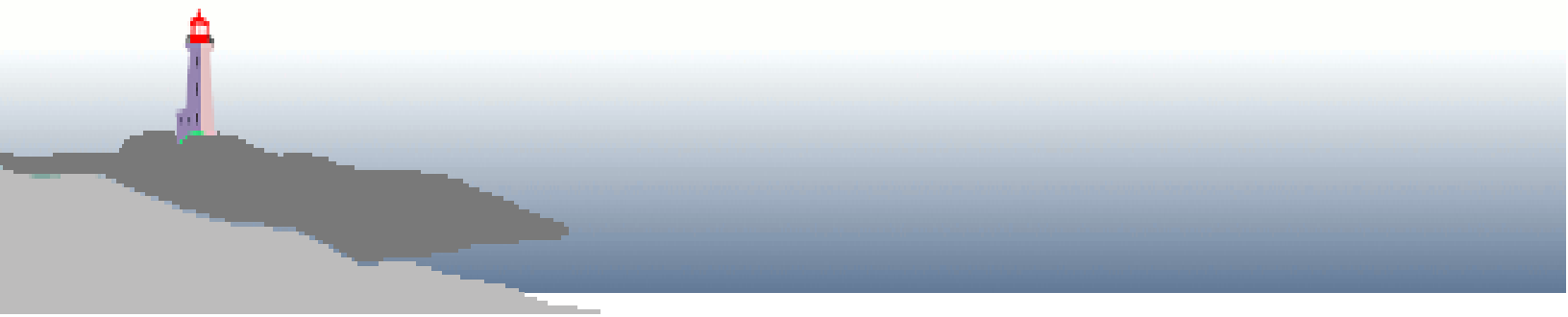
NOVA SCOTIA
Health and Wellness

Notifiable Diseases in Nova Scotia 2011 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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2011 HIGHLIGHTS

A total of 4,637 cases of notifiable diseases were reported in Nova Scotia in 2011. Sexually transmitted infections accounted for over half of all reported cases, followed by direct contact and respiratory, enteric, bloodborne, vectorborne, and vaccine-preventable disease cases (Figure 1). Chlamydia, MRSA, influenza, and hepatitis C were the top four most frequently reported diseases (Figure 2). Selected highlights from this report are presented below.

Influenza cases (n=272 in 2011) are not described 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 website (http://www.gov.ns.ca/hpp/populationhealth/).

Clostridium difficile

In 2011, two *Clostridium difficile* outbreaks were reported in Cape Breton District Health Authority. The first outbreak was the larger of the two, with ninety-one cases of *C. difficile* infection reported from two hospitals between January and the end of the outbreak on May 27. The second *C. difficile* outbreak lasted from December 21, 2011 until February 2, 2012, with six patients from the Cape Breton Regional Hospital reported as being associated with the outbreak.

At the time of the two outbreaks, *C. difficile* was not a notifiable disease in Nova Scotia. *C difficile* was added to the list of notifiable diseases in Nova Scotia on April 1, 2012 in order to provide an understanding of trends in disease incidence in Nova Scotia for both hospital-associated and other cases, facilitate outbreak detection, facilitate national surveillance of this disease, and provide information for public health policy and planning. Public health surveillance information for *C. difficile* will be included in next year's annual report.

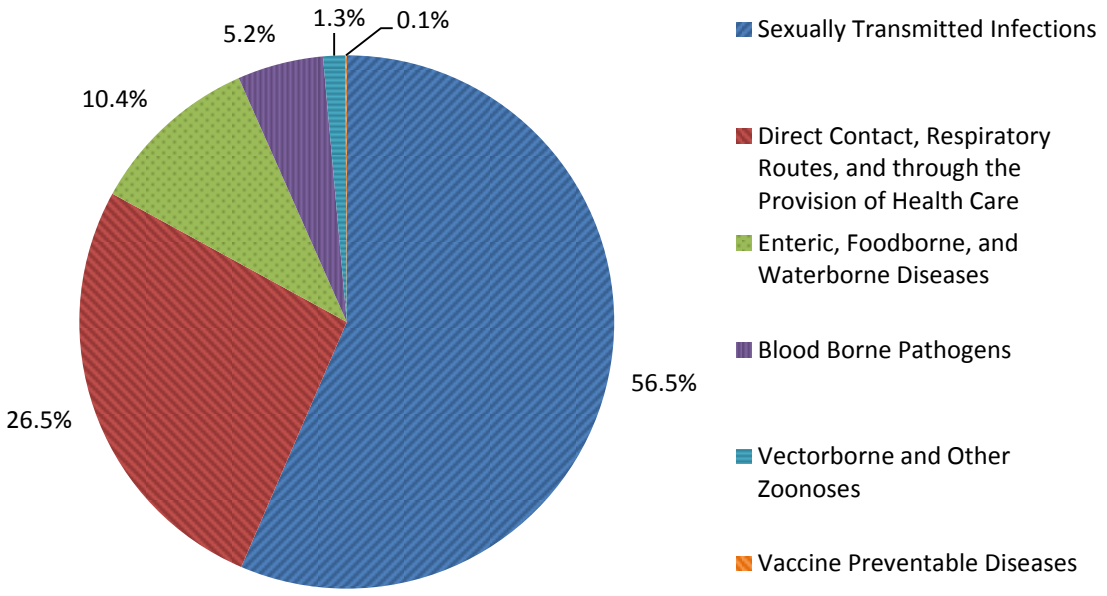
Lyme Disease

Blacklegged tick populations and Lyme disease are emerging in Nova Scotia. Since the first reported cases of Lyme disease in Nova Scotia in 2002, the annual number of reported cases has displayed an increasing trend (2 cases reported in 2002 versus 54 cases reported in 2011). The increase in cases is likely due to a number of factors including an increase in the number of blacklegged tick populations established in Nova Scotia, increases 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. Further information on Lyme disease in Nova Scotia can be found in this report, and a special comprehensive report on Lyme disease epidemiology and surveillance is available on the Population Health Assessment and Surveillance Website (http://www.gov.ns.ca/hpp/populationhealth/Epi_of_Lyme_and_Tick_Surveillance_Report_April_2012.pdf).

Syphilis

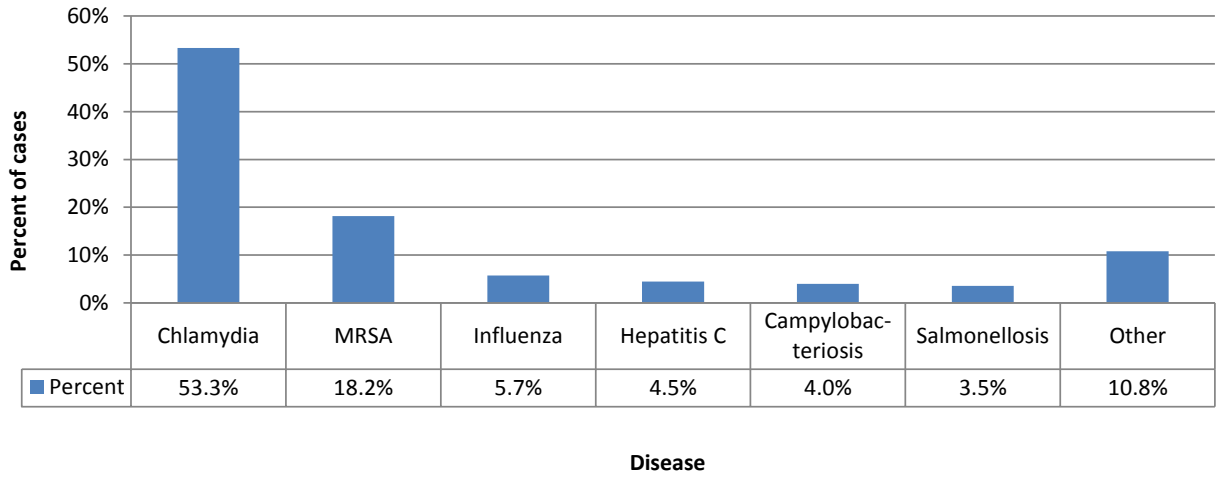
Following four years of near-zero provincial rates, an outbreak of infectious syphilis was declared in Capital District Health Authority in 2009. Since the declaration of this outbreak, an increasing trend in the reported rate of infectious syphilis cases has been observed. The current outbreak is comprised of reports of male cases. Similar resurgences of infectious syphilis have been observed in a number of jurisdictions across Canada over the past decade (1)

Figure 1: Distribution of notifiable diseases reported in Nova Scotia by disease category, 2011.



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, 2011.



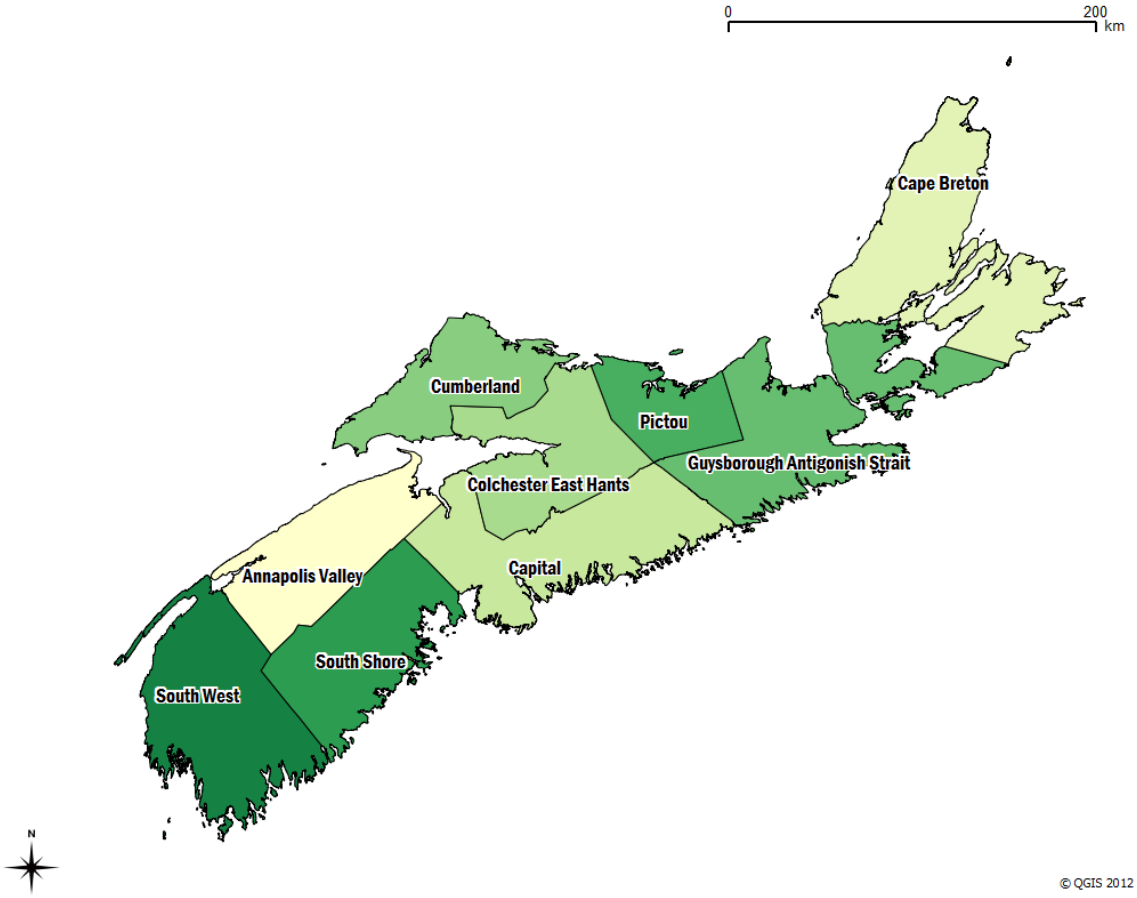
INTRODUCTION

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" (2).

In Nova Scotia, surveillance of communicable 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 (3). 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 2011. The report was compiled by the Population Health Assessment and Surveillance (PHAS) Responsibility Centre, Nova Scotia Department of Health and Wellness (DHW). It includes highlights of notifiable disease data for 2011, examines important trends between 2002-2011 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 (DHAs, Figure 3), sex, and age group are also provided for 2011.

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 (3). Through public health case management, public health staff document demographic, clinical, exposure, treatment, and laboratory information about the case. This information is reported to the Nova Scotia Department of Health and Wellness for provincial surveillance purposes.

Cases are classified based on standardized case definitions and are reported to DHW 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 (4). Information on public health case management and control measures in Nova Scotia can be found in the Nova Scotia Communicable Disease Control Manual (5).

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 (4). 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 frequently 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, which were based on the 2006 Census. All Canadian notifiable disease data were obtained from the Public Health Agency of Canada (PHAC) and are cited where used.

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://www.gov.ns.ca/hpp/populationhealth/).

All case data are current as of May 1, 2012.

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 (e.g. chlamydia) 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 (e.g. changes to laboratory testing methods) may result in an increase or decrease in the number of reported cases that is not reflective of true changes in disease occurrence within the province.

Numbers and rates presented in this report are based on notifications received by DHW as of May 1, 2012. 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 15 newly diagnosed cases of HIV in Nova Scotia in 2011 (rate of 1.6/100,000 population) bringing the cumulative number of new diagnoses since 1985 (when the first case was reported) to 766. The Canadian rate of reported HIV cases in 2009 was 7.2/100,000 population (6). For comparable years of data, the reported rate of HIV in Nova Scotia was below the national rate.

Similar to the past ten years, nearly all HIV cases reported in the province in 2011 (87.5%) were male, and the majority (68.8%) were over 40 years of age. The reported exposure categories were men who have sex with men (MSM, 62.5% of cases), high-risk heterosexual contact (e.g. sex with a person with HIV infection, 25.0%), and low-risk heterosexual contact (12.5%). For comparable years of data, there appeared to be higher proportions of male HIV cases and cases over 40 years of age in Nova Scotia compared to Canada as a whole. The distribution of exposure categories was similar between Nova Scotia and Canadian cases.

Four new cases of AIDS were reported in 2011 (rate of 0.4/100,000 population), bringing the cumulative reports of AIDS in Nova Scotia to 348. The Canadian rate of reported AIDS cases in 2009 was 0.7/100,000 population (6). For comparable years of data, the reported rate of AIDS in Nova Scotia was similar to the national rate.

A special comprehensive report on HIV/AIDS will be available on the Population Health Assessment and Surveillance Website in Fall 2012 (http://www.gov.ns.ca/hpp/populationhealth/). This report describes trends in cases reported between 1983 and 2011 and includes enhanced surveillance information on HIV-1 subtypes, transmitted drug resistance mutations, and HIV disease progression at diagnosis.

Hepatitis B (Acute, Chronic, and Unspecified)

The hepatitis B vaccine has been part of the provincial school-based immunization program since 1995. The number of reported acute cases of hepatitis B has declined since that time, from 41 cases in 1998 to 5 cases in 2011 (rate of 0.5/100,000 population). Nationally, the 2008 reported rate for acute[1] hepatitis B cases was 1.7/100,000 population (7). For comparable years of data, the reported rate of acute hepatitis B in Nova Scotia was similar to the national rate.

A similar number of male and female acute hepatitis B cases were reported, and all cases were between 25 and 59 years of age. Unprotected sexual contact was the most commonly reported risk factor for infection. Sexual transmission is the most common source for acute hepatitis B infections in Canada (7).

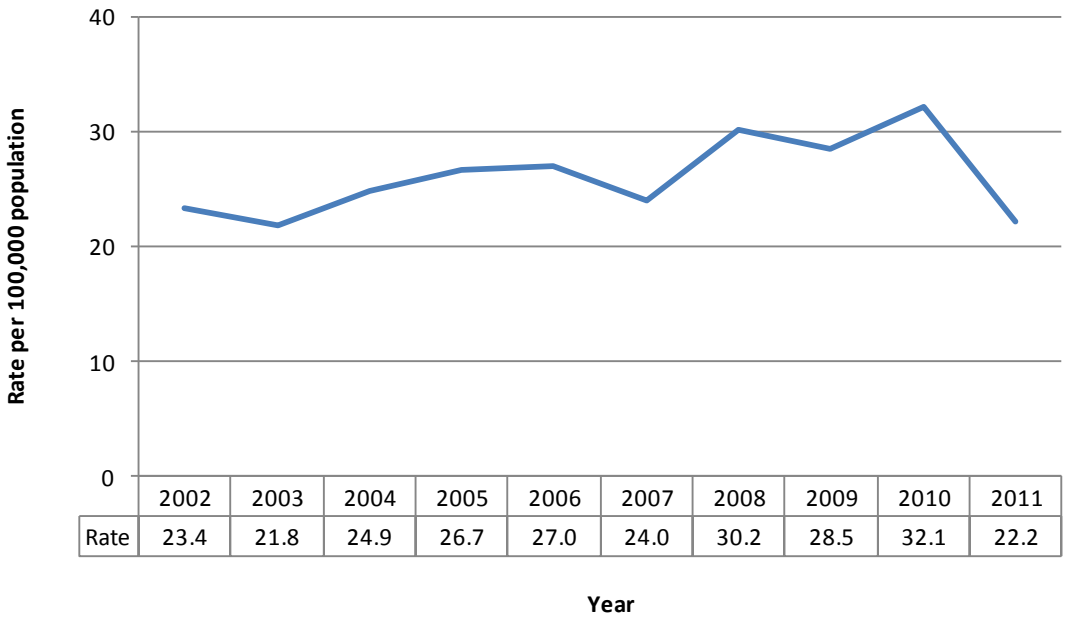
There were 10 cases of chronic or unspecified hepatitis B reported in 2011 (rate of 1.1/100,000 population). The most commonly reported risk factor for these cases was having lived in an endemic country prior to living in Nova Scotia.

Hepatitis C

There were 207 cases of hepatitis C reported in Nova Scotia in 2011, corresponding to a rate of 22.2/100,000 population. This rate is lower than the previous year, which at 32.1/100,000 represented the highest rate in the previous 10 years (Figure 4). This provincial rate decrease was largely influenced by decreased rates in two districts that account for the majority of hepatitis C cases reported in the province (Cape Breton and Capital District Health Authorities). The national rate of reported hepatitis C cases in 2009 was 33.7/100,000 population, which is similar to the Nova Scotia rate for the same time period (8).

[1] Note that the National surveillance data on acute hepatitis B cases also include reports of indeterminate hepatitis B infections.

Figure 4: Reported rate of hepatitis C in Nova Scotia, 2002-2011



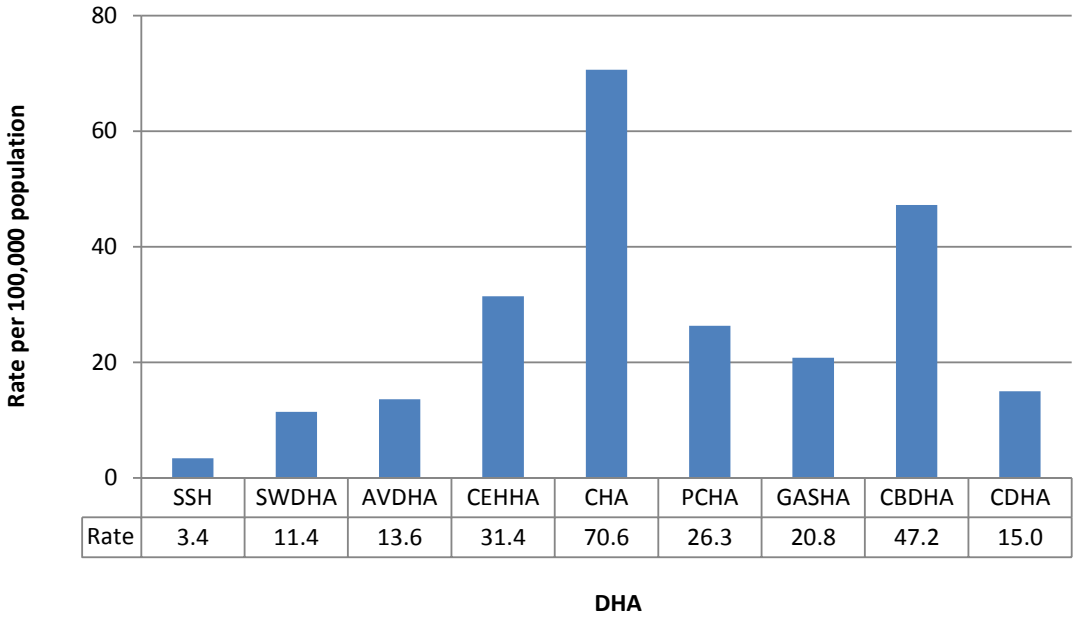
	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rate	23.4	21.8	24.9	26.7	27.0	24.0	30.2	28.5	32.1	22.2

The 2011 district-specific rates of hepatitis C were highest in Cumberland Health Authority, at 70.6/100,000 population (Figure 5). This rate was influenced by incarcerated cases reported to public health in Cumberland Health Authority, which accounted for about 70% of cases reported in that district. With incarcerated cases removed, the hepatitis C rate in Cumberland was similar to the provincial hepatitis C rate. Cumberland Health Authority has the largest Federal correctional institution in the province, which also serves as a reception center for Federal institutions in the Atlantic region (10). The high frequency of incarcerated cases may result from the testing of inmates on admission to the institution, who are then reported to and counted by Cumberland Health Authority for surveillance purposes even if the case is later transferred to another institution. While efforts are made by public health to determine if an incarcerated case has a previous hepatitis C diagnosis, it is possible that cases included in the provincial surveillance data that were lost to follow up (e.g. cases transferred to out of province institutions) may have been previously diagnosed and may not reflect a new diagnosis within the province.

Cumberland Health Authority rates were followed by those in Cape Breton District Health Authority (47.2/100,000 population), Colchester East Hants Health Authority (31.4/100,000 population), and the remaining districts all had rates lower than 30.0/100,000 population.

To fully understand the number of reported hepatitis C cases across the province with a history of incarceration, the hepatitis C case report form will be modified for future data collection to systematically capture information on whether cases were incarcerated at the time of their diagnosis or if they have a history of previous incarceration.

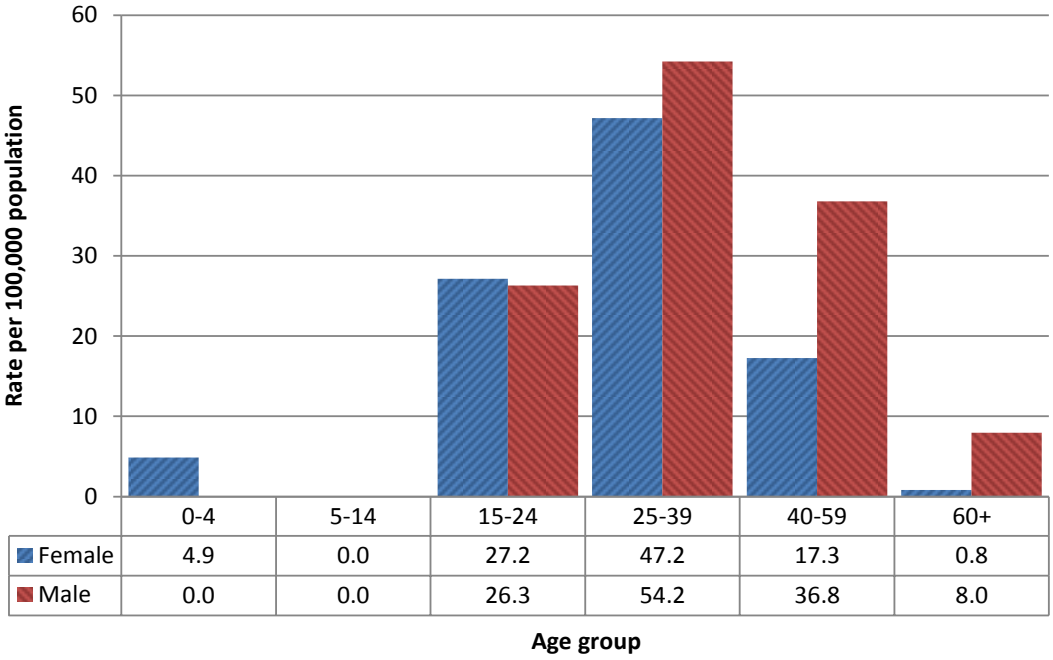
Figure 5: Reported rate of hepatitis C in Nova Scotia by District Health Authority (DHA), 2011.



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 reported rate of hepatitis C cases was highest among those 25 to 39 years of age for both sexes, at 47.2/100,000 females and 54.2/100,000 males (Figure 6). This is similar to what has been observed over the last ten year period in the province. Rates were similar for males and females in the 15-24 year age group (26.3-27.2/100,000 population), and a higher rate of male cases were reported for the 40-59 year age group (36.8/100,000 for males versus 17.3/100,000 for females). Few cases were reported for those under 15 and over 60 years of age. In contrast, the national hepatitis C rate for 2009 peaks in males 40-59 years of age (at 83.0/100,000 population), and remains fairly constant for females 25-59 years of age (at about 36.0/100,000 population) (8).

Figure 6: Reported rate of hepatitis C in Nova Scotia by age group and sex, 2011.

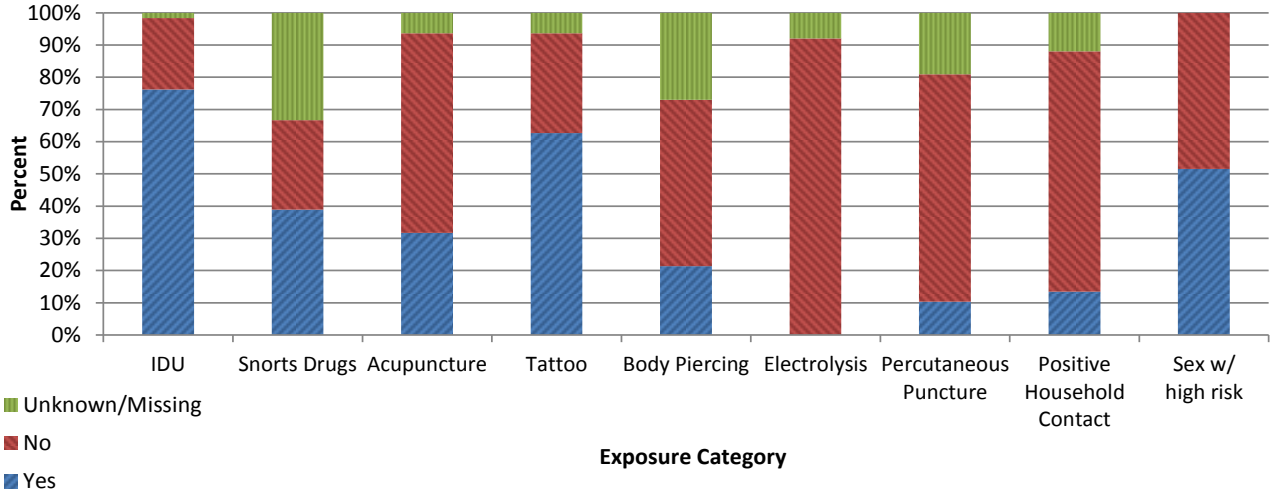


	0-4	5-14	15-24	25-39	40-59	60+
Female	4.9	0.0	27.2	47.2	17.3	0.8
Male	0.0	0.0	26.3	54.2	36.8	8.0

For the 126 (60.6%) cases of hepatitis C reported in 2011 with reported risk factor information, injection drug use (IDU) was the most commonly reported risk factor, with 76.2% of cases reporting IDU (Figure 7). For those who reported IDU, 65.6% also reported sharing injection paraphernalia.

Other reported exposures that could potentially lead to infection included having a tattoo (62.7% of cases), sex with a person at high risk for hepatitis C (51.6%), snorting drugs (38.9%), having acupuncture (31.7%), and having a body piercing, percutaneous puncture, or positive household contact (between 10.3% and 21.4% each).

Figure 7: Distribution of hepatitis C cases by reported risk factors, Nova Scotia, 2011.



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). Note that the "snorts drug" data were not captured on the case report form until September 2011, resulting in a high proportion of cases with missing information.

Other Pathogens

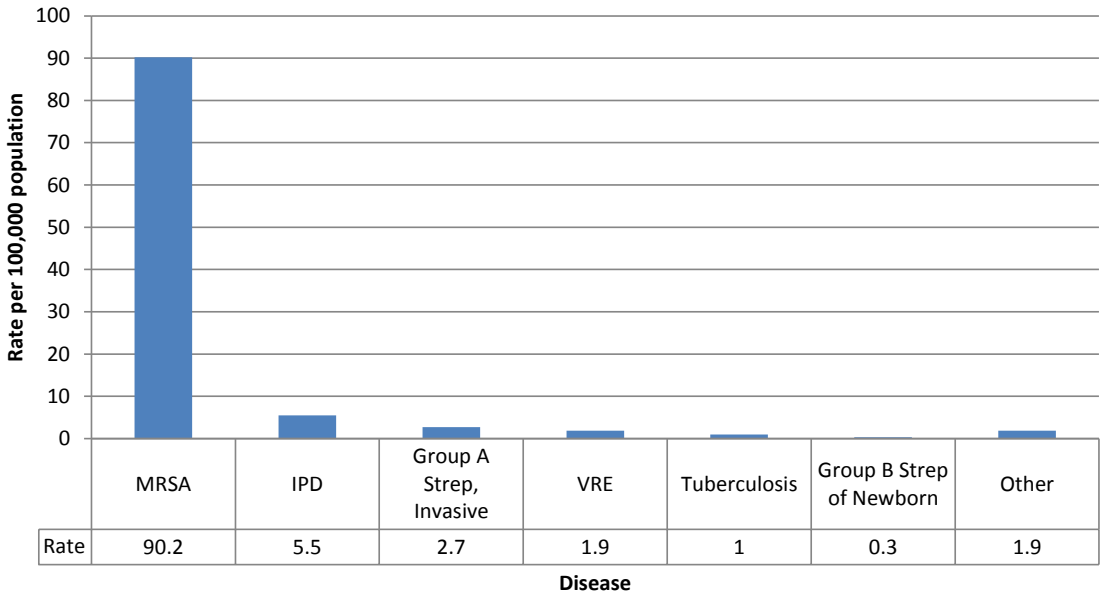
No cases of Hepatitis D have been reported in Nova Scotia between 2002 and 2011.

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

There were a total of 965 cases of respiratory, direct contact, and health care-associated infections reported in 2011. Currently, cases of health care-associated infections are not attributed to a health care-related exposure by public health and may reflect acquisition in any setting. However, new public health reporting procedures being developed for *Clostridium difficile* aim to classify cases of this disease as health care-associated or not. Such procedures may in future be used for all notifiable health care-associated infections. 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://www.gov.ns.ca/hpp/populationhealth/).

There were 841 reported cases of methicillin-resistant *Staphylococcus aureus* (MRSA, rate=90.2/100,000 population), which accounted for nearly all cases reported in this disease group. Rates of other direct contact/respiratory route reports are presented in Figure 8 and Appendix B, Table 1.

Figure 8: Reported rate of diseases transmitted by direct contact, respiratory routes, and through the provision of health care in Nova Scotia, 2011.



Notes: Other category includes encephalitis (viral), meningitis (bacterial), meningitis (viral), and meningococcal disease invasive. Influenza cases have been excluded as they are reported elsewhere.

Invasive Pneumococcal Disease

In 2011, 51 cases of invasive pneumococcal disease were reported, which represents a rate of 5.5/100,000. Between 2002 and 2011, the rate of invasive pneumococcal disease shows an increasing trend, from 0.3/100,000 population in 2002 to 5.5/100,000 population in 2011. The national rate of reported invasive pneumococcal disease cases in 2010 was 9.7/100,000 population, which is higher than the Nova Scotia rate for the same time period (10). Thirty-eight (74.5%) of the 51 cases reported in 2011 were over 40 years of age, and 13 (25.5%) were 65 years of age and older. Thirty-one cases (61%) were male.

The 7-valent pneumococcal vaccine was introduced as part of the childhood immunization schedule in 2005 for children less than one year of age, and was changed to the 13-valent pneumococcal vaccine in 2010. This supplements the 23-valent vaccine already recommended for adults 65 years of age and over and persons at high risk for invasive pneumococcal disease.

Invasive Meningococcal Disease

From 2002 to 2011 there have been a total of 44 cases of invasive meningococcal disease reported (a 10-year average of 4.4 cases per year). There were 4 cases of invasive meningococcal disease reported in 2011, a rate of 0.4/100,000 population: two reports for serogroup B, one report for serogroup Y and one serogroup unknown. The provincial rate (0.3/100,000 population) in 2010 was less than the 2010 Canadian rate of 9.7/100,000 population (10).

Meningococcal Group C Conjugate vaccine was introduced as part of the childhood immunization schedule in 2005 for infants 12 months of age. The vaccine was also introduced in the school immunization program for Grade 4 students in 2005 and Grade 7 students in 2007.

Invasive Group A Streptococcal Disease

Twenty-five cases of invasive group A streptococcal disease were reported in 2011 (rate of 2.7/100,000 population). Between 2002 and 2011, the rate of invasive group A streptococcal disease fluctuated between a high of 2.8 cases per 100,000 population in 2005 to a low of 1.6 cases per 100,000 population in 2010. No age-related trends emerged with 2011 cases.

Tuberculosis

Nine laboratory confirmed cases of tuberculosis were reported in 2011 (8 pulmonary and 1 extra pulmonary), representing a rate of 1.0/100,000 population. Sixty seven percent of cases reported in 2011 (6 of 9) were 40 years of age or older. The provincial rate in 2011 was less than the 2010 Canadian rate of 4.6/100,000 population (11).

Methicillin Resistant Staphylococcus Aureus (MRSA)

The rate of MRSA in Nova Scotia in 2011 was 90.2/100,000 population, which is similar to the rate in 2010 (98.5/100,000 population). MRSA is not nationally reportable so national rates were not available for comparison. However, the rate in Nova Scotia appeared to be lower than rates in other provinces where MRSA is reportable (12, 13). The highest rate in the province in 2011 was reported in Annapolis Valley District Health Authority (221.4/100,000 population).

Adults 60 years of age and older accounted for 68% of all cases reported in the province in 2011 (574 of 841). The rate among adults 60 years of age or over was 262.7/100,000 population. Rates were slightly lower for females than males (87.9/100,000 population vs. 92.6/100,000 population, respectively).

The annual number of reported cases of MRSA has dramatically increased since it became notifiable in 2001. One hundred and nineteen

cases of MRSA were reported in 2001 compared to 841 cases in 2011. There has been an increase in testing for MRSA through the establishment of screening programs in hospitals across Nova Scotia over the past decade and positive tests may reflect patients who are not only infected with MRSA (i.e. those with clinical signs of illness resulting from invasion by the bacteria) but also those who are colonized with MRSA (i.e. those without clinical signs). It is therefore difficult to understand the extent to which the increase in the number of reports is due to increased testing or if it is a real increase in the number of infections over the past decade.

Vancomycin-Resistant Enterococcus

In 2011, 18 cases of vancomycin-resistant enterococcus (VRE) were reported in Nova Scotia (rate of 1.9/100,000 population). Rates from 2002 to 2011 were variable, ranging from 0.7 to 4.1/100,000 population. There were no cases of VRE reported in the under 25 year age groups.

Other Pathogens

There were 11 cases of viral meningitis reported in 2011, three cases of group B streptococcal disease of the newborn, two cases of viral encephalitis, and one case of bacterial meningitis.

No cases of Creutzfeldt-Jacob Disease or legionellosis were reported in Nova Scotia in 2011.

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

In 2011, two *Clostridium difficile* outbreaks were reported in Cape Breton District Health Authority. The first outbreak was the larger of the two, with ninety-one cases of *C. difficile* infection reported from two hospitals between January and the end of the outbreak on May 27. At the peak of this outbreak in February, the rate of hospital-acquired *C. difficile* infections was 2.6/1,000 patient days at Cape Breton Regional Hospital, and 1.5/1,000 patient days at Grace Bay Health Centre. The NAP1 *C. difficile* strain was the predominant strain type reported during this outbreak (51% of samples). Four other strain types were also identified.

The second *C. difficile* outbreak lasted from December 21, 2011 until February 2, 2012, with six patients from the Cape Breton Regional Hospital reported as being associated with the outbreak.

An epidemiologic summary of the first outbreak can be found in the DHW report "*A Report on Lessons Learned Following a Clostridium difficile Outbreak in Acute Care",* available at: http://www.ipc.gov.ns.ca/node/82. Information on the second outbreak can be found in the Cape Breton District Health Authority outbreak report, available at: http://www.cbdha.nshealth.ca/IC2/Intranet/bulletinboard/view_items.cfm?MenuID=5050&CategoryID=25.

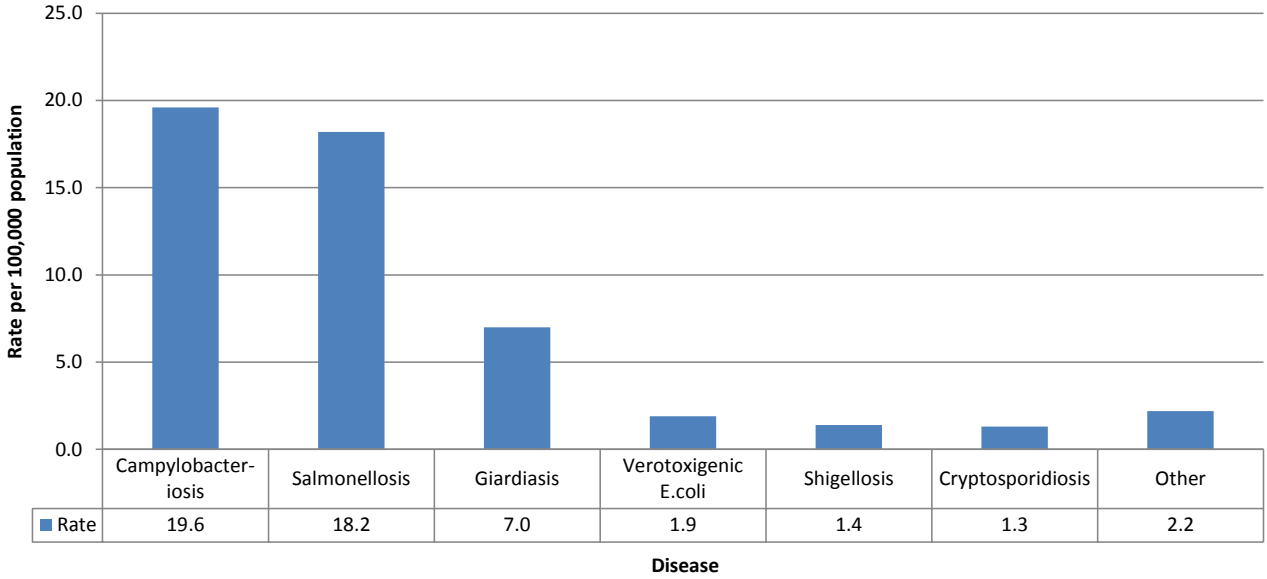
At the time of the two outbreaks, *C. difficile* was not a notifiable disease in Nova Scotia.
In response to recent outbreaks in Canada and an increasing proportion of infections resulting in high morbidity and mortality (14), *C difficile* was added to the list of notifiable diseases in Nova Scotia on April 1, 2012. Requiring that *C difficile* cases be reported to public health will help to provide an understanding of trends in disease incidence in Nova Scotia for both hospital-associated and other cases, facilitate outbreak detection, facilitate national surveillance of this disease, and provide information for public health policy and planning. Public health surveillance information for *C. difficile* will be included in next year's annual report.

Direct contact and respiratory infection outbreaks are summarized in the Annual Influenza Surveillance Report, which can be found on the Population Health Assessment and Surveillance website (http://www.gov.ns.ca/hpp/populationhealth/).

Enteric, Foodborne, and Waterborne Diseases

There were 482 cases of enteric pathogens reported in Nova Scotia in 2011. The most frequently reported enteric infections were campylobacteriosis (n=183), salmonellosis (n=170) and giardiasis (n=65). Travel was associated with 105 (21.8%) of reported enteric infections overall. Figure 9 presents the enteric disease rates by disease for 2011.

Figure 9: Reported rate of enteric, foodborne, and waterborne diseases in Nova Scotia, 2011.



Notes: Other category includes amebiasis, botulism, hepatitis A, listeriosis, typhoid and yersiniosis.

Campylobacteriosis

Campylobacteriosis infections were the most commonly reported enteric pathogen in Nova Scotia in 2011 (183 cases; rate of 19.6/100,000 population). This rate is less than that for Canada in 2008 (28.4/100,000 population) (15). The highest rate among DHAs occurred in South West District Health Authority with a rate of 47.2/100,000 population. A high proportion of these reported cases were related to exposures to birds, wild and domestic animals and to agricultural practices.

Fifty-nine percent of cases (108 of 183) reported in the province in 2011 were reported in people 40 years of age or older, while 34% were reported for people between the ages of 15 and 39. The rate for campylobacteriosis was higher in males than females (23.6/100,000 for males vs. 15.8/100,000 for females).

Salmonellosis

Salmonella infections were the second most frequently reported enteric pathogen in Nova Scotia in 2011 (170 cases; 18.2/100,000 population). The rate of salmonella infections reported in Nova Scotia in 2008 (14.7/100,000 population) is lower than the 2008 Canadian rate of 18.2/100,000 population (15). Nearly 80% of all cases in Nova Scotia in 2011 were reported for adults aged 25 years and older. The rate of infection was higher in females than males (18.7/100,000 for females vs. 17.7/100,000 for males).

Giardiasis

A total of 65 cases of giardiasis were reported in Nova Scotia in 2011, representing a rate of 7.0/100,000 population. This rate is similar to the rate in Nova Scotia in 2010 (69 cases, 7.4/100,000 population). The rate of giardiasis infections reported in Nova Scotia in 2008 (11.5/100,000 population) is lower than the 2008 Canadian rate of 12.7/100,000 population (15). Ninety-two percent of cases (60 of 65) were reported in people aged 25 years and older. The rate of illness among females was 7.1/100,000 population (34 cases) compared to 6.8/100,000 population for males (31 cases).

Other Reportable Enteric Diseases

The rate of other reportable enteric diseases in Nova Scotia in 2011 remained low (See Appendix B, Table 1 for details). Rates were below or similar to the 2008 national rates (15).

Outbreaks of Enteric Illness

There were 40 enteric outbreaks reported in Nova Scotia in 2011. There were 18 norovirus outbreaks, one Verotoxigenic E. coli outbreak in a daycare and one rotavirus outbreak; twenty enteric outbreaks had no reported pathogen. Of the 40 reported outbreaks, 29 occurred in residential institutions (i.e. long term care facilities), 10 occurred in non-residential institutions (i.e. hospitals, daycares, etc.) and one outbreak occurred in the community.

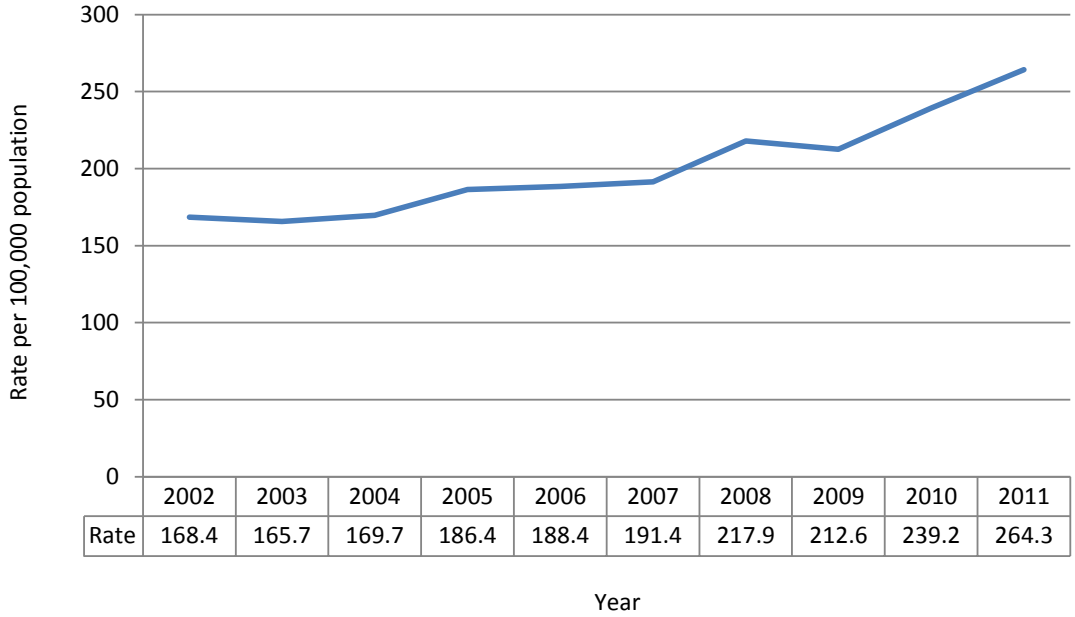
Sexually Transmitted Infections

There were 2603 notifications of bacterial sexually transmitted infections (STI) in Nova Scotia in 2011. Chlamydia was the most frequently reported bacterial STI (n=2,465), followed by gonorrhea (n=102), then infectious syphilis (n=36). Chlamydia and infectious syphilis rates in Nova Scotia have been increasing in recent years. The rate of reported gonorrhea in Nova Scotia displays no apparent trend in the past decade; in 2011 the rate was similar to that in 2010.

Chlamydia

Chlamydia was the most frequently reported notifiable disease in Nova Scotia in 2011 (n=2,465, rate=264.3/100,000 population). The number of reported cases and the associated rate of Chlamydia displayed an increasing trend from 2002 to 2011 (Figure 10). The number of reported cases and the population rate of reported Chlamydia infections in Canada has shown a similar increase over time, with the national rate of reported Chlamydia cases increasing from 150.9/100,000 population in 2000 to 258.5/100,000 population in 2009 (1). Considering data available for comparison, the rate of reported Chlamydia cases in Nova Scotia has remained consistently lower than the national rate (Nova Scotia 2009 rate=212.6/100,000 population compared to Canadian 2009 rate=258.5/100,000 population) (1).

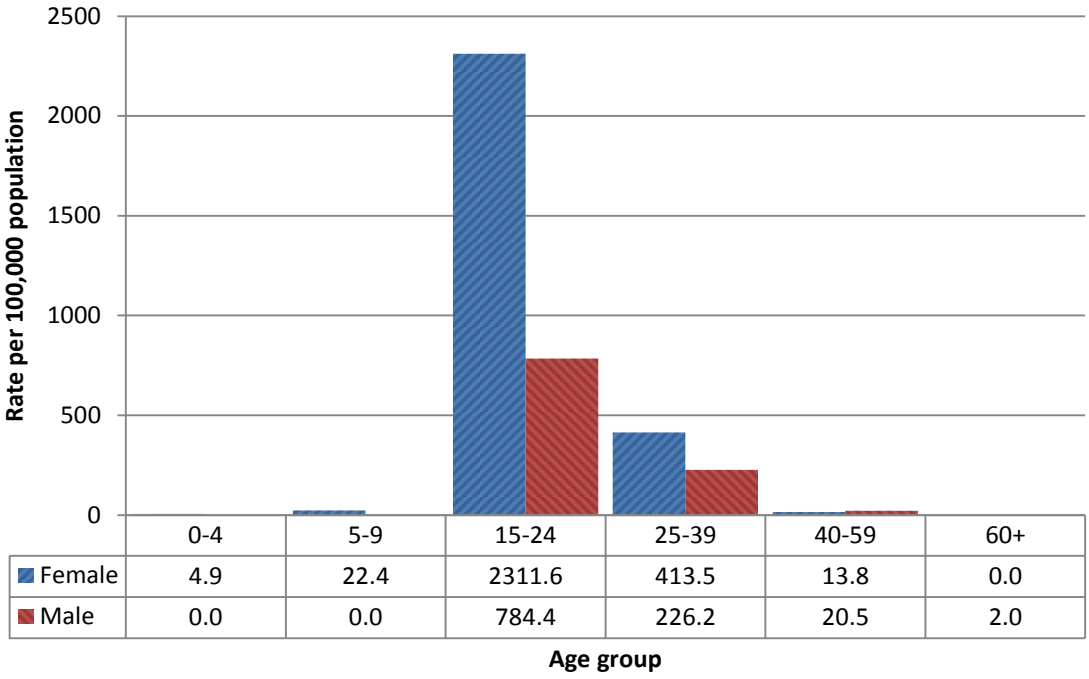
Figure 10: Reported rate of Chlamydia in Nova Scotia, 2002-2011.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rate	168.4	165.7	169.7	186.4	188.4	191.4	217.9	212.6	239.2	264.3

In Canada, between 2000 and 2009, reported rates of Chlamydia cases increased in both the male and female population, with rates among females consistently higher than those among males (1). Similarly, in Nova Scotia, the increase in reported rates of Chlamydia cases is attributable to increases among both the male and female populations, and rates among females have been consistently higher than rates among males. In Nova Scotia in 2011, the reported rates of Chlamydia cases in the female and male populations were 370.0/100,000 females and 154.3/100,000 males. In Canada in 2009, the reported rates of Chlamydia cases in the female and male populations were 339.9 cases per 100,000 females and 175.2 cases per 100,000 males (1). For comparable years of data, the reported rates of Chlamydia in Nova Scotia for all males and all females remained below the national rates. The highest rate of Chlamydia in Nova Scotia was reported among females aged 15 to 24 years (2311.6/100,000 population in 2011) (Figure 11). Similarly, national data show the highest rates of Chlamydia in females aged 15 to 19 years (1720.3/100,000 population) and 20 to 24 years (1871.4/100,000 population in 2009) (1). It is unknown at this time whether the Nova Scotian 2011 Chlamydia rates among young females will be above the national rate, as Canadian rates display an increasing trend and data for 2010 and 2011 were unavailable at the time of writing this report. The 15 to 24 year age group overall accounted for 75% of all reported Chlamydia cases in Nova Scotia in 2011.

Figure 11: Reported rate of Chlamydia in Nova Scotia by age group and sex, 2011.



	0-4	5-9	15-24	25-39	40-59	60+
Female	4.9	22.4	2311.6	413.5	13.8	0.0
Male	0.0	0.0	784.4	226.2	20.5	2.0

Modifications to case finding efforts must be considered when interpreting reported rates of diseases. In Canada (1) and elsewhere (16), the increasing trend in reported rates of Chlamydia over time has been ongoing since the mid-1990s. This general increasing trend is likely attributable to a number of factors, including:

- The change in laboratory testing across Canada from enzyme immunoassay to nucleic acid amplification testing (NAAT), a more sensitive test, in the mid-1990s to early 2000s. This change in diagnostic practice coincided with the beginning of the increasing trend in reported rates of Chlamydia in Canada. The introduction of urine testing that was possible with the change to the NAAT methodology also could have improved case finding, as this specimen is easier to collect and may be more acceptable to some individuals.
- Increasing numbers of specimens being tested on an annual basis. For example, the Capital District Health Authority Laboratory, one of the laboratories that conduct testing for Chlamydia, tested approximately 22,000 specimens for Chlamydia in the 1999/2000 fiscal year and approximately 36,000 specimens in the 2010/2011 fiscal year (PPHLN communication). It is possible that similar increases in testing over time have occurred at other laboratories as well.
- The fact that many females are tested for Chlamydia routinely as part of an annual medical appointment which usually involves cervical cytology-based screening (Pap test) which is easily accompanied by specimen collection for Chlamydia testing. The Canadian Guidelines on Sexually Transmitted Infections (17) lists under 'Prevention and Control' that Chlamydial infection and its sequelae can be prevented by a number of measures including screening sexually active females under 25 years of age, sexually active males under 25 years of age, and pregnant women. Screening and treatment can prevent complications such as pelvic inflammatory disease and tubal ectopic pregnancy. Screening efforts are important to consider for infections that can be largely asymptomatic, such as Chlamydia.
- A true increase in the incidence in Chlamydia infections.

- The testing of vaginal self-swab specimens was introduced at the Provincial Public Health Laboratory in October 2011. This may contribute to increases in Chlamydia incidence noted in the years to come if this method of specimen collection increases case finding. This self-collection method will allow for testing without a speculum exam, facilitating continued Chlamydia screening if changes to screening for cervical cancer are to be implemented.

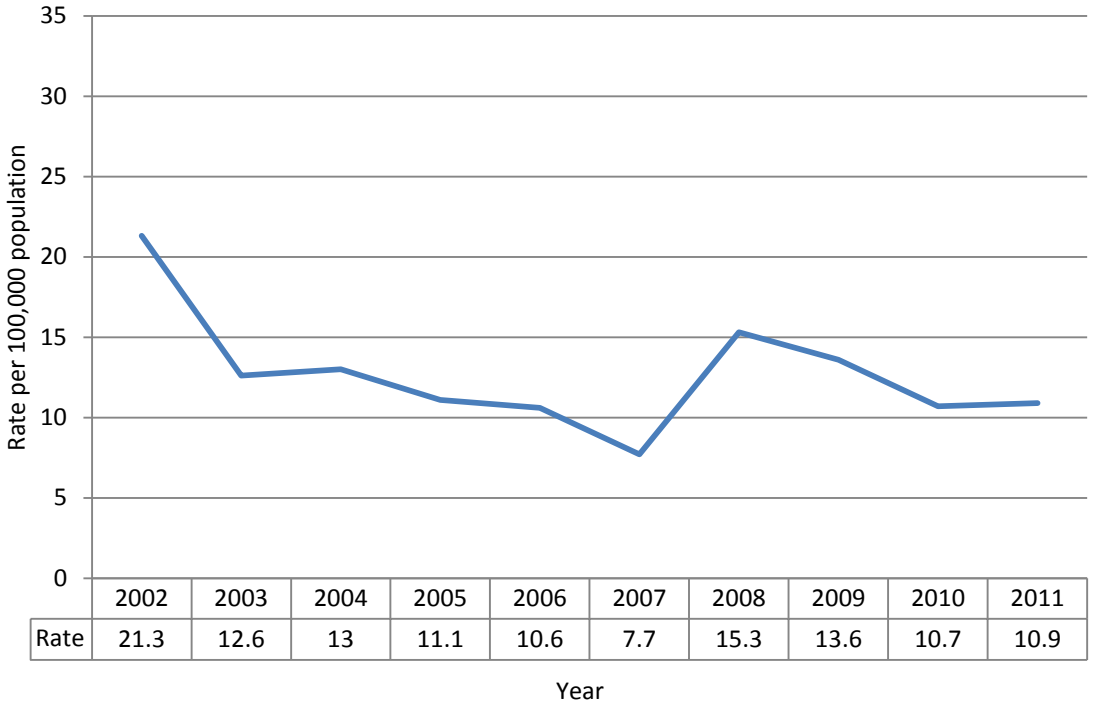
Gonorrhea

There were 102 cases of gonorrhea reported in Nova Scotia in 2011. Between 2002 and 2011, the rate of reported gonorrhea cases fluctuated between a high of 21.3/100,000 population in 2002 to a low of 7.7/100,000 population in 2007 (Figure 12). Considering data available for comparison, the rate of reported gonorrhea cases in Nova Scotia has remained consistently lower than the national rate (Nova Scotia 2009 rate=13.6/100,000 population compared to Canadian 2009 rate=33.1/100,000 population) (1). In contrast to the increasing trend in reported gonorrhea cases observed nationally between 2002 and 2008 (1), the rate of reported gonorrhea cases in Nova Scotia between 2002 and 2008 was quite variable and did not display an increasing trend.

Notably, from 2003 to 2011, there were issues with laboratory testing in certain regions of the province which may have resulted in the reporting of some false positive results[2]. While this suggests caution must be used in interpreting gonorrhea data from previous years, the estimated number of false positive cases of gonorrhea reported represents a small percentage of the cases reported in this time period. It is unlikely that the potential false positive cases are distributed in such a way as to mask a trend in the reported rate.

[2] The Provincial Public Health Laboratory (PPHLN) recently switched to nucleic acid amplification testing (NAAT) for gonorrhea detection, and through this process validated a second NAAT for confirmation of initial positive gonorrhea tests. This confirmatory testing has been offered to the other laboratories in the province. Preliminary data suggested that only 30% of positive gonorrhea specimens were confirmed as positive with the second NAAT confirmatory test. Given the low prevalence of gonorrhea and the associated low positive predictive value of the initial NAAT, the PPLHN has recommended confirmatory testing of all NAAT positive gonorrhea specimens.

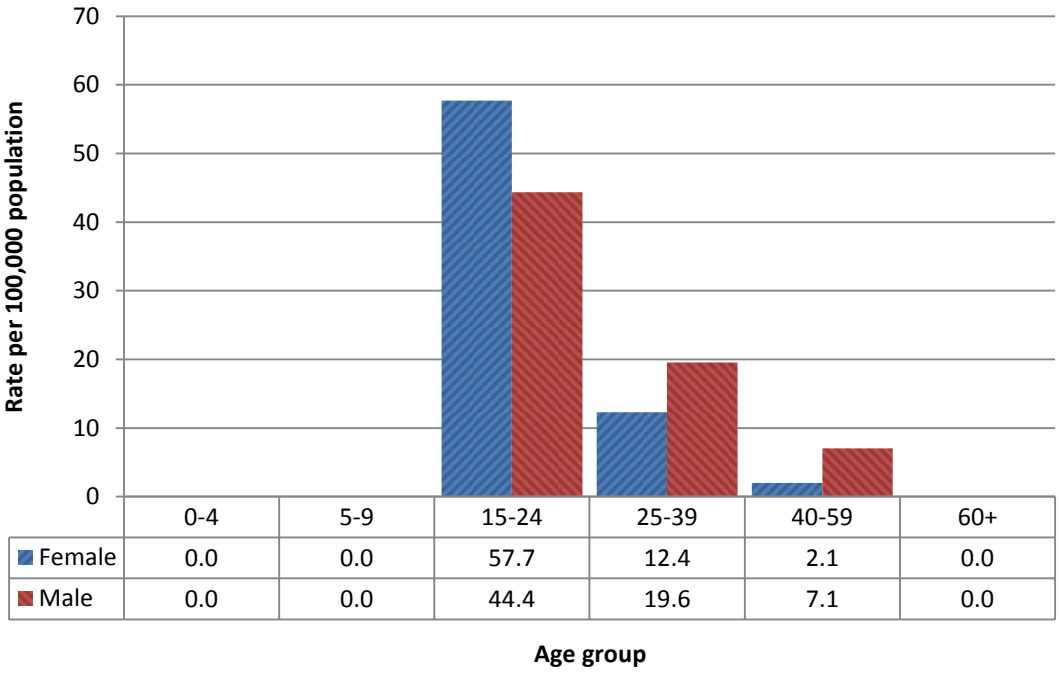
Figure 12: Reported rate of gonorrhea in Nova Scotia, 2002-2011.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rate	21.3	12.6	13	11.1	10.6	7.7	15.3	13.6	10.7	10.9

In Canada, between 1998 and 2008, reported rates of gonorrhea cases increased in both the male and female population, with rates among males consistently higher than those among females (1). In Nova Scotia, between 2002 and 2011, the annual rate of reported gonorrhea was higher among the female population in some years, and higher among the male population in other years. In Nova Scotia in 2011, the reported rates of gonorrhea cases in the female and male populations were 10.1/100,000 females and 11.8/100,000 males. In Canada in 2009, the reported rates of gonorrhea cases in the female and male populations were 29.6/100,000 females and 36.7/100,000 males. For comparable years of data, the reported rates of gonorrhea in Nova Scotia for males and females remained below the national rate. In 2011, the highest rate of gonorrhea in Nova Scotia was reported among females aged 15 to 24 years (57.7/100,000 population) (Figure 13). Similarly, national data show the highest rates of gonorrhea in females aged 15 to 19 years (145.6/100,000 population in 2009) and 20 to 24 years (149.0/100,000 population in 2009) (1).

Figure 13: Reported rate of gonorrhea in Nova Scotia by age group and sex, 2011.



Rates of gonorrhea have been consistently higher in CDHA over the past decade compared to rates outside of CDHA, typically between three and ten times higher. In 2011, the rate of reported gonorrhea cases in CDHA was 18.7/100,000 population compared to 4.8/100,000 population outside of CDHA.

In light of global antimicrobial resistance patterns, the World Health Organization has released a global action plan with the objective to control the spread and minimize the impact of antimicrobial resistance in *Neisseria gonorrhoeae* (18). In Nova Scotia, gonococcal resistance is monitored through a collaborative effort with the National Microbiology Laboratory (NML) of the Public Health Agency of Canada. Sixty-one Nova Scotian gonococcal isolates from 2010 were sent to the NML for typing and antimicrobial susceptibility testing. All isolates were shown to be susceptible to cefixime and ceftriaxone, the current recommended agents for treatment. With a move to nucleic acid amplification testing for gonorrhea across the province in recent years, a new surveillance plan is required to monitor antimicrobial resistance in Nova Scotia.

Syphilis

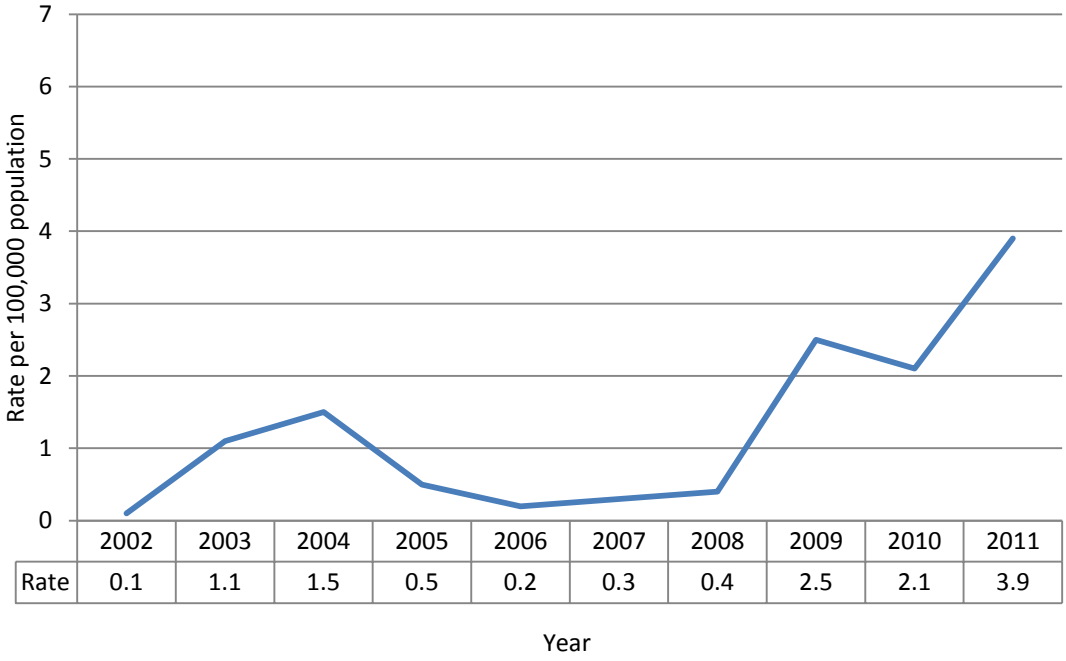
Syphilis cases are categorized as infectious or non-infectious syphilis. The primary, secondary, and early-latent stages of disease are considered infectious. The late latent and tertiary stages of disease are considered non-infectious. Neurosyphilis is typically a complication of tertiary syphilis; however, individuals coinfected with HIV have been shown to progress rapidly to neurosyphilis, often while still infectious (19). Infectious syphilis cases comprise those of public health significance, and will be described in more detail than non-infectious syphilis cases below.

In 2011 there were 36 cases of infectious syphilis and 11 cases of non-infectious syphilis reported in Nova Scotia. Additionally, there was one case pending stage classification when follow up of this individual was transferred to another jurisdiction for further public health action. The reported rate of infectious syphilis cases in Nova Scotia has increased from 0.1/100,000 population in 2002 to 3.9/100,000 population in 2011 (Figure 14). Similarly, the reported rate of infectious syphilis cases in Canada has increased over time, with the national reported rate of infectious syphilis cases increasing from 0.6/100,000 population in 2000

to 5.0/100,000 population in 2009 (1). Considering data available for comparison, the rate of reported infectious syphilis cases in Nova Scotia has remained consistently lower than the national rate.

The overall reported rate of infectious syphilis in Canada has increased by 782.1% from 2000 to 2009 (1). Increases in numbers of reported infectious syphilis cases in many jurisdictions across the country, including Nova Scotia, are contributing to this notable increase. In Nova Scotia, an increasing trend in infectious syphilis has been apparent since 2009. In June 2009, Capital District Health Authority (CDHA) declared an outbreak of infectious syphilis, which remains ongoing. An outbreak of infectious syphilis was declared in CDHA in 2004 as well, with rates returning to baseline levels in years preceding the 2009 outbreak. Similarly, since 2000, outbreaks of infectious syphilis have been reported from other jurisdictions across Canada including outbreaks in Vancouver, Edmonton, Calgary, Winnipeg, Toronto, Ottawa, Montreal, Yukon, Northwest Territories, Regina, and New Brunswick (1, 20, 21). Some of these outbreaks also remain ongoing.

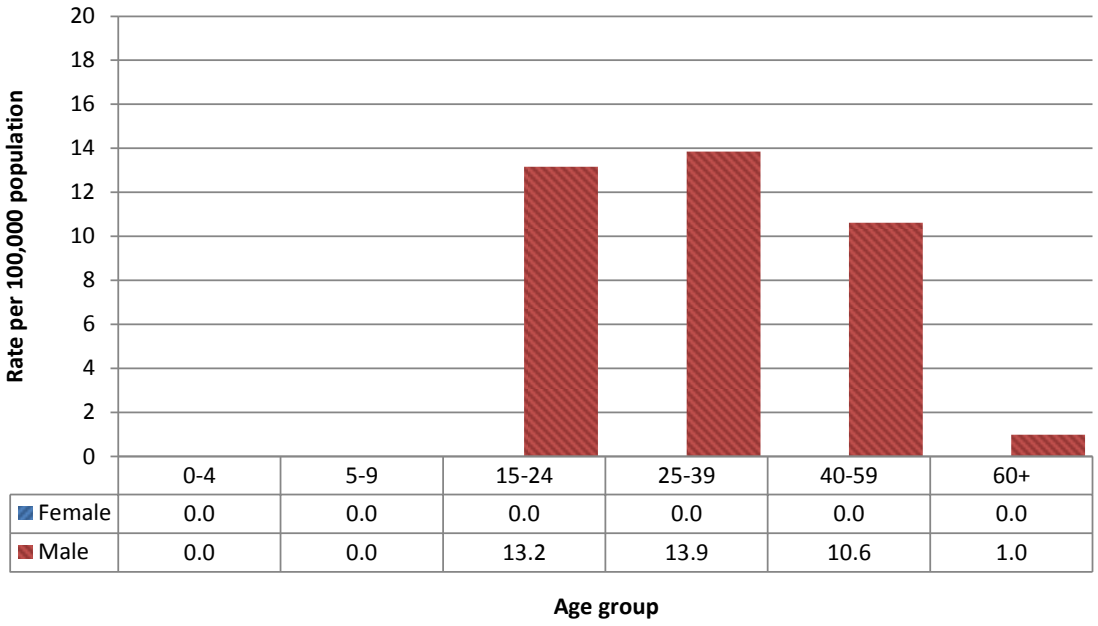
Figure 14: Reported rate of infectious syphilis in Nova Scotia, 2002-2011.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rate	0.1	1.1	1.5	0.5	0.2	0.3	0.4	2.5	2.1	3.9

In Canada, between 2000 and 2009, reported rates of infectious syphilis cases increased in both the male and female population, with a greater increase noted among the male population compared to the female population (1). An increase in reported cases and corresponding rates of congenital syphilis in recent years in Canada has been associated with reported outbreaks of infectious syphilis in heterosexual partnerships in some jurisdictions (1). The increase in reported rates of infectious syphilis cases in Nova Scotia since 2009 has occurred among the male population (associated with the outbreak declared in CDHA), with only one female case reported in the past decade. The highest rate of infectious syphilis in Nova Scotia in 2011 was reported among men aged 25 to 39 years (13.9/100,000 population) (Figure 15). Similarly, national data show the highest rates of infectious syphilis in males aged 25 to 29 years (17.6/100,000 population) and 30 to 39 years of age (17.2/100,000 population) (1).

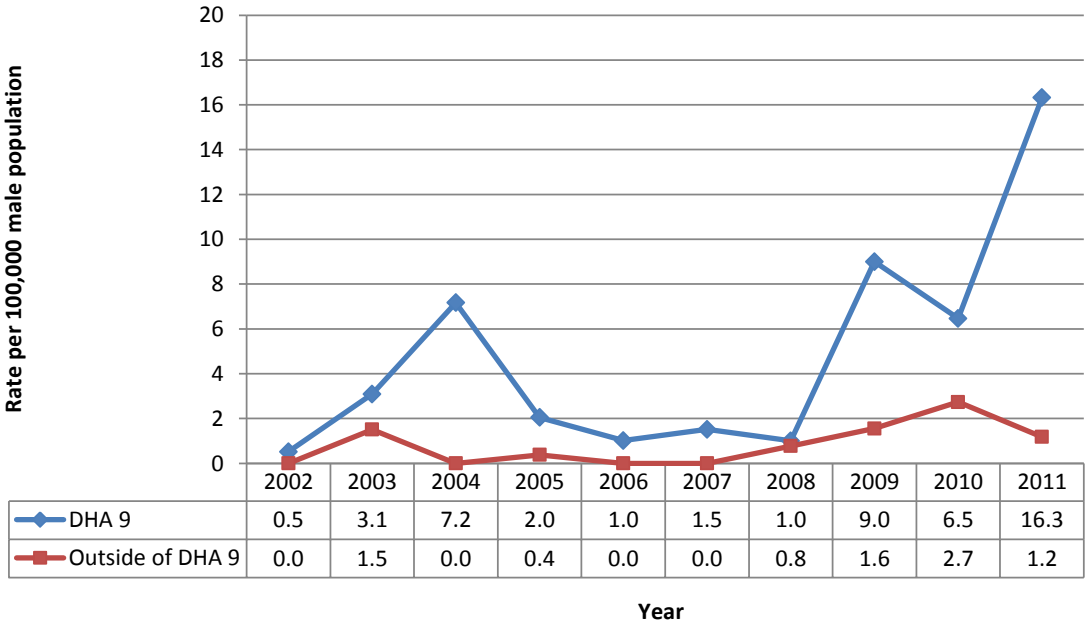
Figure 15: Reported rate of infectious syphilis in Nova Scotia by age group and sex, 2011.



	0-4	5-9	15-24	25-39	40-59	60+
Female	0.0	0.0	0.0	0.0	0.0	0.0
Male	0.0	0.0	13.2	13.9	10.6	1.0

Figure 16 presents rates of infectious syphilis among males in CDHA and outside of CDHA, reflecting reported outbreaks in this district.

Figure 16: Reported rate of infectious syphilis among males residing in DHA 9 and outside of DHA 9, 2002-2011.



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
DHA 9	0.5	3.1	7.2	2.0	1.0	1.5	1.0	9.0	6.5	16.3
Outside of DHA 9	0.0	1.5	0.0	0.4	0.0	0.0	0.8	1.6	2.7	1.2

Vaccine Preventable Diseases

There were 4 cases of vaccine preventable diseases reported in Nova Scotia in 2011:

- There were three cases of pertussis.
- There were no cases of rubella or measles
- There was no cases of mumps
- There was one case of *Haemophilus influenzae*, type b

Vectorborne and Other Zoonoses

There were 58 cases of vectorborne and other zoonotic diseases reported in Nova Scotia in 2011:

- There were 54 cases of Lyme disease reported
- There were two cases of Q-fever reported
- There were two cases of Toxoplasmosis reported
- There were no reported cases of West Nile virus, rabies, malaria, or other reportable vectorborne/zoonotic diseases not mentioned above

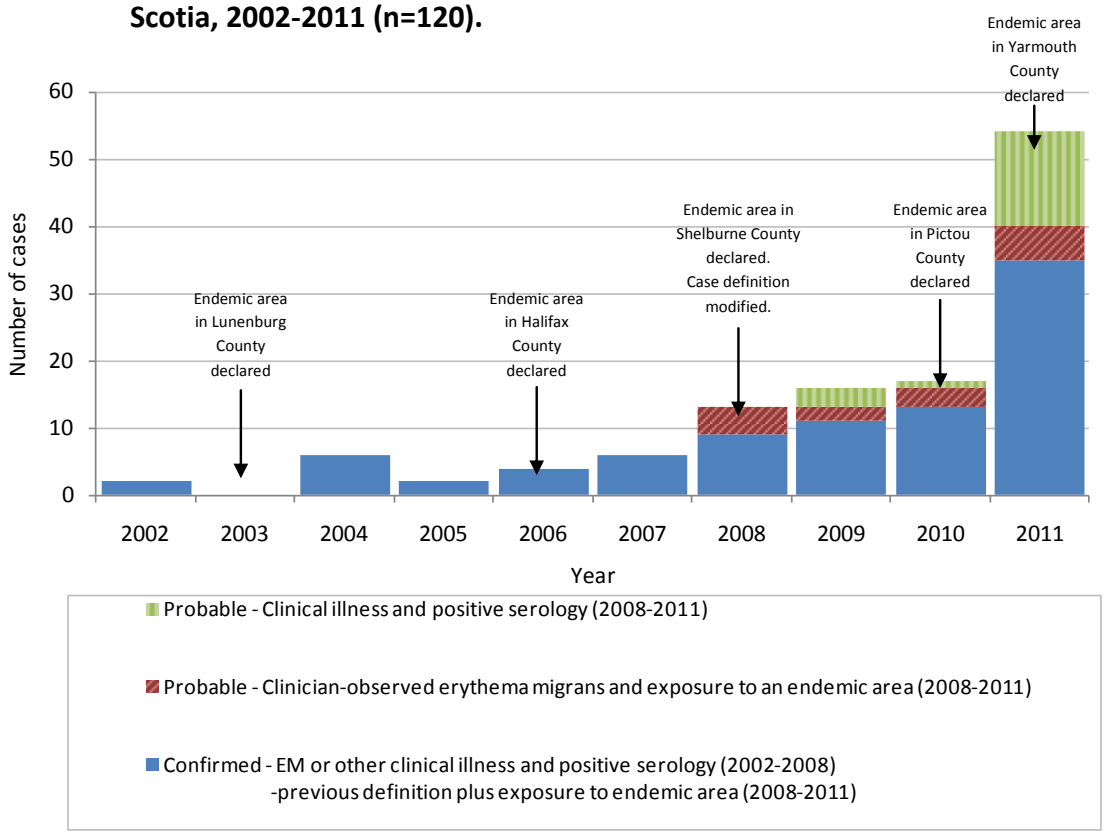
See Appendix B for tables containing numbers and rates of reported cases of vectorborne and other zoonotic diseases from 2002 to 2011.

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 likely due to a number of factors including an increase in the number of blacklegged tick populations established in Nova Scotia, increases 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://www.gov.ns.ca/hpp/populationhealth/surveillanceguidelines/).

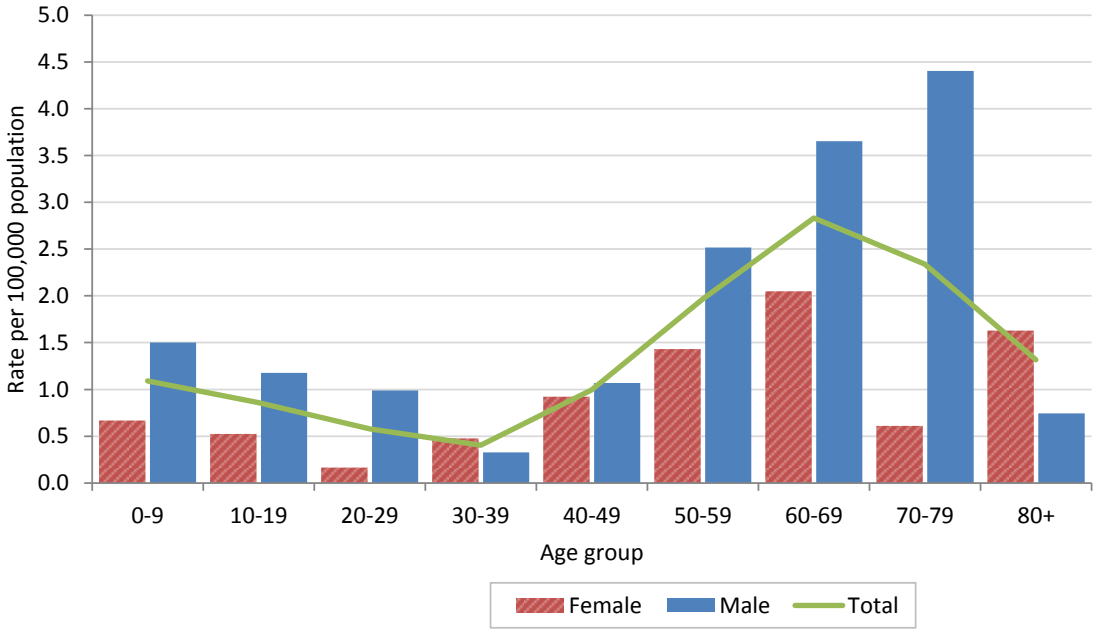
Fifty-four cases of Lyme disease were reported in 2011, which is a marked increase from previous years. Figure 17 presents the number of reported cases by year, showing the increase in cases over time, the years in which new areas were added to the list of known Lyme disease endemic areas, and when the surveillance case definition was modified.

Figure 17: Number of reported cases of Lyme disease by case classification and year, Nova Scotia, 2002-2011 (n=120).



From 2002 to 2011 there have been 120 cases of Lyme disease reported in Nova Scotia, of which 101 (84%) were likely acquired within the province. To date, the majority (>80%) of cases classified as likely acquired in Nova Scotia were associated with tick exposures in the endemic area in Lunenburg County. Cases ranged in age from three to 83 years and were 64% male (Figure 18). Five percent of cases (6/120) were hospitalized; no deaths were associated with Lyme disease.

Figure 18: Rate of reported cases of Lyme disease per 100,000 population, by sex and age group, Nova Scotia, 2002-2011 (n=120).



DHW collaborates with partners within the Nova Scotia Department of Natural Resources and the Public Health Agency of Canada to coordinate field work and data collection for tick surveillance activities. Tick surveillance in Nova Scotia identified five Lyme disease endemic areas between 2003 and 2011:

- Blue Rocks, Garden Lots, Heckmans Island, First Peninsula and the area immediately surrounding them in Lunenburg County
- Admiral's Cove area of Halifax County
- Gunning Cove area of Shelburne County
- Melmerby Beach, Egerton, Kings Head and Pine Tree areas of Pictou County
- Gavelton area of Yarmouth County

For a current map of known endemic areas in the province, please see the map online: http://www.gov.ns.ca/hpp/cdpc/lyme-map.asp.

For further information on Lyme disease epidemiology and tick surveillance in Nova Scotia, please see the summary report titled Lyme Disease: A report on Lyme Disease Epidemiology and Surveillance in Nova Scotia (available online here: http://www.gov.ns.ca/hpp/populationhealth/Epi_of_Lyme_and_Tick_Surveillance_Report_April_2012.pdf).

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APPENDIX A

List of Notifiable Diseases in Nova Scotia (as of December 31, 2011)

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

APPENDIX B

List of Tables in Appendix

TABLE 1: Notifiable diseases reported in Nova Scotia from 2002-2011: Number of reports and crude rates per 100,000 population

Condition	Year																		All Years	
	2002		2003		2004		2005		2006		2007		2008		2009		2010		2011			
	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Rate	n	Average Rate
Bloodborne Pathogens																						
Acquired Immune Deficiency Syndrome (AIDS)	8	0.9	7	0.7	10	1.1	5	0.5	13	1.4	5	0.5	5	0.5	2	0.2	5	0.5	4	0.4	64	0.7
Hepatitis B - Acute	9	1.0	12	1.3	11	1.2	10	1.1	8	0.9	9	1.0	7	0.8	3	0.3	1	0.1	5	0.5	75	0.8
Hepatitis B - Chronic or Unspecified	21	2.2	26	2.8	25	2.7	22	2.4	36	3.9	10	1.1	14	1.5	20	2.1	18	1.9	10	1.1	202	2.2
Hepatitis C	219	23.4	204	21.8	234	24.9	250	26.7	252	27.0	224	24.0	281	30.1	266	28.5	299	32.1	207	22.2	2436	26.1
Human Immunodeficiency Virus (HIV)	15	1.6	18	1.9	33	3.5	21	2.2	23	2.5	20	2.1	21	2.3	13	1.4	15	1.6	15	1.6	194	2.1
Direct Contact, Respiratory Routes, and Through the Provision of Health Care																						
Creutzfeldt-Jakob Disease - Classic	1	0.1	2	0.2	2	0.2	1	0.1	2	0.2	2	0.2	2	0.2	1	0.1	0	0.0	0	0.0	13	0.1
Encephalitis - Viral	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	2	0.2	1	0.1	2	0.2	1	0.1	2	0.2	10	0.1
Group A Streptococcal Disease Invasive	17	1.8	20	2.1	20	2.1	26	2.8	16	1.7	25	2.7	16	1.7	16	1.7	15	1.6	25	2.7	196	2.1
Group B Streptococcal Disease of the Newborn	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1	2	0.2	2	0.2	6	0.6	3	0.3	14	0.1
Legionellosis	1	0.1	0	0.0	0	0.0	2	0.2	1	0.1	0	0.0	0	0.0	2	0.2	1	0.1	0	0.0	7	0.1
Meningitis - Bacterial	4	0.4	3	0.3	3	0.3	4	0.4	2	0.2	4	0.4	5	0.5	2	0.2	1	0.1	1	0.1	29	0.3
Meningitis - Viral	9	1.0	2	0.2	1	0.1	6	0.6	6	0.6	14	1.5	3	0.3	6	0.6	2	0.2	11	1.2	60	0.6
Meningococcal Disease Invasive	5	0.5	3	0.3	7	0.7	2	0.2	4	0.4	4	0.4	8	0.9	4	0.4	3	0.3	4	0.4	44	0.5
Methicillin Resistant Staphylococcus Aureus (MRSA)	193	20.7	374	39.9	417	44.5	759	81.1	849	90.8	951	101.8	1013	108.6	890	95.4	919	98.5	841	90.2	7206	77.2
Pneumococcal Disease Invasive	3	0.3	9	1.0	17	1.8	27	2.9	22	2.4	26	2.8	14	1.5	20	2.1	35	3.8	51	5.5	224	2.4
Tuberculosis	9	1.0	6	0.6	8	0.9	6	0.6	10	1.1	8	0.9	4	0.4	7	0.8	9	1.0	9	1.0	76	0.8
Vancomycin resistant Enterococcus (VRE)	22	2.4	7	0.7	16	1.7	35	3.7	38	4.1	7	0.7	31	3.3	10	1.1	8	0.9	18	1.9	192	2.1
Enteric, Foodborne, and Waterborne Diseases																						
Amebiasis	8	0.9	4	0.4	14	1.5	10	1.1	13	1.4	11	1.2	9	1.0	1	0.1	7	0.8	8	0.9	85	0.9
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	1	0.1	1	0.0
Campylobacteriosis	201	21.5	140	14.9	150	16.0	125	13.4	132	14.1	133	14.2	159	17.0	123	13.2	151	16.2	183	19.6	1497	16.0
Cryptosporidiosis	8	0.9	6	0.6	9	1.0	18	1.9	9	1.0	13	1.4	11	1.2	10	1.1	21	2.3	12	1.3	117	1.3
Cyclosporiasis	2	0.2	2	0.2	2	0.2	0	0.0	3	0.3	3	0.3	0	0.0	1	0.1	2	0.2	0	0.0	15	0.2
Giardiasis	122	13.1	87	9.3	87	9.3	108	11.5	106	11.3	74	7.9	107	11.5	76	8.1	68	7.3	65	7.0	900	9.6
Hepatitis A	6	0.6	4	0.4	8	0.9	5	0.5	18	1.9	5	0.5	4	0.4	2	0.2	3	0.3	4	0.4	59	0.6
Hepatitis E	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
Listeriosis - Invasive	0	0.0	7	0.7	1	0.1	5	0.5	4	0.4	6	0.6	2	0.2	3	0.3	9	1.0	6	0.6	43	0.4
Salmonellosis	143	15.3	133	14.2	110	11.7	123	13.1	108	11.6	121	13.0	137	14.7	94	10.1	145	15.5	170	18.2	1284	13.7
Shellfish Poisoning	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
Shigellosis	15	1.6	7	0.7	8	0.9	19	2.0	6	0.6	6	0.6	4	0.4	11	1.2	11	1.2	13	1.4	100	1.1
Typhoid*	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.3	0	0.0	3	0.3	1	0.1	7	0.1
Verotoxigenic E. coli	23	2.5	17	1.8	14	1.5	14	1.5	21	2.2	15	1.6	10	1.1	5	0.5	14	1.5	18	1.9	151	1.6
Yersiniosis	2	0.2	1	0.1	3	0.3	2	0.2	4	0.4	5	0.5	4	0.4	2	0.2	3	0.3	1	0.1	27	0.3
Sexually Transmitted Infections																						
Chlamydia	1574	168.4	1552	165.7	1592	169.7	1745	186.4	1762	188.4	1788	191.4	2033	217.9	1983	212.6	2231	239.2	2465	264.3	18725	200.4
Gonorrhea	199	21.3	118	12.6	122	13.0	104	11.1	99	10.6	72	7.7	143	15.3	127	13.6	100	10.7	102	10.9	1186	12.7
Lymphogranuloma Venereum	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
Syphilis - Infectious	1	0.1	10	1.1	14	1.5	5	0.5	2	0.2	3	0.3	4	0.4	23	2.5	20	2.1	36	3.9	118	1.3
Syphilis - Non-Infectious or Stage Pending	6	0.6	5	0.5	6	0.6	10	1.1	6	0.6	6	0.6	8	0.9	1	0.1	8	0.9	12	1.3	68	0.7
Vaccine Preventable Diseases																						
Haemophilus influenzae Type b Invasive Disease	2	0.2	0	0.0	0	0.0	1	0.1	0	0.0	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	6	0.1
Mumps	2	0.2	1	0.1	0	0.0	30	3.2	6	0.6	595	63.7	5	0.5	1	0.1	1	0.1	0	0.0	641	6.9
Pertussis	85	9.1	20	2.1	21	2.2	25	2.7	48	5.1	33	3.5	14	1.5	18	1.9	6	0.6	3	0.3	273	2.9
Rubella	1	0.1	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	2	0.0
Vectorborne and Other Zoonoses																						
Lyme Disease - Confirmed	2	0.2	0	0.0	6	0.6	2	0.2	4	0.4	6	0.6	9	1.0	11	1.2	13	1.4	35	3.8	88	0.9
Lyme Disease - Probable	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	4	0.4	5	0.5	4	0.4	19	2.0	32	0.3
Malaria	2	0.2	0	0.0	6	0.6	3	0.3	2	0.2	4	0.4	2	0.2	2	0.2	5	0.5	0	0.0	26	0.3
Q-Fever	3	0.3	0	0.0	2	0.2	5	0.5	3	0.3	4	0.4	17	1.8	2	0.2	3	0.3	2	0.2	41	0.4
Toxoplasmosis	0	0.0	0	0.0	0	0.0	0	0.0	2	0.2	1	0.1	3	0.3	3	0.3	1	0.1	2	0.2	12	0.1
West Nile Virus	0	0.0	2	0.2	0	0.0	1	0.1	0	0.0	1	0.1	1	0.1	0	0.0	0	0.0	0	0.0	5	0.1
Total	**2944**	**315.0**	**2809**	**299.4**	**2979**	**317.5**	**3538**	**377.6**	**3642**	**389.3**	**4217**	**451.0**	**4122**	**441.6**	**3770**	**403.8**	**4168**	**446.7**	**4365**	**467.9**	**36554**	**391.0**

Notes: 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 2011 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	1	0	1	3	4
Hepatitis B - Acute	0	0	0	0	0	0	0	0	0	2	2	3	5
Hepatitis B - Chronic or Unspecified	1	0	0	1	1	1	0	2	0	0	0	7	10
Hepatitis C	2	7	11	20	23	22	12	57	9	59	68	62	207
Human Immunodeficiency Virus (HIV)	0	0	0	0	0	0	0	0	1	1	2	13	15
Direct Contact, Respiratory Routes, and Through the Provision of Health Care													
Creutzfeldt-Jakob Disease - Classic	0	0	0	0	0	0	0	0	0	0	0	0	0
Encephalitis - Viral	0	2	0	2	0	0	0	0	0	0	0	0	2
Group A Streptococcal Disease Invasive	1	2	2	5	3	0	4	7	1	3	4	9	25
Group B Streptococcal Disease of the Newborn	0	0	0	0	2	0	0	2	0	0	0	1	3
Legionellosis	0	0	0	0	0	0	0	0	0	0	0	0	0
Meningitis - Bacterial	1	0	0	1	0	0	0	0	0	0	0	0	1
Meningitis - Viral	1	1	0	2	0	0	0	0	0	0	0	9	11
Meningococcal Disease Invasive	0	0	3	3	0	0	0	0	0	0	0	1	4
Methicillin Resistant Staphylococcus Aureus (MRSA)	99	136	44	279	84	58	44	186	56	101	157	219	841
Pneumococcal Disease Invasive	1	1	2	4	1	2	1	4	3	11	14	29	51
Tuberculosis	0	0	0	0	0	0	1	1	0	2	2	6	9
Vancomycin resistant Enterococcus (VRE)	1	0	0	1	1	0	1	2	1	8	9	6	18
Enteric, Foodborne, and Waterborne Diseases													
Amebiasis	0	0	0	0	0	0	0	0	1	0	1	7	8
Botulism	0	0	0	0	1	0	0	1	0	0	0	0	1
Campylobacteriosis	6	29	20	55	16	5	5	26	12	12	24	78	183
Cryptosporidiosis	0	0	0	0	1	2	0	3	0	1	1	8	12
Cyclosporiasis	0	0	0	0	0	0	0	0	0	0	0	0	0
Giardiasis	8	7	1	16	2	2	1	5	1	4	5	39	65
Hepatitis A	1	0	0	1	0	0	0	0	0	0	0	3	4
Hepatitis E	0	0	0	0	0	0	0	0	0	0	0	0	0
Listeriosis - Invasive	1	0	0	1	0	1	1	2	0	2	2	1	6
Salmonellosis	13	13	20	46	9	7	10	26	14	18	32	66	170
Shellfish Poisoning	0	0	0	0	0	0	0	0	0	0	0	0	0
Shigellosis	2	0	1	3	1	1	0	2	1	0	1	7	13
Typhoid*	0	0	0	0	0	0	0	0	0	0	0	1	1
Verotoxigenic E. coli	0	0	1	1	1	2	2	5	0	3	3	9	18
Yersiniosis	0	0	0	0	0	0	0	0	0	0	0	1	1
Sexually Transmitted Infections													
Chlamydia	86	99	185	370	210	68	46	324	102	228	330	1441	2465
Gonorrhea	4	8	3	15	2	0	1	3	2	5	7	77	102
Lymphogranuloma Venereum	0	0	0	0	0	0	0	0	0	0	0	0	0
Syphilis - Infectious	0	2	0	2	0	0	0	0	1	0	1	33	36
Syphilis - Non-Infectious or Stage Pending	0	0	0	0	0	0	0	0	1	0	1	11	12
Vaccine Preventable Diseases													
Haemophilus influenzae Type b Invasive Disease	0	0	0	0	0	0	0	0	0	0	0	1	1
Mumps	0	0	0	0	0	0	0	0	0	0	0	0	0
Pertussis	0	0	0	0	0	1	0	1	1	1	2	0	3
Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0
Vectorborne and Other Zoonoses													
Lyme Disease - Confirmed	27	2	0	29	0	0	1	1	1	0	1	4	35
Lyme Disease - Probable	9	1	0	10	0	0	1	1	1	0	1	7	19
Malaria	0	0	0	0	0	0	0	0	0	0	0	0	0
Q-Fever	0	0	0	0	0	0	0	0	2	0	2	0	2
Toxoplasmosis	0	1	0	1	0	0	0	0	0	1	1	0	2
West Nile Virus	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**264**	**311**	**293**	**868**	**358**	**172**	**131**	**661**	**212**	**462**	**674**	**2162**	**4365**

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 2011 by District Health Authority (DHA): Crude rates per 100,000 population

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	0.0	0.0	2.3	0.0	0.6	0.7	0.4
Hepatitis B - Acute	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.2	0.7	0.5
Hepatitis B - Chronic or Unspecified	1.7	0.0	0.0	0.5	1.4	3.2	0.0	1.3	0.0	0.0	0.0	1.7	1.1
Hepatitis C	3.4	11.4	13.6	9.9	31.4	70.6	26.3	38.0	20.8	47.2	40.4	15.0	22.2
Human Immunodeficiency Virus (HIV)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.8	1.2	3.2	1.6
Direct Contact, Respiratory Routes, and Through the Provision of Health Care													
Creutzfeldt-Jakob Disease - Classic	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Encephalitis - Viral	0.0	3.3	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Group A Streptococcal Disease Invasive	1.7	3.3	2.5	2.5	4.1	0.0	8.8	4.7	2.3	2.4	2.4	2.2	2.7
Group B Streptococcal Disease of the Newborn	0.0	0.0	0.0	0.0	2.7	0.0	0.0	1.3	0.0	0.0	0.0	0.2	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	0.0	0.0
Meningitis - Bacterial	1.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Meningitis - Viral	1.7	1.6	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.2
Meningococcal Disease Invasive	0.0	0.0	3.7	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	167.4	221.4	54.2	138.3	114.7	186.1	96.5	124.0	129.4	80.8	93.3	53.1	90.2
Pneumococcal Disease Invasive	1.7	1.6	2.5	2.0	1.4	6.4	2.2	2.7	6.9	8.8	8.3	7.0	5.5
Tuberculosis	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.7	0.0	1.6	1.2	1.5	1.0
Vancomycin resistant Enterococcus (VRE)	1.7	0.0	0.0	0.5	1.4	0.0	2.2	1.3	2.3	6.4	5.4	1.5	1.9
Enteric, Foodborne, and Waterborne Diseases													
Amebiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.6	1.7	0.9
Botulism	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.1
Campylobacteriosis	10.1	47.2	24.6	27.3	21.8	16.0	11.0	17.3	27.7	9.6	14.3	18.9	19.6
Cryptosporidiosis	0.0	0.0	0.0	0.0	1.4	6.4	0.0	2.0	0.0	0.8	0.6	1.9	1.3
Cyclosporiasis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Giardiasis	13.5	11.4	1.2	7.9	2.7	6.4	2.2	3.3	2.3	3.2	3.0	9.5	7.0
Hepatitis A	1.7	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4
Hepatitis E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Listeriosis - Invasive	1.7	0.0	0.0	0.5	0.0	3.2	2.2	1.3	0.0	1.6	1.2	0.2	0.6
Salmonellosis	22.0	21.2	24.6	22.8	12.3	22.5	21.9	17.3	32.4	14.4	19.0	16.0	18.2
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
Shigellosis	3.4	0.0	1.2	1.5	1.4	3.2	0.0	1.3	2.3	0.0	0.6	1.7	1.4
Typhoid*	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
Verotoxigenic E. coli	0.0	0.0	1.2	0.5	1.4	6.4	4.4	3.3	0.0	2.4	1.8	2.2	1.9
Yersiniosis	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
Sexually Transmitted Infections													
Chlamydia	145.4	161.1	228.0	183.4	286.7	218.2	100.9	216.0	235.7	182.5	196.2	349.2	264.3
Gonorrhea	6.8	13.0	3.7	7.4	2.7	0.0	2.2	2.0	4.6	4.0	4.2	18.7	10.9
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
Syphilis - Infectious	0.0	3.3	0.0	1.0	0.0	0.0	0.0	0.0	2.3	0.0	0.6	8.0	3.9
Syphilis - Non-Infectious or Stage Pending	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.6	2.7	1.3
Vaccine Preventable Diseases													
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	0.2	0.1
Mumps	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pertussis	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.7	2.3	0.8	1.2	0.0	0.3
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
Vectorborne and Other Zoonoses													
Lyme Disease - Confirmed	45.7	3.3	0.0	14.4	0.0	0.0	2.2	0.7	2.3	0.0	0.6	1.0	3.8
Lyme Disease - Probable	15.2	1.6	0.0	5.0	0.0	0.0	2.2	0.7	2.3	0.0	0.6	1.7	2.0
Malaria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Q-Fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	1.2	0.0	0.2
Toxoplasmosis	0.0	1.6	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.8	0.6	0.0	0.2
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
TOTAL	**446.5**	**506.3**	**361.0**	**430.3**	**488.9**	**551.8**	**287.4**	**440.6**	**489.7**	**369.7**	**400.7**	**523.9**	**467.9**

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 2011 by age group: Number of reports and age specific rates per 100,000 population

Condition	Age Group (Years)												Total	
	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	4	1.4	0	0.0	4	0.4
Hepatitis B - Acute	0	0.0	0	0.0	0	0.0	2	1.1	3	1.0	0	0.0	5	0.5
Hepatitis B - Chronic or Unspecified	0	0.0	0	0.0	2	1.7	3	1.7	3	1.0	2	0.9	10	1.1
Hepatitis C	1	2.4	0	0.0	32	26.7	89	50.7	76	26.6	9	4.1	207	22.2
Human Immunodeficiency Virus (HIV)	0	0.0	0	0.0	0	0.0	5	2.8	10	3.5	0	0.0	15	1.6
Direct Contact, Respiratory Routes, and Through the Provision of Health Care														
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Encephalitis - Viral	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.5	2	0.2
Group A Streptococcal Disease Invasive	1	2.4	4	4.4	4	3.3	6	3.4	5	1.7	5	2.3	25	2.7
Group B Streptococcal Disease of the Newborn	3	7.2	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	3	0.3
Legionellosis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	1	2.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Meningitis - Viral	9	21.6	1	1.1	1	0.8	0	0.0	0	0.0	0	0.0	11	1.2
Meningococcal Disease Invasive	1	2.4	0	0.0	2	1.7	0	0.0	0	0.0	1	0.5	4	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	18	43.3	13	14.2	48	40.1	64	36.4	122	42.7	574	262.7	841	90.2
Pneumococcal Disease Invasive	5	12.0	5	5.5	0	0.0	3	1.7	16	5.6	22	10.1	51	5.5
Tuberculosis	1	2.4	0	0.0	2	1.7	1	0.6	1	0.3	4	1.8	9	1.0
Vancomycin resistant Enterococcus (VRE)	0	0.0	0	0.0	0	0.0	1	0.6	5	1.7	12	5.5	18	1.9
Enteric, Foodborne, and Waterborne Diseases														
Amebiasis	0	0.0	1	1.1	1	0.8	1	0.6	5	1.7	0	0.0	8	0.9
Botulism	1	2.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	0.1
Campylobacteriosis	7	16.8	5	5.5	20	16.7	43	24.5	59	20.6	49	22.4	183	19.6
Cryptosporidiosis	0	0.0	2	2.2	6	5.0	1	0.6	3	1.0	0	0.0	12	1.3
Cyclosporiasis	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Giardiasis	3	7.2	3	3.3	4	3.3	21	12.0	25	8.7	9	4.1	65	7.0
Hepatitis A	0	0.0	2	2.2	0	0.0	0	0.0	1	0.3	1	0.5	4	0.4
Hepatitis E	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	1	2.4	0	0.0	0	0.0	0	0.0	2	0.7	3	1.4	6	0.6
Salmonellosis	20	48.1	13	14.2	17	14.2	26	14.8	52	18.2	42	19.2	170	18.2
Shellfish Poisoning	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Shigellosis	1	2.4	3	3.3	1	0.8	4	2.3	3	1.0	1	0.5	13	1.4
Typhoid*	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Verotoxigenic E. coli	8	19.2	1	1.1	1	0.8	3	1.7	1	0.3	4	1.8	18	1.9
Yersiniosis	0	0.0	0	0.0	0	0.0	1	0.6	0	0.0	0	0.0	1	0.1
Sexually Transmitted Infections														
Chlamydia	1	2.4	10	10.9	1838	1535.6	564	321.1	49	17.1	2	0.9	2465	264.3
Gonorrhea	0	0.0	0	0.0	61	51.0	28	15.9	13	4.5	0	0.0	102	10.9
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	8	6.7	12	6.8	15	5.2	1	0.5	36	3.9
Syphilis - Non-Infectious or Stage Pending	0	0.0	0	0.0	2	1.7	3	1.7	6	2.1	1	0.5	12	1.3
Vaccine Preventable Diseases														
Haemophilus influenzae Type b Invasive Disease	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	1	0.1
Mumps	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Pertussis	2	4.8	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0	3	0.3
Rubella	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	1	2.4	4	4.4	0	0.0	2	1.1	12	4.2	16	7.3	35	3.8
Lyme Disease - Probable	1	2.4	3	3.3	3	2.5	1	0.6	4	1.4	7	3.2	19	2.0
Malaria	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Q-Fever	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	1	0.5	2	0.2
Toxoplasmosis	0	0.0	0	0.0	0	0.0	1	0.6	1	0.3	0	0.0	2	0.2
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	**86**	**206.6**	**70**	**76.7**	**2053**	**1715.1**	**886**	**504.5**	**500**	**174.0**	**767**	**351.2**	**4362**	**467.7**

Notes: Excludes 2 MRSA and 1 chlamydia cases 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 2011: Number of reports and sex-specific rates per 100,000 population

Condition	Sex				Total	
	Female		Male			
	n	*Rate*	n	*Rate*	n	*Rate*
Bloodborne Pathogens						
Acquired Immune Deficiency Syndrome (AIDS)	1	0.2	3	0.7	4	0.4
Hepatitis B - Acute	2	0.4	3	0.7	5	0.5
Hepatitis B - Chronic or Unspecified	3	0.6	7	1.5	10	1.1
Hepatitis C	84	17.7	123	26.9	207	22.2
Human Immunodeficiency Virus (HIV)	2	0.4	13	2.8	15	1.6
Direct Contact, Respiratory Routes, and Through the Provision of Health Care						
Creutzfeldt-Jakob Disease - Classic	0	0.0	0	0.0	0	0.0
Encephalitis - Viral	1	0.2	1	0.2	2	0.2
Group A Streptococcal Disease Invasive	13	2.7	12	2.6	25	2.7
Group B Streptococcal Disease of the Newborn	2	0.4	1	0.2	3	0.3
Legionellosis	0	0.0	0	0.0	0	0.0
Meningitis - Bacterial	1	0.2	0	0.0	1	0.1
Meningitis - Viral	4	0.8	7	1.5	11	1.2
Meningococcal Disease Invasive	2	0.4	2	0.4	4	0.4
Methicillin Resistant Staphylococcus Aureus (MRSA)	418	87.9	423	92.6	841	90.2
Pneumococcal Disease Invasive	24	5.0	27	5.9	51	5.5
Tuberculosis	5	1.1	4	0.9	9	1.0
Vancomycin resistant Enterococcus (VRE)	12	2.5	6	1.3	18	1.9
Enteric, Foodborne, and Waterborne Diseases						
Amebiasis	1	0.2	7	1.5	8	0.9
Botulism	0	0.0	1	0.2	1	0.1
Campylobacteriosis	75	15.8	108	23.6	183	19.6
Cryptosporidiosis	6	1.3	6	1.3	12	1.3
Cyclosporiasis	0	0.0	0	0.0	0	0.0
Giardiasis	34	7.1	31	6.8	65	7.0
Hepatitis A	3	0.6	1	0.2	4	0.4
Hepatitis E	0	0.0	0	0.0	0	0.0
Listeriosis - Invasive	2	0.4	4	0.9	6	0.6
Salmonellosis	81	17.7	89	18.7	170	18.2
Shellfish Poisoning	0	0.0	0	0.0	0	0.0
Shigellosis	3	0.6	10	2.2	13	1.4
Typhoid*	0	0.0	1	0.2	1	0.1
Verotoxigenic E. coli	9	1.9	9	2.0	18	1.9
Yersiniosis	1	0.2	0	0.0	1	0.1
Sexually Transmitted Infections						
Chlamydia	1760	370.0	705	154.3	2465	264.3
Gonorrhea	48	10.1	54	11.8	102	10.9
Lymphogranuloma Venereum	0	0.0	0	0.0	0	0.0
Syphilis - Infectious	0	0.0	36	7.9	36	3.9
Syphilis - Non-Infectious or Stage Pending	2	0.4	10	2.2	12	1.3
Vaccine Preventable Diseases						
Haemophilus influenzae Type b Invasive Disease	0	0.0	1	0.2	1	0.1
Mumps	0	0.0	0	0.0	0	0.0
Pertussis	2	0.4	1	0.2	3	0.3
Rubella	0	0.0	0	0.0	0	0.0
Vectorborne and Other Zoonoses						
Lyme Disease - Confirmed	11	2.3	24	5.3	35	3.8
Lyme Disease - Probable	6	1.3	13	2.8	19	2.0
Malaria	0	0.0	0	0.0	0	0.0
Q-Fever	1	0.2	1	0.2	2	0.2
Toxoplasmosis	1	0.2	1	0.2	2	0.2
West Nile Virus	0	0.0	0	0.0	0	0.0
TOTAL	**2620**	**551.2**	**1745**	**380.9**	**4365**	**467.9**

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