2	1	3	4	0	0	4	3	4	7	70	84
Syphilis - Non-Infectious or Stage Pending	0	0	0	0	2	0	0	2	0	1	1	20	23
Vaccine Preventable Diseases													
Haemophilus influenzae Type b Invasive Disease	0	0	0	0	1	0	0	1	0	0	0	0	1
Mumps	0	0	0	0	0	0	1	1	0	0	0	1	2
Pertussis	0	0	1	1	1	1	0	2	0	0	0	1	4
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	90	12	2	104	0	0	3	3	1	0	1	10	118
Lyme Disease - Probable	29	3	1	33	1	1	1	3	0	0	0	0	36
Malaria	0	0	0	0	1	0	0	1	1	0	1	1	3
Q-Fever	0	0	0	0	0	0	0	0	0	0	0	0	0
Toxoplasmosis	0	0	0	0	0	0	1	1	0	0	0	0	1
West Nile Virus	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	343	354	402	1099	383	155	168	706	174	651	825	2650	5280

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 2013 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	0.0	0.0	0.0	0.0	0.0
Hepatitis B - Acute	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.9	0.5
Hepatitis B - Chronic	0.0	1.8	0.0	0.6	1.4	0.0	0.0	0.5	0.0	0.8	0.4	0.9	0.7	0.7
Hepatitis B - Unspecified	1.7	0.0	0.0	0.6	0.0	0.0	2.2	0.7	0.0	0.0	0.0	0.2	0.3	0.3
Hepatitis C	15.3	12.3	14.6	14.1	44.4	90.1	26.1	53.5	4.6	66.6	35.6	24.3	30.4	30.4
Human Immunodeficiency Virus (HIV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.7	1.7
Direct Contact, Respiratory Routes, and Through the Provision of Health Care														
Clostridium difficile	59.5	61.4	59.8	60.2	63.8	51.5	41.3	52.2	48.2	150.8	99.5	63.3	71.5	71.5
Creutzfeldt-Jakob Disease - Classic	0.0	0.0	1.2	0.4	0.0	54.7	45.7	33.5	0.0	0.0	0.0	0.0	0.1	0.1
Encephalitis - Viral	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Group A Streptococcal Disease Invasive-Severe	3.4	1.8	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.5	0.6	0.6
Group A Streptococcal Disease Invasive-Non-Severe	0.0	1.8	1.2	1.0	1.4	0.0	2.2	1.2	0.0	0.8	0.4	2.3	1.6	1.6
Group B Streptococcal Disease of the Newborn	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7	0.0	0.0	0.0	0.7	0.3	0.3
Legionellosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.2
Meningitis - Bacterial	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Meningitis - Viral	0.0	0.0	3.7	1.2	2.8	0.0	0.0	0.9	2.3	0.8	1.6	2.8	2.1	2.1
Meningococcal Disease Invasive	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Methicillin Resistant Staphylococcus Aureus (MRSA)	108.7	233.4	108.6	150.2	98.4	0.0	0.0	32.8	62.0	110.4	86.2	49.1	85.2	85.2
Pneumococcal Disease Invasive	1.7	3.5	7.3	4.2	19.4	99.7	95.7	71.6	4.6	9.3	7.0	6.0	6.9	6.9
Tuberculosis	0.0	1.8	1.2	1.0	1.4	0.0	2.2	1.2	2.3	0.8	1.6	0.7	0.8	0.8
Vancomycin resistant Enterococcus (VRE)	6.8	7.0	6.1	6.6	5.5	0.0	2.2	2.6	4.6	5.1	4.9	3.2	4.6	4.6
Enteric, Foodborne, and Waterborne Diseases														
Amebiasis	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
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	5.1	10.5	25.6	13.7	15.3	16.1	30.4	20.6	27.5	7.6	17.6	21.1	18.3	18.3
Cryptosporidiosis	1.7	0.0	3.7	1.8	1.4	0.0	2.2	1.2	4.6	0.8	2.7	3.0	2.3	2.3
Cyclosporiasis	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
Giardiasis	17.0	7.0	7.3	10.4	5.5	9.6	4.3	6.5	4.6	5.9	5.3	13.4	10.2	10.2
Hepatitis A	0.0	0.0	2.4	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
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	3.4	3.5	0.0	2.3	0.0	0.0	0.0	0.0	2.3	0.0	1.2	0.7	0.9	0.9
Salmonellosis	18.7	28.1	17.1	21.3	16.6	19.3	10.9	15.6	32.1	24.4	28.3	14.4	18.0	18.0
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	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
Typhoid*	0.0	0.0	0.0	0.0	0.0	3.2	0.0	1.1	0.0	0.0	0.0	0.0	0.1	0.1
Verotoxigenic E. coli	0.0	0.0	0.0	0.0	0.0	3.2	0.0	1.1	6.9	0.8	3.9	1.4	1.2	1.2
Yersiniosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	1.2	0.5	0.3	0.3
Sexually Transmitted Infections														
Chlamydia	137.6	212.3	215.9	188.6	234.3	189.8	117.4	180.5	151.5	156.7	154.1	359.9	262.0	262.0
Gonorrhoea	0.0	7.0	8.5	5.2	4.2	3.2	4.3	3.9	27.5	2.5	15.0	15.1	10.3	10.3
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	0.0	3.5	1.2	1.6	5.5	0.0	0.0	1.8	6.9	3.4	5.2	16.2	8.9	8.9
Syphilis - Non-Infectious or Stage Pending	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.9	0.0	0.8	0.4	4.6	2.4	2.4
Vaccine Preventable Diseases														
Haemophilus influenzae Type b Invasive Disease	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.1	0.1
Mumps	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7	0.0	0.0	0.0	0.2	0.2	0.2
Pertussis	0.0	0.0	1.2	0.4	1.4	3.2	0.0	1.5	0.0	0.0	0.0	0.2	0.4	0.4
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
Vectorborne and Other Zoonoses														
Lyme Disease - Confirmed	152.9	21.1	2.4	58.8	0.0	0.0	6.5	2.2	2.3	0.0	1.2	2.3	12.5	12.5
Lyme Disease - Probable	49.3	5.3	1.2	18.6	1.4	3.2	2.2	2.3	0.0	0.0	0.0	0.0	3.8	3.8
Malaria	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.5	2.3	0.0	1.2	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	2.2	0.7	0.0	0.0	0.0	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	0.0	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 2013 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	0	0.0	0	0.0	0	0.0	0	0.0
Hepatitis B - Acute	0	0.0	0	0.0	1	0.8	2	1.2	2	0.7	0	0.0	5	0.5	5	0.5
Hepatitis B - Chronic	0	0.0	0	0.0	1	0.8	2	1.2	2	0.7	2	0.9	7	0.7	7	0.7
Hepatitis B - Unspecified	0	0.0	0	0.0	0	0.0	1	0.6	1	0.4	1	0.4	3	0.3	3	0.3
Hepatitis C	2	4.6	0	0.0	71	59.8	115	67.4	78	27.4	20	8.6	286	30.4	286	30.4
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	3	2.5	5	2.9	5	1.8	0	0.0	16	1.7	16	1.7
Direct Contact, Respiratory Routes, and Through the Provision of Health Care																
Clostridium difficile	22	50.4	16	17.7	33	27.8	62	36.3	141	49.5	399	171.6	673	71.5	673	71.5
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	1	0.1	1	0.1
Encephalitis - Viral	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive-Severe	0	0.0	0	0.0	0	0.0	2	1.2	1	0.4	3	1.3	6	0.6	6	0.6
Group A Streptococcal Disease Invasive-Non-Severe	1	2.3	1	1.1	2	1.7	2	1.2	2	0.7	7	3.0	15	1.6	15	1.6
Group B Streptococcal Disease of the Newborn	3	6.9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.3	3	0.3
Legionellosis	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	1	0.4	2	0.2	2	0.2
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Viral	10	22.9	3	3.3	4	3.4	0	0.0	2	0.7	1	0.4	20	2.1	20	2.1
Meningococcal Disease Invasive	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Methicillin Resistant Staphylococcus Aureus (MRSA)	28	64.2	8	8.8	37	31.2	65	38.1	144	50.6	520	223.6	802	85.2	802	85.2
Pneumococcal Disease Invasive	3	6.9	1	1.1	0	0.0	4	2.3	21	7.4	36	15.5	65	6.9	65	6.9
Tuberculosis	0	0.0	0	0.0	0	0.0	3	1.8	2	0.7	3	1.3	8	0.8	8	0.8
Vancomycin resistant Enterococcus (VRE)	0	0.0	0	0.0	1	0.8	1	0.6	12	4.2	29	12.5	43	4.6	43	4.6
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	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
Campylobacteriosis	7	16.0	9	9.9	18	15.2	36	21.1	62	21.8	40	17.2	172	18.3	172	18.3
Cryptosporidiosis	2	4.6	0	0.0	5	4.2	8	4.7	7	2.5	0	0.0	22	2.3	22	2.3
Cyclosporiasis	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7	1	0.4	3	0.3	3	0.3
Giardiasis	6	13.8	3	3.3	13	11.0	27	15.8	30	10.5	17	7.3	96	10.2	96	10.2
Hepatitis A	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.9	2	0.2	2	0.2
Hepatitis E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	7	3.0	8	0.9	8	0.9
Salmonellosis	10	22.9	13	14.4	17	14.3	31	18.2	42	14.7	56	24.1	169	18.0	169	18.0
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
Shigellosis	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Typhoid*	0	0.0	0	0.0	0	0.0	0	0.0	1	0.4	0	0.0	1	0.1	1	0.1
Verotoxigenic E. coli	1	2.3	2	2.2	0	0.0	2	1.2	2	0.7	4	1.7	11	1.2	11	1.2
Yersiniosis	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	2	0.9	3	0.3	3	0.3
Sexually Transmitted Infections																
Chlamydia	5	11.5	4	4.4	1714	1444.2	665	389.5	70	24.6	6	2.6	2465	262.0	2465	262.0
Gonorrhea	0	0.0	1	1.1	54	45.5	33	19.3	8	2.8	1	0.4	97	10.3	97	10.3
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
Syphilis - Infectious	0	0.0	0	0.0	22	18.5	39	22.8	19	6.7	4	1.7	84	8.9	84	8.9
Syphilis - Non-Infectious or Stage Pending	0	0.0	0	0.0	3	2.5	12	7.0	6	2.1	2	0.9	23	2.4	23	2.4
Vaccine Preventable Diseases																
Haemophilus influenzae Type b Invasive Disease	1	2.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	1	0.1
Mumps	1	2.3	0	0.0	1	0.8	0	0.0	0	0.0	0	0.0	2	0.2	2	0.2
Pertussis	1	2.3	2	2.2	0	0.0	0	0.0	0	0.0	1	0.4	4	0.4	4	0.4
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
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
Vectorborne and Other Zoonoses																
Lyme Disease - Confirmed	4	9.2	14	15.5	7	5.9	14	8.2	36	12.6	43	18.5	118	12.5	118	12.5
Lyme Disease - Probable	3	6.9	2	2.2	3	2.5	1	0.6	5	1.8	22	9.5	36	3.8	36	3.8
Malaria	0	0.0	0	0.0	1	0.8	1	0.6	1	0.4	0	0.0	3	0.3	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
Toxoplasmosis	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1	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	0	0.0
TOTAL	111		79		2011		1135		708		1232		5280			

Notes: Excludes 3 HIV and 1 chlamydia 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 2013: 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	0	0.0	0	0.0
Hepatitis B - Acute	2	0.4	3	0.7	5	0.5
Hepatitis B - Chronic	3	0.6	4	0.9	7	0.7
Hepatitis B - Unspecified	1	0.2	2	0.4	3	0.3
Hepatitis C	101	21.1	185	39.7	286	30.4
Human Immunodeficiency Virus (HIV)	2	0.4	14	3.0	16	1.7
Direct Contact, Respiratory Routes, and Through the Provision of Health Care						
Clostridium difficile	401	83.6	270	58.5	673	71.5
Creutzfeldt-Jakob Disease - Classic	1	0.2	0	0.0	1	0.1
Encephalitis - Viral	0	0.0	0	0.0	0	0.0
Group A Streptococcal Disease Invasive-Severe	4	0.8	2	0.4	6	0.6
Group A Streptococcal Disease Invasive-Non-Severe	8	1.7	7	1.5	15	1.6
Group B Streptococcal Disease of the Newborn	3	0.6	0	0.0	3	0.3
Legionellosis	1	0.2	1	0.2	2	0.2
Meningitis - Bacterial	0	0.0	0	0.0	0	0.0
Meningitis - Viral	10	2.1	10	2.2	20	2.1
Meningococcal Disease Invasive	0	0.0	0	0.0	0	0.0
Methicillin Resistant Staphylococcus Aureus (MRSA)	370	77.1	432	93.7	802	85.2
Pneumococcal Disease Invasive	29	6.0	36	7.8	65	6.9
Tuberculosis	2	0.4	6	1.3	8	0.8
Vancomycin resistant Enterococcus (VRE)	20	4.2	23	5.0	43	4.6
Enteric, Foodborne, and Waterborne Diseases						
Amebiasis	0	0.0	3	0.7	3	0.3
Botulism	0	0.0	0	0.0	0	0.0
Campylobacteriosis	72	15.0	100	21.7	172	18.3
Cryptosporidiosis	14	2.9	8	1.7	22	2.3
Cyclosporiasis	2	0.4	1	0.2	3	0.3
Giardiasis	50	10.4	46	10.0	96	10.2
Hepatitis A	0	0.0	2	0.4	2	0.2
Hepatitis E	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	7	1.5	1	0.2	8	0.9
Salmonellosis	93	19.4	76	16.5	169	18.0
Shellfish Poisoning	0	0.0	0	0.0	0	0.0
Shigellosis	1	0.2	0	0.0	1	0.1
Typhoid*	0	0.0	1	0.2	1	0.1
Verotoxigenic E. coli	7	1.5	4	0.9	11	1.2
Yersiniosis	3	0.6	0	0.0	3	0.3
Sexually Transmitted Infections						
Chlamydia	1727	360.3	738	160.0	2465	262.0
Gonorrhea	38	7.9	59	12.8	97	10.3
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0
Syphilis - Infectious	3	0.6	81	17.6	84	8.9
Syphilis - Non-Infectious or Stage Pending	5	1.0	18	3.9	23	2.4
Vaccine Preventable Diseases						
Haemophilus influenzae Type b Invasive Disease	0	0.0	1	0.2	1	0.1
Mumps	0	0.0	2	0.4	2	0.2
Pertussis	2	0.4	2	0.4	4	0.4
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	50	10.4	68	14.7	118	12.5
Lyme Disease - Probable	17	3.5	19	4.1	36	3.8
Malaria	1	0.2	2	0.4	3	0.3
Q-Fever	0	0.0	0	0.0	0	0.0
Toxoplasmosis	1	0.2	0	0.0	1	0.1
West Nile Virus	0	0.0	0	0.0	0	0.0
TOTAL	3051		2227		5280	

Notes: Excludes 2 Clostridium difficile 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.