

TEENS AND TRENDS:

Get the Facts on Teen Sexuality

For Professional Reference

This document highlights statistics related to trends in teenage sexual behaviour, condom use and contraception use. Additionally, this document provides Calgary Zone, Alberta and Canadian statistics on teen pregnancy, sexually transmitted infections (STI), and HIV and AIDS.

SEXUAL BEHAVIOUR AND CONDOM & CONTRACEPTION USE

Sexual behaviour has a major impact on the sexual and reproductive health of teens. Early sexual debut, having sex with multiple partners, and/or having unprotected intercourse can place teens at risk for unintended pregnancy, sexually transmitted infections (STI) and HIV (Rotermann, 2012; Warner & Steiner, 2011).

Sexual Behaviour

- In 2012, Rotermann reported the results from the Canadian Community Health Survey, and examined the sexual health behaviors of youth ages 15-24 during two time periods (2009/2010 and 2003). The 2009/2010 data revealed:
 - 66% of youth aged 15-24 had sexual intercourse at least one time (not significantly different in 2003);
 - 30% of teens aged 15-17, 68% of teens aged 18-19, and 86% of youth aged 20-24 had sexual intercourse at least one time (not significantly different in 2003);
 - 9.0% of those who had intercourse had done so prior to the age of 15 and 25.7% of those who had intercourse had done so at the age of 15 or 16 (not significantly different in 2003); and
 - 32.5% of sexually active youth reported having sex with more than one partner, with males (39.0%) more likely to have multiple partners than females (25.4%).
- The 2010 Health Behaviour in School-aged Children Study asked grade 9 and 10 Canadians if they had participated in sexual intercourse (Freeman et al., 2011). The results indicated that approximately 23% of grade 9 males, 18% of grade 9 females, and 31% of grade 10 males and females have had sexual intercourse. Among the sexually active teens, 2% of girls and 6% of boys reported having their first intercourse prior to the age of 13. See Figure 1 for the percent of grade 9 and 10 students having had intercourse from 2002 to 2010.
- There is limited Canadian research regarding other types of sexual activity (e.g., oral sex) teens engage in. The most recent research of this type was conducted in 2002/2003 (Boyce, Doherty, Fortin, & MacKinnon, 2003; Boyce et al., 2006) and was called the Canadian Youth, Sexual Health and HIV/AIDS Study. According to the study:
 - Over 60% of grade 9 students and over 80% of grade 11 students had participated in touching above the waist;
 - Over 50% of grade nine students and approximately 75% of grade 11 students had participated in touching below the waist; and
 - Over 25% of grade nine students and over 50% of grade 11 students participated in oral sex at least once.

Figure 2 summarizes the results from the Canadian Youth, Sexual Health and HIV/AIDS (Boyce et al., 2003; 2006) research.

Figure 1. Percent of Grade 9 and 10 Students Having Had Sexual Intercourse: 2002, 2006, 2010*

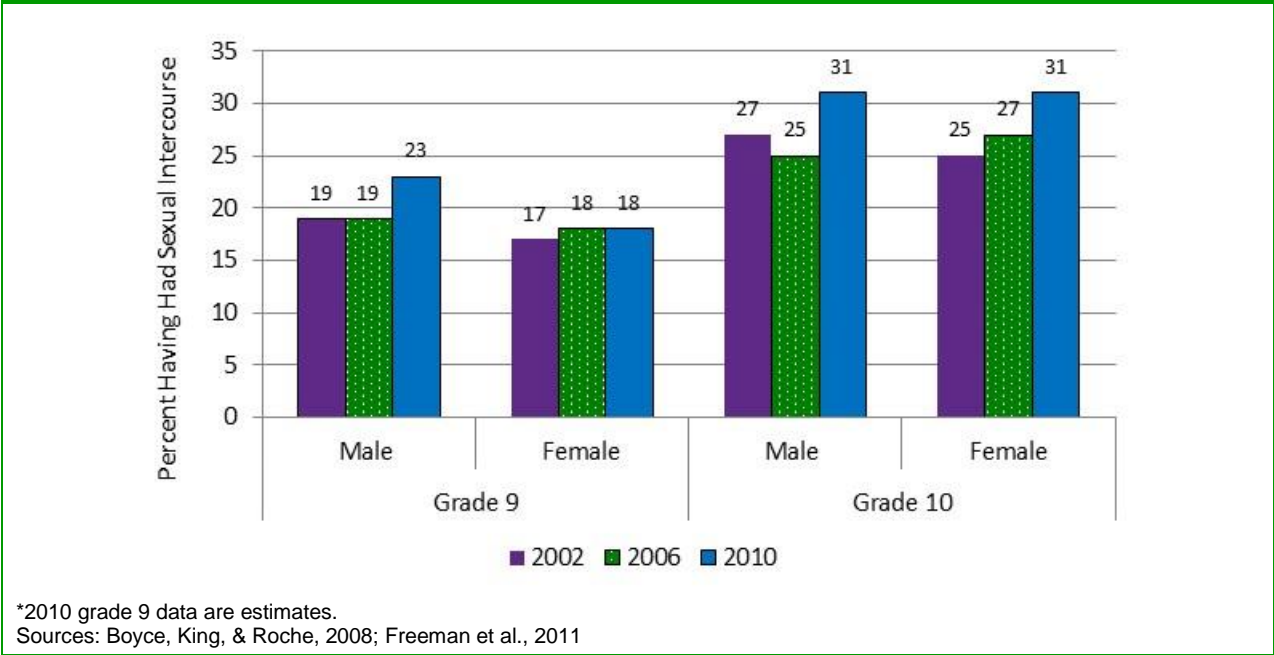
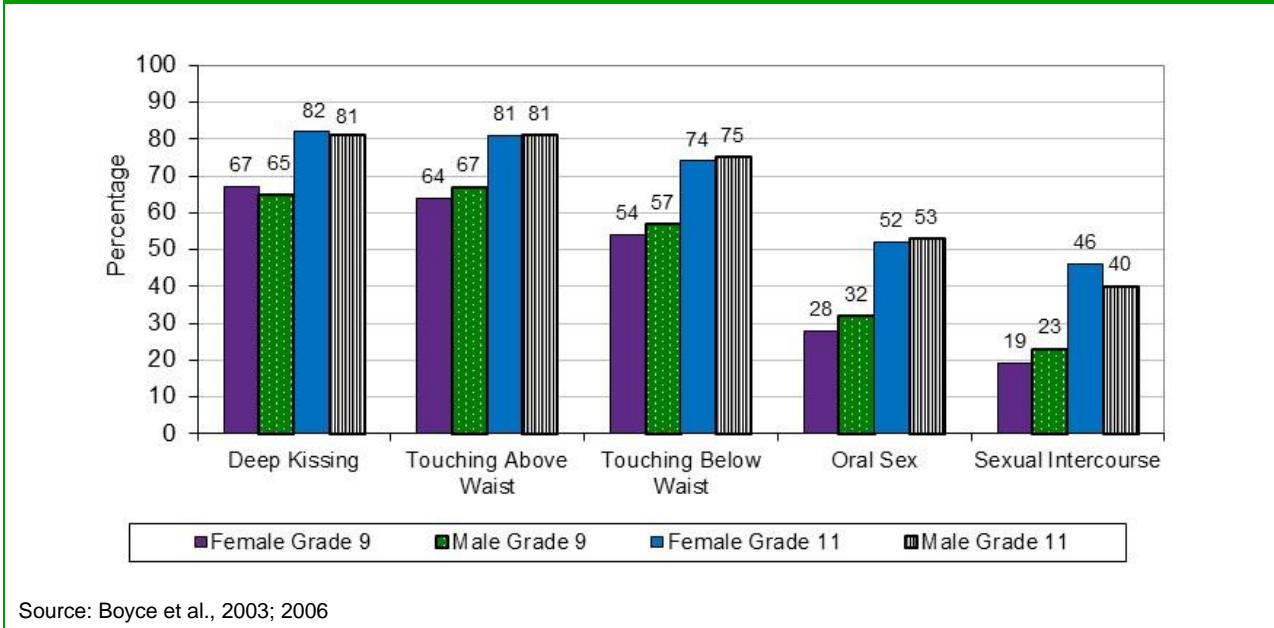


Figure 2. Teen Participation in Sexual Activity At Least Once (2002/2003)



Condoms & Contraception

- Condoms can be used to prevent unintended pregnancy and reduce the risk of spreading and contracting STIs (Warner & Steiner, 2011). 2009/2010 data from the Canadian Community Health Survey (Rotermann, 2012) revealed that 67.9% of youth aged 15-24 used condoms during their last sexual intercourse compared to 62.2% in 2003 (significantly different). The same study revealed:
 - 79.9% of teens aged 15-17, 73.7% of teens aged 18-19 and 62.8% of youth aged 20-24 used condoms during their last intercourse;
 - 72.5% of males and 62.5% of females aged 15-24 used condoms during their last intercourse;
 - More Albertan youth aged 15-24 used condoms at their last sexual intercourse in 2009/2010 (72.5%) compared to 2003 (59.6%); and
 - The percentage of teens using condoms is higher in Alberta (72.5%) compared to the rest of Canada (67.9%) (Rotermann, 2012).
- The 2010 Health Behaviour in School-aged Children Study asked sexually active grade 9 and 10 Canadians to specify the contraceptive method they used during their last sexual intercourse. The findings revealed that condoms are the contraceptive method of choice for both males (71%) and females (70%) (Freeman et al., 2011). Whereas in the 2006 cycle of the study, 47-58% of males and 40-52% of females identified that condoms were used during their last sexual intercourse (Boyce et al., 2008). Table 1 summarizes the findings from the 2006 (Boyce et al., 2008) and 2010 (Freeman et al., 2011) studies.

Table 1. Contraceptive Method Used During Last Intercourse: 2006 and 2010 Comparisons						
Contraceptive Method	Grade 9 2006 data		Grade 10 2006 data		Grades 9 and 10 2010 data	
	Males	Females	Males	Females	Males	Females
Condoms	58%	52%	47%	40%	71%	70%
Birth Control Pills	26%	36%	25%	33%	39%	48%
Withdrawal	7%	9%	8%	14%	19%	21%
Depo-Provera	2%	1%	1%	3%	not available	not available
Not Sure	2%	1%	1%	0%	7%	2%
Some Other method	1%	1%	1%	1%	6%	3%
No Method	37%	38%	46%	43%	13%	8%

Sources: Boyce et al., 2008; Freeman et al., 2011

Alcohol and Drug Influences

- The use of alcohol and drugs reduces decision-making abilities required to say no to sexual intercourse or to practice safer sex. A Canadian study conducted in 2010 indicated two-thirds of grade 9 and 10 students had reportedly tried alcohol at least once (Freeman et al., 2011). Furthermore, approximately 15-20% of grade 10 males and 5-10% of grade 10 females reportedly drank beer at least once per week whereas 10% of grade 10 males and females reported drinking liquor at least once per week. Of those students who consumed alcohol in the past year, over half of grade 10 students (56% of males; 54% of females) reported binge drinking, where they consumed five or more drinks (four or more for females) on one occasion in the previous 12 months (Freeman et al., 2011).

- A 2010 study of Canadian students indicated 26-28% of grade 9 and 10 students reported use of marijuana in the last year. Of those who had used marijuana, 12% of males and 10% of females had reportedly used marijuana three or more times in the previous 30 days (Freeman et al., 2011).
- A Canadian study indicated 39% of grade 9 males and 28% of grade 9 females used alcohol or drugs prior to their last sexual intercourse compared to 38% of grade 11 males and 21% of grade 11 females (Boyce et al., 2003).
- Adolescents who drink alcohol or use drugs before engaging in sexual intercourse are less likely to use protection such as condoms and therefore increase their risk of pregnancy or developing STI or HIV (Boyce et al., 2003).

The Benefits of Sexual Health Education

- Sexual health education “should be accessible to all people and ... it should be provided in an age appropriate, culturally sensitive manner that is respectful of an individual’s right to make informed choices about sexual and reproductive health” (Sex Information and Education Council of Canada [SIECCAN], 2009, pp. 47-48).
- Effective sexual health education provides opportunities for individuals to explore the attitudes, feelings, values and moral perspectives that may influence their choices regarding sexual health (Public Health Agency of Canada [PHAC], 2008a).
- The majority of Canadian parents and students strongly support school-based sexuality education, and ultimately believe sexual health education is the shared responsibility of schools and parents (SIECCAN, 2009).
- Evaluations of *comprehensive sexual health education programs* (full information at appropriate ages) revealed that they result in postponement of first sexual intercourse and increases in condom use. Evaluations of *abstinence only programs* indicated they are **ineffective** at delaying intercourse, preventing pregnancy, and preventing STI (SIECCAN, 2009).
- Research indicates that parent-child communication about sexuality can have a positive influence on teen sexual behavior (Beckett et al., 2010). Unfortunately, parents and their children often have difficulty discussing sexuality with each another. In a 2005 Canadian study of mothers and teenagers (Frappier et al., 2008), 63% of teens aged 14-17 considered parents a source of sexuality information while 43% felt parents were the most useful/valuable sources of information. That said, 38% had never had conversations about sexuality with their mothers. When participants were asked what was lacking in their knowledge regarding sexual health, 25% identified “how to talk about sexual health issues with parents.” In the same study, mothers underestimated their role in their teenager’s sexual health knowledge and behaviors (Frappier et al., 2008).
- For teens, there is a hierarchy of preferred sexual behavior. Abstinence from sexual activity for teenagers is preferred because of health consequences that may affect the individual. Postponement of initial sexual activity, adherence to one sexual partner, and protected sexual intercourse are sequentially offered as the next best alternatives (Sexuality Information and Education Counsel of the United States, 2008; Calgary Health Services, 1996).

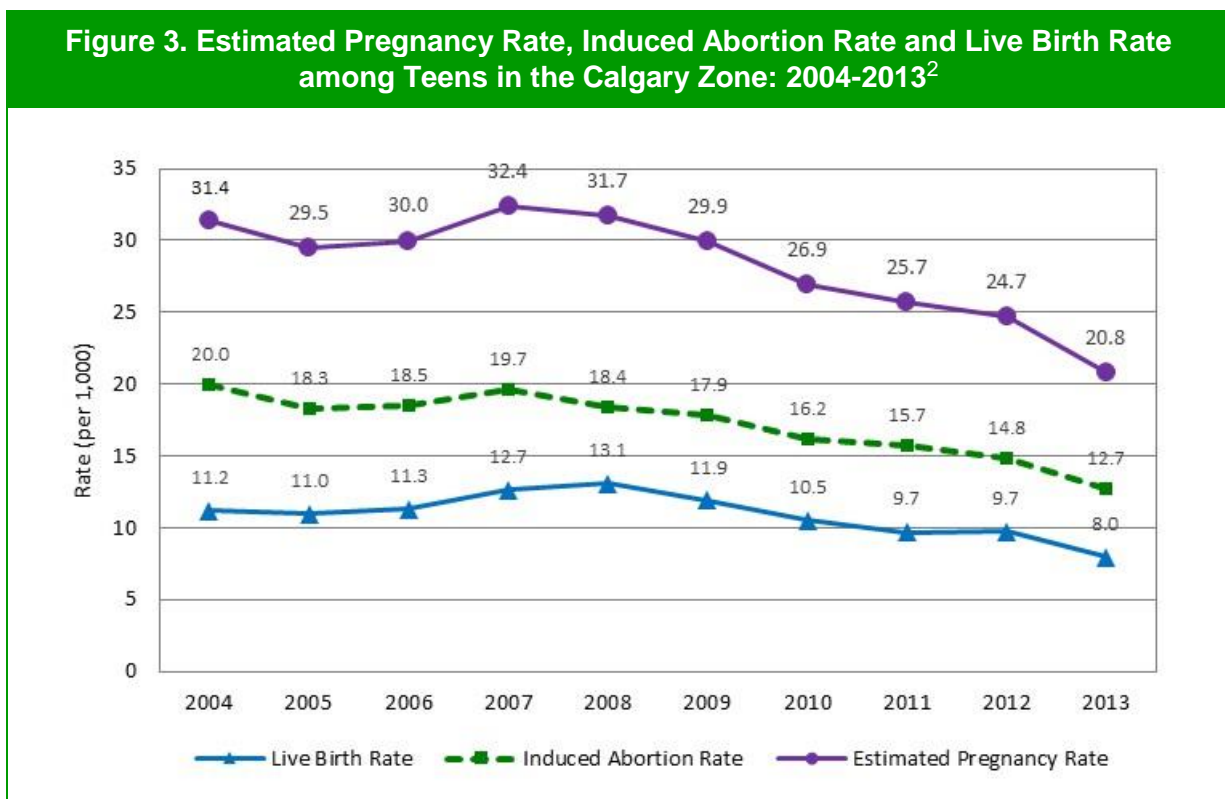
TEEN PREGNANCY

Teen Pregnancy Statistics

Educators, researchers, and health care providers are interested in teenage pregnancy rates because they are seen as an indicator of sexual and reproductive health and the overall well-being of adolescents (McKay, 2012; SIECCAN, 2012). It is generally assumed that most teen pregnancies are not intended and therefore trends in adolescent pregnancy “reflect the extent to which young women have the capacity to control their sexual and reproductive health” (SIECCAN, 2012). Decreasing trends in teen pregnancy may be an indication that there is more exposure to quality sexuality education, more access to sexual and reproductive health services, increasing use of and access to contraception, and/or a shift in societal norms that are supportive of adolescents’ ability to practice reproductive choice (SIECCAN, 2012).

Calgary Zone

- From 2007 to 2013, the estimated pregnancy rate¹ for teens aged 15-19 declined from 32.4 to 20.8 per 1,000 females, in the Calgary Zone², a 35.8% decrease (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).



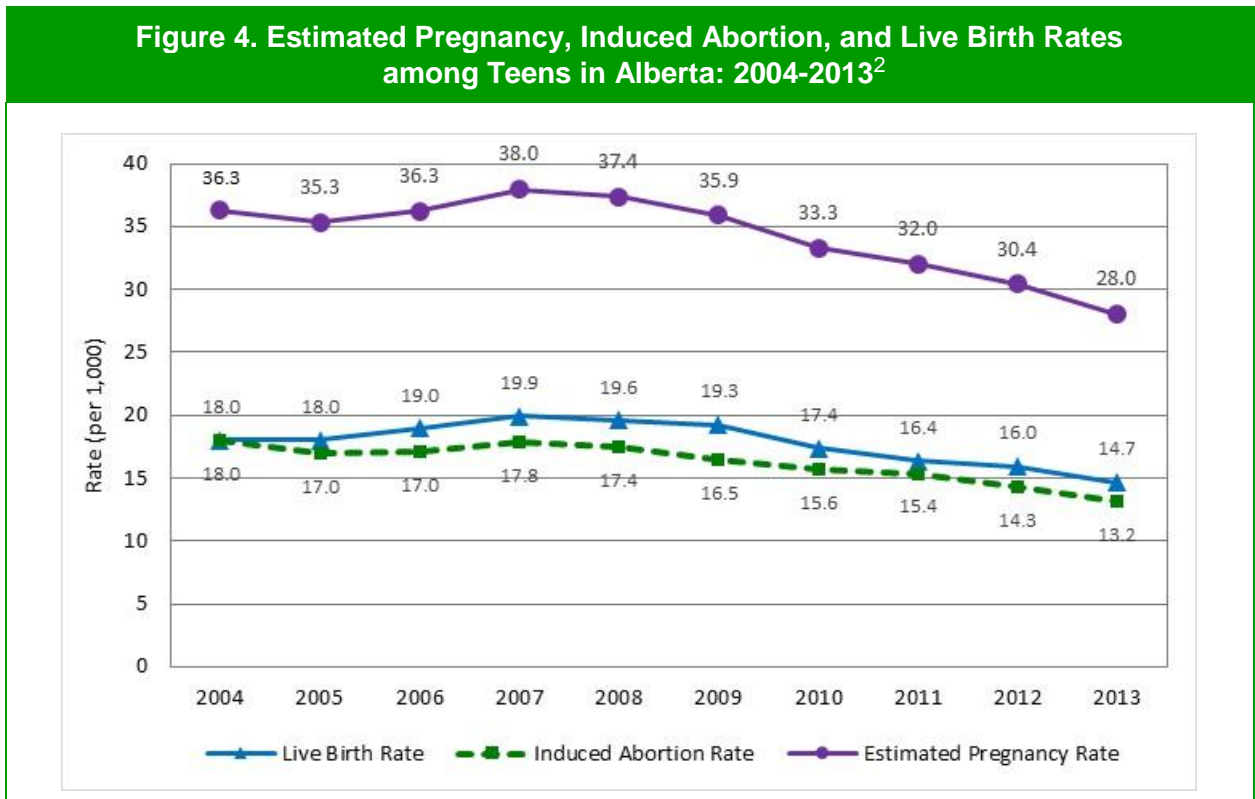
¹Rate - reflects the number per 1,000 females of the same age group.

²Data may differ from other published information due to differences in definitions and sources. The data sources were the Alberta Health Services NACRS/DAD Provincial Database. In order to calculate the rates, the number of events were provided by Data Integration, Measurement and Reporting and the population statistics were obtained from the Government of Alberta Interactive Health Data Application. The pregnancy rate includes live births, still births, induced abortions and spontaneous abortions. It does not include abortions received out of province or in the United States.

- In 2013, the estimated pregnancy rate¹ for teens 15-17 years of age was 10.5 per 1,000 females, compared to 12.5 in 2012. The pregnancy rate for teens aged 18-19 was 35.7 in 2013 compared to 41.8 in 2012 (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).
- The live birth rate for teens increased from 11.2 per 1,000 persons in 2004 to 13.1 in 2008. The live birth rate among Calgary teens has steadily declined from 13.1 in 2008 to 8.0 in 2013 (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).
- In 2013, the induced abortion rate for teens ages 15-19 was 12.7 per 1,000 females, compared to 19.7 in 2007, a decline of 35.5% (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).

Alberta²

- From the years 2005 to 2007, the estimated pregnancy rate for Alberta teens aged 15-19 increased from 35.3 to 38.0 per 1,000 females. From 2007 to 2013, the rate steadily declined from 38.0 to 28.0 per 1,000 persons, a 26.3% reduction (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).



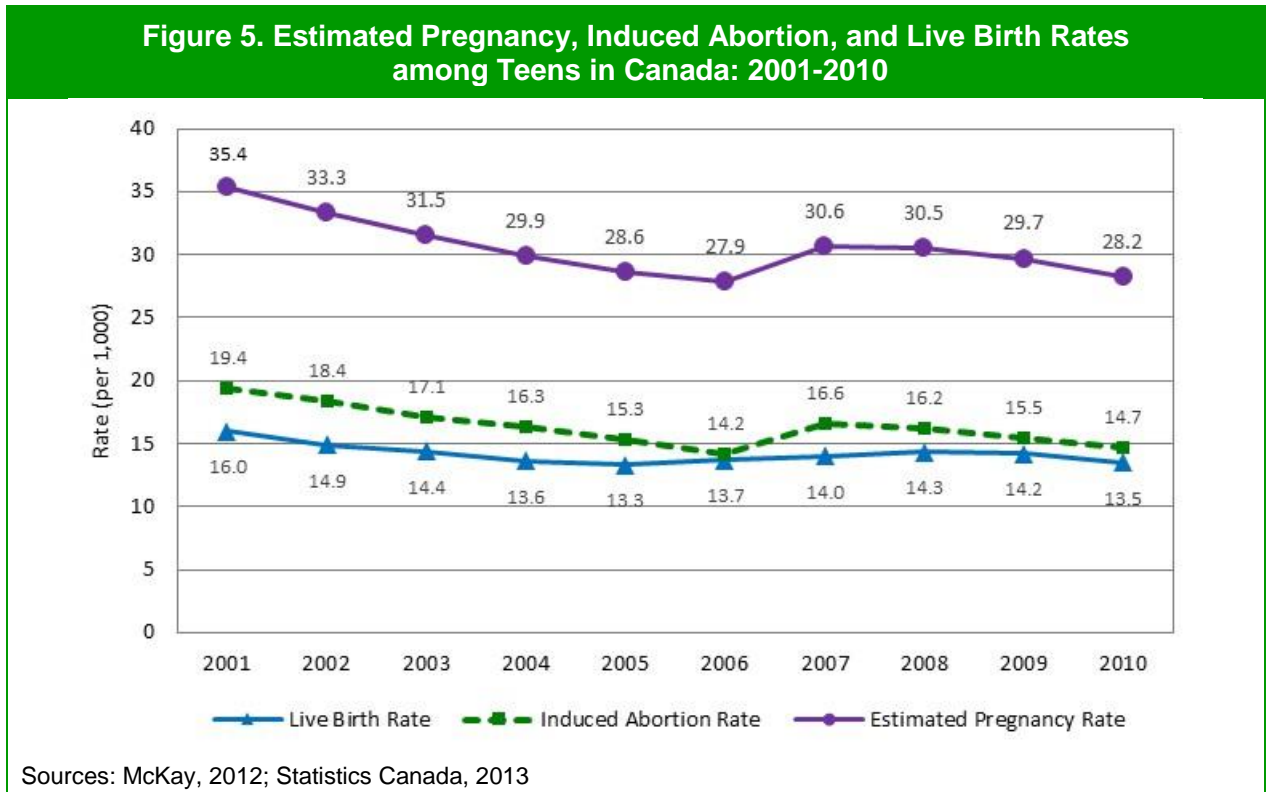
¹Rate - reflects the number per 1,000 females of the same age group.

²Data may differ from other published information due to differences in definitions and sources. The data sources were the Alberta Health Services NACRS/DAD Provincial Database. In order to calculate the rates, the number of events were provided by Data Integration, Measurement and Reporting and the population statistics were obtained from the Government of Alberta Interactive Health Data Application. The pregnancy rate includes live births, still births, induced abortions and spontaneous abortions. It does not include abortions received out of province or in the United States.

- In 2013, the estimated pregnancy rate¹ for teens 15-17 years old was 16.2 per 1,000 females. The pregnancy rate for teens aged 18-19 was 50.2 (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).
- From 2007 to 2013, the teen birth rate steadily declined from 19.9 to 14.7 per 1,000 females (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).
- From 2007 to 2013, the teen induced abortion rate decreased from 17.8 to 13.2 per 1,000 females (Data Integration, Measurement & Reporting - Alberta Health Services, 2014; Government of Alberta, 2014).
- Figure 4 summarizes the estimated teen pregnancy, induced abortion, and live birth rates over the past decade in Alberta.

Canada

- From 2001 to 2006, the estimated teen pregnancy rate in Canada declined from 35.4 to 27.9 per 1,000 females aged 15-19. From 2006 to 2007, the estimated teen pregnancy rate increased from 27.9 to 30.6. From 2007 to 2010, the estimated pregnancy rate declined from 30.6 to 28.2 per 1,000 females (McKay, 2012).
- In 2011 the live birth rate for teens 15-19 years old was 12.6 per 1,000 females (Statistics Canada, 2013). The live birth rate has been decreasing since 2008 (14.3) (McKay, 2012).
- In 2010 the induced abortion rate for teens aged 15-19 was 14.7 per 1,000 females. The abortion rate has declined since 2007 (16.6) (McKay, 2012).



¹Rate - reflects the number per 1,000 females of the same age group.

Summary

- Table 2 summarizes the adolescent pregnancy, live birth, and abortion rates¹ for Calgary, Alberta, and Canada.

Table 2. Adolescent Pregnancy, Live Birth and Abortion Rate Comparisons: Calgary Zone (2013), Alberta (2013) and Canada (2010)				
		Calgary	Alberta	Canada
Pregnancy Rate	15-19 years	20.8	28.3	28.2
	15-17 years	10.5	14.5	Data not available
	18-19 years	35.7	47.0	Data not available
Live Birth Rate	15-19 years	8.0	14.7	13.5
Induced Abortion Rate	15-19 years	12.7	13.1	14.7

CONSEQUENCES OF TEEN PREGNANCY

Socioeconomic Factors

- In a Canadian study investigating teen motherhood, teen mothers had a greater likelihood of having a lower socioeconomic status compared to their average aged counterparts (Al-Sahab, Heifetz, Tamim, Bohr, & Connolly, 2011).
- Teen motherhood is associated with incompleteness of high school or post-secondary education (Luong, 2008). With less education, the teen mother may lack job skills producing poor economic outcomes (Bushnik & Garner, 2008).
- Teen mothers are at increased risk for single parenthood (Al-Sahab et al., 2011; Bushnik & Garner, 2008), which impacts socioeconomic status.
- Experiencing poor economic conditions puts adolescent mothers at risk for depression and anxiety (Al-Sahab et al., 2011). Additionally, these economic conditions place the children of adolescent mothers at risk for adverse effects on health and wellness (PHAC, 2013a; Al-Sahab et al., 2011).
- All that being said, for some adolescents, becoming pregnant provides great motivation to produce a better life for their children. With strong support from the community and family members, teen mothers can strive for a life that does not lead to a life of poverty (Al-Sahab et al., 2011).

Health Risks

- A Canadian study of teen pregnancy indicated that teen mothers were more likely to start prenatal care after their first trimester of pregnancy and less likely to take folic acid prior to becoming pregnant or during the first trimester of pregnancy (Kingston, Heaman, Fell, & Chalmers, 2012). Teen mothers were also less likely to initiate and/or continue breastfeeding compared to their average aged counterparts (Kingston et al., 2012).
- Infants of teen mothers are at risk for premature birth and low birth weight putting them at risk for illness and/or death (Chen et al., 2007; PHAC, 2008b).

¹Rate - reflects the number per 1,000 females of the same age group.

- During the years 2004-2006 (combined), Albertan mothers less than 20 years of age had the highest smoking during pregnancy rate compared to all other age groups. In fact, almost half (48.5%) of teen mothers smoked during pregnancy (Reproductive Health Working Group, 2009). Tobacco use during pregnancy is associated with low birth weight, preterm birth and sudden infant death syndrome (Reproductive Health Working Group, 2009).
- During the years 2004-2006 (combined), mothers in Alberta less than 20 years of age had the highest alcohol consumption rate (8.2%) and street drug use rate (5.2%) compared to all other age groups (Reproductive Health Working Group, 2009). Alcohol consumption during pregnancy can cause fetal alcohol spectrum disorder, which can result in permanent mental, behavioral, learning and physical disabilities. The use of street drugs is related to social and health problems for both the mother and her child (Reproductive Health Working Group, 2009).

PREGNANCY PREVENTION

- Teens should be encouraged to consider or re-consider abstinence. When trying to avoid pregnancy, abstinence means abstaining from penis in vagina intercourse (Santelli, Kowal, & Wheeler, 2011).
- Besides abstinence, hormonal methods of contraception (e.g., birth control pill, birth control patch, vaginal contraceptive ring, Mirena IUD) are the most effective methods for preventing pregnancy when used consistently and correctly (Trussell & Guthrie, 2011). When hormonal contraceptive methods are used to prevent pregnancy, it is recommended a male or female condom also be used to protect against STI and HIV. Studies have shown that females using hormonal contraceptives do not necessarily use a condom (Rotermann, 2008) for STI and HIV prevention.
- Emergency Contraception (EC) can be taken to prevent pregnancy up to 5 days after unprotected intercourse or contraceptive failure (e.g., broken condom), although *it is most effective if taken within 24 hours* (Alberta Health Services, 2010/2011). Teens can access a prescription for EC at a sexual and reproductive health clinic, a walk-in clinic, or through their family doctor. In Alberta, EC is now available through most pharmacies without a prescription.

SEXUALLY TRANSMITTED INFECTIONS (STI), HIV and AIDS

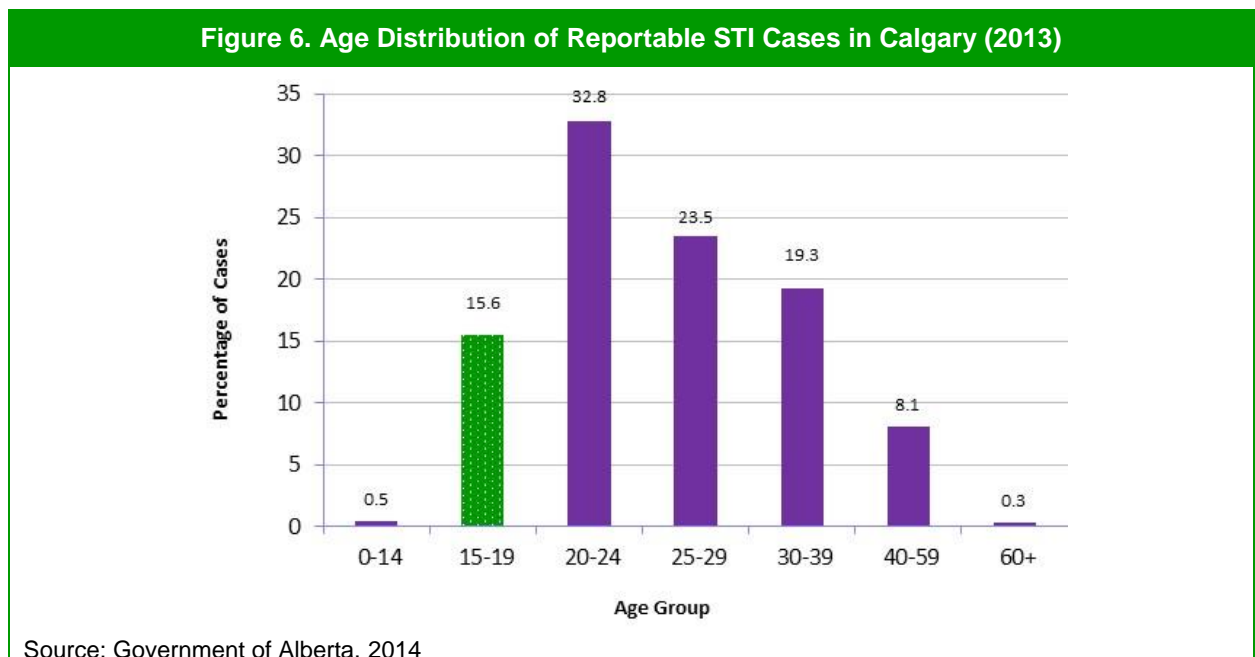
STI STATISTICS

In Alberta, sexually transmitted infections (STI) such as chlamydia, gonorrhea, and syphilis are reported to public health officials (Alberta Health, Surveillance and Assessment, 2014). Chlamydia and gonorrhea are bacterial infections primarily transmitted through unprotected vaginal and anal sex, and less often through unprotected oral sex. These infections can also pass from mother to newborn baby during delivery (PHAC, 2014a). Syphilis, also a bacterial infection, is primarily transmitted through unprotected vaginal, oral, or anal sexual sex. Syphilis can also be passed from mother to baby during pregnancy or childbirth, resulting in congenital syphilis or newborn death (PHAC, 2014a).

Herpes and human papillomavirus (HPV/ genital warts) are non-reportable STI. Herpes and HPV are viral infections that spread through skin to skin genital contact. Herpes and HPV are transmitted through vaginal, oral, and/or anal sexual intercourse but mostly through skin-to-skin sexual contact. Herpes can also be spread from mother to baby through childbirth and can cause serious complications (PHAC, 2014a). HPV is the main cause of cervical changes detected by Pap tests. If cervical changes are not detected early, they may go on to become cervical cancer. The prevalence of these infections are unknown, however, it is estimated that approximately 70% of sexually active adults will encounter one type of HPV infection during their lifetime (PHAC, 2014a).

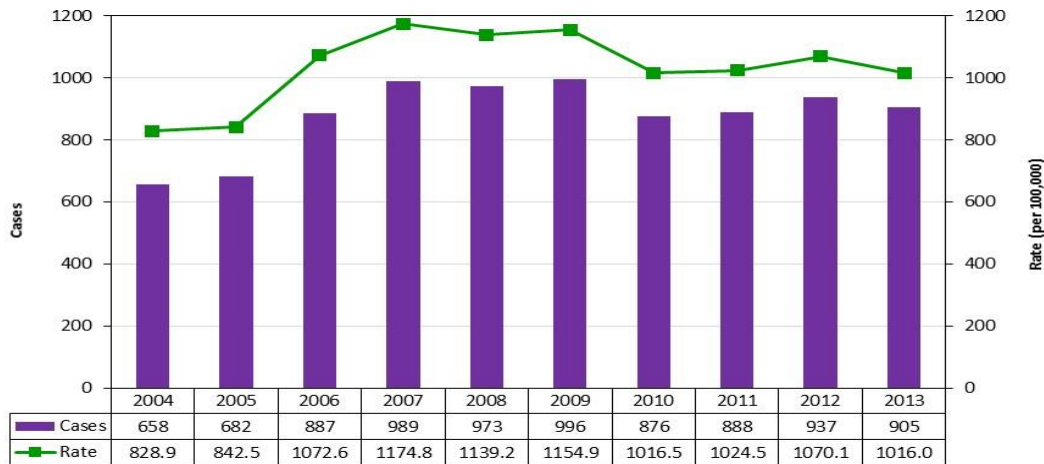
Calgary Zone

- In 2013, 15.6% of all STI reported in the Calgary Zone were among teens aged 15-19 and nearly half of all STI were reported among youth aged 15-24 (Government of Alberta, 2014). For the purpose of this document, reportable STI include chlamydia, gonorrhea, syphilis, mucopurulent cervicitis (MPC) and non-gonococcal urethritis (NGU).
- See Figure 6 for the age distribution of reported Calgary Zone STI cases (2013).



- Chlamydia is the most commonly reported STI in the Calgary Zone. From 2010 to 2012, the chlamydia rate¹ for teens ages 15-19 increased from 1016.5 to 1070.1 per 100,000 persons. From 2012 to 2013, the chlamydia rate decreased from 1070.1 to 1016.0. In 2013, there were 905 cases of chlamydia reported among Calgary Zone teens (Government of Alberta, 2014). See Figure 7.

Figure 7. Number of Cases and Rate¹ of Chlamydia in Calgary Zone Teens: 2004-2013



Source: Government of Alberta, 2014

- Gonorrhea is the second most reported STI in the Calgary Zone. The gonorrhea rate for teens ages 15-19 decreased from 125.8 per 100,000 persons in 2006 to 39.5 in 2010. The gonorrhea rate increased from 39.5 in 2010 to 70.8 in 2012. In 2013, there were 43 reported cases of gonorrhea among Calgary teens, for a rate of 48.3 per 100,000 persons (Government of Alberta, 2014). See Figure 8.

Figure 8. Number of Cases and Rate¹ of Gonorrhea in Calgary Zone Teens: 2004-2013

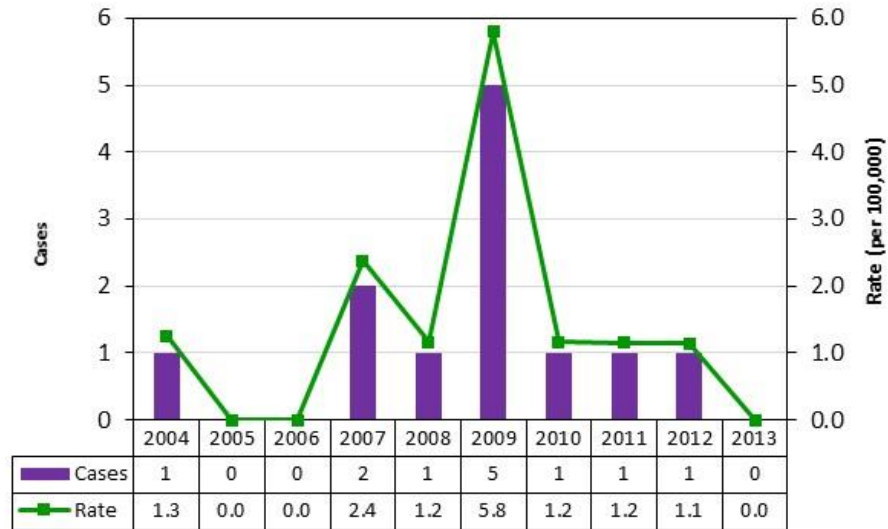


Source: Government of Alberta, 2014

¹Rate - reflects the number per 100,000 persons of the same age group.

- In 2013, there were zero cases of **infectious syphilis** reported among Calgary Zone teens ages 15-19 years. From 2009 to 2013, the infectious syphilis rate¹ decreased from 5.8 to 0 per 100,000 persons (Government of Alberta, 2014). See Figure 9.

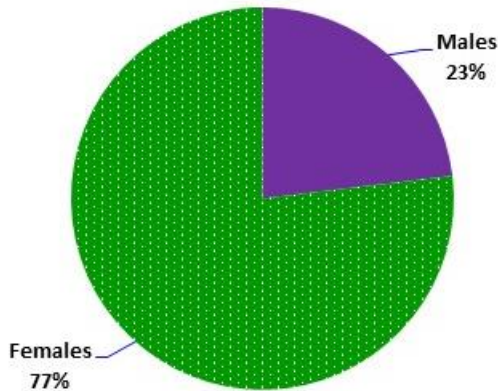
Figure 9. Number of Cases and Rate of Infectious Syphilis in Calgary Zone Teens: 2004-2013



Source: Government of Alberta, 2014

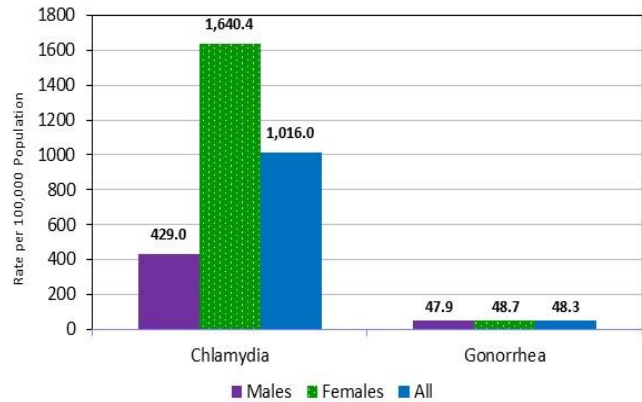
- **In 2013, there were a total of 948 chlamydia, gonorrhea, and syphilis cases among Calgary Zone teens ages 15-19.** Of those cases, 729 (77%) were among females and 219 (23%) were among males. See Figure 10. When looking at the gender specific chlamydia and gonorrhea rates, the rates are higher for females (1,640.4 and 48.7 respectively) than males (429.0 and 47.9 respectively) (Government of Alberta, 2014). See Figure 11.

Figure 10. Percentage of Chlamydia, Gonorrhea and Infectious Syphilis Cases by Gender (2013)



Source: Government of Alberta, 2014

Figure 11. Calgary Zone Chlamydia and Gonorrhea Rates for Teens: Males, Females, All (2013)



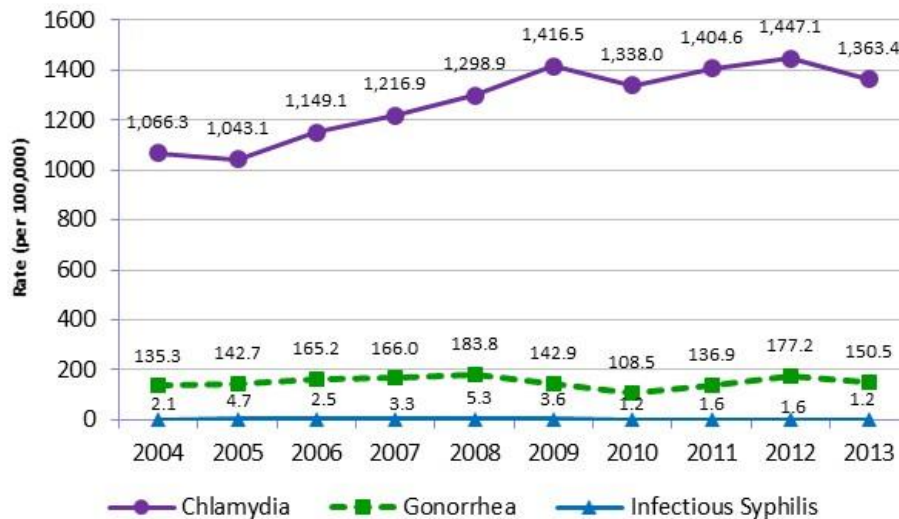
Source: Government of Alberta, 2014

¹Rate - reflects the number per 100,000 persons of the same age group.

Alberta

- **Chlamydia** is the most commonly reported STI for Albertan teenagers. From 2005 to 2009, the chlamydia rate¹ escalated from 1043.1 to 1416.5 per 100,000 persons. Since 2009, the chlamydia rate has fluctuated. In 2013, 3,398 teens were diagnosed with chlamydia, for a rate of 1363.4 per 100,000 persons (Government of Alberta, 2014).
- From 2004 to 2008, the **gonorrhoea** rate for teens aged 15-19 increased from 135.3 to 183.8 per 100,000 persons. From 2009 to 2013, the rate fluctuated ranging from 142.9 to 177.2. In 2013, 375 teens were diagnosed with gonorrhoea, for a rate of 150.5 per 100,000 persons (Government of Alberta, 2014).
- Over the past decade, the **infectious syphilis** rate in teens has fluctuated ranging from 1.2 to 5.3 per 100,000 persons. In 2013, three Albertan teenagers were diagnosed with infectious syphilis, for a rate of 1.2 per 100,000 persons (Government of Alberta, 2014).
- See Figure 12 for chlamydia, gonorrhoea and infectious syphilis rates for Alberta teens (2004-2013).

Figure 12. Chlamydia, Gonorrhoea and Infectious Syphilis Rates¹ for Alberta Teens: 2004-2013



Source: Government of Alberta, 2014

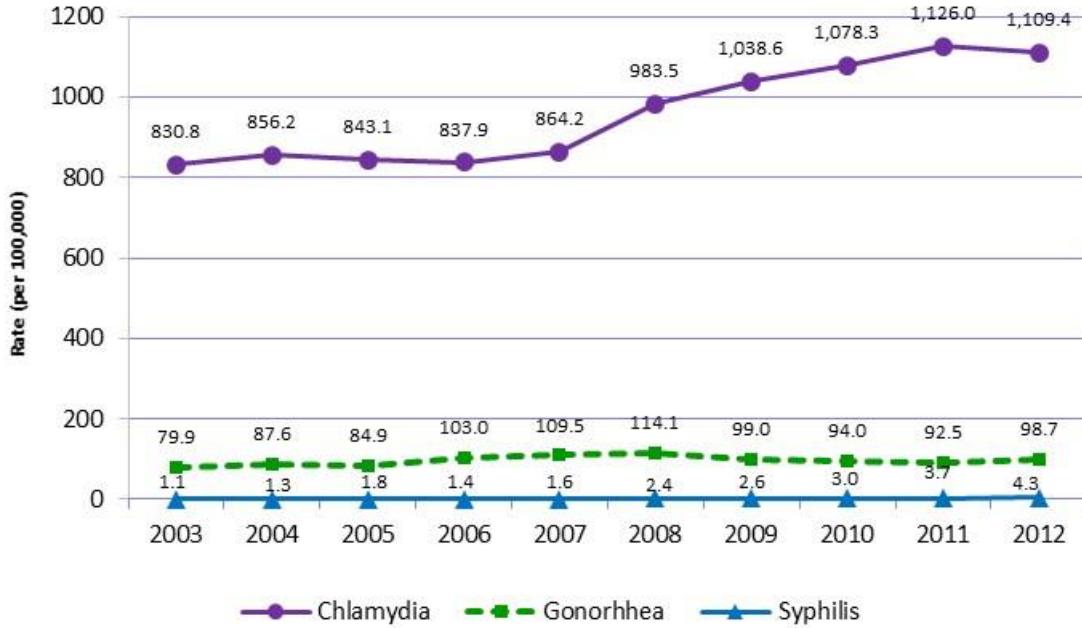
Canada

- **Chlamydia** is the most commonly reported STI for Canadian teens, 15-19 years old. From 2006 to 2012, the chlamydia rate¹ for teens escalated from 837.9 to 1126.0 per 100,000 persons. In 2013, the teen chlamydia rate decreased slightly to 1109.4, equating to 24,535 cases across Canada (PHAC, 2014b).
- From 2005 to 2008 the **gonorrhoea** rate for 15-19 year olds increased from 84.9 to 114.1 per 100,000 persons. The rate decreased from 114.1 in 2008 to 92.5 in 2011. In 2012, the gonorrhoea rate was 98.7 (PHAC, 2014b).
- From 2006 to 2012, the **syphilis**² rate for adolescents ages 15-19 increased from 1.4 to 4.3 per 100,000 persons (PHAC, 2014b).
- See Figure 13 for chlamydia, gonorrhoea and infectious syphilis rates for Canada teens (2003-2012).

¹Rate - reflects the number per 100,000 persons of the same age group.

²The Canadian data on syphilis includes both infectious and non-infectious syphilis.

Figure 13. Chlamydia, Gonorrhoea and Syphilis Rates¹ for Canadian Teens: 2003-2012



Source: PHAC, 2014b

Summary

- Table 3 summarizes the chlamydia, gonorrhoea and infectious syphilis rates¹ for Calgary, Alberta and Canada.

Table 3. Chlamydia, Gonorrhoea, and Infectious Syphilis Rate^{1,2} Comparisons: Calgary (2013), Alberta (2013), and Canada (2012)

		Calgary Zone	Alberta	Canada
Chlamydia Rate	All Ages	331.84	392.84	298.72
	15-19 years	1015.97	1363.37	1109.42
	20-24 years	1753.97	1998.58	1604.83
Gonorrhoea Rate	All Ages	31.55	49.22	36.18
	15-19 years	48.27	150.46	98.67
	20-24 years	122.35	205.06	150.98
Infectious Syphilis Rate²	All Ages	3.68	2.87	not available
	15-19 years	0	1.2	not available
	20-24 years	9.79	7.29	not available

¹Rate - reflects the number per 100,000 persons of the same age group.

²The Canadian data on syphilis includes both infectious and non-infectious syphilis.

HIV AND AIDS STATISTICS

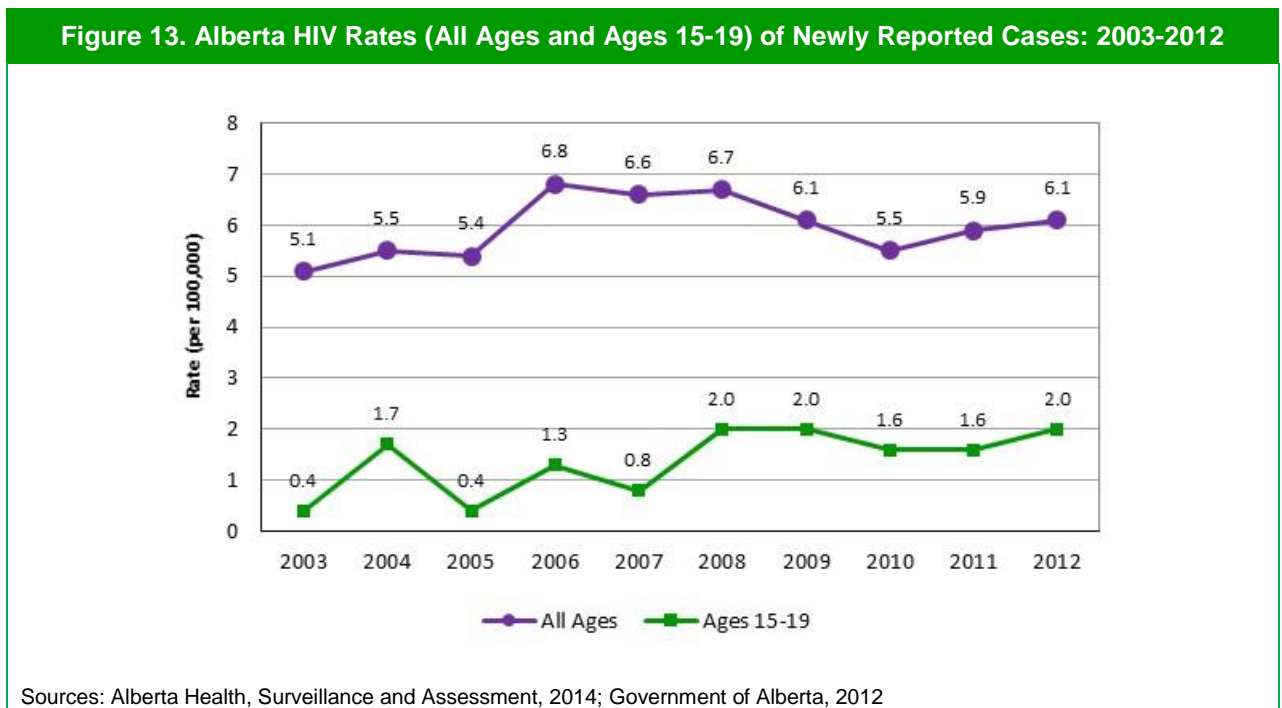
Although infection with HIV (human immunodeficiency virus) can be transmitted sexually, it is reported separately from other STIs.

Calgary Zone

- In 2012, there were 87 persons (in all age groups) in the Calgary Zone newly diagnosed with HIV (Alberta Health, Surveillance and Assessment, 2014).
- In 2012, the HIV rate¹ of newly reported cases in Calgary was 5.9 per 100,000 persons compared to 6.1 in 2011 (Alberta Health, Surveillance and Assessment, 2014).

Alberta

- In the year 2012, there were 241 newly reported HIV cases (in all age groups) in Alberta. The HIV rate¹ for all ages was 6.1 in 2012 (Alberta Health, Surveillance and Assessment, 2014).
- In 2012, 5 Alberta teens, aged 15-19 were newly diagnosed with HIV, for a rate of 2.0 per 100,000 persons (Alberta Health, Surveillance and Assessment, 2014). The teen HIV rate has fluctuated during the past decade ranging from 0.4 to 2.0 per 100,000 persons (Alberta Health, Surveillance and Assessment, 2014; Government of Alberta, 2012).
- See Figure 13 for Alberta HIV rates (all ages and ages 15-19) of newly reported cases from 2003-2012.



¹Rate - reflects the number per 100,000 persons of the same age group.

- In 2012, 71.4% of newly diagnosed HIV cases were in males (Alberta Health, Surveillance and Assessment, 2014).
- In 2012, the Caucasian ethnic group represented the largest percentage of newly diagnosed cases (39.1%). The Black ethnic group represented 35.2% of newly diagnosed cases and the Aboriginal ethnicity represented 16.7% (Alberta Health, Surveillance and Assessment, 2014).
- In 2012, the most common HIV risk exposures for males newly diagnosed with HIV were: men having sex with men or MSM (~42%); immigrants who tested positive prior to entering Canada (~17%); heterosexual person with a partner at risk (e.g., sexual partner of a person confirmed to have HIV or AIDS, sexual partner of an injection drug user, patron of a sex trade worker, etc.) (~10%); injection drug user (~9%); and heterosexual immigrant from an endemic country or heterosexual contact from a person from an endemic country (~8%) (Alberta Health, Surveillance and Assessment, 2014).
- For females, in 2012, the most common HIV risk exposures were: immigrants who tested positive prior to entering Canada (~32%); heterosexual immigrant from an endemic country or heterosexual contact from a person from an endemic country (~27%); heterosexual person with a partner at risk (~27%); heterosexual partner with an anonymous contact (~4%); and injection drug user (~3%) (Alberta Health, Surveillance and Assessment, 2014).

Canada

- HIV testing became available in 1985. From 1985 to December 2012, a total of 76,275 positive HIV tests were reported in Canada (PHAC, 2012).
- There were 2,062 positive HIV tests reported in Canada in 2012, for a national rate¹ of 5.9 per 100,000 persons (PHAC, 2013). According to PHAC (2013), this is the lowest rate reported to date.
- As of December 2012, a total of 22,702 AIDS cases were reported in Canada (PHAC, 2013).

CONSEQUENCES OF STI, HIV AND AIDS

- The high incidence of chlamydia has become a global public health concern. Each year, there are nearly 100 million new cases of chlamydia worldwide (Alberta Blood-borne Pathogens and Sexually Transmitted Infections Surveillance Working Group, 2008).
- Studies show that having an STI such as chlamydia increases the transmission and acquisition of HIV infection (PHAC, 2014a; Alberta Blood-borne Pathogens and Sexually Transmitted Infections Surveillance Working Group, 2008).
- Approximately 70% of females and 50% of males infected with chlamydia, do not have any symptoms. As a result, chlamydia is under-diagnosed (Alberta Blood-borne Pathogens and Sexually Transmitted Infections Surveillance Working Group, 2008).
- In women, untreated STI such as gonorrhoea and chlamydia, can lead to pelvic inflammatory disease (PID), which is an inflammation of the internal female reproductive organs. PID may lead to chronic pelvic pain, ectopic pregnancy, or infertility. About 75-85% of PID cases are a result of chlamydia or gonorrhoea infections that have spread to the reproductive organs (Alberta Blood-borne Pathogens and Sexually Transmitted Infections Surveillance Working Group, 2008).
- Untreated STI such as gonorrhoea and chlamydia can put young men at risk of testicular infections and in rare cases infertility (PHAC, 2014a; Alberta Blood-borne Pathogens and Sexually Transmitted Infections Surveillance Working Group, 2008).

¹Rate - reflects the number per 100,000 persons of the same age group.

- STI such as gonorrhea and chlamydia can be passed from mother to child during birth causing eye infections, blindness, and pneumonia (PHAC, 2014a).
- HPV is probably the most common STI in Canada. It is estimated that roughly 70% of adults will have at least one type of HPV infection during their lifetime. Many people infected with HPV have no symptoms. There are over 140 strains of HPV. Certain strains cause genital warts whereas others cause abnormal cell growth on the cervix, which may lead to cervical cancer if left untreated (PHAC, 2014a).

RISK FACTORS FOR STI, HIV AND AIDS

- *Several factors place an individual at risk for contracting STI and/or HIV including:*
 - Participation in unprotected vaginal, oral or anal sex (no condom or dental dam used) (PHAC, 2014a; Warner & Steiner, 2011).
 - Genital to genital sexual contact (Santelli et al., 2011).
 - Involvement in street culture (PHAC, 2014a; Lokanc-Diluzio & Troute-Wood, in press).
 - Previous history of STI (PHAC, 2014a).
 - Having multiple sexual partners (PHAC, 2014a).
 - Use of non-barrier contraceptives, such as the birth control pill, without using a male or female condom (PHAC, 2014a).
 - Use of injection drugs, alcohol or other substances that can impair decision making ability (PHAC, 2014a).

PREVENTION OF STI, HIV AND AIDS

- Teens should be encouraged to consider or re-consider abstinence. When trying to avoid STI, abstinence means avoiding vaginal, anal, oral intercourse and other behaviors (e.g., genital to genital contact) that expose a person to semen, pre-ejaculate fluid, cervical or vaginal secretions, and blood (Santelli et al., 2011).
- Male and female **condoms** reduce the risk of STI (e.g., chlamydia, gonorrhea, syphilis, HPV, etc.) and HIV (Warner & Steiner, 2011).
- **Dental dams** are square pieces of latex, similar to the material condoms are made from. They are used to cover the vulva or anus during oral sex to lower the risk of STI.
- It is recommended that teens use a **male or female condom and/or dental dam every time** they have sexual contact (e.g., vaginal, anal, or oral sex; and genital to genital contact). The most common causes of condom failure are that they are *not* used consistently (e.g., with every act of intercourse) or correctly. Misuse of condoms account for condom breakage or slippage (Warner & Steiner, 2011).
- Teens should limit sexual activity to a partner they are sure has **tested negative** for STI and HIV (PHAC, 2014a).
- Health Canada has approved the use of two vaccines (Gardasil and Cervarix) to protect against different strains of HPV. Gardasil HPV vaccine is approved for use in females aged 9-45 and males aged 9-26 (National Advisory Committee on Immunization [NACI], 2012). Cervarix HPV vaccine is approved for females ages 9-26 (NACI, 2012). In Alberta, Gardasil is publically funded for all grade 5 students.
- Refer to page 4 for the benefits of sexual health education.

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