

New Brunswick Health Indicators

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Youth Sexual Health

Sexual health is an important aspect of the overall health and well-being of youth. Although risk-taking behaviours are a normal part of transition into adulthood for many young people, some partake in riskier sexual behaviours linked to adverse health outcomes including sexually transmitted infections (STIs) and unplanned pregnancies [1]. Evidence-informed actions to promote healthy sexual attitudes and responsible sexual behaviour among adolescents and young adults, requires ongoing surveillance, research and knowledge exchange to improve understanding of population health and sexual health. Teen pregnancy rates, along with rates of chlamydia and other STIs, are key indicators for monitoring youth sexual health and well-being in New Brunswick.

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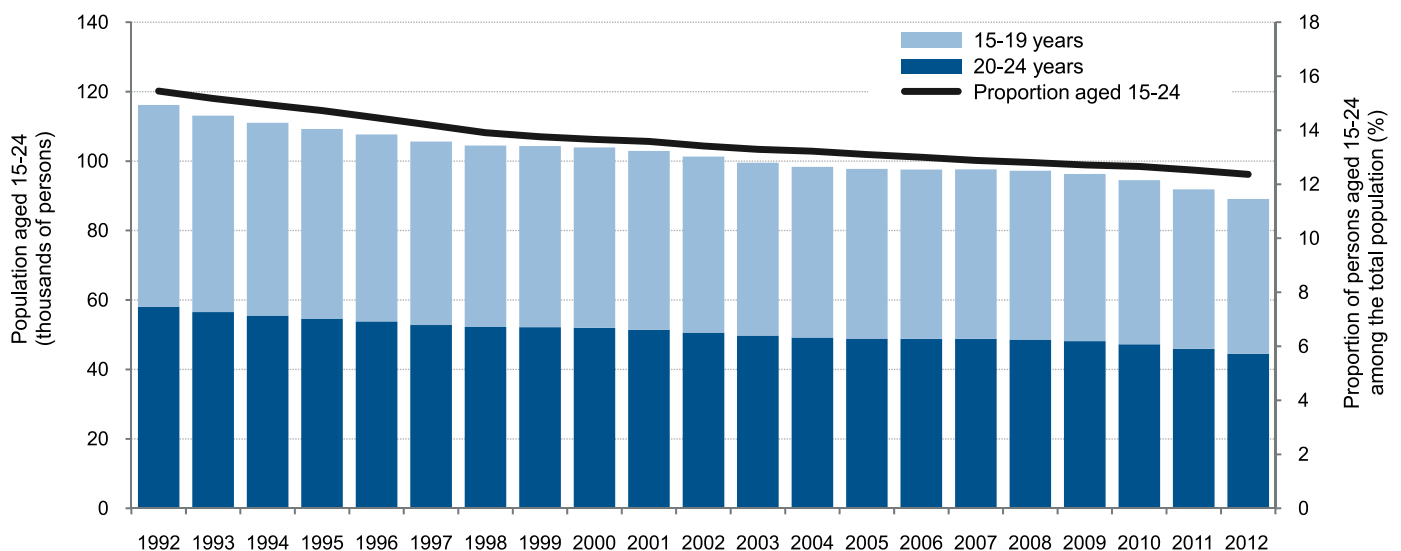
- The youth population in New Brunswick
- Teen pregnancy
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- Other sexual health indicators

In parallel with population aging, downward trends in the demographic weight of youth and young adults were observed in all health regions between 2000 and 2012, except Region 2 (Saint John), where the number of persons aged 15 to 24 increased by 5% (Figure 2) [3].

Demographic profile

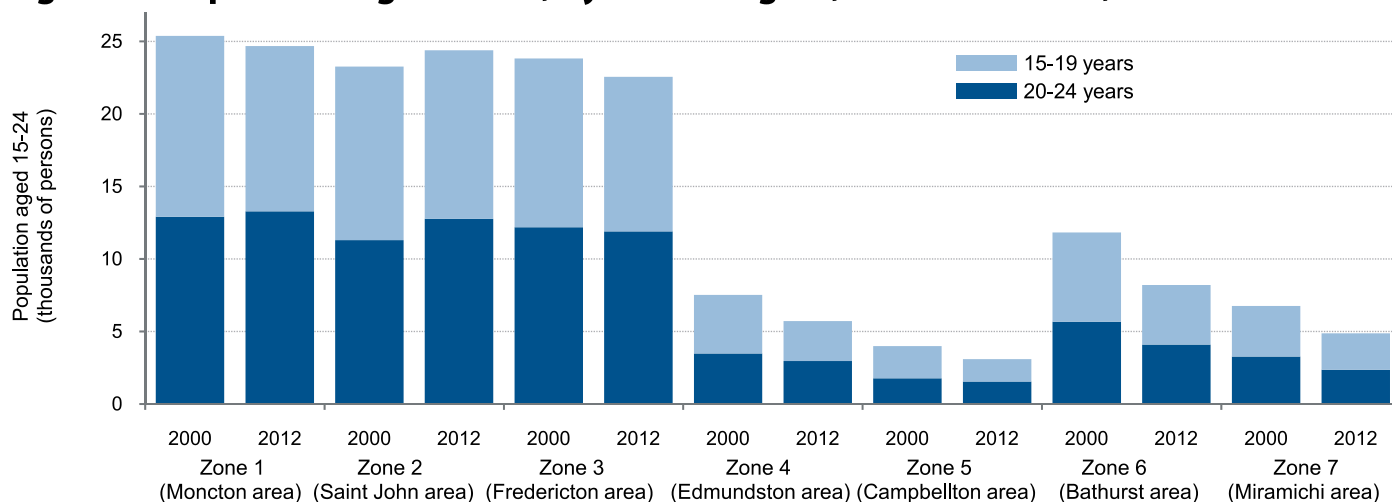
In 2012, New Brunswick had a population of 755,950, of whom 93,470 (12.4%) were between the ages of 15 and 24 [2]. The demographic weight of this age group has dropped considerably over the past two decades, in terms of both absolute value (115,590 young persons in 1992) and proportion of the total population (15.5% in 1992) (Figure 1).

Figure 1: Population aged 15-24, New Brunswick, 1992-2012



Source: Statistics Canada.

Figure 2 : Population aged 15-24, by health region, New Brunswick, 2000-2012



Source: Statistics Canada.

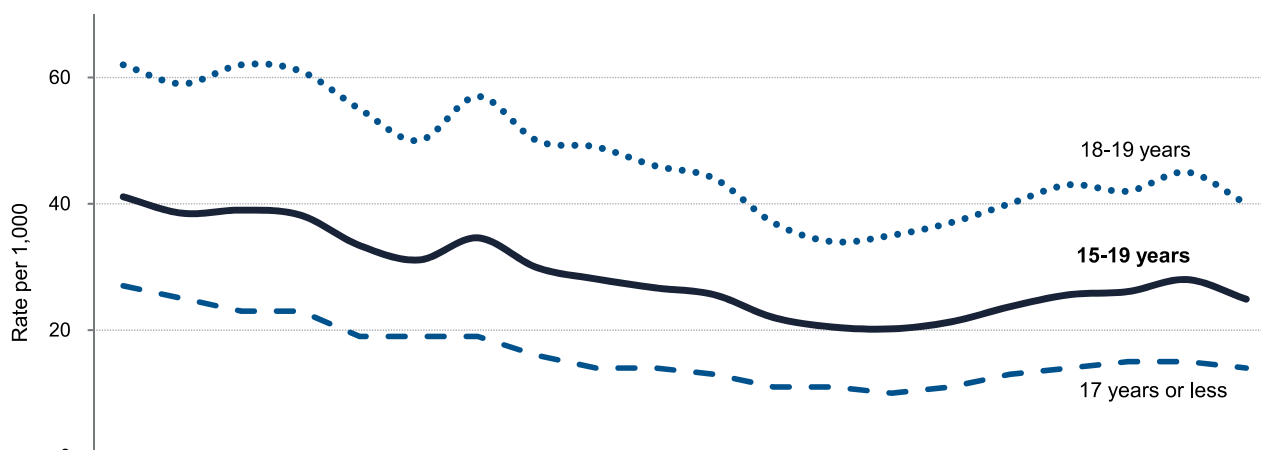
Teen pregnancy

Although teenagers account for a small proportion of all pregnancies in Canada, teen pregnancy is a public health concern because it may result in important immediate and long-term health consequences for young women and their infants. Compared to those who postpone motherhood, teenage

mothers experience a higher rate of pregnancy-related complications and are less likely to complete their education and more likely to have limited career and economic opportunities [4]. Furthermore, their babies are at increased risk of low birth weight and the associated health problems, such as perinatal morbidity, developmental delays and chronic diseases later in life.

In New Brunswick, the number of reported pregnancies at ages 19 and under dropped in half between 1992 and 2011: from 1,162 to 558. Declining numbers of teen births and teen pregnancies over the last two decades can be attributed to several factors including a decrease in the number of women in their teenage years, an increase in the availability and use of family

Figure 3: Trends in the teen pregnancy rate, by age group, New Brunswick, 1992-2011

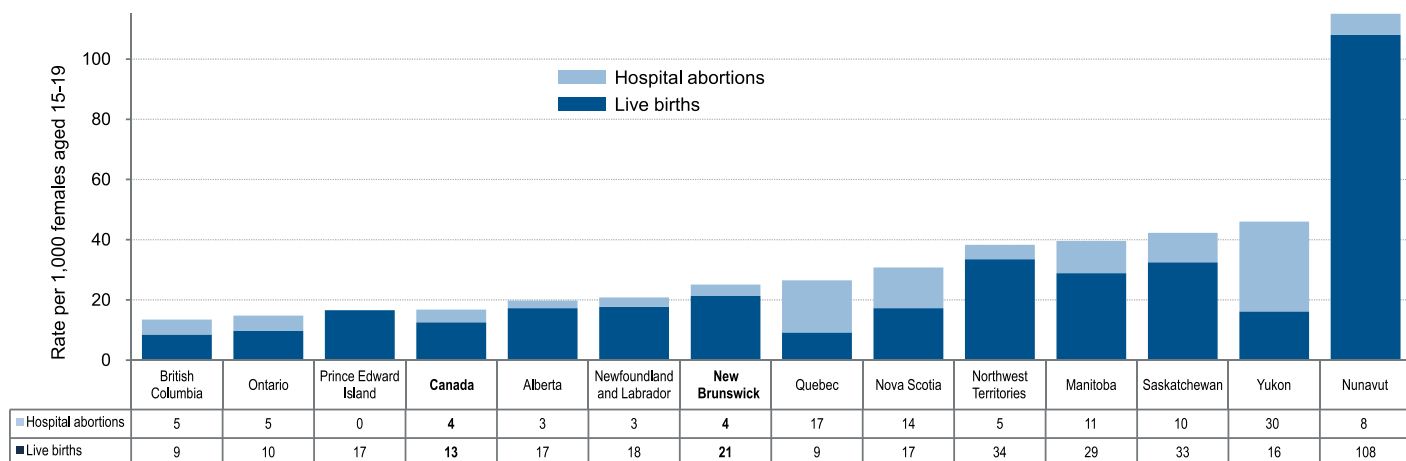


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
15-19 years	41.1	38.5	39.0	38.2	33.4	31.1	34.6	29.9	28.1	26.7	25.6	22.0	20.5	20.2	21.3	23.7	25.6	26.1	28.0	24.9
17 years or less	27	25	23	23	19	19	19	16	14	14	13	11	11	10	11	13	14	15	15	14
18-19 years	62	59	62	61	55	50	57	50	49	46	44	37	34	35	37	40	43	42	45	40

Note: The teen pregnancy rate represents the total number of registered live births, stillbirths and therapeutic abortions performed in New Brunswick hospitals to women under age 20 at the time of the pregnancy outcome per 1,000 women aged 15-19. Rates for teens 17 or younger at the time of the pregnancy outcome are per 1,000 women aged 15-17.

Source: Office of the Chief Medical Officer of Health, using data on live births and stillbirths from New Brunswick Vital Statistics; hospitalizations for therapeutic abortions from the Discharge Abstract Database; and population estimates from Statistics Canada.

Figure 4: Teen birth and hospital abortion rates, by province and territory, Canada, 2011



Note: The teen birth rate represents the number of live births to women under age 20 per 1,000 women aged 15-19; data based on the mother's place of residence. Teen hospital abortion rate is the number of therapeutic abortions reported by hospitals among women under age 20 per 1,000 women aged 15-19; data based on the province or territory where the abortion was performed. Stillbirths and induced abortions in private clinics excluded.

Source: Statistics Canada; Canadian Institute for Health Information.

planning methods, an increase in awareness of risks associated with unprotected sex, as well as changes in social values and perceived economic opportunities [1,5].

The 2011 provincial teen pregnancy rate was 24.9 per 1,000 females aged 15-19, up slightly from the lowest point of 20.2 in 2005 but down considerably from the rate of 41.1 recorded in 1992 (Figure 3). This generally reflects the national teen fertility and pregnancy patterns: from a clear downward trend over several decades to relative stability since the early 2000s [5,6].

In 2011, for the first time since 2005, the teen pregnancy rate in New Brunswick showed a decrease from the previous year. Considering the number of live births and hospital abortions among teens [7,8], which represent most pregnancy

outcomes in this age group [5], New Brunswick ranked 6th out of the 13 Canadian provinces and territories (Figure 4).

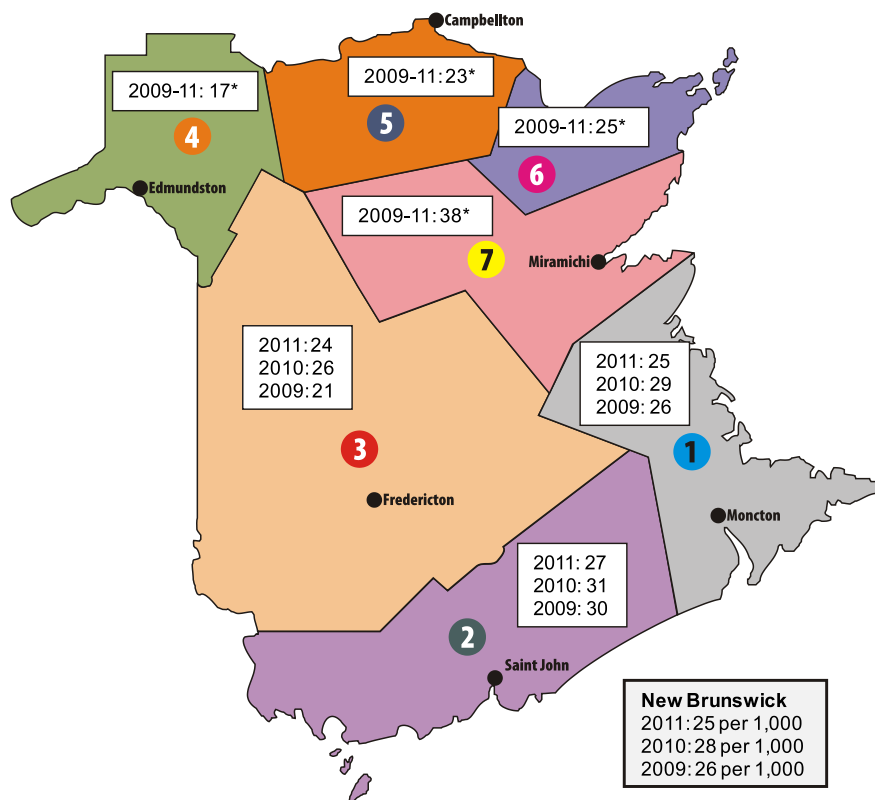
The pregnancy rate among New Brunswick teens aged 17 and under is considerably lower than that among those aged 18-19: 14 versus 40 per 1,000 in 2011 (see Figure 3). The medical, social and economic consequences of pregnancy tend to be less serious among teens aged 18 or 19 compared to those 17 and younger, among whom pregnancies are more often unplanned [9]. In New Brunswick, the pace of decline in the pregnancy rate between 1992 and 2011 has been faster among teens 17 and younger (one half) compared to older teens (one third).

About three-quarters of teen pregnancies in recent years involved females residing in three of the

province's seven health regions – Region 1 (Moncton area), Region 2 (Saint John area) and Region 3 (Fredericton area). The teen pregnancy rates in these three most populous regions generally reflected the provincial average: 24–27 per 1,000 in 2011 (Figure 5).

Teen pregnancy rates in the other, less populous health regions experienced higher variations compared to the provincial rate: 17–38 per 1,000 on average in 2009-2011. The rates for Regions 4–7 should be interpreted with caution due to the small number of teen pregnancies. Figures in the annex show the prevailing direction of the teen pregnancy rates over the past decade for all of New Brunswick's health regions.

Figure 5: Teen pregnancy rates by health region, New Brunswick, 2009-2011



Note: * = three-year average. Data should be interpreted with caution due to small numbers of teen pregnancies. Rates are per 1,000 females aged 15-19.

Source: Office of the Chief Medical Officer of Health.

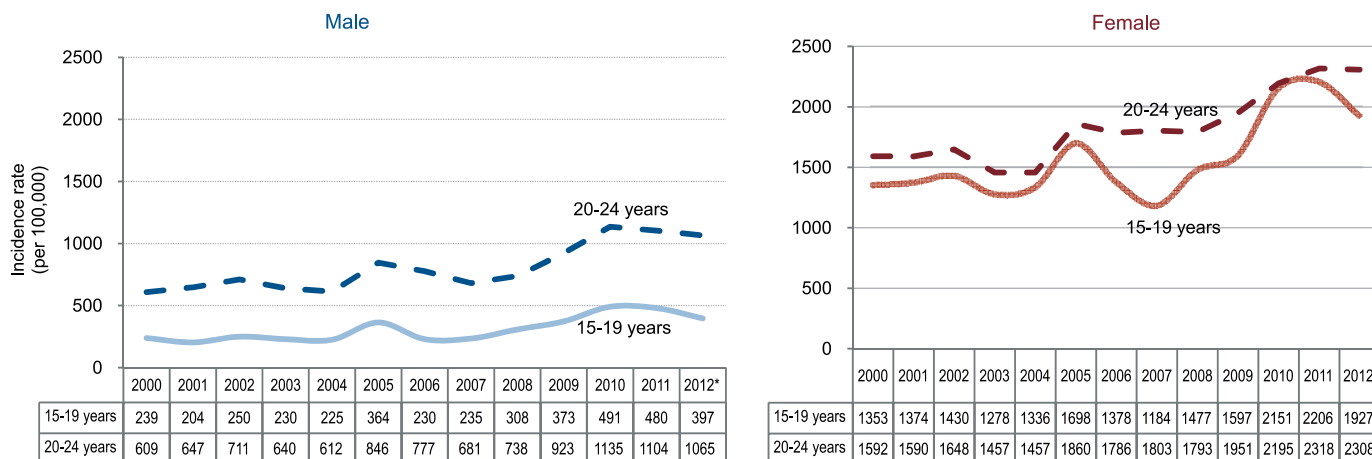
Sexually transmitted infections

Genital chlamydiosis (infection caused by *Chlamydia trachomatis*) is the most commonly reported sexually transmitted infection in Canada. If left untreated, chlamydia can lead to numerous health problems such as chronic pelvic pain and sterility. After a long period of decline, the chlamydia rate has been increasing in Canada in recent years, particularly among teenagers and young adults [1].

In New Brunswick, the number of cases of chlamydia reported annually has been rising since 2007, going from 1,240 to 1,923 in 2012. Young persons aged 15 to 24 make up a large proportion of these cases: in 2011, three cases in four were in this age group, and females accounted for 73% of them.

The chlamydia incidence rate among youth and young adults increased by 57% between 2007 and 2011, going from 960 to 1,510 per 100,000 persons aged 15 to 24. The increase was even greater among persons aged 15 to 19: the incidence rate doubled among males and rose by 86% among females – who

Figure 6 : Rates of chlamydia infection among youth, by age group and sex, New Brunswick, 2000-2012



Note: *=preliminary data. Rates of laboratory-confirmed infections with *Chlamydia trachomatis* (new cases per 100,000 persons aged 15-24).

Source: Office of the Chief Medical Officer of Health, using data from the Reportable Diseases Surveillance System (N=14,062) and population estimates from Statistics Canada.

almost matched the rate observed among young women aged 20 to 24 (Figure 6). However, data for 2011 and preliminary data for 2012 show encouraging signs of a slowdown, and even a reduction, in the rate for all age groups (see annex for regional trends).

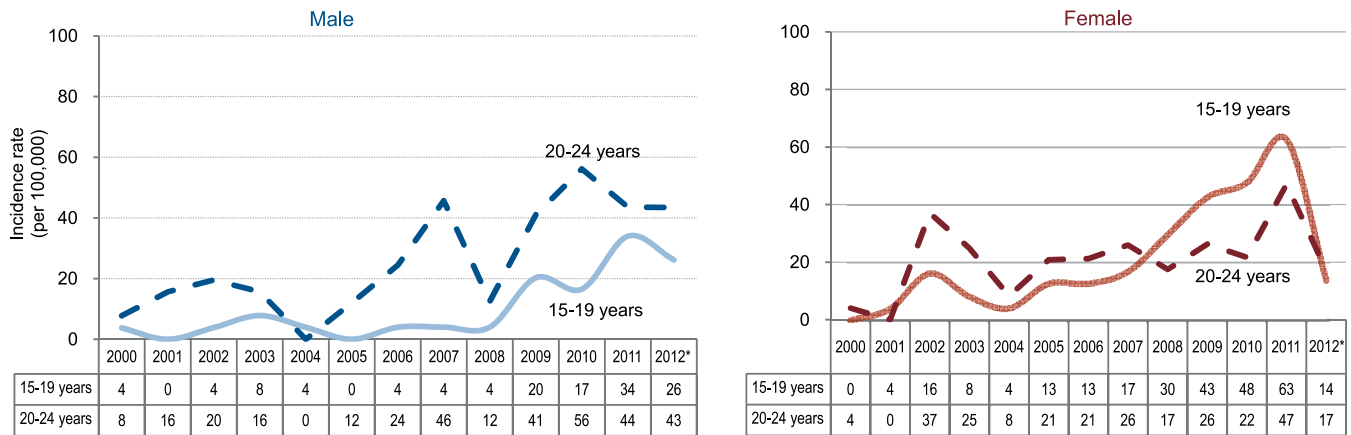
Data on gonorrhoea also indicate an upward trend in recent years. The incidence rate among 15-to-24-year-olds tripled between 2006 and 2011 (15 versus 47 per 100,000), attributable largely to 15-to-19-year-olds, for whom the rate increased

nearly sixfold during the same period (8 versus 48 per 100,000). This latter group accounted for 12% of all cases in 2006, whereas it represented nearly one-third of cases (31%) in 2011. This is the same proportion of all cases represented by 20- to-24-year-olds, a percentage that has not changed significantly since 2006. Preliminary data for 2012 are encouraging as well, with rates declining compared to the year before, particularly among females aged 15 to 19 for whom the rate dropped by 77%, from 63 to

14 per 100,000 (Figure 7). However, annual changes in the gonorrhoea incidence rate should be interpreted with caution: the relatively small number of cases can result in major fluctuations in the rate from year to year.

Although the chlamydia and gonorrhoea incidence rates have risen in New Brunswick in the past few years, they were similar to, or lower than, the national average, according to the most recent pan-Canadian data (Figure 8) [10,11].

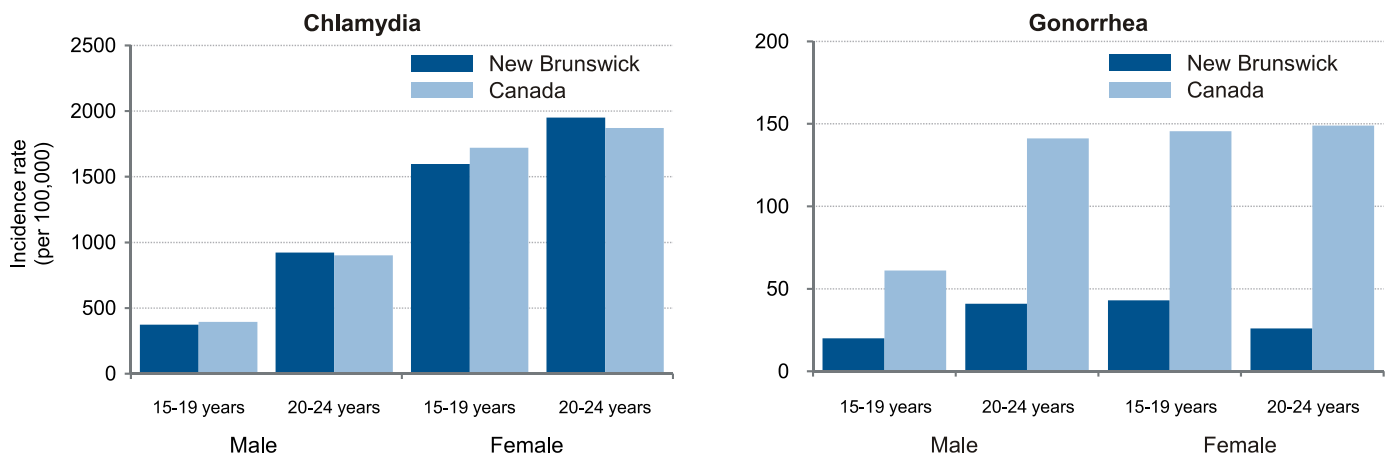
Figure 7: Rates of gonorrhoea infection among youth, by age group and sex, New Brunswick, 2000-2012



Note: *=preliminary data. Rates of laboratory-confirmed gonorrhoea infections (new cases per 100,000 persons aged 15-24).

Source: Office of the Chief Medical Officer of Health, using data from the Reportable Diseases Surveillance System (N=242) and population estimates from Statistics Canada.

Figure 8: Rates of chlamydia and gonorrhoea infection among youth, by age group and sex, New Brunswick and Canada, 2009



Source: Office of the Chief Medical Officer of Health (New Brunswick) and Public Health Agency of Canada.

Chlamydia and gonorrhoea are the main STIs affecting youth aged 15 to 24, although other STIs are present in smaller proportions. Since HIV/AIDS surveillance started in 1985, about 10 AIDS cases and nearly 140 HIV cases have been reported in this age group in New Brunswick, or between 1 and 6 new cases each year. The annual incidence has remained under 3 cases since 2007. Lastly, syphilis, practically absent from the province's epidemiologic profile prior to 2009, has experienced a major increase, especially among men [12]. Between late 2009 and 2012, there was an outbreak of infectious syphilis in New Brunswick, with 120 confirmed cases. More than a quarter (28%) were in the 15-to-24 age group.

Sexual behaviours and risks

Different kinds of sexual activity encompass different risks for youth. Vaginal sex can lead to unplanned pregnancy. Unprotected vaginal, anal and oral sex can lead to chlamydia and other STIs. Data from the New Brunswick Student Drug Use Survey 2012, which collected information from middle and high

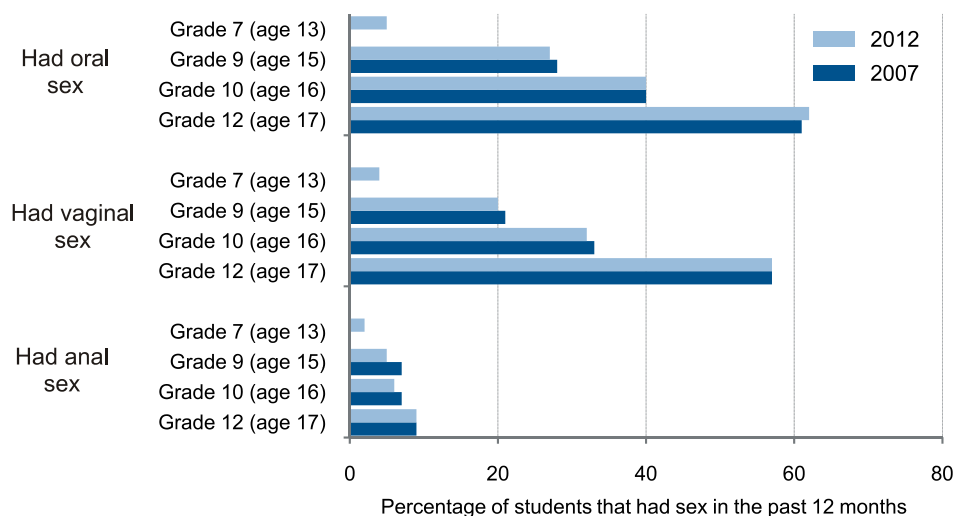
school students on levels and patterns of sexual activity [13], indicated:

- About one-third of adolescent students (38%) engaged in sexual activity in the past 12 months. Nearly one-quarter (22%) had unplanned sex in the past year;
- Two-fifths of sexually active adolescents did not use a condom or other latex barrier at their last sexual encounter;
- Half of those having unplanned sex did so under the influence of alcohol or drugs. Rates of unplanned sex after using alcohol or drugs were generally similar across health regions, except for Region 6 (Bathurst area) where it was significantly lower than the provincial average (5% versus 10%);
- The most common type of sexual activity was oral sex (34%), followed by vaginal sex (29%) and anal sex (6%). Levels of oral, vaginal and anal sex increased with age, and remained relatively stable against a comparable 2007 survey of high school students (Figure 9);
- Among adolescents who indicated their sexual orientation, 94% reported being heterosexual, 5% bisexual and 1% homosexual, regardless of sexual experience [13].

Healthy sexuality involves much more than avoiding negative outcomes, such as STIs and unplanned pregnancies; it involves acquiring knowledge and skills and adopting behaviours contributing to positive sexual and reproductive health and experiences across the life course, including the ability to make healthy choices and respect the choices of others. There is some evidence that economically disadvantaged and marginalized population groups may be more vulnerable to negative sexual health outcomes than others (e.g. street-involved youth, sexual minority youth, First Nations youth) [1,9]. Creating conditions for young people to transition into healthy adulthood requires addressing the interconnected factors that influence health and well-being, such as healthy public policies; education and increasing awareness; and preventing and managing risky sexual behaviours through supportive environments of family and friends, schools,

workplaces and communities, with attention to at-risk populations.

Figure 9: Trends in the rates of sexual activity among middle and high school students, by grade, New Brunswick, 2007-2012



Note: Data captured self-reports from a representative sample of students in Grades 7, 9, 10 and 12. Age refers to the average age of respondents to the 2012 survey questionnaire. The 2007 survey did not collect information on sexual activity among Grade 7 students (middle school).

Source: New Brunswick Department of Health, New Brunswick Student Drug Use Survey (sample sizes: 4993 high school students in 2007; 3507 middle and high school students in 2012).

Key points:

- The percentage of New Brunswickers aged 15 to 24 years has decreased over the past two decades.
- Sexually active youth may engage in behaviours that could put them at risk for unplanned pregnancy or sexually transmitted infections.
- For the first time since 2005, in 2011 the teen pregnancy rate in New Brunswick showed a decrease from the previous year. The rate was down considerably from two decades ago.
- New Brunswickers under the age of 25 years account for the majority of reported cases of chlamydia, with the infection rate considerably higher among females than males. Preliminary data for 2012 suggest incidence rates of chlamydia and gonorrhoea for both sexes are going down.
- About a third of New Brunswick's adolescent students are sexually active, a trend that seems to have been stable over the past five years. Two-fifths of sexually active teens reported in a 2012 survey they did not use a condom or other latex barrier at their last sexual encounter.

Technical notes

In this report, the number of pregnancies is measured as the total number of live births, stillbirths and therapeutic abortions reported by hospitals. Data are based on provincial administrative records, and are considered virtually complete. However, the reported number of pregnancies likely underestimates the true number of pregnancies in the population, as the data exclude miscarriages (which may not always come to the attention of the medical care system) and induced abortions in private clinics (for which reporting is voluntary, and detailed age information not available for New Brunswick). It has been estimated that the true number of teen pregnancies is likely at least 15 per cent higher than the official statistics [14].

Data on sexually transmitted infections in New Brunswick are collected through the Reportable Diseases Surveillance System. Results from the surveillance system likely underestimate the true levels of STIs in the population, as they are limited to those who have used a public health or health-care service and have a laboratory-confirmed diagnosis. Evidence from the Canadian Health Measures Survey, which included direct physical measures among a sample of the population aged 14-59, indicated that few individuals who tested positive for chlamydia or selected other STIs were aware they were infected, likely related to lack of symptoms [15]. Changes in both screening practices and lab technology, such as improved diagnostic capabilities, mean the number of unreported STI cases may be decreasing over time.

New Brunswick population estimates used for the denominators in calculating rates of pregnancy and STIs are drawn from custom population estimates from Statistics Canada: data received on Jan. 15, 2009 for historical rates prior to 1996; updated estimates received on Feb. 6, 2013 for rates for 1996-2012. Updates to the population count methodology mean comparisons with previously published population-based rates from the Office of the Chief Medical Officer of Health must be made with caution. Rates in this report are definitive should a discrepancy exist.

All data presented in this report are protected by the confidentiality provisions of the *Public Health Act*, *Personal Health Information Privacy and Access Act*, and other privacy legislation in force in the province of New Brunswick. In some cases data based on small numbers have been grouped to ensure minimum standards for statistical validity, privacy and confidentiality.

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For more information:

- Talk to a health professional about sexually transmitted infections including HIV/AIDS: **1-877-STI1010**
- Sexuality and U: **www.sexualityandu.ca**
- Sexual health clinics in New Brunswick: **www2.gnb.ca/content/gnb/en/departments/ocmoh/cdc/content/sexual_health_clinics.html**
- New Brunswick Sexual Health Program: **www2.gnb.ca/content/gnb/en/services/services_renderer.12055.html**
- Sexual health and promotion (Health Canada): **www.hc-sc.gc.ca/hl-vs/sex/index-eng.php**
- Sexually transmitted infections (Public Health Agency of Canada): **www.phac-aspc.gc.ca/std-mts/faq-eng.php**

Annex

As seen in Figure A.1, between 2000 and 2011 the teenage pregnancy rates edged upwards in some health regions of New Brunswick, and downwards in others. This was a period over which the provincial rate remained relatively stable. Higher fluctuations over time for regional rates are expected, given the typical variability associated with data for smaller populations.

Figure A.1: Trends in the teen pregnancy rate, by age group and health region, New Brunswick, 2000-2011

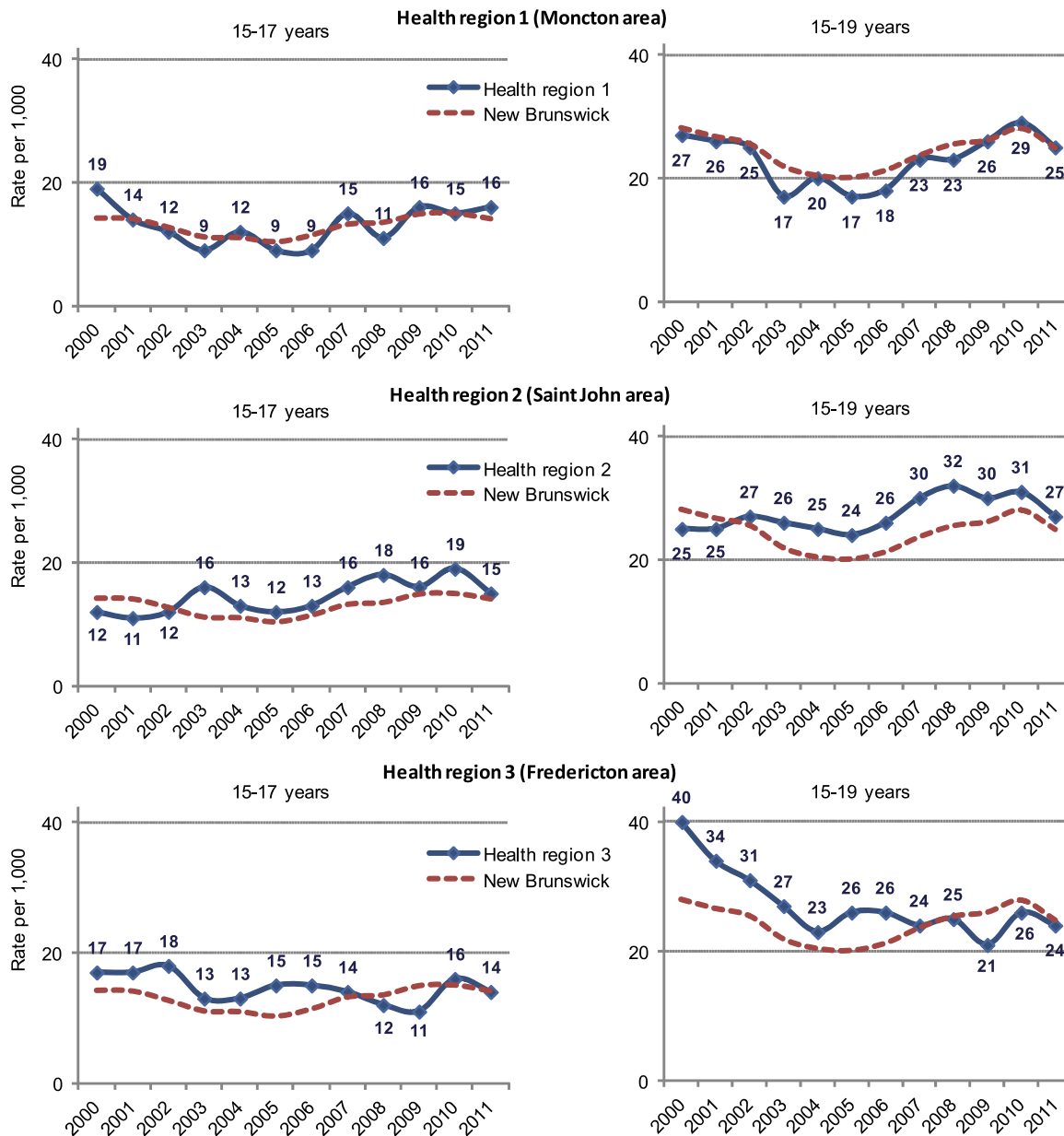
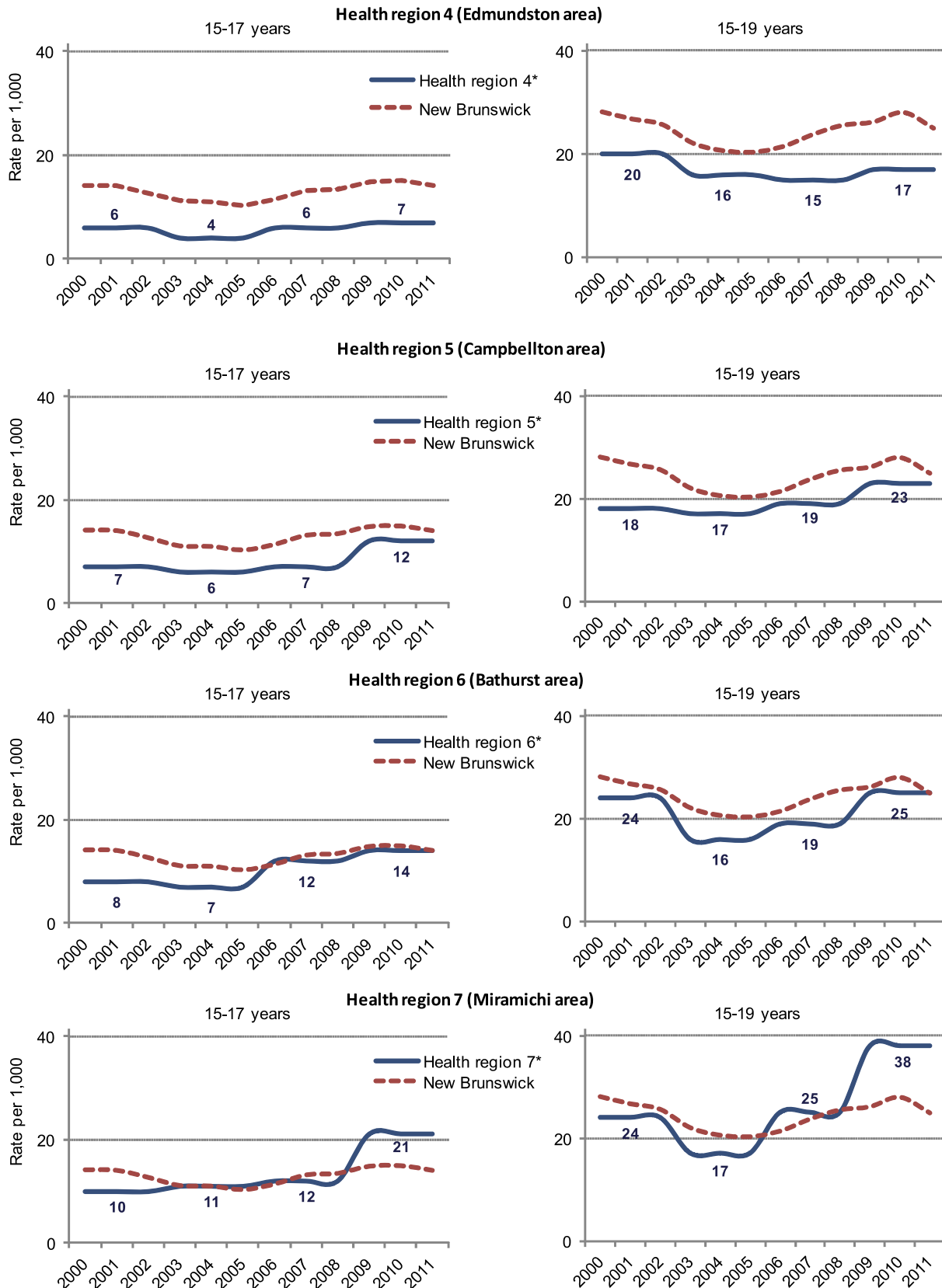


Figure A.1: Trends in the teen pregnancy rate by age group and health region (continued)



Note: * = three-year averages. Data should be interpreted with caution due to small numbers of teen pregnancies. Teen pregnancy rate is the number of live births, stillbirths and induced abortions reported by hospitals among women under age 20 at the time of the pregnancy outcome per 1,000 women aged 15-19. Data based on the woman's place of residence.

Source: Office of the Chief Medical Officer of Health, using data on births and stillbirths from New Brunswick Vital Statistics, acute-care hospitalizations from the Discharge Abstract Database, and population estimates from Statistics Canada (estimates updated February 2013).

Table A.1 presents recent trends in the annual incidence rates of chlamydia infection among youth and young adults in New Brunswick by health region. Data should be interpreted with caution.

Table A.1: Trends in the rates of chlamydia infection among youth (per 100,000 population), by age group, sex and health region, New Brunswick, 2008 to 2012

Sex	Health Region	Age group and year												
		15-19 years					Trend*		20-24 years					
		2008	2009	2010	2011	2012*			2008	2009	2010	2011	2012*	
Female	1	1812	2025	2987	2910	2771			2198	2672	2957	2996	3273	
	2	1499	1514	1918	1772	1270			1258	1676	1789	1732	1400	
	3	1676	1954	2530	2761	2324			2514	2087	2639	2790	2762	
	4	475	611	642	949	1094			859	650	709	796	1115	
	5	1063	1350	1205	1047	720			733	1935	1022	1509	1461	
	6	1159	811	991	1759	1799			889	891	1227	1797	2349	
	7	1220	1351	2204	1518	1175			1746	1931	1901	2555	1343	
	NB	1477	1597	2151	2206	1927			1793	1951	2195	2318	2308	
Male	1	357	587	738	766	622			853	974	1781	1475	1331	
	2	246	276	353	318	282			537	872	771	698	571	
	3	409	446	653	591	357			1114	1244	1426	1557	1506	
	4	0	180	187	65	69			136	207	401	653	510	
	5	421	0	227	238	244			776	747	437	695	407	
	6	121	0	130	270	554			417	368	600	423	1119	
	7	593	688	567	515	296			514	1258	290	971	1184	
	NB	308	373	491	480	397			738	923	1135	1104	1065	
All	1	1081	1297	1855	1829	1678			1513	1804	2352	2213	2273	
	2	838	863	1089	1010	757			888	1260	1255	1183	956	
	3	1032	1188	1587	1666	1334			1800	1654	2015	2153	2119	
	4	232	393	411	498	567			488	424	550	724	808	
	5	740	670	701	623	462			754	1342	729	1105	939	
	6	633	401	551	994	1144			639	612	897	1090	1733	
	7	893	1005	1357	996	708			1092	1574	1025	1698	1258	
	NB	878	970	1301	1322	1140			1252	1421	1645	1688	1664	

Note: *=preliminary data. Rates of laboratory-confirmed chlamydia infections (new cases per 100,000 population).

* In-cell graph's vertical axes have been standardized, allowing trend comparisons by age group, sex and health regions. The markers on the lines represent the minimum and maximum rate observed during the five-year period (2008 to 2012) for each trend in-cell graph.

Source: Office of the Chief Medical Officer of Health, using data from the Reportable Diseases Surveillance System (April 2013 extraction) and population estimates from Statistics Canada (estimates received February 2013).