

COMMUNICABLE DISEASE REPORT

Quarterly Report

Volume 29, Number 4

December 2012

This edition of the NL Communicable Disease Report provides a summary of major activities during the 2012 year. The year-end disease counts are located on the last page and provide comparative data from previous years.

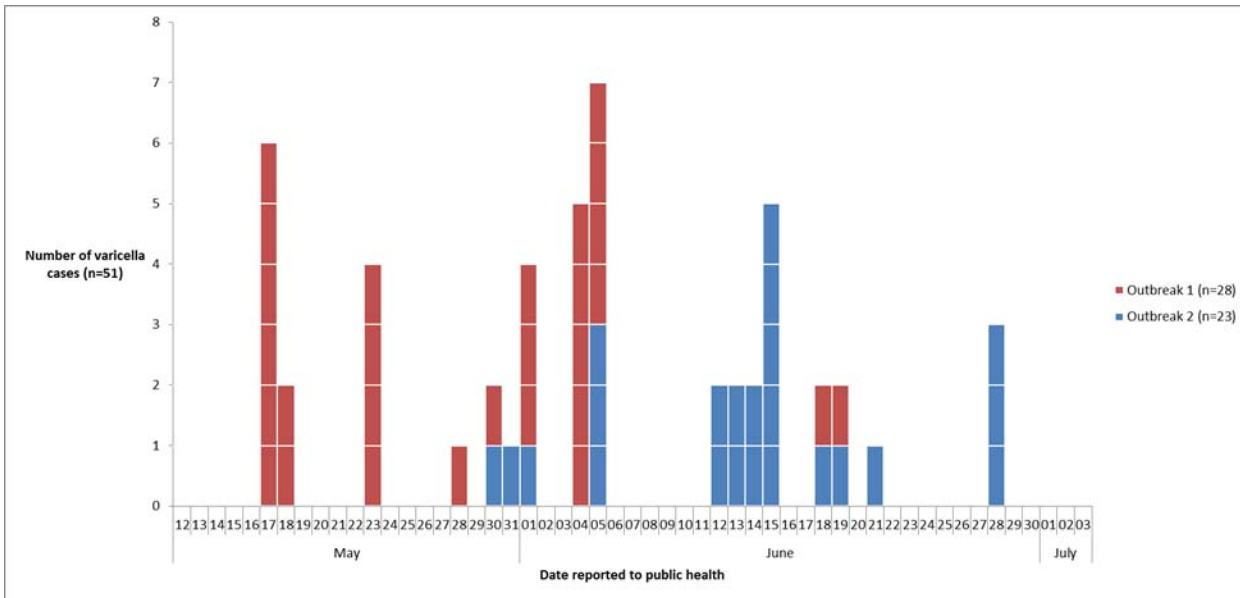
Chickenpox

Two concurrent outbreaks of clinically-diagnosed chickenpox occurred in Eastern Health in 2012, beginning in mid-May 2012 and ending at the end of June 2012. 51 cases were reported at two elementary schools in the region. A large proportion of students in both elementary schools were vaccinated against chickenpox (92% at each school). None of the cases were laboratory-confirmed to be chickenpox. However, parents of 67% of cases in the outbreaks reported that their child had seen a physician who made a clinical diagnosis of chickenpox.

In vaccinated individuals, chickenpox typically presents as a much milder infection than in unvaccinated individuals, and may be confused with other rash-causing illnesses. Of note, at the same time as these outbreaks, the region reported an increase in clinical cases of hand, foot and mouth disease. In order to avoid potential confusion, physicians may wish to test cases in order to confirm a chickenpox infection. Confirmed laboratory results will also help public health officials in the province better understand the changing epidemiology of chickenpox in NL, since the provincially-funded immunization program was introduced in 2005.

Laboratory testing for chickenpox is available at the NL Public Health Laboratory. The preferred method to confirm a current infection is viral culture. Sample collection for a varicella viral culture test involves collecting liquid from or scrapings of fresh (new) chickenpox vesicles (lesions). For more detailed information, please consult the NL Public Health Laboratory's online Guide to Services <http://publichealthlab.ca/service/varicella-zoster-virus-culture/>

Figure 1: Cases of chickenpox in two elementary school outbreaks by the date reported to public health, Eastern Health, May-June 2012



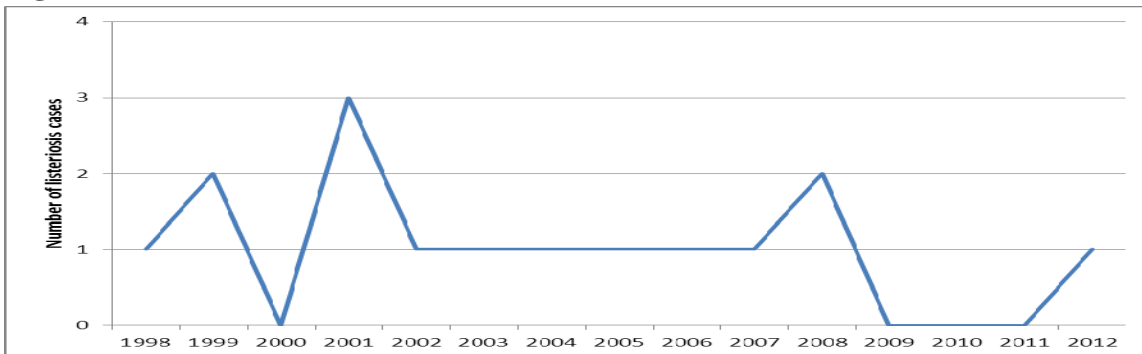
Listeriosis

Listeriosis is caused by the bacterium, *Listeria monocytogenes*. It can cause a spectrum of disease from gastroenteritis to potentially fatal bloodstream infections and meningitis. Pregnancy associated listeriosis can result in fetal loss, invasive neonatal infection and infant death.

Foodborne transmission of listeriosis was first recognized in Canada in 1981 related to contaminated coleslaw. Other foodborne outbreaks reported were related to cheese, shrimp and milk.

In Newfoundland and Labrador listeriosis is a rare occurrence. In the past 15 years, there have been 15 cases of listeriosis in NL, ranging from 0 to 3 cases per year (see Figure 2). The cases were evenly distributed between males (7 cases) and females (8 cases). Since 1998, 80% of listeriosis cases have been among people aged greater than 60 years.

Figure 2: Number of listeriosis cases in Newfoundland and Labrador, 1998-2012



Tuberculosis

Tuberculosis (TB) is a disease caused by a bacterium, *Mycobacterium tuberculosis*. Although TB is preventable and treatable, it is not a disease of the past; it affects millions of people worldwide each year. Globally 8.7 million new cases of TB occurred in 2011 and 1.4 million died. In Canada the picture is different; the incidence rate of TB reported in 2011 was 4.7 per 100,000 population. Nationally the highest incidence of TB occurred in foreign-born Canadians accounting for 66% of the cases followed by 21% in Canadian born Aboriginal people.

In Newfoundland and Labrador (NL) the incidence rate for TB has been lower than the national average from 1999 – 2011 (Figure 3). In NL report individuals with the highest incidence rate by age is reported in the 65+ age group (Figure 5). Pulmonary TB is the most commonly reported type; however, as shown in Table 2 TB can cause disease in other body sites.

Figure 3: Reported tuberculosis incidence rate per 100,000, Canada and Newfoundland and Labrador, 1999-2012

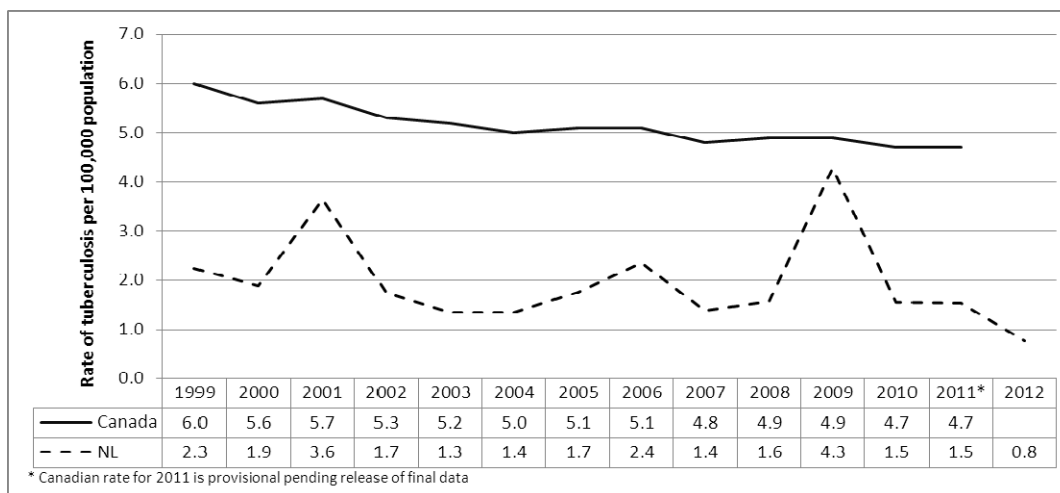


Figure 4: Reported new tuberculosis cases, age at onset, Newfoundland and Labrador, 1999-2012.

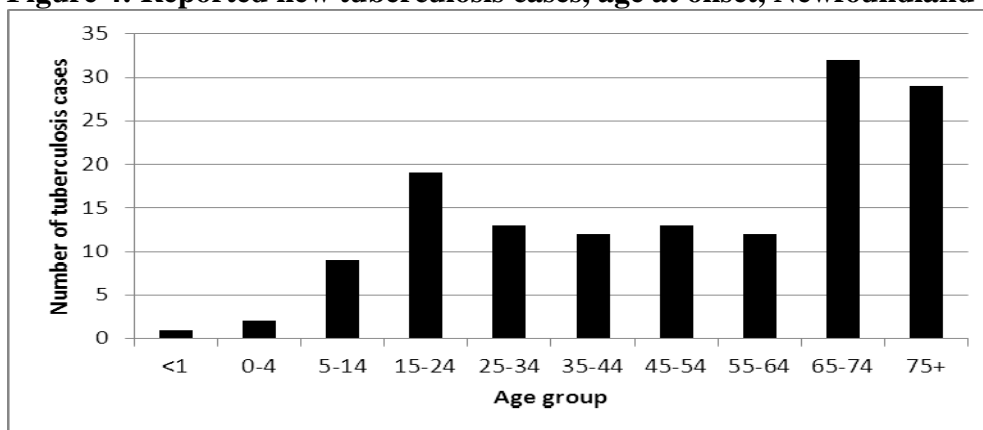


Table 2: Reported new tuberculosis cases and incidence rates by main diagnostic site, Newfoundland and Labrador, 1999 – 2012.

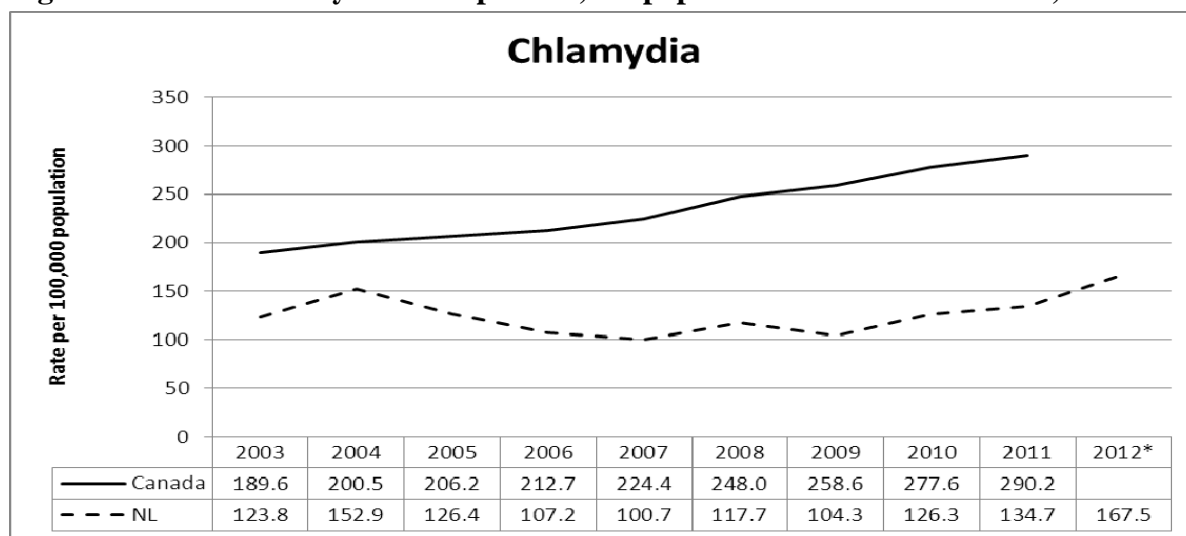
Diagnostic site		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Primary	Cases	0	0	2	1	0	0	2	3	1	0	6	0	0	0
	Rate	0.0	0.0	0.4	0.2	0.0	0.0	0.4	0.6	0.2	0.0	1.2	0.0	0.0	0.0
Pulmonary	Cases	8	5	14	6	6	2	5	4	3	5	11	7	7	4
	Rate	1.5	0.9	2.7	1.2	1.2	0.4	1.0	0.8	0.6	1.0	2.1	1.3	1.3	0.8
Other Respiratory	Cases	0	0	0	0	0	1	0	2	0	0	3	0	0	0
	Rate	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	0.0	0.6	0.0	0.0	0.0
Miliary	Cases	0	0	0	0	1	0	1	1	1	1	1	0	0	0
	Rate	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0
CNS	Cases	0	0	0	1	0	0	0	0	0	2	0	0	0	0
	Rate	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Lymph	Cases	1	1	0	0	0	0	0	0	1	0	0	0	1	0
	Rate	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.0
Other	Cases	3	4	3	1	0	4	1	2	1	0	1	1	0	0
	Rate	0.6	0.8	0.6	0.2	0.0	0.8	0.2	0.4	0.2	0.0	0.2	0.2	0.0	0.0

SEXUALLY-TRANSMITTED AND BLOODBORNE INFECTIONS

Chlamydia

Chlamydia is the most commonly reported infectious disease in Canada and in NL. The rate of chlamydia in Canada has consistently increased each year from 2003 (189.6 cases per 100,000 population) to 2011 (290.2 per 100,000). In NL, the rate has fluctuated by year, but has increased overall from 2002 (100.5 per 100,000) to 2012 (167.5 per 100,000).

Figure 5: Rate of chlamydia cases per 100,000 population in NL and Canada, 2003-2012

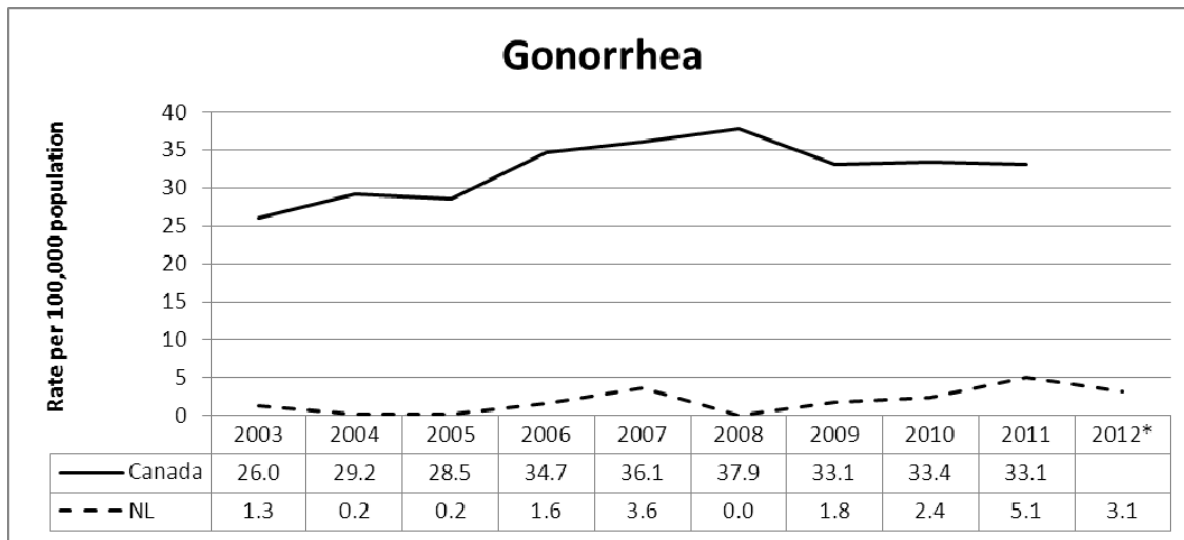


* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

Gonorrhoea

The rate of gonorrhoea in NL in 2012 (3.1 cases per 100,000 population) decreased from the previous year (5.10 per 100,000), however, has increased overall since 2003 (1.3 cases per 100,000). The majority of gonorrhoea activity in 2012 was in the Labrador-Grenfell region, which accounted for 63% of cases in NL. In Canada, the rate of gonorrhoea has fluctuated since 2003, but has increased overall from 2003 (26.0 per 100,000) to 2011 (33.1 per 100,000).

Figure 6: Rate of gonorrhoea cases per 100,000 population in Newfoundland and Labrador and Canada, 2003-2012

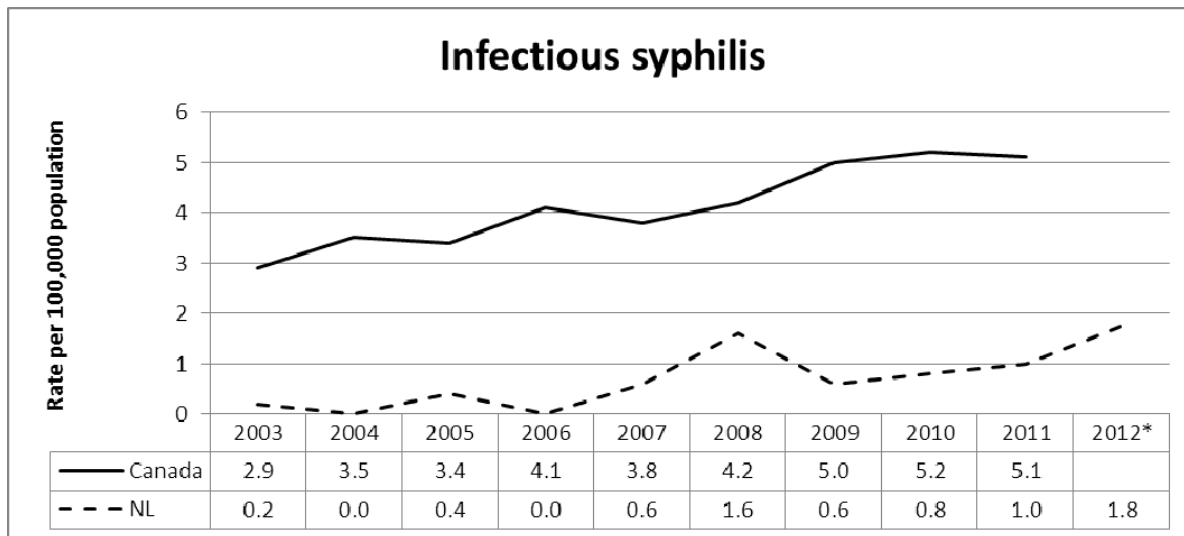


* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

Infectious Syphilis

The rate of infectious syphilis Canada rose steadily over time from 2003 (2.9 cases per 100,000 population) to 2011 (5.1 per 100,000). In NL, the rate was low until an increase from 2007 (0.60 per 100,000) to 2008 (1.60 per 100,000). Since 2009, the rate of infectious syphilis has increased each year, to 1.8 cases per 100,000 in 2012. The majority of infectious syphilis cases (78%) in 2012 were among residents of the Eastern Health region, which identified a cluster of cases in 2012 that had connections to a similar cluster in 2011 (provincial Communicable Disease Report – September 2012).

Figure 7: Rate of infectious syphilis cases per 100,000 population in Newfoundland and Labrador and Canada, 2003-2012

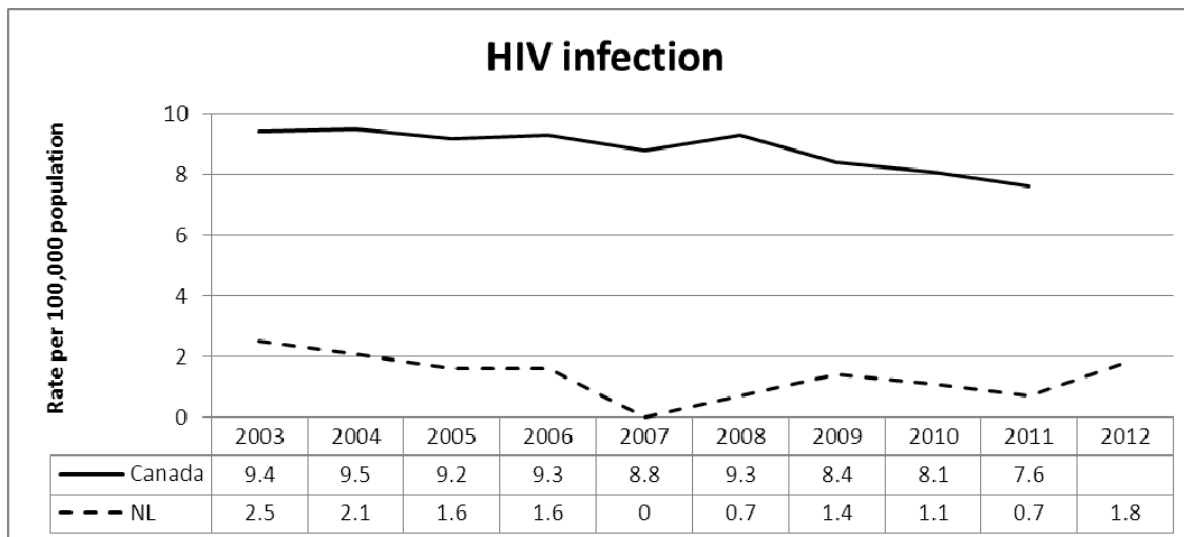


* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

HIV

The rate of new positive HIV tests among adults (≥ 15 years of age) in NL fluctuated over time, but was lower in 2012 (1.8 positive tests per 100,000 population) compared to 2003 (2.5 per 100,000). In Canada, the rate of positive HIV tests remained fairly steady between 2003 (9.4 per 100,000) and 2008 (9.3 per 100,000), but decreased to 7.6 per 100,000 in 2011.

Figure 8: Rate of positive HIV tests per 100,000 population in Newfoundland and Labrador and Canada, 2003-2012

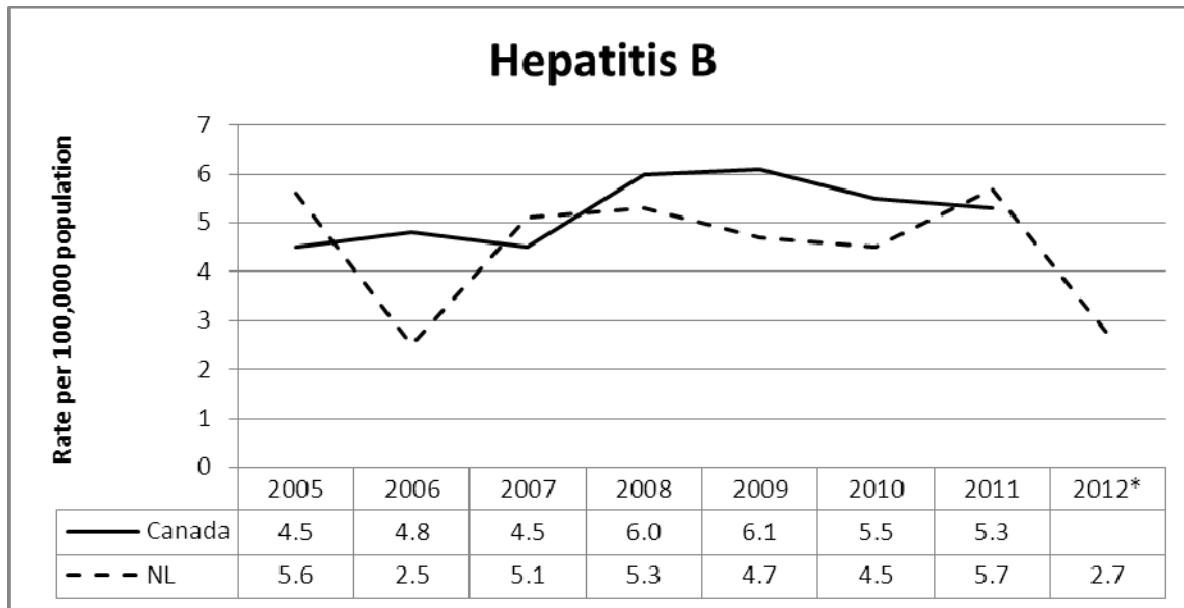


* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

Hepatitis B

Compared with Canada, rates of new hepatitis B in NL are relatively similar. In NL, the hepatitis B rate fluctuated from year to year in NL between 2005 and 2012, but the rate in 2012 (2.7 cases per 100,000 population) is lower than 2005 (5.6 per 100,000). In Canada, the hepatitis B rate remained relatively stable between 2005 and 2011.

Figure 9: Rate of new hepatitis B cases per 100,000 population in Newfoundland and Labrador and Canada, 2005-2012

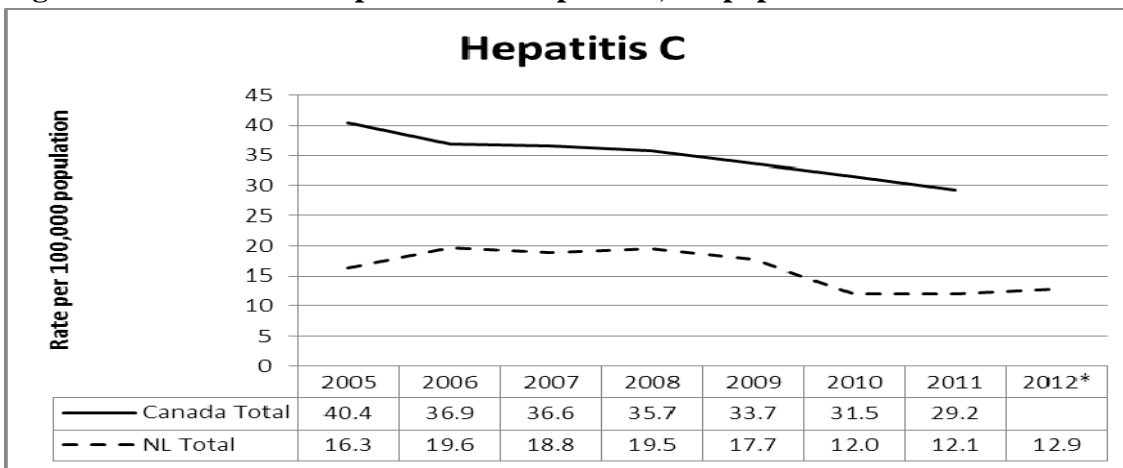


* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

Hepatitis C

In NL, the rate of new hepatitis C remained relatively stable from 2005 to 2009, but decreased to 12.0 cases per 100,000 population in 2010 and remained stable through 2012 (12.9 per 100,000). In Canada, hepatitis C rates declined from 2005 (40.4 per 100,000) to 2011 (29.2 per 100,000).

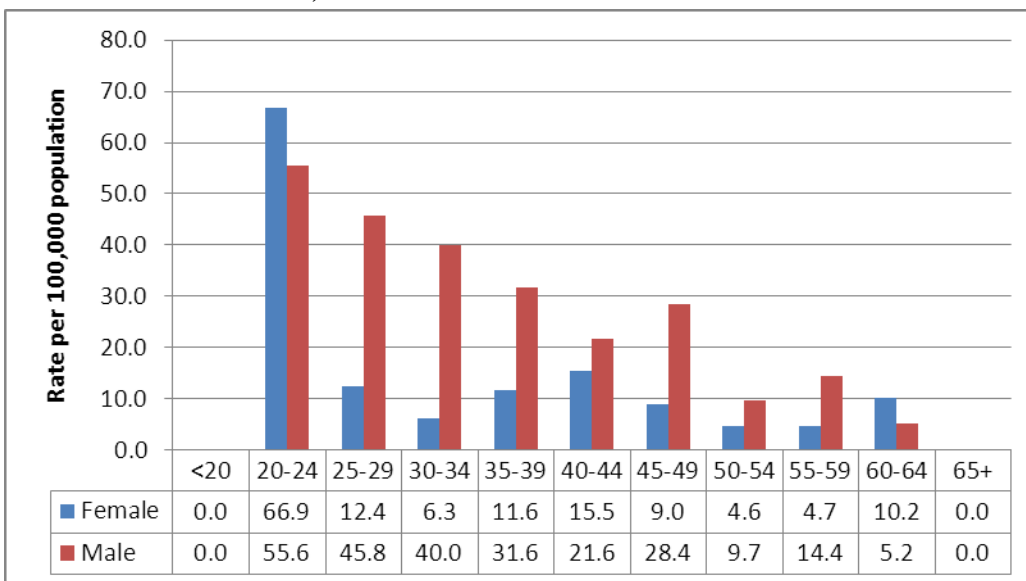
Figure 10: Rate of new hepatitis C cases per 100,000 population in NL and Canada, 2005-2012



* Canadian data for 2011 are preliminary pending final release. Canadian data are not available for 2012

In 2012, the majority (64%) of hepatitis C cases in NL were male. For both males and females, hepatitis C rates were highest in the 20-24 years age group. In females aged greater than 24 years, the rate of hepatitis C decreased dramatically, and ranged from 4.6 cases per 100,000 population to 15.5 per 100,000. Incidence of hepatitis C in males generally decreased with increasing age. In 2012, all hepatitis C cases fell within the age range 20-64.

Figure 11: Rate of hepatitis C cases per 100,000 population by age group and sex in Newfoundland and Labrador and Canada, 2012



National STI and BBI Data Sources:

- Report on Sexually Transmitted Infections in Canada: 2010. Centre for Communicable Diseases and Infection Control, Infectious Disease Prevention and Control Branch, Public Health Agency of Canada; 2012.
- Reported cases and rates of chlamydia, gonorrhoea and infectious syphilis in Canada by province/territory, 2010 and 2011. Surveillance and Epidemiology Division, Centre for Communicable Diseases and Infection Control, Infectious Disease Prevention and Control Branch, Public Health Agency of Canada, 2011.
- Reported cases and rates of hepatitis B and hepatitis C in Canada by province/territory, 2010 and 2011. Surveillance and Epidemiology Division, Centre for Communicable Diseases and Infection Control, Infectious Disease Prevention and Control Branch, Public Health Agency of Canada, 2012.
- Reported cases and rates of hepatitis B by province/territory and sex, 2005 to 2010. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2012.
- Reported cases and rates of hepatitis C by province/territory and sex, 2005 to 2010. Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2012.
- Public Health Agency of Canada. HIV and AIDS in Canada: Surveillance Report to December 31, 2011. Surveillance and Epidemiology Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2012.

Newfoundland and Labrador Communicable Disease Surveillance

Monthly Disease Report: December 2012



DISEASE CLASS	DISEASE NAME	TOTAL			EASTERN			CENTRAL			WESTERN			LABRADOR GRENFELL		
		Dec	YTD 12	YTD 11	Dec	YTD 12	YTD 11	Dec	YTD 12	YTD 11	Dec	YTD 12	YTD 11	Dec	YTD 12	YTD 11
	Tuberculosis, respiratory	1	4	8	1	1	3	0	0	0	0	1	0	0	2	5
Sexually Transmitted and Bloodborne Pathogens	Chlamydia	75	860	688	51	496	379	5	58	56	7	119	61	12	187	192
	Gonorrhoea	3	16	26	0	5	4	0	1	0	0	0	0	3	10	22
	Hepatitis C	6	66	63	6	53	42	0	2	6	0	11	14	0	0	1
	HIV Infection	2	8	3	2	7	2	0	1	0	0	0	1	0	0	0
	Syphilis, infectious	1	9	6	0	7	6	0	1	0	1	1	0	0	0	0
	Syphilis, non-infectious	0	4	4	0	4	4	0	0	0	0	0	0	0	0	0
Vectorborne & Other Zoonotic Diseases	Lyme disease	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Malaria	0	3	2	0	3	2	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
	Rabies	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Toxoplasmosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Trichinellosis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	West Nile Virus Infection	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vaccine Preventable	Chickenpox	6	371	288	3	83	108	1	174	82	0	99	93	2	15	5
	Congenital Rubella Syndrome	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Hepatitis B	1	14	29	0	12	20	1	1	4	0	1	3	0	0	2
	Invasive Haemophilus Influenza type B (Hib)	0	0	2	0	0	1	0	0	0	0	0	0	0	0	1
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0
	Rubella	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Communicable Disease Control System, Department of Health and Community Services, Government of Newfoundland and Labrador

Date verified: 13-Feb-2013

Disclaimer: Data are subject to continuous updates; small variations in numbers may occur.

Note: Prior to January 2011, "Invasive Meningococcal Disease, Probable" was included under the heading "Invasive Meningococcal Disease"

The majority of chickenpox cases meet the probable case 'definition'