HIV and Sexually Transmitted Infections 2010

BC Centre for Disease Control
AN AGENCY OF THE PROVINCIAL HEALTH SERVICES AUTHORITY

Clinical Prevention Services

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Table of Contents

List of Figures & Tables

Chlamydia

Gonorrhea

Pelvic Inflammatory Disease and Ectopic Pregnancy

Infectious Syphilis

HIV

AIDS

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We would like to acknowledge the contributions of our many partners. Without their support this report would not have been possible.

• Staff from the Provincial Public Health Microbiology and Reference Laboratory, located at the BCCDC, for collecting and compiling of HIV requisition data.

• Designated public health nurses in the health service delivery areas for data collection as part of follow-up to persons testing positive for HIV.

• Physicians, healthcare providers, and public health staff in BC for taking the time and effort to complete and submit case report forms.

• BC Centre for Excellence in HIV/AIDS for their continued assistance in the reporting of new AIDS cases.

• BC Ministry of Health for providing data on pelvic inflammatory disease and ectopic pregnancy.

• Oak Tree Clinic at BC Children's & Women's Hospital for providing summary data on HIV positive pregnant women having live births.

• Surveillance and Risk Assessment Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada for providing the estimates of HIV incidence and prevalence.

1. Introduction

This Annual Surveillance Report describes trends in HIV, AIDS, and sexually transmitted infections up to 2010 for the province of British Columbia.

We would like to point out the following changes from previous reports:

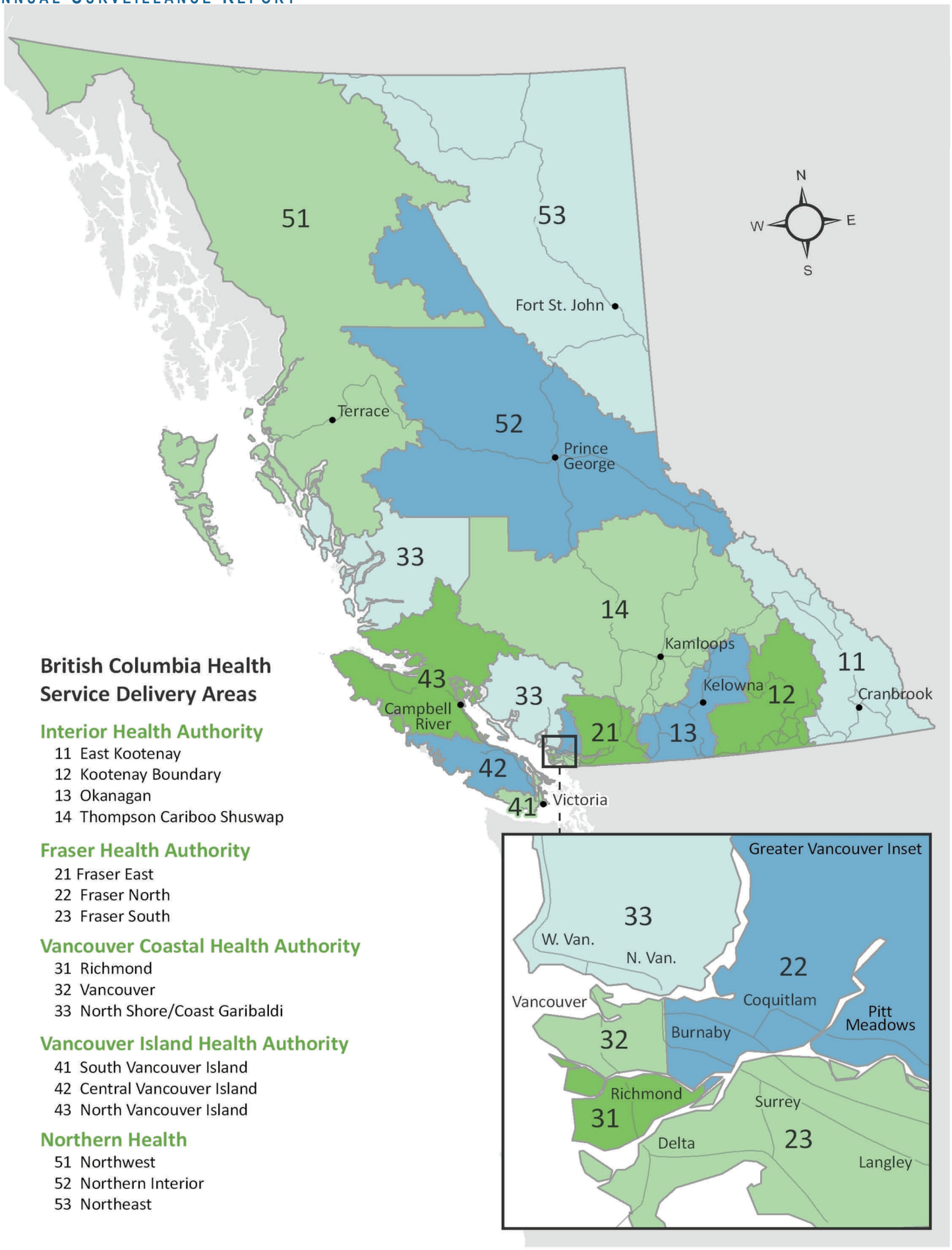
- The annual number of prenatal HIV tests for females is included (section 7).
- The historic number of AIDS cases has increased slightly from previous reports, due to improved identification of cancer-related AIDS-defining illnesses (section 8).
- We are no longer publishing a separate Annual HIV/AIDS Supplement Report. The tables previously presented in this report are now included in Appendix A.

Please do not hesitate to contact us with any questions or comments on this report – feedback is always welcome.

Sincerely,

Dr. Mark Gilbert
Physician Epidemiologist, Clinical Prevention Services

Dr. Gina Ogilvie
Director, Clinical Prevention Services



British Columbia Health Service Delivery Areas

Interior Health Authority
- 11 East Kootenay
- 12 Kootenay Boundary
- 13 Okanagan
- 14 Thompson Cariboo Shuswap

Fraser Health Authority
- 21 Fraser East
- 22 Fraser North
- 23 Fraser South

Vancouver Coastal Health Authority
- 31 Richmond
- 32 Vancouver
- 33 North Shore/Coast Garibaldi

Vancouver Island Health Authority
- 41 South Vancouver Island
- 42 Central Vancouver Island
- 43 North Vancouver Island

Northern Health
- 51 Northwest
- 52 Northern Interior
- 53 Northeast

2. Overview of Trends

Chlamydia

In 2010, 11,838 cases of genital chlamydia were reported in BC for a rate of 261.7 per 100,000 population. This is an increase from 250.9 per 100,000 population in 2009 (11,177 cases). The majority of cases are female, with the highest rate of infection among females aged 15-19 and 20-24 years. The overall trend in genital chlamydia infection rates has been steadily increasing since 1998.

Gonorrhea

The 2010 rate of genital gonorrhea in BC (29.2 per 100,000; 1,321 cases) remains similar to the 2009 rate of 29.4 per 100,000 population (1,309 cases). The majority of cases are male. The highest rates of infection among males are in those aged 20-24 and 25-29 years, and among females aged 15-19 and 20-24 years. Rates of genital gonorrhea have been generally increasing since 1998, however; rates have stabilized for the past two years, with decreases observed in some groups in 2010.

Pelvic Inflammatory Disease (PID) and Ectopic Pregnancy (EP)

Physician billing and hospital discharge rates for PID have generally decreased over time. Physician billing rates for EP have been slightly increasing since 2006 with trends in 2009 showing small variation. PID and EP are potential complications of chlamydia and gonorrhea infection in women.

Infectious Syphilis

The provincial rate of infectious syphilis decreased substantially in 2010 to 3.4 (155 cases) from 4.8 per 100,000 population (216 cases) in 2009. The majority of cases continue to be male, however, the rate of infectious syphilis in males continued to decrease in 2010 primarily due to a decrease in infectious syphilis among gay, bisexual and other men who have sex with men (MSM) (115 cases; 74.2%). Infectious syphilis cases in street-involved persons, sex trade workers and their patrons (10 cases; 6.5%) continued a decreasing trend along with cases among heterosexual persons without other risk factors (24 cases; 15.5%) .

HIV

The rate of new positive HIV tests in BC decreased in 2010 to 6.7 (301 cases) from 7.6 per 100,000 population (337 cases) in 2009. The greatest number of new positive HIV tests continued to be among MSM, who accounted for 50.5% (152 cases) of 2010 cases. The number of new positive HIV tests among people who use injection drugs decreased in 2010 to 51 (16.9%) from 64 (19.0%) new positive HIV tests in 2009. Aboriginal persons, particularly females, continue to be overrepresented in BC's HIV epidemic. Aboriginal females comprised 33.3% (21 cases) of all new positive HIV tests among females in 2010.

AIDS

In 2009, the rate of AIDS in BC decreased to 1.7 (77 cases) from 2.5 per 100,000 population (110 cases) in 2008.

3. Chlamydia

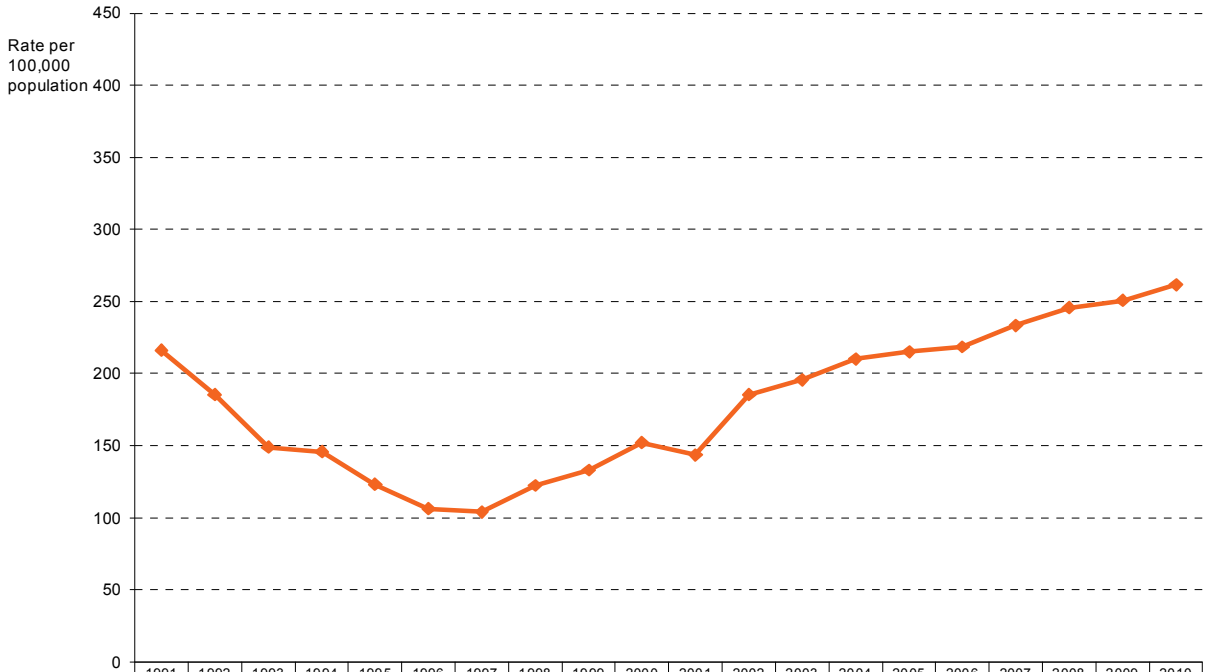
Genital Chlamydia

After a prolonged period of declining rates, genital chlamydia in BC has been steadily increasing since 1998 ,similar to national rates. The rate of genital chlamydia for BC increased in 2010 to 261.7 (11,838 cases) from 250.9 per 100,000 population (11,177 cases) in 2009. Trends by HSDA are variable, with decreases observed in some areas. The highest rates of genital chlamydia infection in 2010 were in the Northwest , Northern Interior , Northeast , and Vancouver HSDAs.

The rates of infection for both females and males continue to increase, and females continue to have approximately twice the rate of infection compared to males. The highest rates of genital chlamydia among females are in those aged 15-19 and 20-24 years, and among males in those aged 20-24 years.

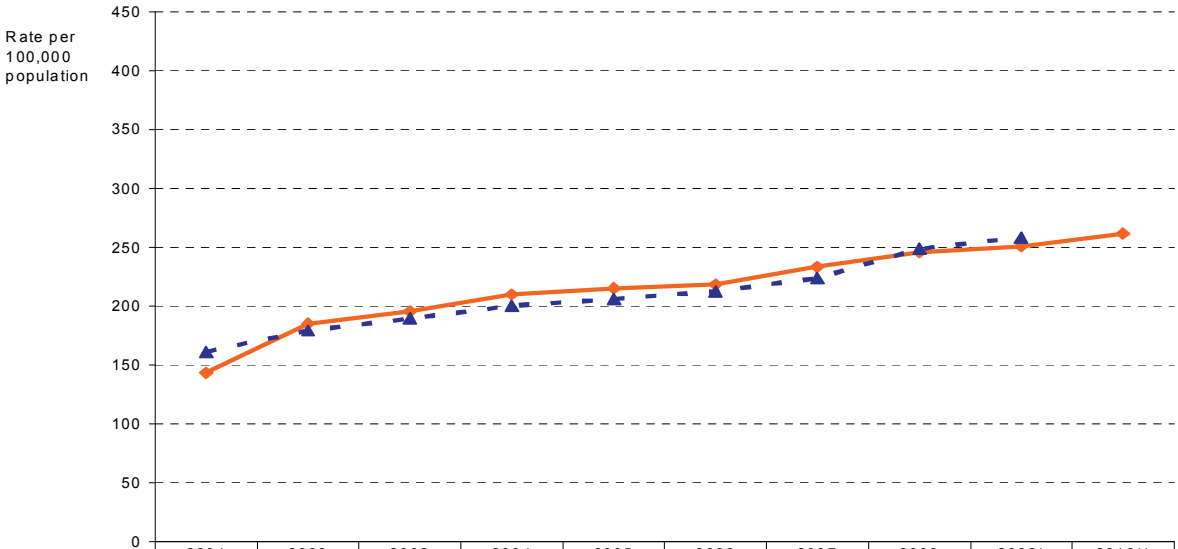
Many genital chlamydia infections are asymptomatic and thus diagnosed infections reflect only a fraction of the total population burden. The greater number of infections detected in females is in part due to greater testing in females as part of routine screening at the time of visits for other reasons (e.g., pap testing or contraception counseling).

3.1 Genital chlamydia case reports and rates in BC by historical trend, 1991 to 2010



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BC Reports	7,294	6,434	5,321	5,366	4,660	4,116	4,116	4,877	5,342	6,148	5,855	7,601	8,072	8,733	9,040	9,275	10,063	10,776	11,177	11,838
BC Rate	216.2	185.5	149.1	146.0	123.4	106.2	104.2	122.4	133.2	152.2	143.6	185.5	195.8	210.2	215.4	218.6	233.5	245.8	250.9	261.7

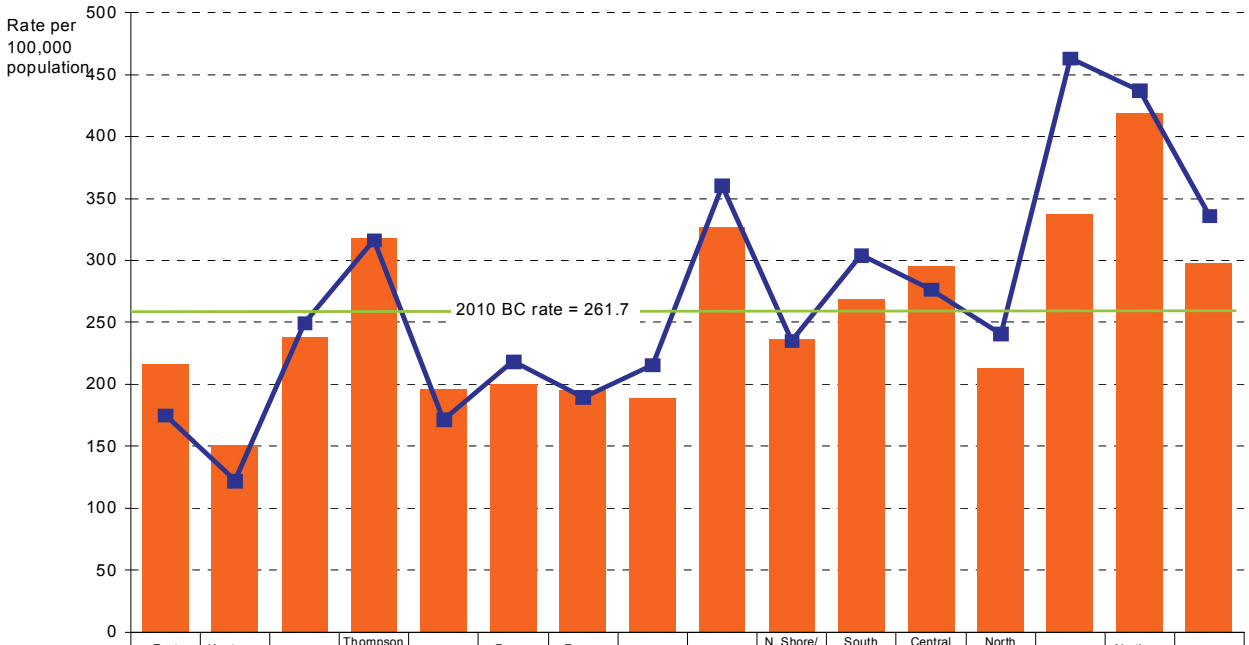
3.2 Genital chlamydia rates in BC and Canada, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010**
BC Reports	5,855	7,601	8,072	8,733	9,040	9,275	10,063	10,776	11,177	11,838
BC Rate	143.6	185.5	195.8	210.2	215.4	218.6	233.5	245.8	250.9	261.7
Canadian Rate	161.4	179.5	189.6	200.5	206.1	212.9	224.0	248.8	258.5	

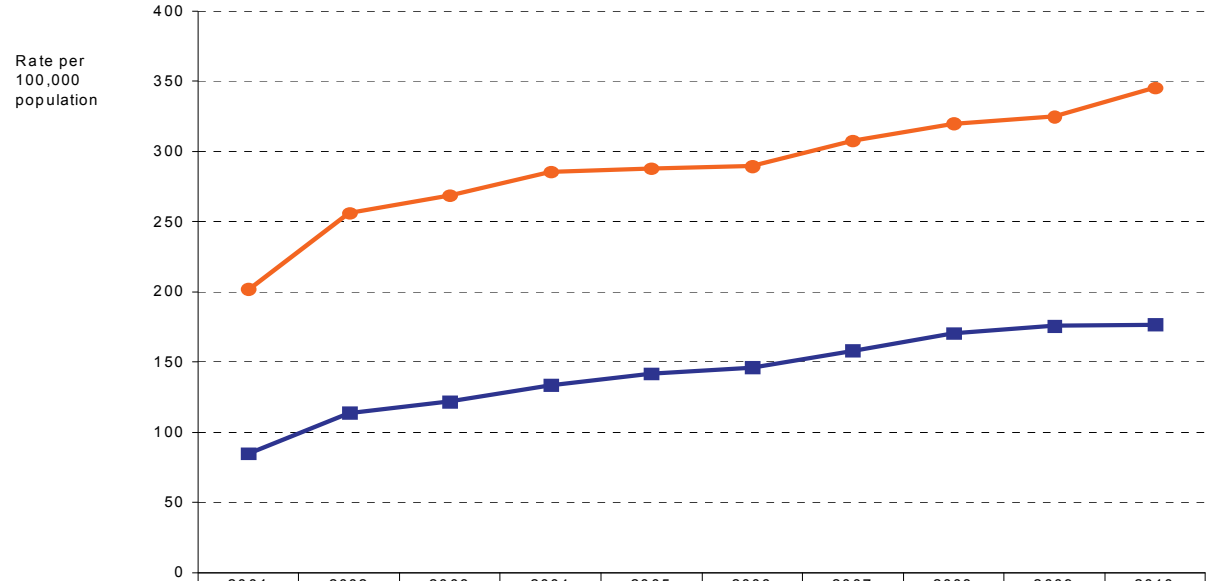
*2009 Canadian rate is projected and is subject to change (Public Health Agency of Canada, 2010)
Canadian rate does not distinguish between genital and extra-genital chlamydia case reports
**2010 data is not available for Canadian Rate

3.3 Genital chlamydia case reports and rates in BC by health service delivery area, 2009 & 2010



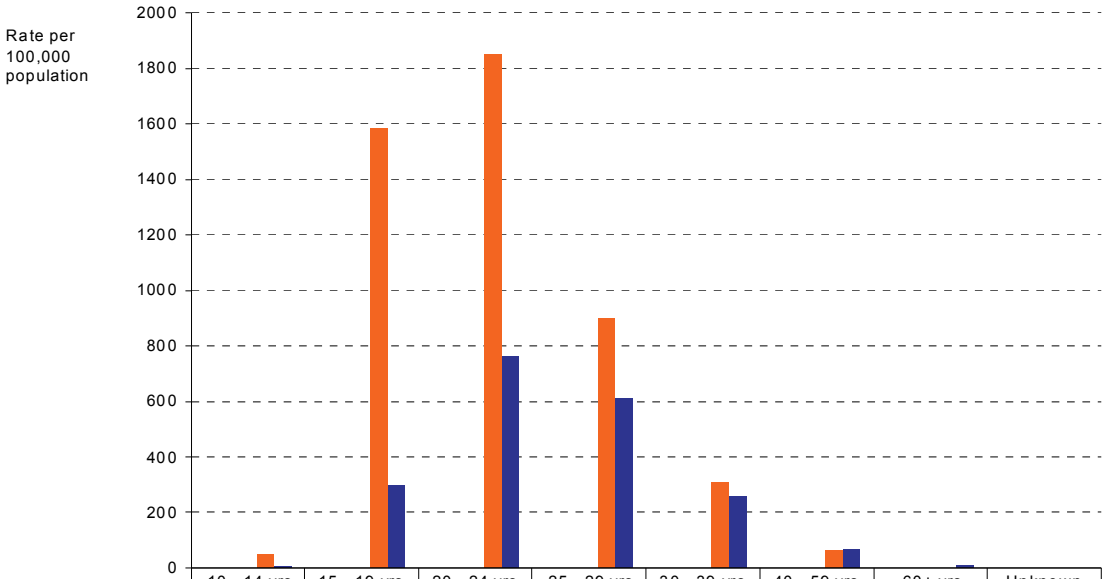
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Fraser East	Fraser North	Fraser South	Richmond	Vancouver	N. Shore/ Coast Garibaldi	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Northwest	Northern Interior	Northeast
Reports 2010	142	97	890	711	490	1,331	1,349	423	2,347	662	1,131	735	293	348	625	231
Rate 2009	216.3	151.3	237.9	317.9	196.1	200.0	195.1	188.4	326.8	237.1	268.2	295.2	212.8	337.3	418.7	297.5
Rate 2010	175.0	122.1	249.6	316.5	171.6	218.3	189.4	215.6	360.4	235.3	304.2	276.7	240.5	463.1	437.3	336.0

3.4 Genital chlamydia case reports and rates in BC by sex, 2001 to 2010



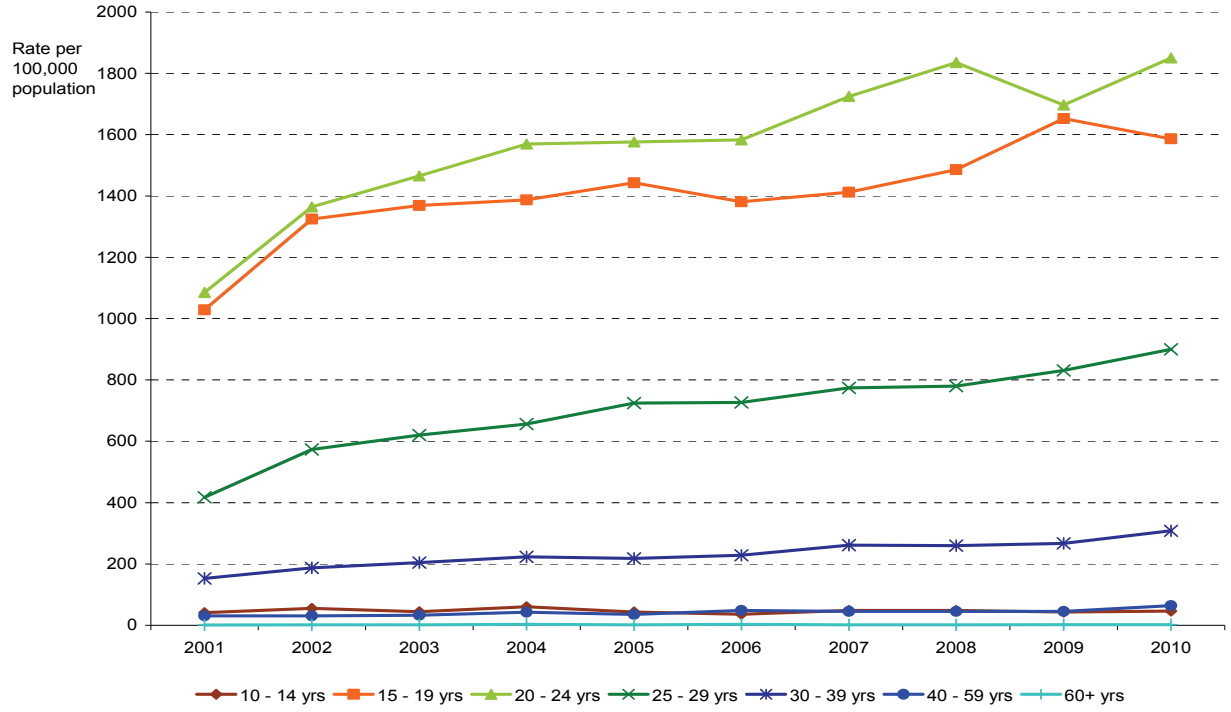
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - Female	4,142	5,287	5,587	5,984	6,094	6,198	6,685	7,067	7,289	7,868
Reforts - Male	1,713	2,313	2,484	2,748	2,945	3,071	3,374	3,703	3,881	3,964
Rate - Female	201.7	255.9	268.7	285.4	287.8	289.4	307.5	319.7	324.7	345.1
Rate - Male	84.7	113.8	121.6	133.5	141.6	146.1	158.0	170.4	175.6	176.6

3.5 Genital chlamydia case reports and rates in BC by age group and sex, 2010



	10 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 59 yrs	60+ yrs	Unknown
Reports - Female	55	2,150	2,843	1,435	929	442	8	6
Reports - Male	9	429	1,265	993	755	462	46	5
Reports - Transgender/Unknown	0	1	3	1	0	0	0	1
Rate - Female	46.7	1,586.2	1,850.7	900.1	308.2	64.0	1.6	
Rate - Male	7.2	297.0	763.4	611.8	255.9	68.5	10.3	

3.6 Female genital chlamydia rates in BC by age group, 2001 to 2010

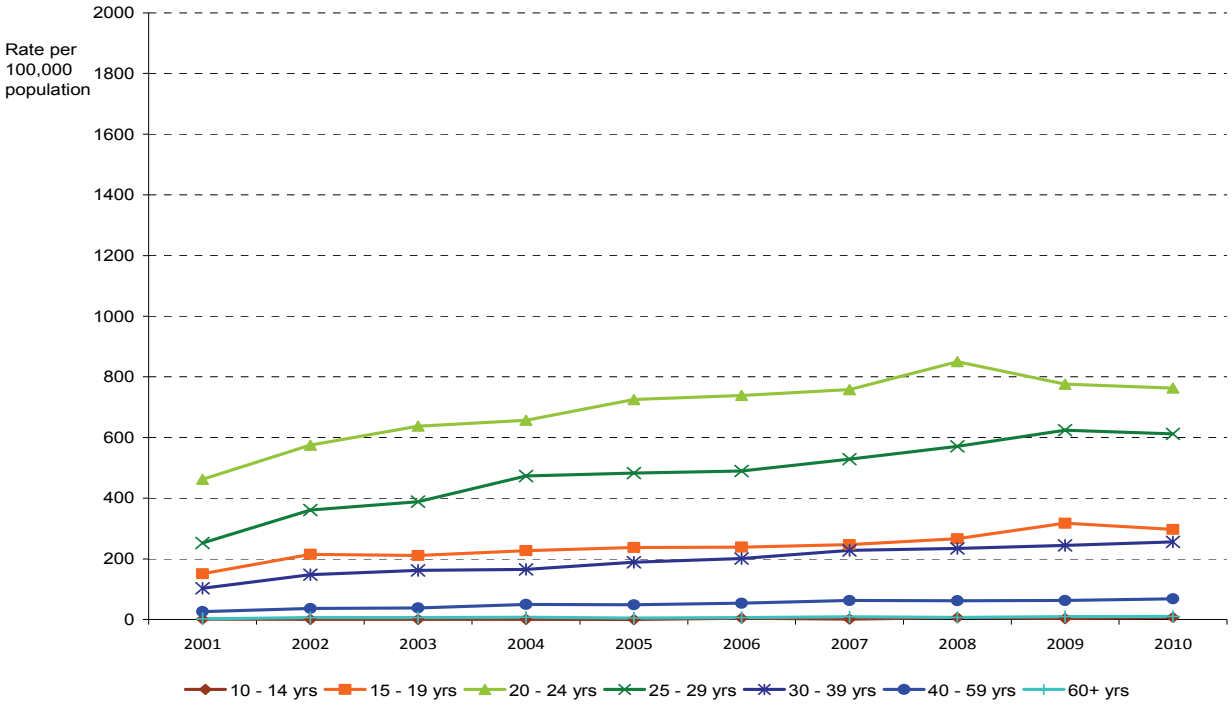


3.A Female genital chlamydia case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Case	52	71	56	77	55	45	60	59	52	55
	Rate	40.6	55.5	43.8	60.5	43.5	35.9	48.4	48.6	43.5	46.7
15 - 19 yrs	Case	1,390	1,788	1,827	1,841	1,927	1,867	1,943	2,062	2,282	2,150
	Rate	1,028.8	1,324.7	1,369.0	1,387.3	1,443.0	1,380.6	1,412.3	1,486.1	1,652.2	1,586.2
20 - 24 yrs	Case	1,427	1,837	2,019	2,215	2,249	2,269	2,489	2,691	2,546	2,843
	Rate	1,085.5	1,364.4	1,465.8	1,569.6	1,576.4	1,583.3	1,724.9	1,835.6	1,697.2	1,850.7
25 - 29 yrs	Case	559	757	811	866	974	1,004	1,109	1,164	1,287	1,435
	Rate	417.2	573.3	620.3	656.5	724.7	726.5	774.5	780.1	830.7	900.1
30 - 39 yrs	Case	494	591	626	666	641	664	766	768	795	929
	Rate	152.9	187.2	204.0	223.1	218.1	228.0	261.4	259.7	267.0	308.2
40 - 59 yrs	Case	181	188	202	274	229	320	301	305	310	442
	Rate	30.6	30.9	32.4	42.9	35.1	48.3	45.0	45.1	45.3	64.0
60+ yrs	Case	3	5	6	12	5	13	6	7	9	8
	Rate	0.8	1.3	1.5	2.9	1.2	3.0	1.3	1.5	1.8	1.6
Total*	Case	4,142	5,287	5,587	5,984	6,094	6,198	6,685	7,067	7,289	7,868
	Rate	201.7	255.9	268.7	285.4	287.8	289.4	307.5	319.7	324.7	345.1

Rate per 100,000 population
*Includes cases under age 10 yrs and unknown/missing age

3.7 Male genital chlamydia rates in BC by age group, 2001 to 2010



3.B Male genital chlamydia case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	2	1	1	1	0	6	2	8	4	9
	Rate	1.5	0.7	0.7	0.7	0.0	4.5	1.5	6.2	3.1	7.2
15 - 19 yrs	Cases	220	310	302	326	344	351	368	397	470	429
	Rate	151.4	215.0	211.2	227.1	237.3	238.6	247.4	266.3	317.8	297.0
20 - 24 yrs	Cases	631	799	908	951	1,070	1,095	1,149	1,330	1,262	1,265
	Rate	462.0	575.2	637.4	656.7	725.5	739.0	758.1	850.3	776.0	763.4
25 - 29 yrs	Cases	341	479	509	623	645	668	749	846	970	993
	Rate	252.0	361.0	388.4	473.3	482.9	489.6	528.9	571.0	624.0	611.8
30 - 39 yrs	Cases	331	463	491	489	550	578	657	682	715	755
	Rate	103.1	147.8	161.7	165.3	189.1	200.9	227.7	234.5	244.6	255.9
40 - 59 yrs	Cases	155	221	234	311	311	347	411	409	418	462
	Rate	26.4	36.8	38.1	49.7	48.7	53.6	62.9	61.9	62.6	68.5
60+ yrs	Cases	8	21	21	28	18	25	35	29	40	46
	Rate	2.5	6.3	6.1	7.9	4.9	6.6	8.8	7.0	9.3	10.3
Total*	Cases	1,713	2,313	2,484	2,748	2,945	3,071	3,374	3,703	3,881	3,964
	Rate	84.7	113.8	121.6	133.5	141.6	146.1	158.0	170.4	175.6	176.6

Rate per 100,000 population

*Includes cases under age 10 yrs and unknown/missing age

Extra-genital Chlamydia

A small number of extra-genital chlamydia infections are detected each year in BC, with 34 cases identified in 2010 (13 female, 21 male). The 184 extra-genital infections between 2001 and 2010 were identified in specimens from the following sites: eye (113 cases, 61.4%), throat (26 cases, 14.1%), lung (2 cases, 1.1%), and other sites (43 cases, 23.4%).

3.C Extra-genital chlamydia case reports in BC by sex and site/culture, 2001 to 2010

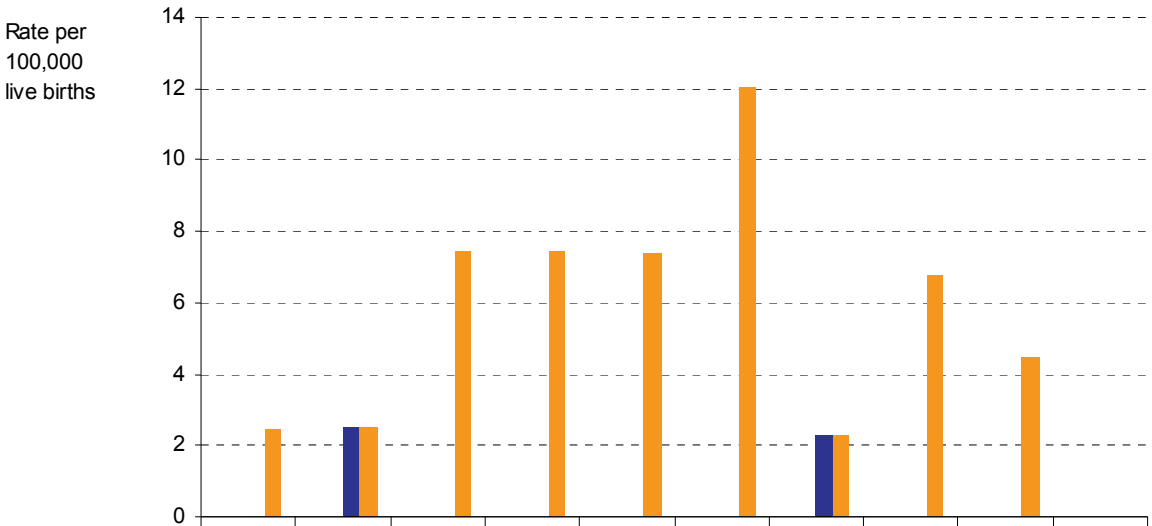
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Female	Throat	0	0	0	0	0	1	2	0	0	0
	Eye	8	6	6	5	9	6	3	3	6	3
	Lung	0	0	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	1	7	10	10
	Female total	8	6	6	5	9	7	6	10	16	13
Male	Throat	0	0	0	0	4	4	1	6	2	6
	Eye	2	8	3	12	5	8	5	5	5	5
	Lung	0	1	0	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	1	4	0	10
	Male total	2	9	3	12	9	12	8	15	7	21
Total	Throat	0	0	0	0	4	5	3	6	2	6
	Eye	10	14	9	17	14	14	8	8	11	8
	Lung	0	1	0	0	0	0	1	0	0	0
	Other	0	0	0	0	0	0	2	11	10	20
	Total	10	15	9	17	18	19	14	25	23	34

Perinatally-acquired Chlamydia

In 2010, there were no cases of perinatally-acquired chlamydia infection which is below the expected range (range 1 to 5 cases per year between 2001 and 2009). Historically, the majority of cases have chlamydia detected in conjunctival specimens (91.7%, 22/24, of cases between 2001 and 2010) with 8.3% (2/24) of cases being detected in specimens from the respiratory tract.

Very few jurisdictions have published rates of perinatally-acquired chlamydia infections, and historic trend data for BC is not available. However, it is likely that the current standards of screening and treatment of chlamydia infection in pregnant women in BC and of prophylaxis of newborns to prevent opthalmia neonatorum have resulted in the lower rate of perinatally-acquired chlamydia.

3.8 Perinatally-acquired chlamydia case reports and rates in BC by site/culture, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - Respiratory	0	1	0	0	0	0	1	0	0	0
Reports - Conjunctival	1	1	3	3	3	5	1	3	2	0
Rate - Respiratory	0.0	2.5	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0
Rate - Conjunctival	2.5	2.5	7.4	7.4	7.4	12.0	2.3	6.8	4.5	0.0

4. Gonorrhea

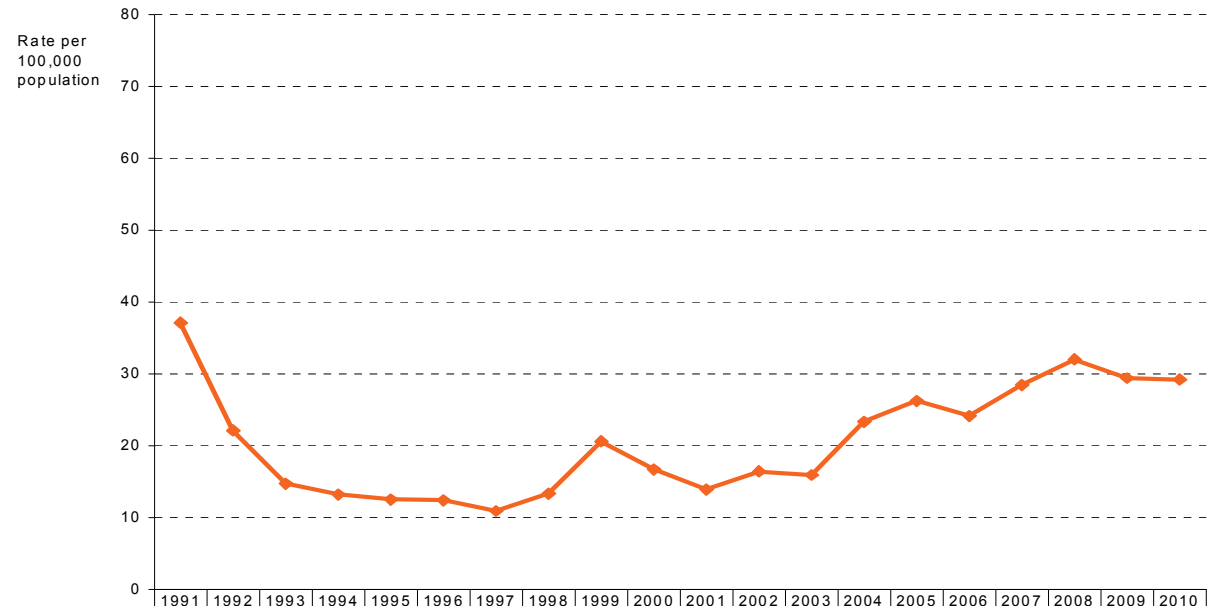
Genital Gonorrhea

The rate of genital gonorrhea in BC began to increase in 1998 in parallel with Canadian rates, and has recently stabilized. The rate of genital gonorrhea in BC decreased slightly in 2010 to 29.2 (1,321 cases) from 29.4 per 100,000 population (1,309 cases) in 2009. Trends in genital gonorrhea rates are variable by HSDA, with decreased genital gonorrhea rates in many HSDAs in 2010. The highest rates in 2010 were in Vancouver HSDA and Northern Interior HSDA.

Males continue to have a greater rate of infection compared to females. Between 2004 and 2010, the rate of infection among males has been relatively stable while the rate of infection among females has decreased since 2008. The highest rates of genital gonorrhea among females are in those aged 15-19 and 20-24 years, and among males in those aged 20-24 and 25-29 years. Compared to 2009, rates of genital gonorrhea have decreased in some age groups (particularly 15-19 and 20-24 year age groups among females, and 15-19 age group among males).

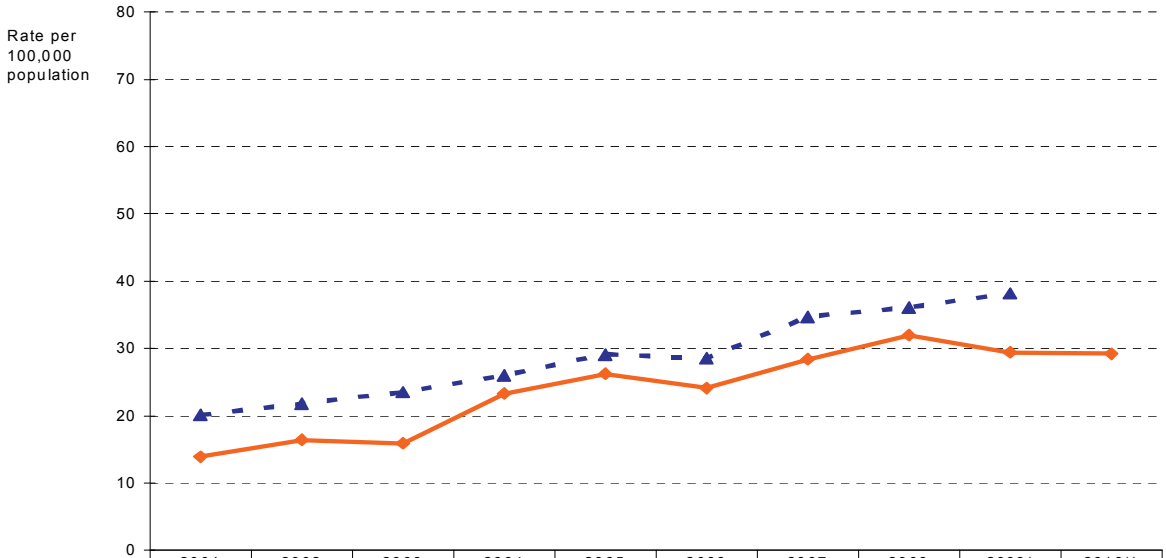
Gonorrhea infections may be asymptomatic or symptoms may be mild. Males are more likely to show signs of gonorrheal infection (e.g., urethral discharge) which may lead to seeking medical attention and may in part explain the greater number of gonorrheal infections among males in BC. Based on reports from other jurisdictions, transmission of gonorrhea among men who have sex with men (MSM) may also contribute to the number of cases observed in males.

4.1 Genital gonorrhea case reports and rates in BC by historical trend, 1991 to 2010



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BC Reports	1,250	766	526	484	474	480	429	529	826	673	568	673	654	969	1,100	1,022	1,224	1,405	1,309	1,321
BC Rate	37.1	22.1	14.7	13.2	12.5	12.4	10.9	13.3	20.6	16.7	13.9	16.4	15.9	23.3	26.2	24.1	28.4	32.0	29.4	29.2

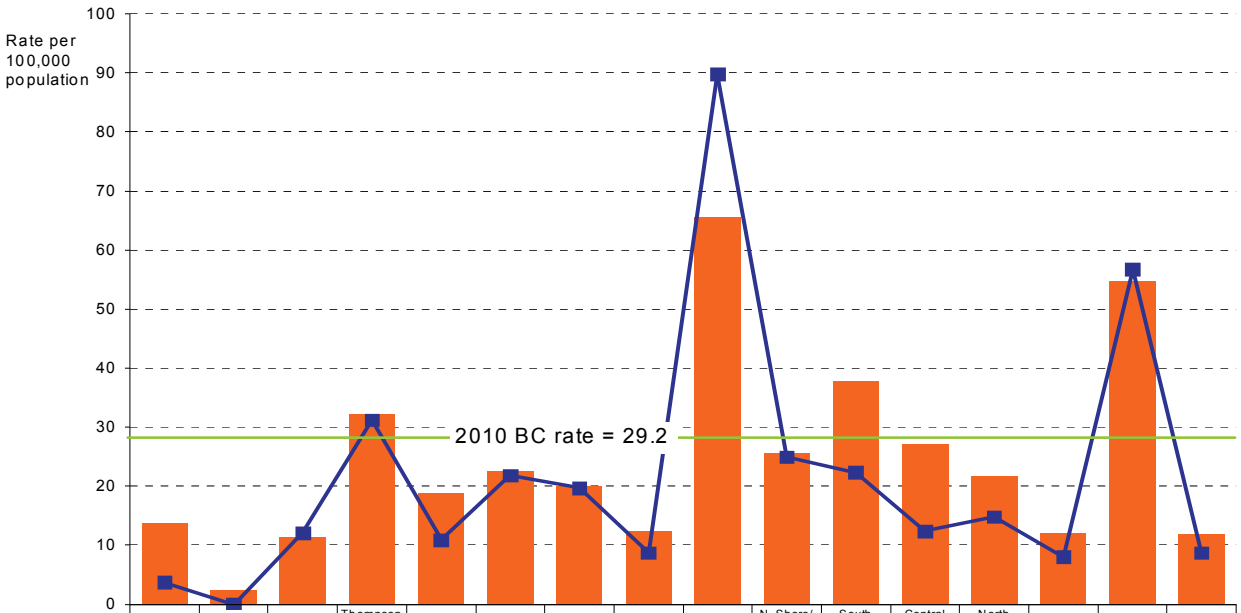
4.2 Genital gonorrhea rates in BC and Canada, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010**
BC Reports	568	673	654	969	1,100	1,022	1,224	1,405	1,309	1,321
BC Rate	13.9	16.4	15.9	23.3	26.2	24.1	28.4	32.0	29.4	29.2
Canadian Rate	20.1	21.8	23.5	26.0	29.1	28.5	34.7	36.1	38.2	

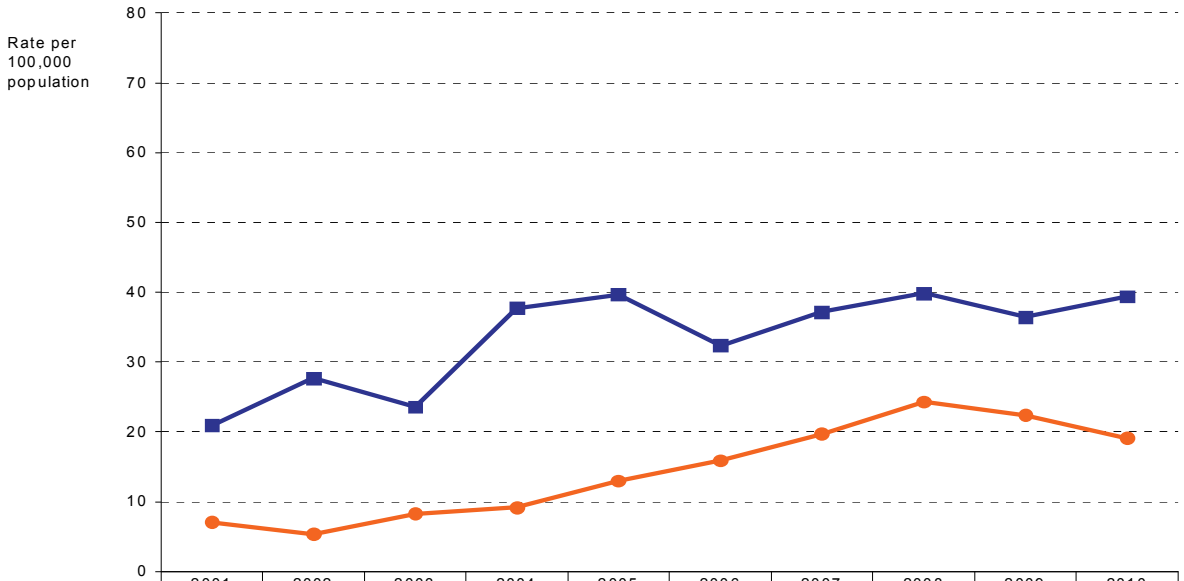
*2009 Canadian rate is projected and is subject to change (Public Health Agency of Canada, 2010)
Canadian rate does not distinguish between genital and extra-genital gonorrhea case reports
**2010 data is not available for Canadian rate

4.3 Genital gonorrhea case reports and rates in BC by health service delivery area, 2009 & 2010



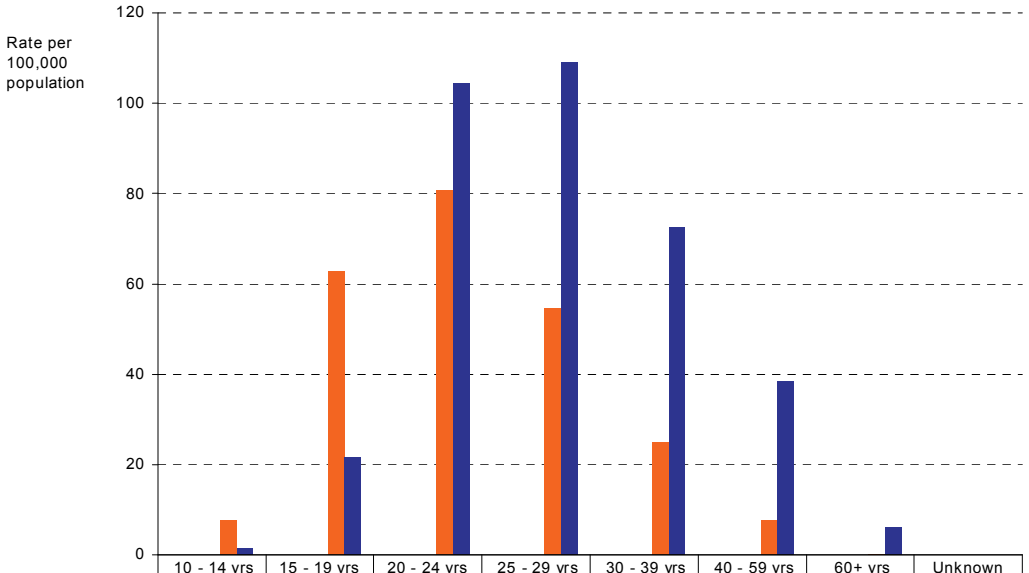
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Fraser East	Fraser North	Fraser South	Richmond	Vancouver	N. Shore/ Coast Garibaldi	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Northwest	Northern Interior	Northeast
Reports 2010	3	0	43	70	31	133	140	17	585	70	83	33	18	6	81	6
Rate 2009	13.8	2.5	11.4	32.3	18.9	22.5	20.1	12.4	65.6	25.5	37.8	27.2	21.6	12.0	54.7	11.8
Rate 2010	3.7	0.0	12.1	31.2	10.9	21.8	19.7	8.7	89.8	24.9	22.3	12.4	14.8	8.0	56.7	8.7

4.4 Genital gonorrhea case reports and rates in BC by sex, 2001 to 2010



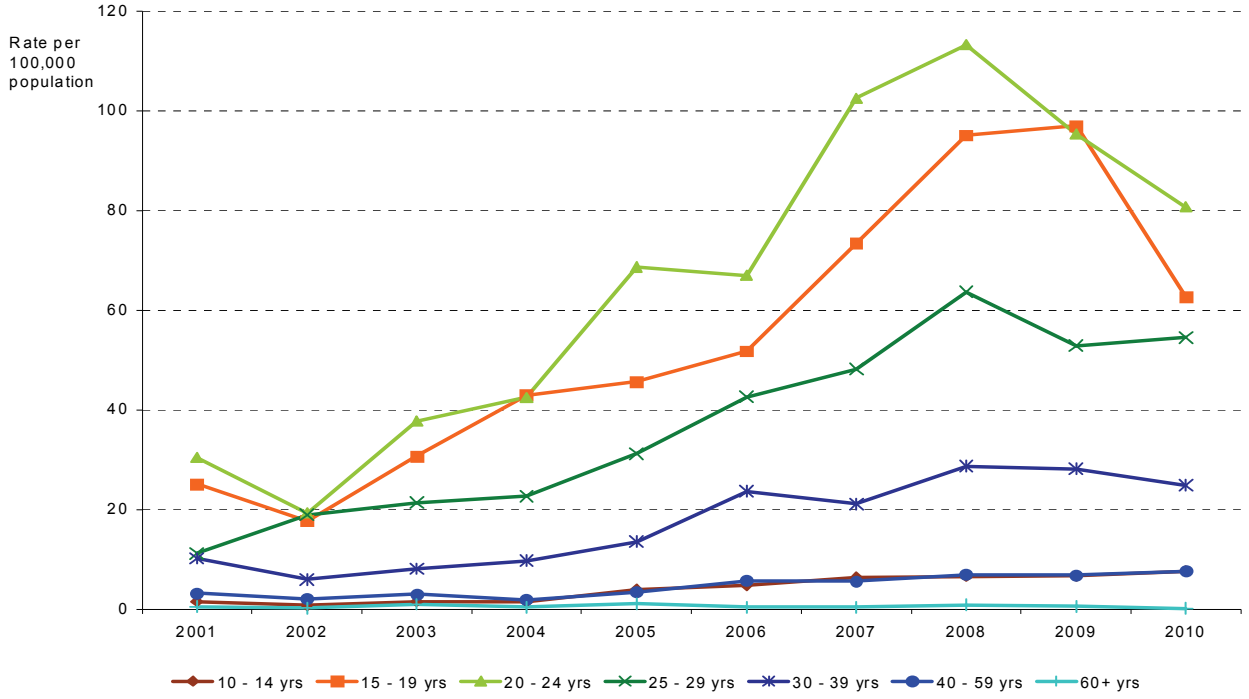
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - Female	145	111	172	192	275	340	429	537	503	435
Reports - Male	423	562	481	776	825	681	793	866	805	884
Rate - Female	7.1	5.4	8.3	9.2	13.0	15.9	19.7	24.3	22.4	19.1
Rate - Male	20.9	27.7	23.5	37.7	39.7	32.4	37.1	39.8	36.4	39.4

4.5 Genital gonorrhea case reports and rates in BC by age group and sex, 2010



	10 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 59 yrs	60+ yrs	Unknown
Reports - Female	9	85	124	87	75	53	1	1
Reports - Male	2	31	173	177	214	259	28	0
Reports - Transgender/Unknown	0	0	1	1	0	0	0	0
Rate - Female	7.6	62.7	80.7	54.6	24.9	7.7	0.2	
Rate - Male	1.6	21.5	104.4	109.1	72.5	38.4	6.3	

4.6 Female genital gonorrhea rates in BC by age group, 2001 to 2010



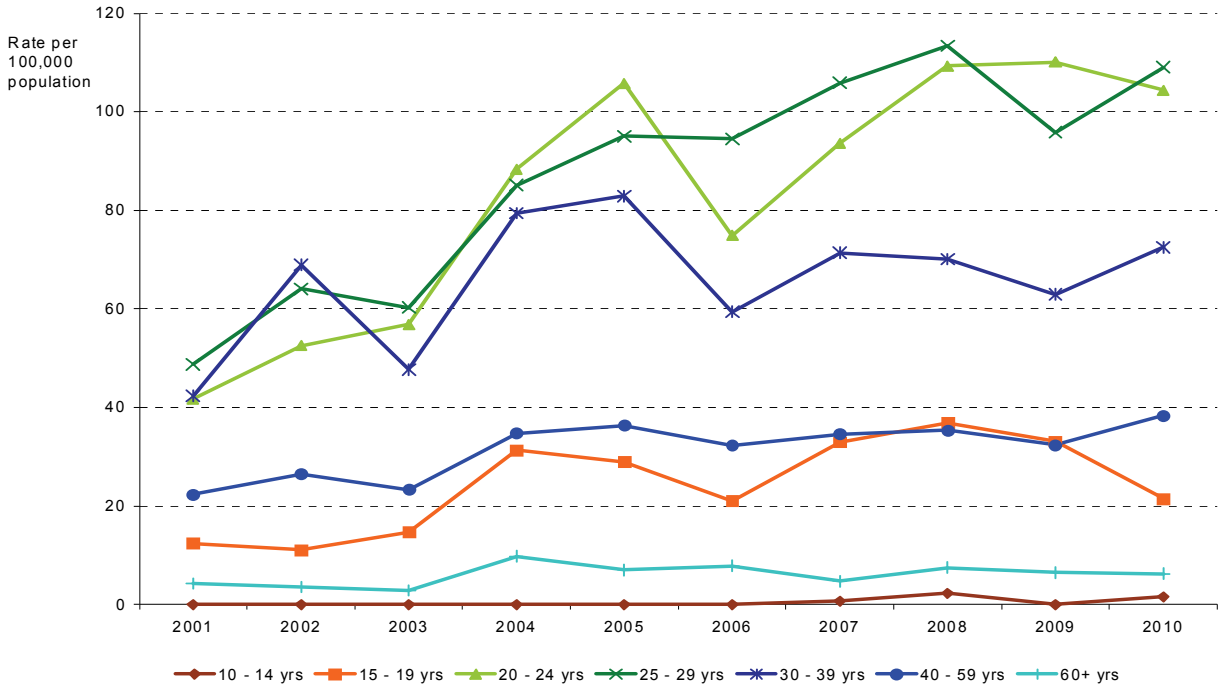
4.A Female genital gonorrhea case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Case	2	1	2	2	5	6	8	8	8	9
	Rate	1.6	0.8	1.6	1.6	4.0	4.8	6.5	6.6	6.7	7.6
15 - 19 yrs	Case	34	24	41	57	61	70	101	132	134	85
	Rate	25.2	17.8	30.7	43.0	45.7	51.8	73.4	95.1	97.0	62.7
20 - 24 yrs	Case	40	26	52	60	98	96	148	166	143	124
	Rate	30.4	19.3	37.8	42.5	68.7	67.0	102.6	113.2	95.3	80.7
25 - 29 yrs	Case	15	25	28	30	42	59	69	95	82	87
	Rate	11.2	18.9	21.4	22.7	31.2	42.7	48.2	63.7	52.9	54.6
30 - 39 yrs	Case	33	19	25	29	40	69	62	85	84	75
	Rate	10.2	6.0	8.1	9.7	13.6	23.7	21.2	28.7	28.2	24.9
40 - 59 yrs	Case	19	13	19	12	23	38	38	47	47	53
	Rate	3.2	2.1	3.0	1.9	3.5	5.7	5.7	6.9	6.9	7.7
60+ yrs	Case	2	1	4	2	5	2	2	4	3	1
	Rate	0.5	0.3	1.0	0.5	1.2	0.5	0.4	0.8	0.6	0.2
Total*	Case	145	111	172	192	275	340	429	537	503	435
	Rate	7.1	5.4	8.3	9.2	13.0	15.9	19.7	24.3	22.4	19.1

Rate per 100,000 population

*Includes cases under age 10 yrs and unknown/missing age

4.7 Male genital gonorrhea rates in BC by age group, 2001 to 2010



4.B Male genital gonorrhea case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	0	0	0	0	0	0	1	3	0	2
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.3	0.0	1.6
15 - 19 yrs	Cases	18	16	21	45	42	31	49	55	49	31
	Rate	12.4	11.1	14.7	31.4	29.0	21.1	32.9	36.9	33.1	21.5
20 - 24 yrs	Cases	57	73	81	128	156	111	142	171	179	173
	Rate	41.7	52.6	56.9	88.4	105.8	74.9	93.7	109.3	110.1	104.4
25 - 29 yrs	Cases	66	85	79	112	127	129	150	168	149	177
	Rate	48.8	64.1	60.3	85.1	95.1	94.5	105.9	113.4	95.8	109.1
30 - 39 yrs	Cases	136	216	145	235	241	171	206	204	184	214
	Rate	42.4	68.9	47.7	79.4	82.9	59.4	71.4	70.1	62.9	72.5
40 - 59 yrs	Cases	131	159	143	218	232	209	226	234	216	259
	Rate	22.3	26.5	23.3	34.8	36.3	32.3	34.6	35.4	32.4	38.4
60+ yrs	Cases	14	12	10	35	26	30	19	31	28	28
	Rate	4.3	3.6	2.9	9.8	7.1	7.9	4.8	7.5	6.5	6.3
Total*	Cases	423	562	481	776	825	681	793	866	805	884
	Rate	20.9	27.7	23.5	37.7	39.7	32.4	37.1	39.8	36.4	39.4

Rate per 100,000 population

*Includes cases under age 10 yrs and unknown/missing age

Extra-genital Gonorrhea

A small number of extra-genital gonorrhea infections are detected each year in BC, with 77 cases identified in 2010 (11 female, 66 male). The 607 extra-genital infections between 2001 and 2010 were identified from the throat (531 cases, 87.5%), eye (16 cases, 2.6%), or other sites (52, 8.6%), or represented disseminated gonococcal infection (8 cases, 1.3%).

4.C Extra-genital gonorrhea case reports in BC by sex and site/culture, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Female	Throat	5	6	6	1	14	16	15	3	7	8
	Eye	0	0	0	1	0	0	1	1	0	1
	Other	0	1	2	3	3	3	5	1	0	2
	DGI*	0	1	0	1	2	0	0	1	0	0
	Female Total	5	8	8	6	19	19	21	6	7	11
Male	Throat	28	41	27	54	74	41	46	41	43	55
	Eye	0	2	1	0	1	0	1	1	4	2
	Other	0	0	1	1	10	4	0	2	5	9
	DGI*	0	0	1	0	0	0	0	1	1	0
	Male Total	28	43	30	55	85	45	47	45	53	66
Total	Throat	33	47	33	55	88	57	61	44	50	63
	Eye	0	2	1	1	1	0	2	2	4	3
	Other	0	1	3	4	13	7	5	3	5	11
	DGI*	0	1	1	1	2	0	0	2	1	0
	Total	33	51	38	61	104	64	68	51	60	77

*DGI: Disseminated gonococcal infection

Perinatally-acquired Gonorrhea

In 2010, there were no cases of perinatally-acquired gonorrhea, with only one case identified between 2000 to 2009.

5. Pelvic Inflammatory Disease and Ectopic Pregnancy

Pelvic inflammatory disease (PID) and ectopic pregnancy (EP) are conditions in women that can be caused by sexually transmitted infections, particularly chlamydia and gonorrhea . As such, looking at the rates of these conditions provides an indication of the trends in complications of these STIs. Data is presented through 2009 only due to expected delays in reporting, collation and transfer of data. This report includes data on physician billings and hospital discharges provided by the BC Ministry of Health . Please see the Technical Appendix for further information on data sources and analytic methods.

Pelvic Inflammatory Disease

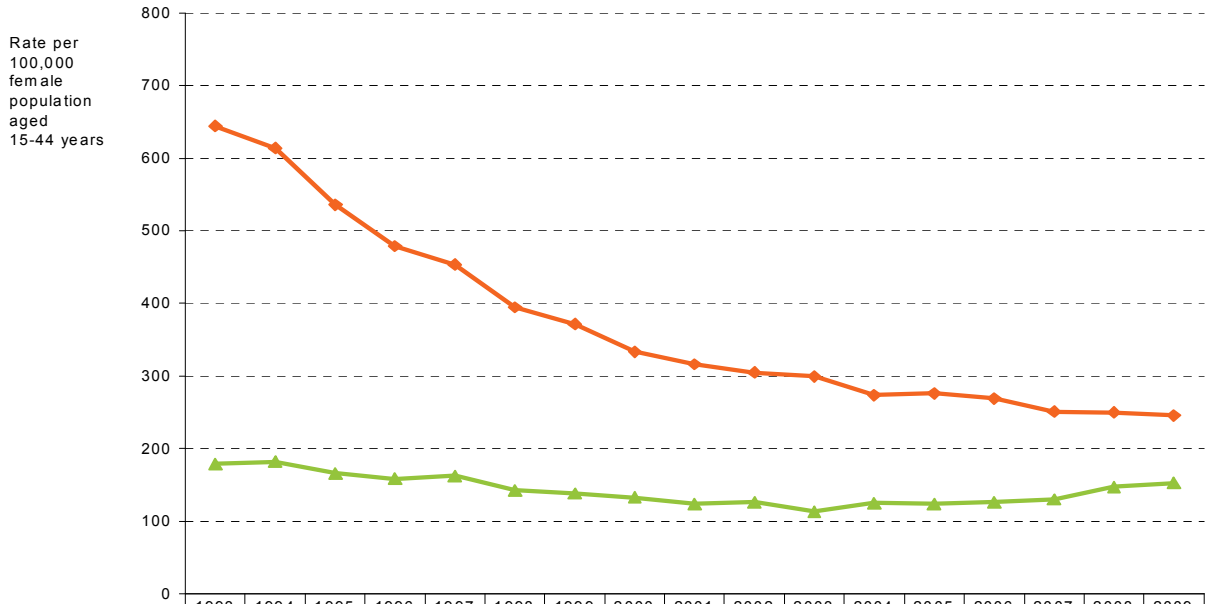
Rates of hospital discharges and physician billings related to PID have declined appreciably over time, with 2009 rates slightly lower than 2008 rates (245.7 versus 249.6 physician billings per 100,000 women aged 15-44 years, and 30.1 versus 33.6 hospital discharges per 100,000 women aged 15-44 years).

Ectopic Pregnancy

A more moderate decrease in rates of hospital discharges and physician billings related to EP has been observed over time, however, rates of physician billings related to EP have been slightly increasing since 2006. In 2009, the rate of hospital discharges for EP decreased slightly to 55.3 hospital discharges per 100,000 women aged 15-44 years. The rate of EP-related physician billings increased to 152.7 billings per 100,000 women aged 15-44 years in 2009.

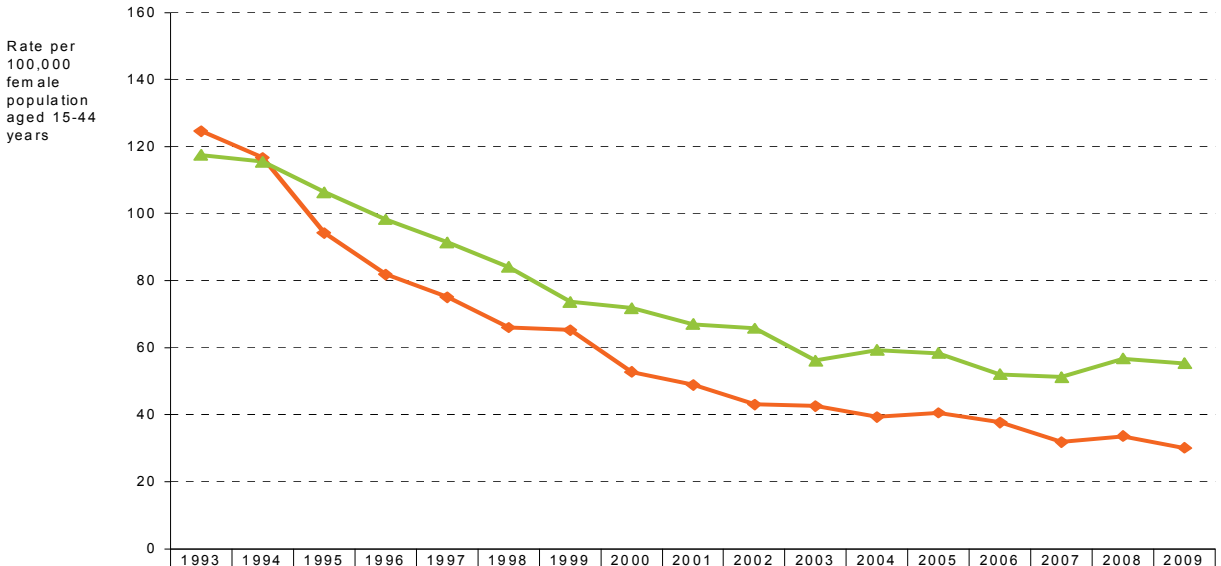
Taken together, these data indicate that despite overall increasing rates of chlamydia and gonorrhea infections among females in BC, a proportionate increase in potential complications of these infections has not been observed. As these complications are prevented by appropriate antibiotic treatment, this finding likely reflects the success of chlamydia public health control programs (implemented after chlamydia became a reportable infection in 1994) in identifying new cases of chlamydia and gonorrhea and ensuring appropriate treatment.

5.1 Case reports and rates of women aged 15-44 years with a physician billing related to PID or EP in BC, 1993 to 2009



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Reports - PID	5,326	5,196	4,636	4,261	4,089	3,559	3,351	3,002	2,846	2,724	2,652	2,417	2,435	2,377	2,230	2,242	2,225
Reports - EP	1,478	1,541	1,436	1,410	1,469	1,289	1,248	1,196	1,116	1,127	1,006	1,103	1,093	1,114	1,156	1,323	1,383
Rate - PID	644.3	613.7	535.9	478.9	453.2	394.4	371.6	333.7	316.2	304.7	299.2	273.7	276.0	269.3	250.7	249.6	245.7
Rate - EP	178.8	182.0	166.0	158.5	162.8	142.9	138.4	132.9	124.0	126.1	113.5	124.9	123.9	126.2	129.9	147.3	152.7

5.2 Case reports and rates of women aged 15-44 years with a hospital discharge related to PID or EP in BC, 1993 to 2009



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Reports - PID	1,030	987	815	728	677	596	588	475	440	385	378	347	358	333	284	302	273
Reports - EP	971	978	920	874	825	759	664	646	603	588	498	524	515	460	456	510	501
Rate - PID	124.6	116.6	94.2	81.8	75.0	66.1	65.2	52.8	48.9	43.1	42.6	39.3	40.6	37.7	31.9	33.6	30.1
Rate - EP	117.5	115.5	106.3	98.2	91.4	84.1	73.6	71.8	67.0	65.8	56.2	59.3	58.4	52.1	51.3	56.8	55.3

6. Infectious Syphilis

The rate of infectious syphilis (i.e., primary, secondary and early latent syphilis) in BC decreased substantially in 2010, to 3.4 (155 cases) from 4.8 per 100,000 population (216 cases) in 2009. Decreased infectious syphilis rates were observed in all HSDAs except Richmond HSDA and North Shore/Coast Garibaldi HSDA in 2010. The highest rate was observed in Vancouver HSDA.

The majority of cases continue to be male, however, the rate of infectious syphilis in males decreased in 2010 and contributed substantially to the overall provincial decrease. The rate of infectious syphilis in females continued decreasing in 2010, a trend which started in 2007. The highest rates of infection are observed in males aged between 20 -24 and 40-59 years, and the greatest decrease in age-specific rates in 2010 is for males between 25-29 and 30-39 years.

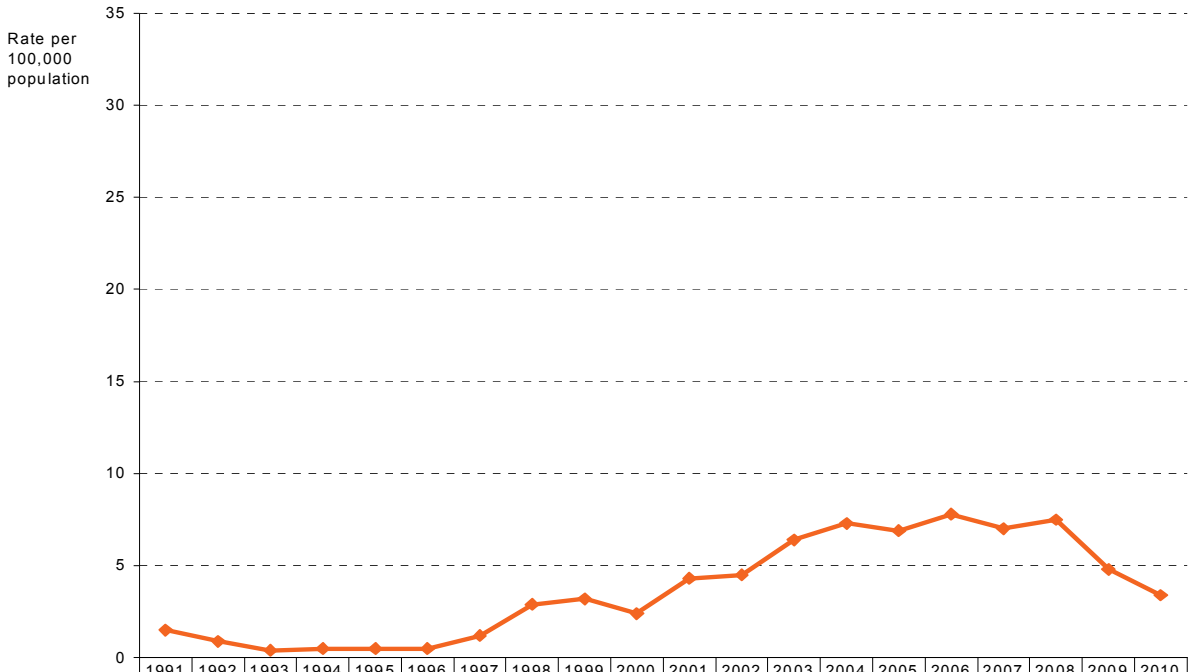
These findings are attributable to a decrease in infectious syphilis cases among gay, bisexual and other men who have sex with men (MSM), from 143 cases (66.2%) in 2009 to 115 cases (74.2%) in 2010. Known HIV positive MSM are disproportionately affected, accounting for 48.7% (56 cases) of all MSM infectious syphilis cases in 2010 (36.1% of all BC infectious syphilis cases).

The decrease in infectious syphilis cases among street-involved persons, sex trade workers and their patrons, 19 cases (8.8%) in 2009 to 10 cases (6.5%) in 2010, is also contributing to the overall decrease in infectious syphilis cases since 2007. Infectious syphilis cases among heterosexual persons without other risk factors have decreased from 48 cases (22.2%) in 2009 to 24 cases (15.5%) in 2010.

While provincially there have been no recent campaigns related to syphilis, an enhanced and sustained response to the syphilis outbreak in BC has been in place throughout the province with activities including education for health care providers, promotion of testing, and centralized follow-up of infectious syphilis cases. This sustained response has likely contributed to these declining trends. In particular, initiatives over the past few years to promote syphilis testing among MSM (i.e., including syphilis testing with routine blood-work during HIV antiretroviral therapy and the promotion of syphilis testing by service providers and community agencies) may be having an impact.

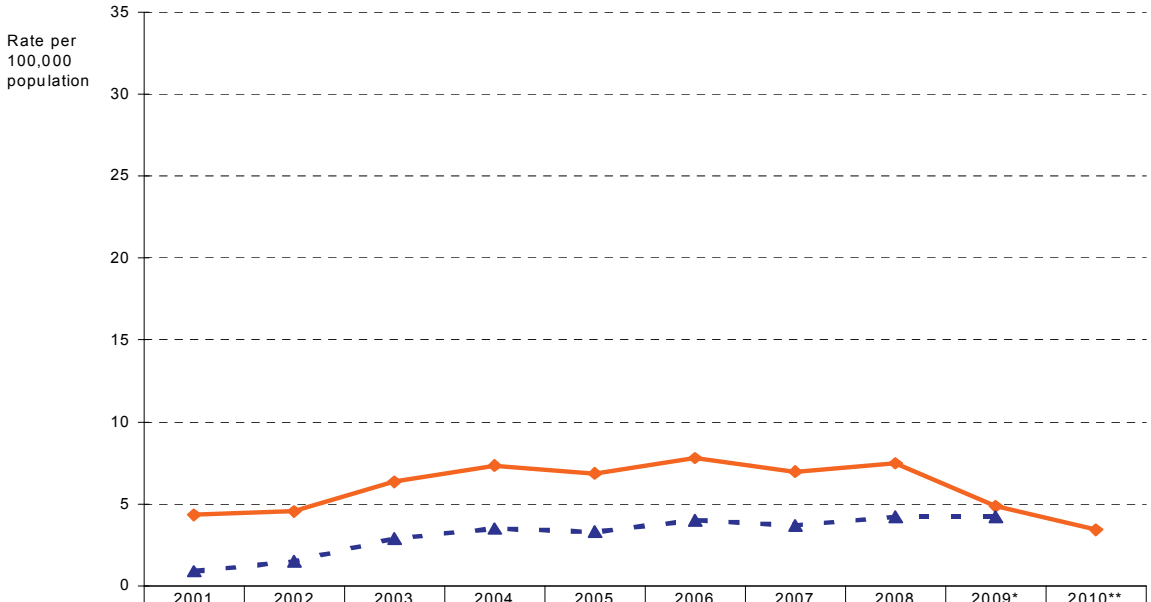
Similar to previous years, in 2010, most of the infectious syphilis cases continue to be among persons of Caucasian ethnicity (104 cases; 67.1%), followed by cases among persons of Asian (17 cases; 11%) ethnicity.

6.1 Infectious syphilis case reports and rates in BC by historical trend, 1991 to 2010



	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BC Reports	50	31	16	18	17	19	48	116	128	95	176	186	262	305	288	331	300	328	216	155
BC Rate	1.5	0.9	0.4	0.5	0.5	0.5	1.2	2.9	3.2	2.4	4.3	4.5	6.4	7.3	6.9	7.8	7.0	7.5	4.8	3.4

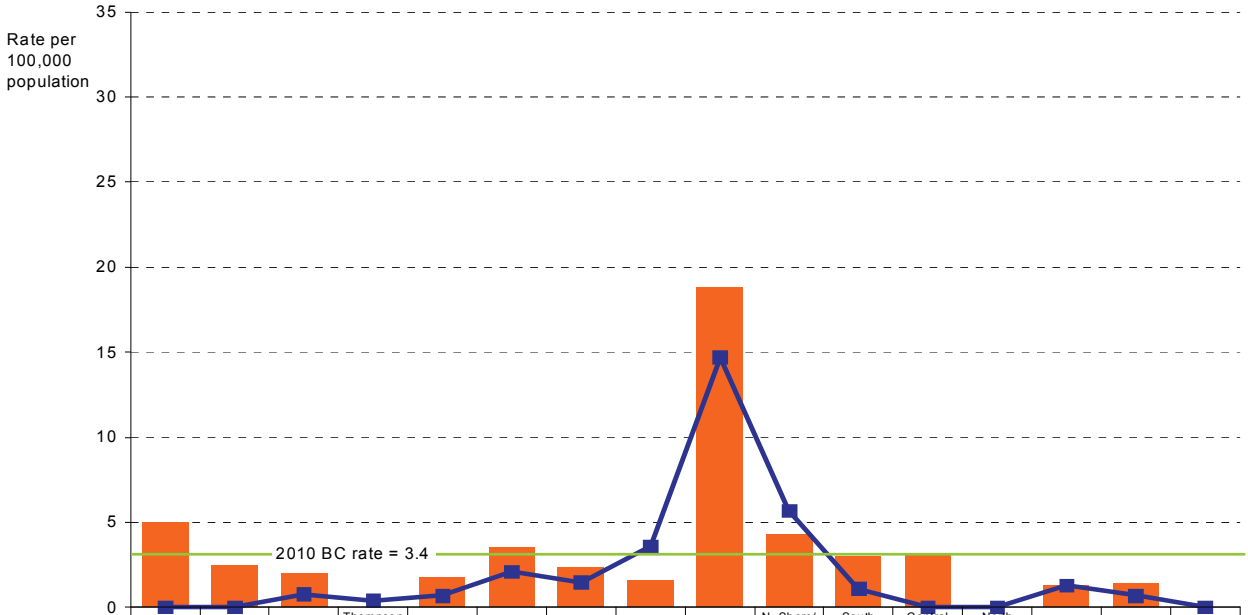
6.2 Infectious syphilis rates in BC and Canada, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009*	2010**
BC Reports	176	186	262	305	288	331	300	328	216	155
BC Rate	4.3	4.5	6.4	7.3	6.9	7.8	7.0	7.5	4.8	3.4
Canadian Rate	0.9	1.5	2.9	3.5	3.3	4.0	3.7	4.2	4.2	

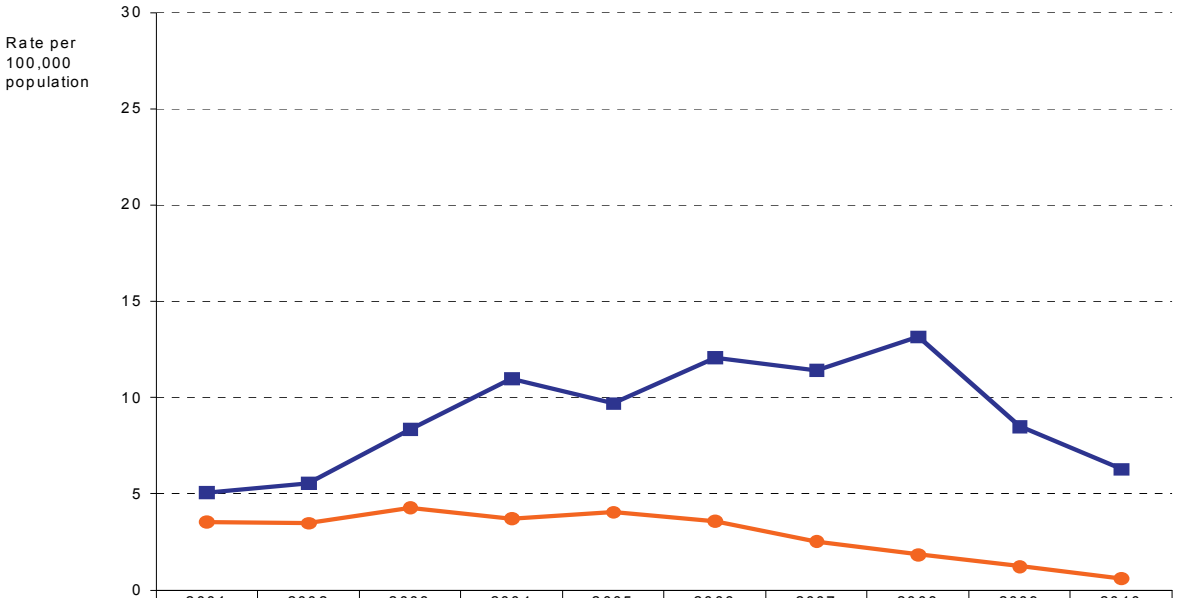
*2009 Canadian rate is projected and is subject to change (Public Health Agency of Canada, 2010)
**2010 data is not available for Canadian rate

6.3 Infectious syphilis case reports and rates in BC by health service delivery area, 2009 & 2010



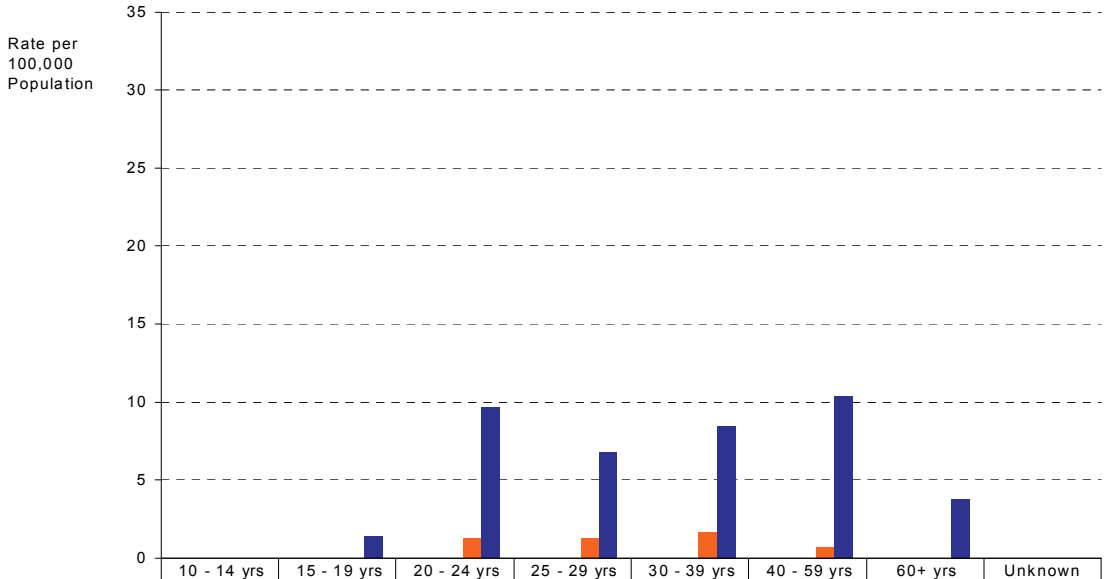
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Fraser East	Fraser North	Fraser South	Richmond	Vancouver	N. Shore/ Coast Garibaldi	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Northwest	Northern Interior	Northeast
Reports 2010	0	0	3	1	2	13	11	7	96	16	4	0	0	1	1	0
Rate 2009	5.0	2.5	2.0	0.0	1.8	3.5	2.4	1.6	18.8	4.3	3.0	3.1	0.0	1.3	1.4	0.0
Rate 2010	0.0	0.0	0.8	0.4	0.7	2.1	1.5	3.6	14.7	5.7	1.1	0.0	0.0	1.3	0.7	0.0

6.4 Infectious syphilis case reports and rates in BC by sex, 2001 to 2010



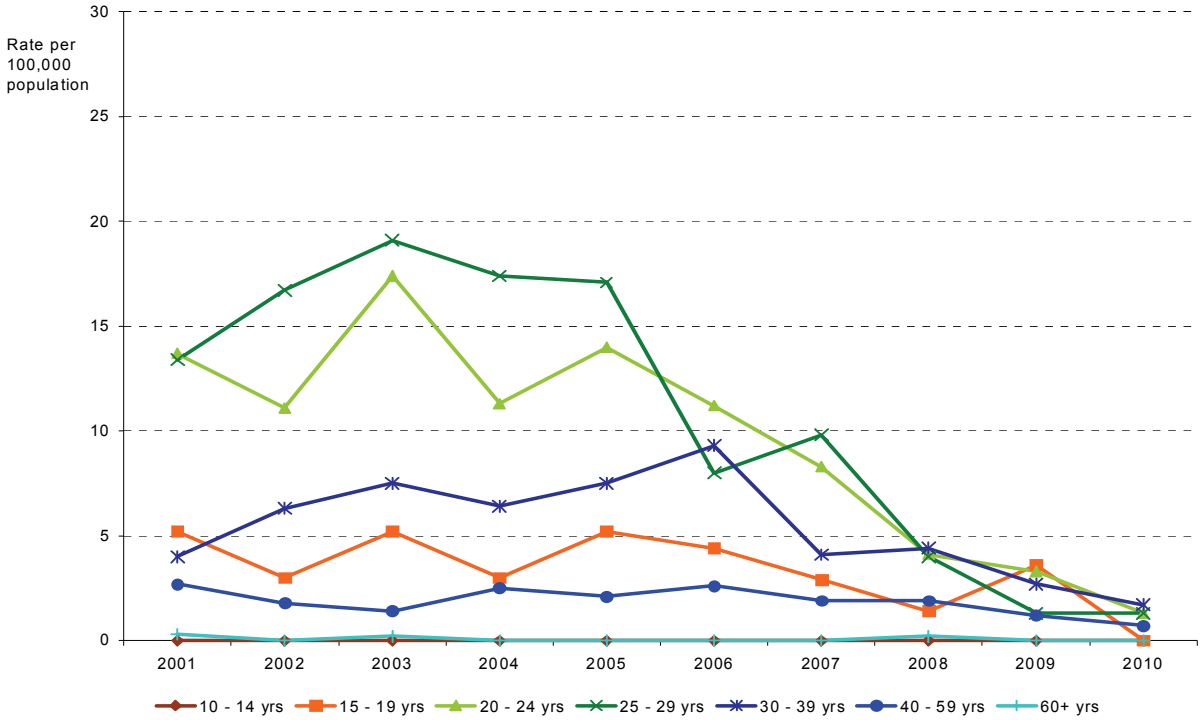
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - Female	73	72	89	78	86	77	55	41	28	14
Reports - Male	103	113	171	226	202	254	244	286	188	141
Rate - Female	3.6	3.5	4.3	3.7	4.1	3.6	2.5	1.9	1.2	0.6
Rate - Male	5.1	5.6	8.4	11.0	9.7	12.1	11.4	13.2	8.5	6.3

6.5 Infectious syphilis case reports and rates in BC by age group and sex, 2010



	10 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 59 yrs	60+ yrs	Unknown
Reports - Female	0	0	2	2	5	5	0	0
Reports - Male	0	2	16	11	25	70	17	0
Reports - Transgender/Unknown	0	0	0	0	0	0	0	0
Rate - Female	0.0	0.0	1.3	1.3	1.7	0.7	0.0	
Rate - Male	0.0	1.4	9.7	6.8	8.5	10.4	3.8	

6.6 Female infectious syphilis rates in BC by age group, 2001 to 2010

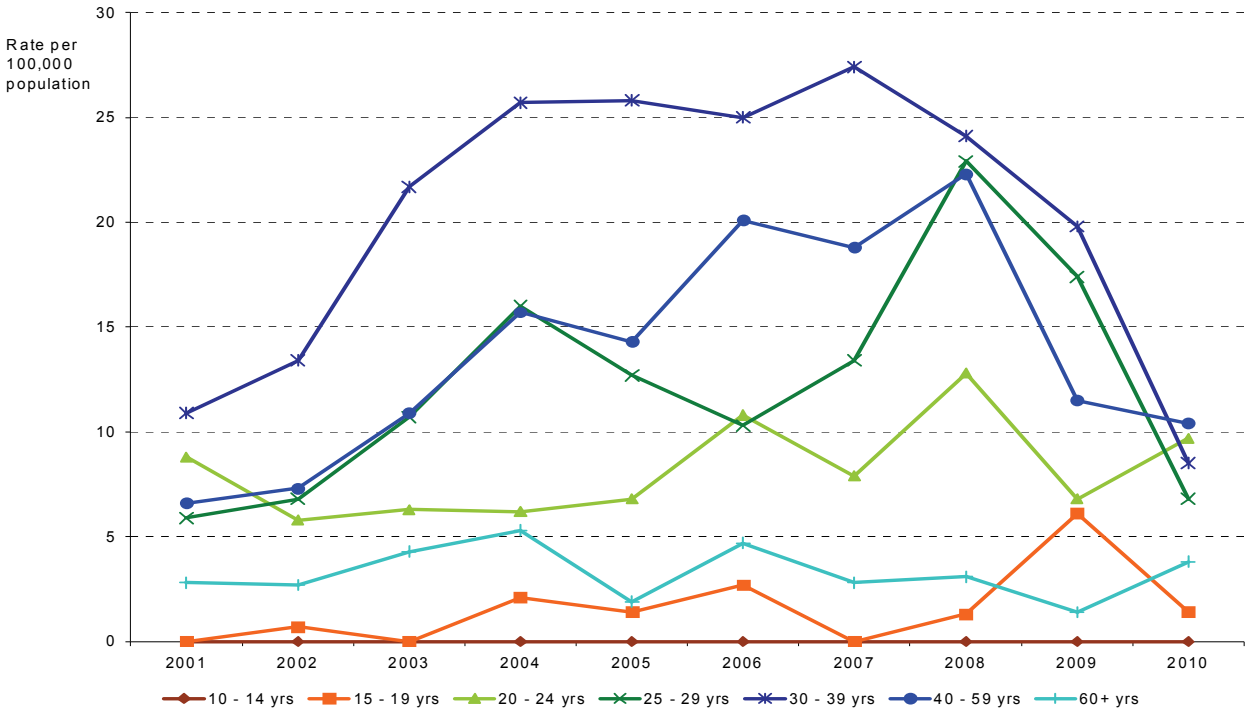


6.A Female infectious syphilis case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	0	0	0	0	0	0	0	0	0	0
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 19 yrs	Cases	7	4	7	4	7	6	4	2	5	0
	Rate	5.2	3.0	5.2	3.0	5.2	4.4	2.9	1.4	3.6	0.0
20 - 24 yrs	Cases	18	15	24	16	20	16	12	6	5	2
	Rate	13.7	11.1	17.4	11.3	14.0	11.2	8.3	4.1	3.3	1.3
25 - 29 yrs	Cases	18	22	25	23	23	11	14	6	2	2
	Rate	13.4	16.7	19.1	17.4	17.1	8.0	9.8	4.0	1.3	1.3
30 - 39 yrs	Cases	13	20	23	19	22	27	12	13	8	5
	Rate	4.0	6.3	7.5	6.4	7.5	9.3	4.1	4.4	2.7	1.7
40 - 59 yrs	Cases	16	11	9	16	14	17	13	13	8	5
	Rate	2.7	1.8	1.4	2.5	2.1	2.6	1.9	1.9	1.2	0.7
60+ yrs	Cases	1	0	1	0	0	0	0	1	0	0
	Rate	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Total*	Cases	73	72	89	78	86	77	55	41	28	14
	Rate	3.6	3.5	4.3	3.7	4.1	3.6	2.5	1.9	1.2	0.6

Rate per 100,000 population
*Includes cases under age 10 yrs and unknown/missing age

6.7 Male infectious syphilis rates in BC by age group, 2001 to 2010

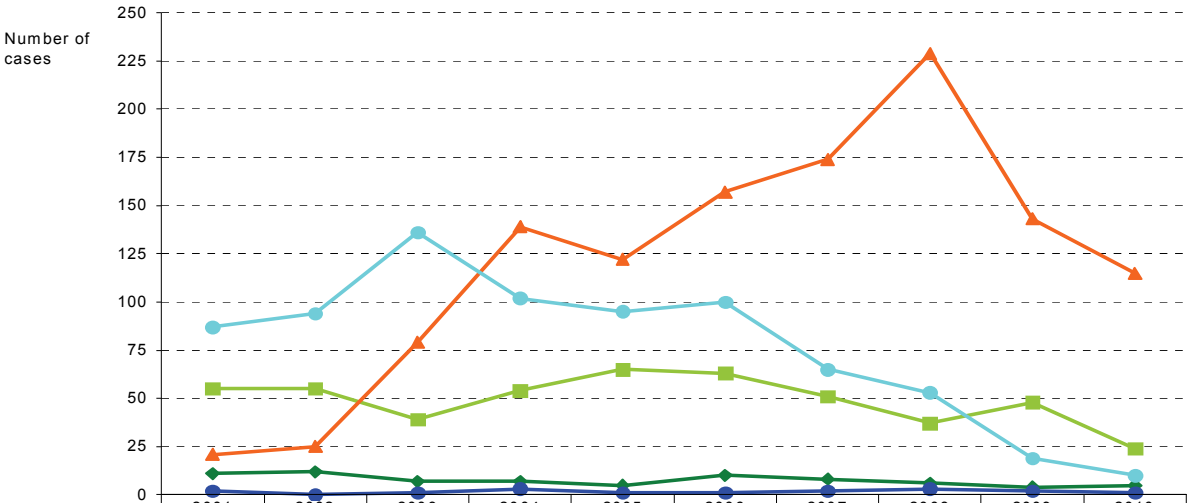


6.B Male infectious syphilis case reports and rates in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	0	0	0	0	0	0	0	0	0	0
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
15 - 19 yrs	Cases	0	1	0	3	2	4	0	2	9	2
	Rate	0.0	0.7	0.0	2.1	1.4	2.7	0.0	1.3	6.1	1.4
20 - 24 yrs	Cases	12	8	9	9	10	16	12	20	11	16
	Rate	8.8	5.8	6.3	6.2	6.8	10.8	7.9	12.8	6.8	9.7
25 - 29 yrs	Cases	8	9	14	21	17	14	19	34	27	11
	Rate	5.9	6.8	10.7	16.0	12.7	10.3	13.4	22.9	17.4	6.8
30 - 39 yrs	Cases	35	42	66	76	75	72	79	70	58	25
	Rate	10.9	13.4	21.7	25.7	25.8	25.0	27.4	24.1	19.8	8.5
40 - 59 yrs	Cases	39	44	67	98	91	130	123	147	77	70
	Rate	6.6	7.3	10.9	15.7	14.3	20.1	18.8	22.3	11.5	10.4
60+ yrs	Cases	9	9	15	19	7	18	11	13	6	17
	Rate	2.8	2.7	4.3	5.3	1.9	4.7	2.8	3.1	1.4	3.8
Total*	Cases	103	113	171	226	202	254	244	286	188	141
	Rate	5.1	5.6	8.4	11.0	9.7	12.1	11.4	13.2	8.5	6.3

Rate per 100,000 population
*Includes cases under age 10 yrs and unknown/missing age

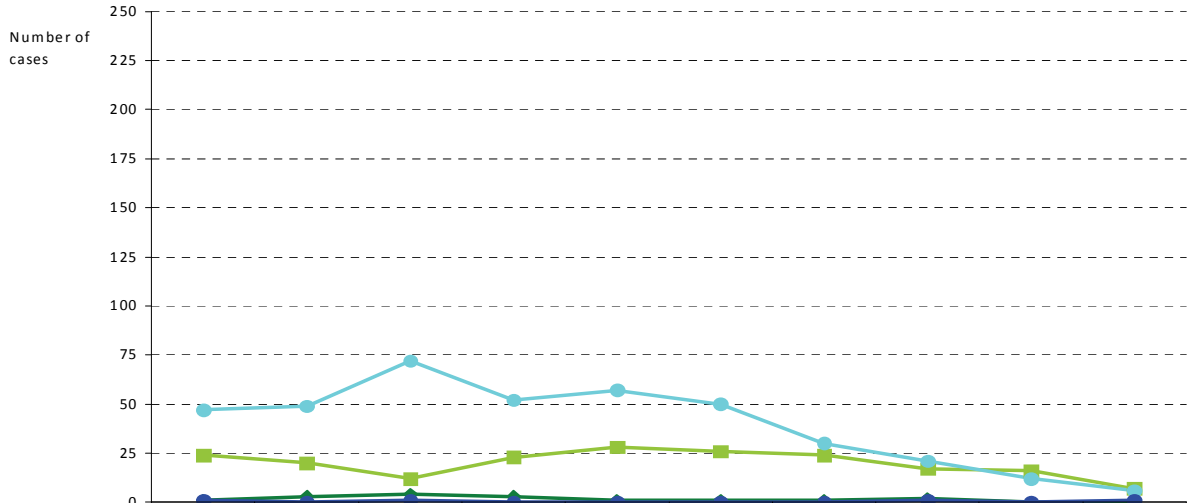
6.8 Infectious syphilis case reports in BC by exposure category, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HET	55	55	39	54	65	63	51	37	48	24
MSM	21	25	79	139	122	157	174	229	143	115
Outside	11	12	7	7	5	10	8	6	4	5
Street/STW	87	94	136	102	95	100	65	53	19	10
Other/UNK	2	0	1	3	1	1	2	3	2	1

HET = Heterosexual Contact
MSM = Men having Sex with Men
Outside = Acquired Outside of Canada
Street/STW = Street Involved / Sex Trade Worker or Patron
Other/UNK = Other / Unknown Risk

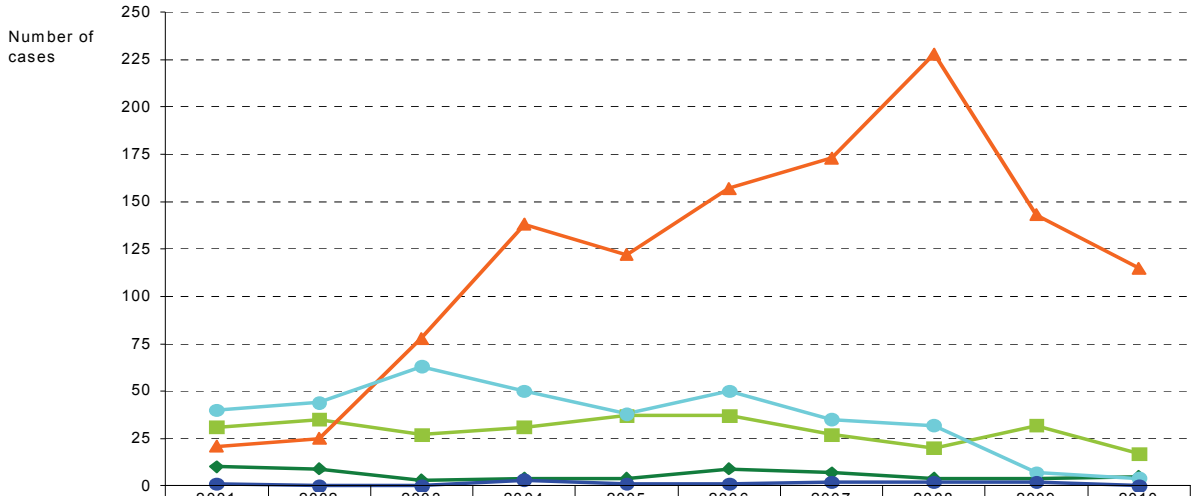
6.9 Female Infectious syphilis case reports in BC by exposure category, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HET	24	20	12	23	28	26	24	17	16	7
Outside	1	3	4	3	1	1	1	2	0	0
Street/STW	47	49	72	52	57	50	30	21	12	6
Other/UNK	1	0	1	0	0	0	0	1	0	1

HET = Heterosexual Contact
Outside = Acquired Outside of Canada
Other/UNK = Other / Unknown Risk
Street/STW = Street Involved / Sex Trade Worker or Patron

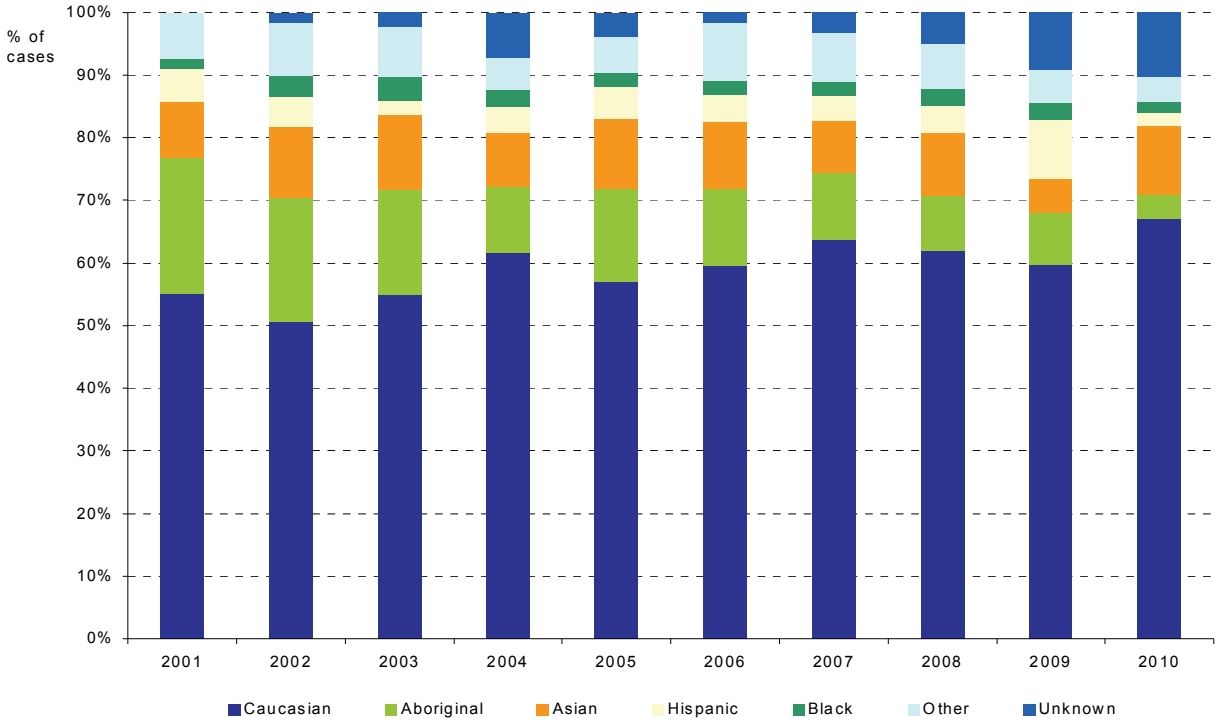
6.10 Male infectious syphilis case reports in BC by exposure category, 2001 to 2010



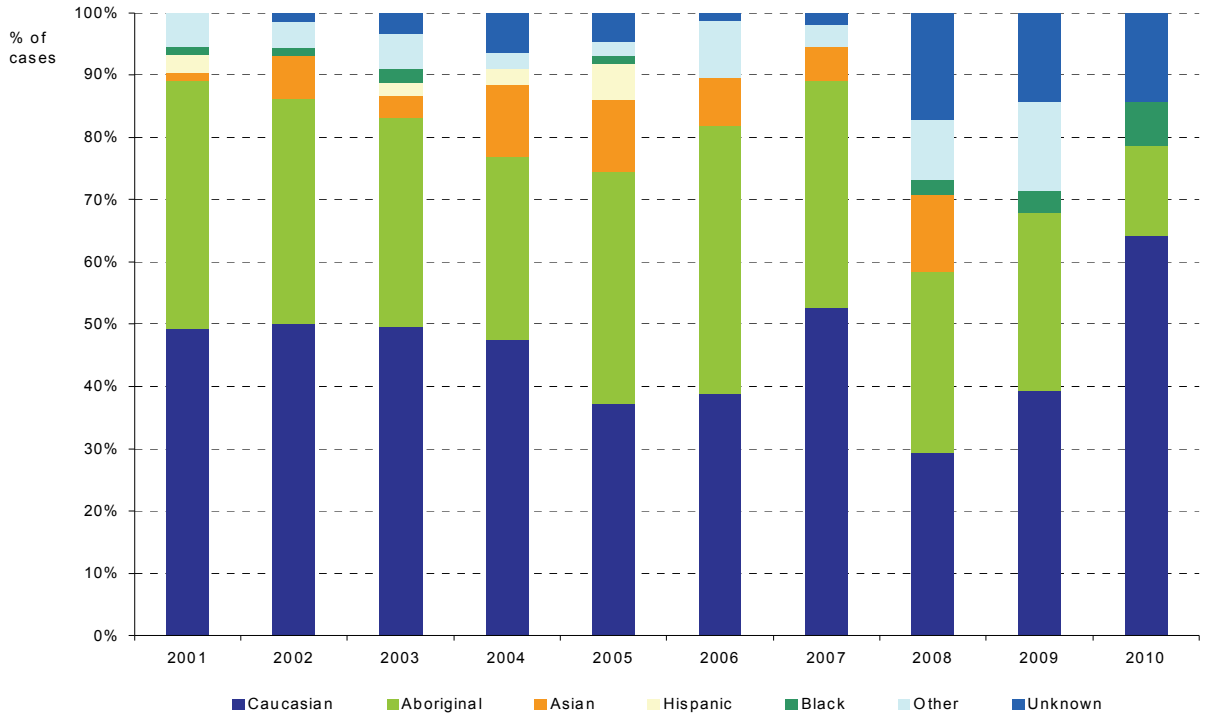
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
HET	31	35	27	31	37	37	27	20	32	17
MSM	21	25	78	138	122	157	173	228	143	115
Outside	10	9	3	4	4	9	7	4	4	5
Street/STW	40	44	63	50	38	50	35	32	7	4
Other/UNK	1	0	0	3	1	1	2	2	2	0

HET = Heterosexual Contact
MSM = Men having Sex with Men
Outside = Acquired Outside of Canada
Street/STW = Street Involved / Sex Trade Worker or Patron
Other/UNK = Other / Unknown Risk

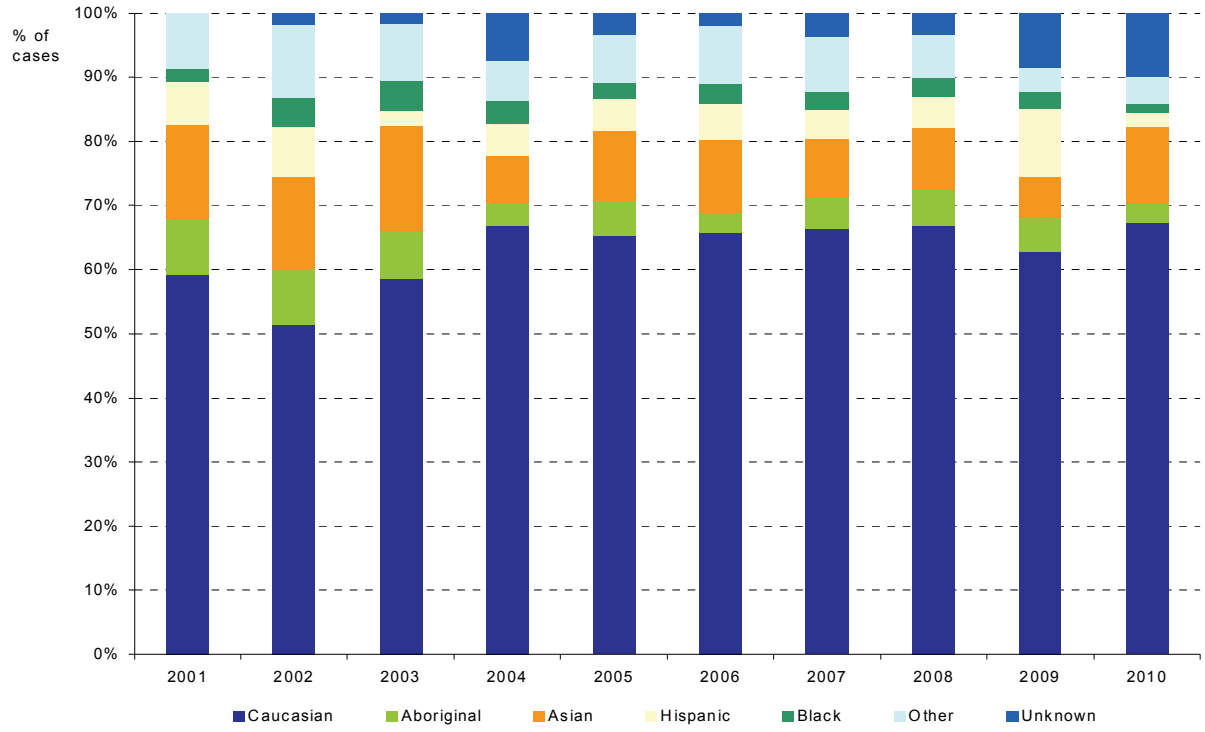
6.11 Total infectious syphilis case reports in BC by ethnicity, 2001 to 2010



6.12 Female infectious syphilis case reports in BC by ethnicity, 2001 to 2010



6.13 Male Infectious syphilis case reports in BC by ethnicity, 2001 to 2010



6.C Infectious syphilis case reports in BC by ethnicity and sex, 2010

		Caucasian	Aboriginal	Asian	Hispanic	Black	Other*	Unknown
Cases	Female	9	2	0	0	1	0	2
	Male	95	4	17	3	2	6	14
	Transgender/Unknown	0	0	0	0	0	0	0
	Total	104	6	17	3	3	6	16
Percentage	Female	64.3.%	14.3%	0.0%	0.0%	7.1%	0.0%	14.3%
	Male	67.4%	2.8%	12.1%	2.1%	1.4%	4.3%	9.9%
	Total	67.1%	3.9%	11.0%	1.9%	1.9%	3.9%	10.3%

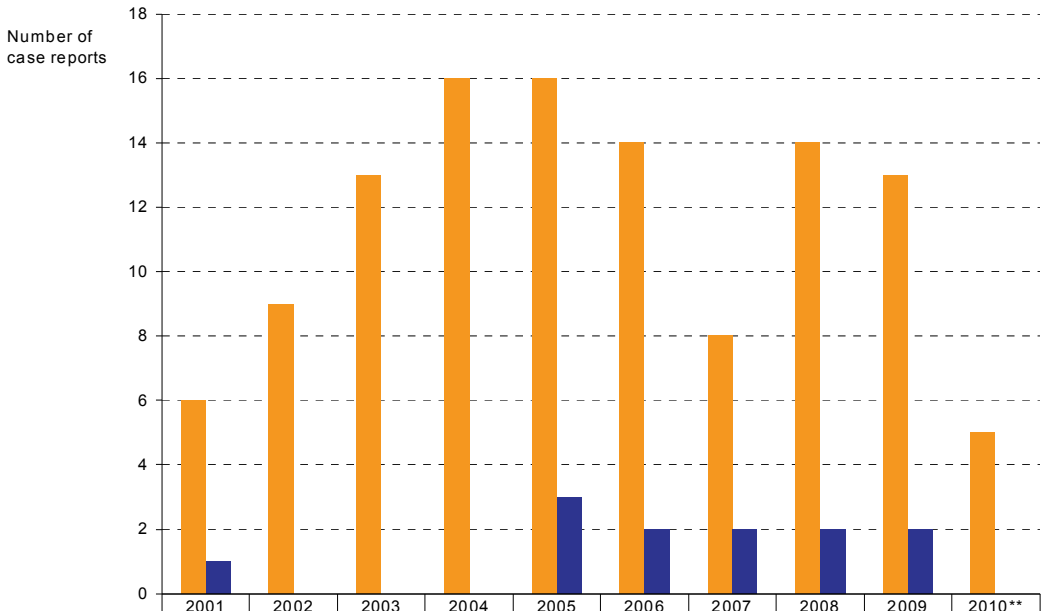
*Other includes Arab/West Asian, South Asian and Other

Congenital Syphilis

There were no cases of congenital syphilis identified in 2010. Since 2005, the number of early congenital syphilis cases per year ranged from 2 to 3 cases, compared to 0 to 1 cases per year between 2000 and 2004.

The number of maternal syphilis cases had increased provincially since 2001, ranging from 8 to 16 cases per year between 2002 and 2009. However in 2010, only five cases of maternal syphilis were identified among pregnant women, the lowest number in the past decade.

6.14 Maternal and early congenital infectious syphilis case reports in BC, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010**
Reports - Maternal	6	9	13	16	16	14	8	14	13	5
Reports - Early Congenital	1	0	0	0	3	2	2	2	2	0
Rate* - Early Congenital	2.5	0.0	0.0	0.0	7.4	4.8	4.6	4.5	4.5	

*Rate per 100,000 live birth
**2010 live birth data is not available at time of publishing

7. HIV

Notes Regarding the Interpretation of HIV Data

The number of new positive HIV tests is not a true reflection of the number of new HIV infections per year (i.e., HIV incidence), as individuals may have a new positive HIV test one or more years after they became infected with HIV.

HIV became a reportable disease in BC in 2003, which was accompanied by enhanced follow-up of new positive HIV tests by designated nurses. This change has led to more complete follow-up of individuals having new positive HIV tests, and has had a demonstrable impact on the quality of surveillance data through:

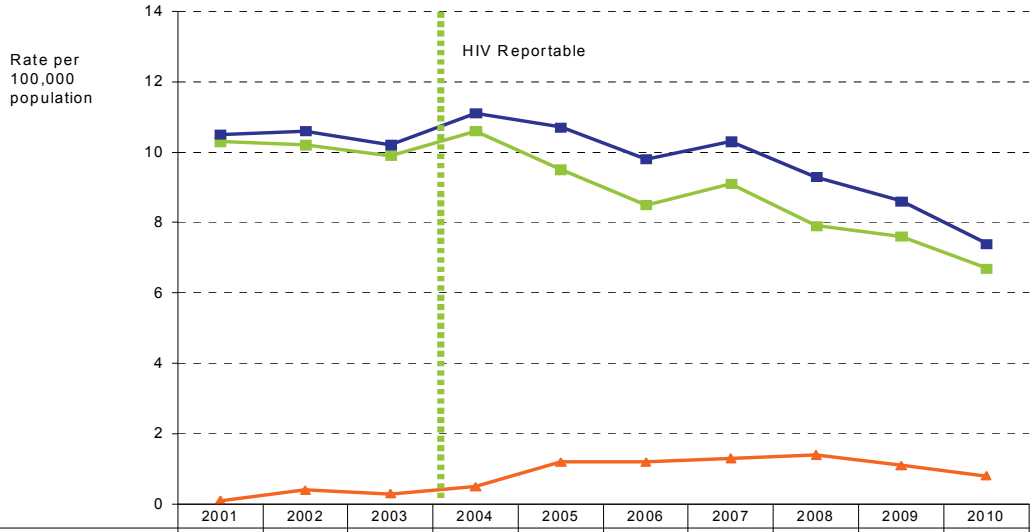
- The improved identification of individuals having a first positive HIV test in BC who have a previous positive HIV test outside of BC. These previously positive individuals are excluded from surveillance reporting. As shown in Figure 7.1 , the increased exclusion of individuals with a previous positive HIV test has contributed to the observed decline in new positive HIV tests observed in BC since 2004.

- The improved identification of exposure category and ethnicity, resulting in a decrease in the proportion of new positive HIV tests each year where exposure or ethnicity is unknown.

These data quality issues need to be considered when comparing trends before and after 2003. In this report, we have added a line indicating when HIV became reportable to each figure to serve as a visual reminder of this major influence on observed trends.

For interpretation of ethnicity and exposure category data, the data presented in this report for 2010 is not final. There is an expected delay in collection of this information for individuals having a new positive HIV test, resulting in a proportion of individuals having unknown ethnicity or exposure category. This proportion will have decreased by the time of next year's report.

7.1 Reported positive HIV test rates* in BC, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - New (+) in BC	420	418	408	442	400	361	391	345	337	301
Reports - 1st (+) in BC, Prev (+) outside BC	6	17	13	20	50	53	54	61	47	35
Reports - Total (+) in BC	426	435	421	462	450	414	445	406	384	336
Rate - New (+) in BC	10.3	10.2	9.9	10.6	9.5	8.5	9.1	7.9	7.6	6.7
Rate - 1st (+) in BC, Prev (+) outside BC	0.1	0.4	0.3	0.5	1.2	1.2	1.3	1.4	1.1	0.8
Rate - Total (+) in BC	10.5	10.6	10.2	11.1	10.7	9.8	10.3	9.3	8.6	7.4

*Caution is advised in interpreting historic trends of New Positive Rates of HIV.

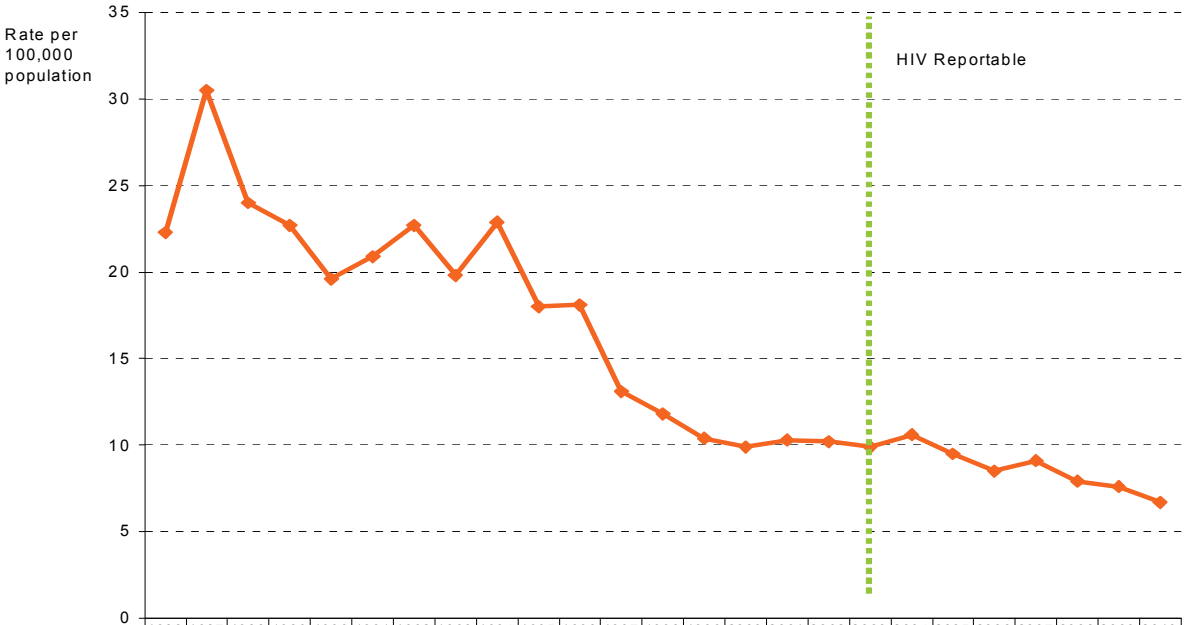
New Positive HIV Tests

The rate of new positive HIV tests in BC decreased to its lowest point ever in 2010 to 6.7 (301 cases) from 7.6 per 100,000 population (337 cases) in 2009. The highest rates of new positive HIV tests were in Vancouver HSDA and Northwest HSDA.

While rates among males continue to decrease, rates among females are relatively stable. The rate of new positive HIV tests continues to be higher among males than females, with the highest rates among males in those 25-29 years and 30-39 years of age, and among females 25-29 years of age.

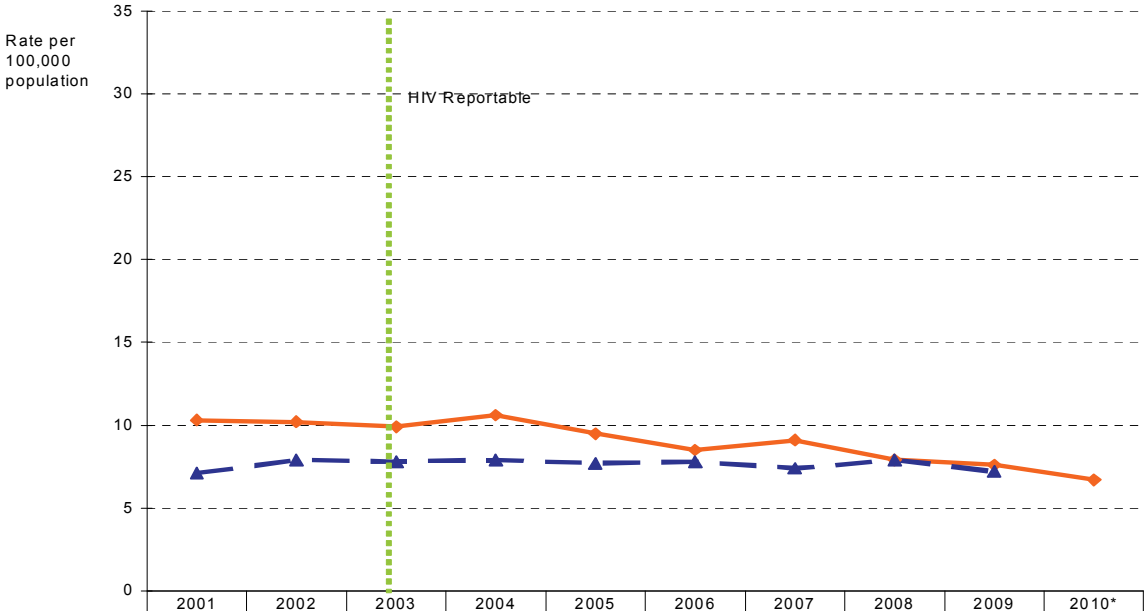
At the time of this report, the ethnicity of 18 individuals having a new positive HIV test (6.0%) in 2010 is unknown. Similar to previous years, in 2010, most of the new positive HIV cases continue to be among persons of Caucasian ethnicity (174 cases; 57.8%) followed by cases of Aboriginal (39 cases; 13.0%) and Asian (29 cases; 9.6%) ethnicity. Aboriginal persons are disproportionately represented in BC's HIV epidemic, particularly Aboriginal females who comprised 33.3% (21 cases) of all new positive HIV cases among females in 2010. The proportion of males who are Aboriginal decreased from 14.6% (39 cases) in 2009 to 7.6% (18 cases) in 2010.

7.2 Persons testing newly positive for HIV in BC by historical trend, 1986 to 2010



	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BC Reports	670	929	746	726	645	704	788	706	840	681	702	519	471	416	400	420	418	408	442	400	361	391	345	337	301
BC Rate	22.3	30.5	24.0	22.7	19.6	20.9	22.7	19.8	22.9	18.0	18.1	13.1	11.8	10.4	9.9	10.3	10.2	9.9	10.6	9.5	8.5	9.1	7.9	7.6	6.7

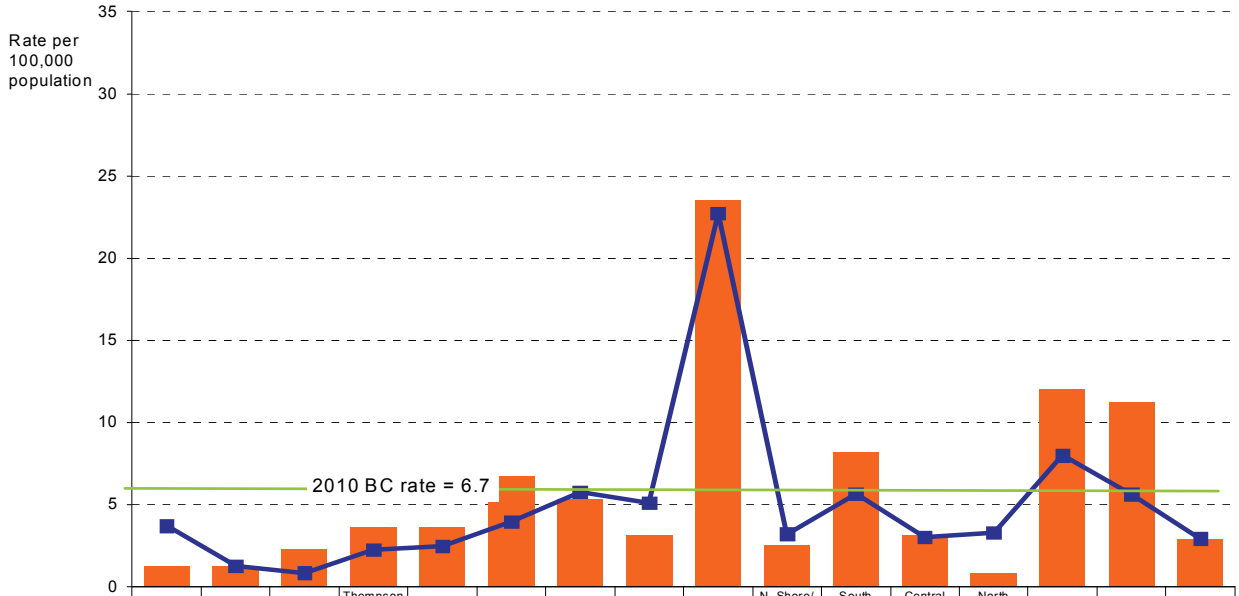
7.3 Newly positive HIV rates in BC and Canada, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010*
BC Reports	420	418	408	442	400	361	391	345	337	301
BC Rate	10.3	10.2	9.9	10.6	9.5	8.5	9.1	7.9	7.6	6.7
Canadian Rate	7.1	7.9	7.8	7.9	7.7	7.8	7.4	7.9	7.2	

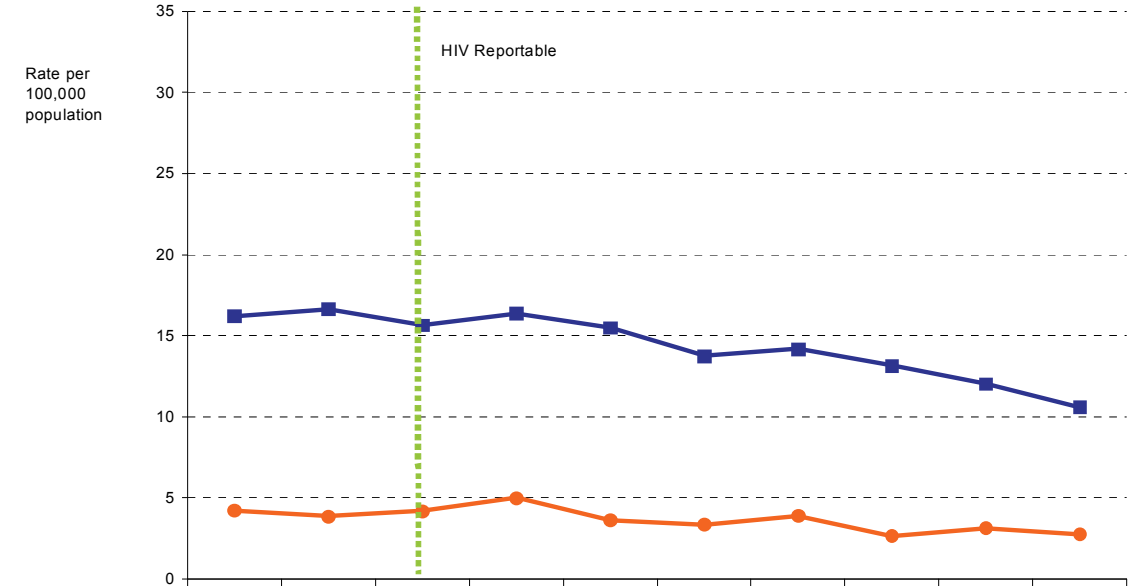
*2010 data for Canadian rate is not available

7.4 Persons testing newly positive for HIV in BC by health service delivery area, 2009 & 2010



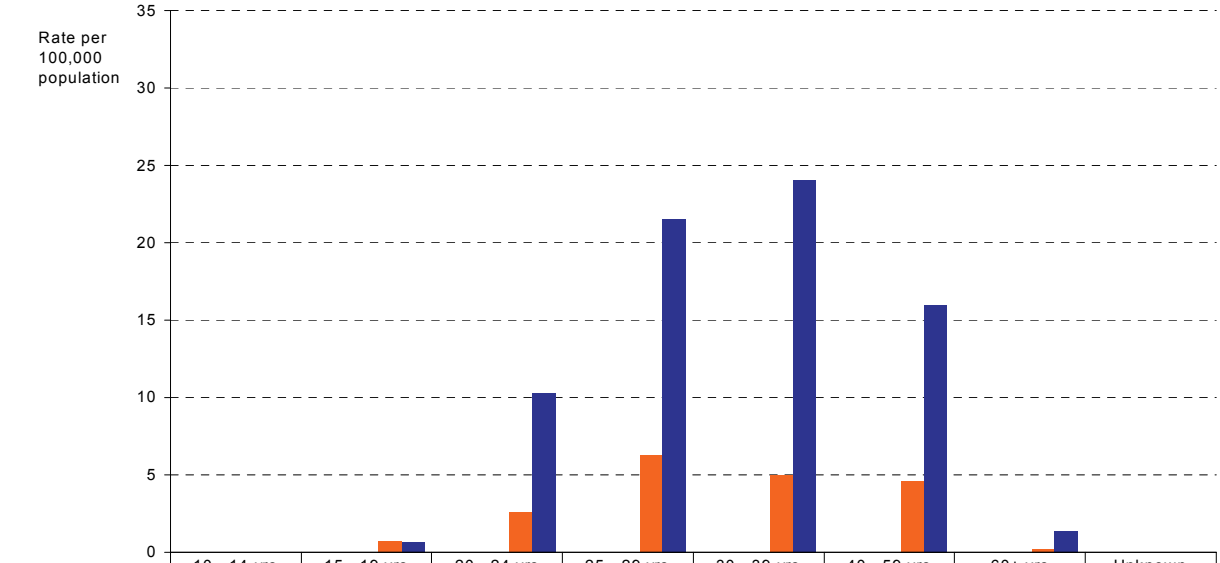
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Fraser East	Fraser North	Fraser South	Richmond	Vancouver	N. Shore/ Coast Garibaldi	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Northwest	Northern Interior	Northeast
Reports 2010	3	1	3	5	7	24	41	10	148	9	21	8	4	6	8	2
Rate 2009	1.3	1.3	2.3	3.6	3.6	6.7	5.3	3.1	23.5	2.5	8.2	3.1	0.8	12.0	11.2	2.9
Rate 2010	3.7	1.3	0.8	2.2	2.5	3.9	5.8	5.1	22.7	3.2	5.6	3.0	3.3	8.0	5.6	2.9

7.5 Persons testing newly positive for HIV in BC by sex, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Reports - Female	87	80	87	105	77	72	85	59	71	63
Reports - Male	328	338	320	337	322	289	303	286	266	238
Rate - Female	4.2	3.9	4.2	5.0	3.6	3.4	3.9	2.7	3.2	2.8
Rate - Male	16.2	16.6	15.7	16.4	15.5	13.7	14.2	13.2	12.0	10.6

7.6 Persons testing newly positive for HIV in BC by age group and sex, 2010



	10 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 59 yrs	60+ yrs	Unknown
Reports - Female	0	1	4	10	15	32	1	0
Reports - Male	0	1	17	35	71	108	6	0
Reports - Other*	0	0	0	0	0	0	0	0
Rate - Female	0.0	0.7	2.6	6.3	5.0	4.6	0.2	
Rate - Male	0.0	0.7	10.3	21.6	24.1	16.0	1.3	

*Other: Transgender and Unknown

7.A Females testing newly positive for HIV in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	0	0	0	2	0	0	0	2	0	0
	Rate	0.0	0.0	0.0	1.6	0.0	0.0	0.0	1.6	0.0	0.0
15—19 yrs	Cases	8	4	2	3	3	2	1	0	3	1
	Rate	5.9	3.0	1.5	2.3	2.2	1.5	0.7	0.0	2.2	0.7
20 - 24 yrs	Cases	18	6	11	12	7	15	15	6	4	4
	Rate	13.7	4.5	8.0	8.5	4.9	10.5	10.4	4.1	2.7	2.6
25 - 29 yrs	Cases	17	16	15	17	11	10	22	8	8	10
	Rate	12.7	12.1	11.5	12.9	8.2	7.2	15.4	5.4	5.2	6.3
30 - 39 yrs	Cases	28	35	33	38	19	23	21	13	26	15
	Rate	8.7	11.1	10.8	12.7	6.5	7.9	7.2	4.4	8.7	5.0
40 - 59 yrs	Cases	15	17	24	28	34	15	25	25	27	32
	Rate	2.5	2.8	3.8	4.4	5.2	2.3	3.7	3.7	3.9	4.6
60+ yrs	Cases	0	1	2	3	2	6	1	4	2	1
	Rate	0.0	0.3	0.5	0.7	0.5	1.4	0.2	0.8	0.4	0.2
Total*	Cases	87	80	87	105	77	72	85	59	71	63
	Rate	4.2	3.9	4.2	5.0	3.6	3.4	3.9	2.7	3.2	2.8

Rate per 100,000 population

*Includes cases under age 10 yrs and unknown/missing age

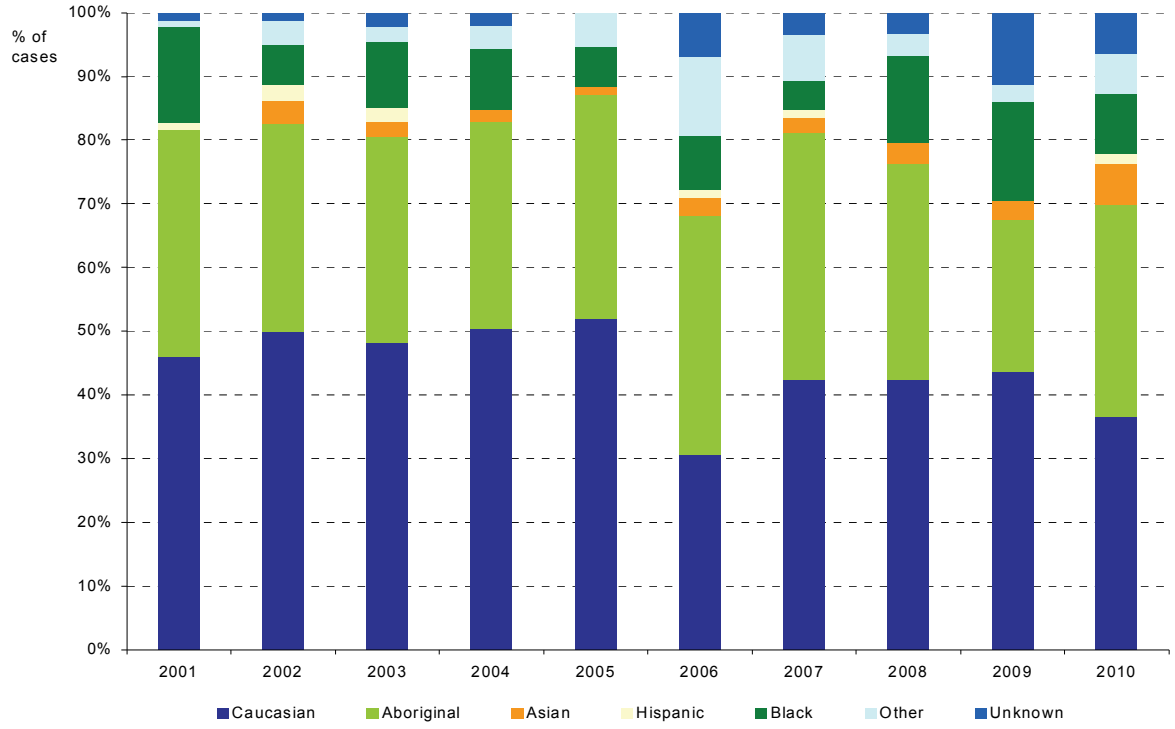
7.B Males testing newly positive for HIV in BC by age group, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 - 14 yrs	Cases	1	0	1	0	0	1	0	0	0	0
	Rate	0.7	0.0	0.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0
15 - 19 yrs	Cases	2	1	2	2	2	3	1	1	4	1
	Rate	1.4	0.7	1.4	1.4	1.4	2.0	0.7	0.7	2.7	0.7
20 - 24 yrs	Cases	16	12	12	17	18	18	21	18	18	17
	Rate	11.7	8.6	8.4	11.7	12.2	12.1	13.9	11.5	11.1	10.3
25 - 29 yrs	Cases	45	34	32	32	23	36	34	41	36	35
	Rate	33.3	25.6	24.4	24.3	17.2	26.4	24.0	27.7	23.2	21.6
30 - 39 yrs	Cases	114	124	105	99	110	87	103	83	64	71
	Rate	35.5	39.6	34.6	33.5	37.8	30.2	35.7	28.5	21.9	24.1
40 - 59 yrs	Cases	135	145	153	167	154	122	130	125	130	108
	Rate	23.0	24.1	24.9	26.7	24.1	18.8	19.9	18.9	19.5	16.0
60+ yrs	Cases	12	21	15	20	15	21	14	18	14	6
	Rate	3.7	6.3	4.3	5.6	4.1	5.5	3.5	4.3	3.3	1.3
Total*	Cases	328	338	320	337	322	289	303	286	266	238
	Rate	16.2	16.6	15.7	16.4	15.5	13.7	14.2	13.2	12.0	10.6

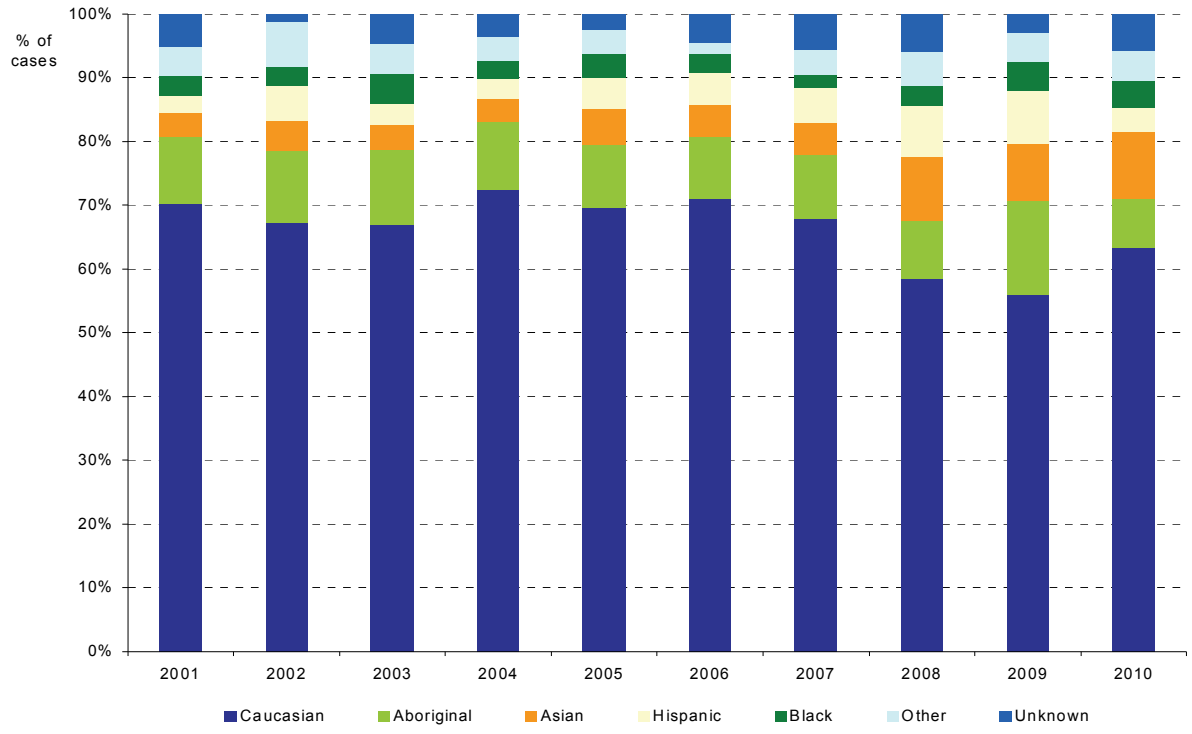
Rate per 100,000 population

*Includes cases under age 10 yrs and unknown/missing age

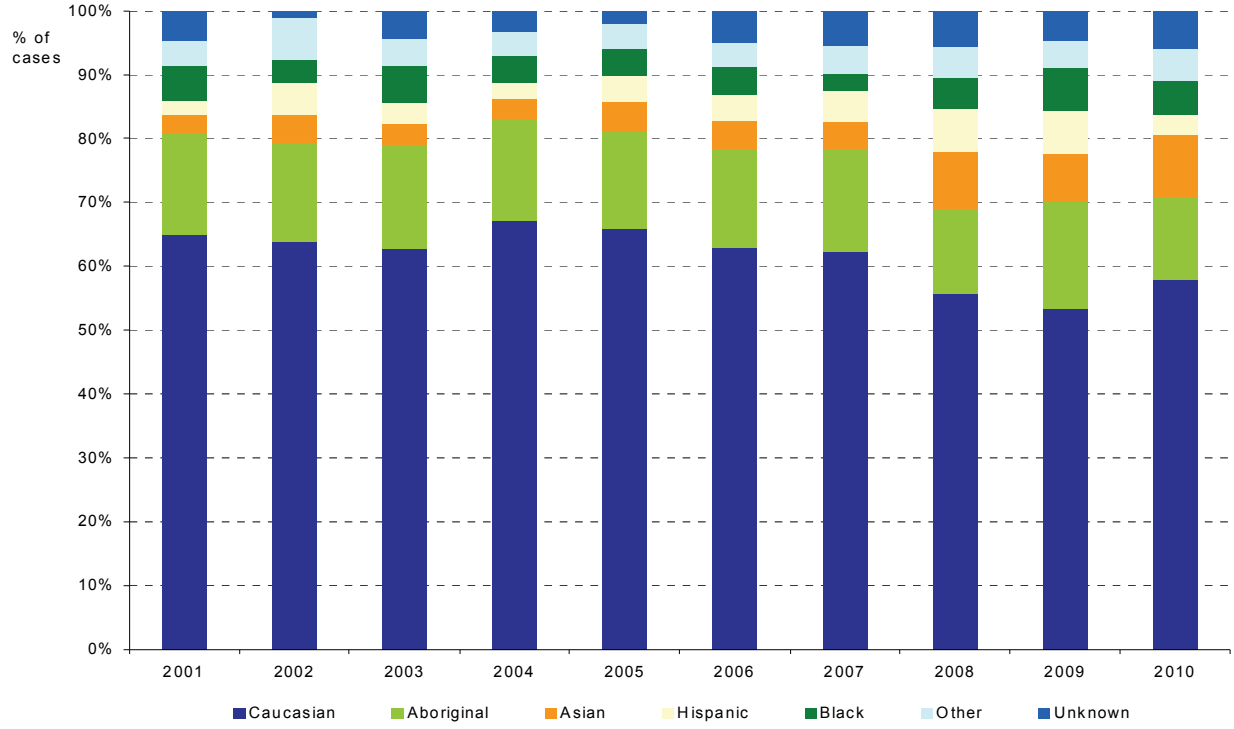
7.7 Females testing newly positive for HIV in BC by ethnicity, 2001 to 2010



7.8 Males testing newly positive for HIV in BC by ethnicity, 2001 to 2010



7.9 Persons testing newly positive for HIV in BC by ethnicity, 2001 to 2010



7.C Persons testing newly positive for HIV in BC by ethnicity and sex, 2010

		Caucasian	Aboriginal	Asian	Hispanic	Black	Other*	Unknown
Cases	Female	23	21	4	1	6	4	4
	Male	151	18	25	9	10	11	14
	Transgender/Unknown	0	0	0	0	0	0	0
	Total	174	39	29	10	16	15	18
Percentage	Female	36.5%	33.3%	6.3%	1.6%	9.5%	6.3%	6.3%
	Male	63.4%	7.6%	10.5%	3.8%	4.2%	4.6%	5.9%
	Total	57.8%	13.0%	9.6%	3.3%	5.3%	5.0%	6.0%

*Other includes Arab/West Asian, South Asian and Other

New Positive HIV Tests by Exposure Category

At the time of this report, the exposure category of 8 individuals having a new positive HIV test (2.7%) in 2010 is not identified or is unknown. The final number of individuals in each exposure category for 2010 may change slightly if further information on these 8 individuals is received.

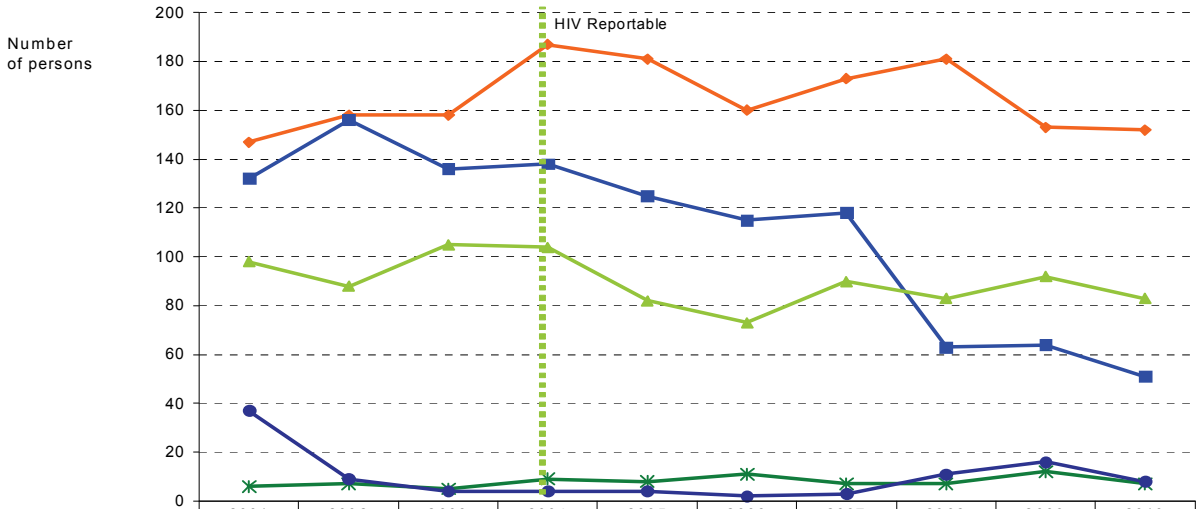
Gay, bisexual and other men who have sex with men (MSM) continue to be the population most affected by HIV in BC. Although the number of new positive HIV tests among MSM decreased slightly in 2010 to 152 from 153 new positive HIV tests in 2009, the proportion of new cases who were MSM increased from 45.4% in 2009 to 50.5% in 2010.

The number of new positive HIV tests among individuals in the heterosexual exposure category has been generally stable in recent years (overall and for both males and females). The number of new positive HIV tests in the heterosexual exposure category decreased slightly in 2010 to 83 (27.6%) from 92 new positive HIV tests (27.3%) in 2009.

The number of new positive HIV tests among people who use injection drugs (IDU) decreased in 2010 to 51 (16.9%) from 64 new positive HIV tests (19.0%) in 2009. The number of new positive HIV tests among IDU in 2010 continues to decline following a large decrease in new positive HIV tests in 2008, a trend observed for both males and females and in most regional health authorities. This decrease most likely represents a true decrease in HIV incidence among IDU in BC. Possible explanations for the decrease in HIV incidence include the impact of increasing coverage of highly active antiretroviral therapy (HAART) among IDU, changes in injection behaviours (e.g., increased smoking of crack cocaine), and the impact of HIV prevention programs (e.g., harm reduction programs) in this population. For more information, please refer to the report released by the Provincial Health Officer on this topic. [1]

[1] Kendall P. Decreasing HIV Infections Among People who use Drugs by Injection in British Columbia: Potential explanation and recommendations for further action. Report from the Office of the Provincial Health Officer. March 2011. http://www.health.gov.bc.ca/library/publications/year/2011/decreasing-HIV-in-IDU-population.pdf

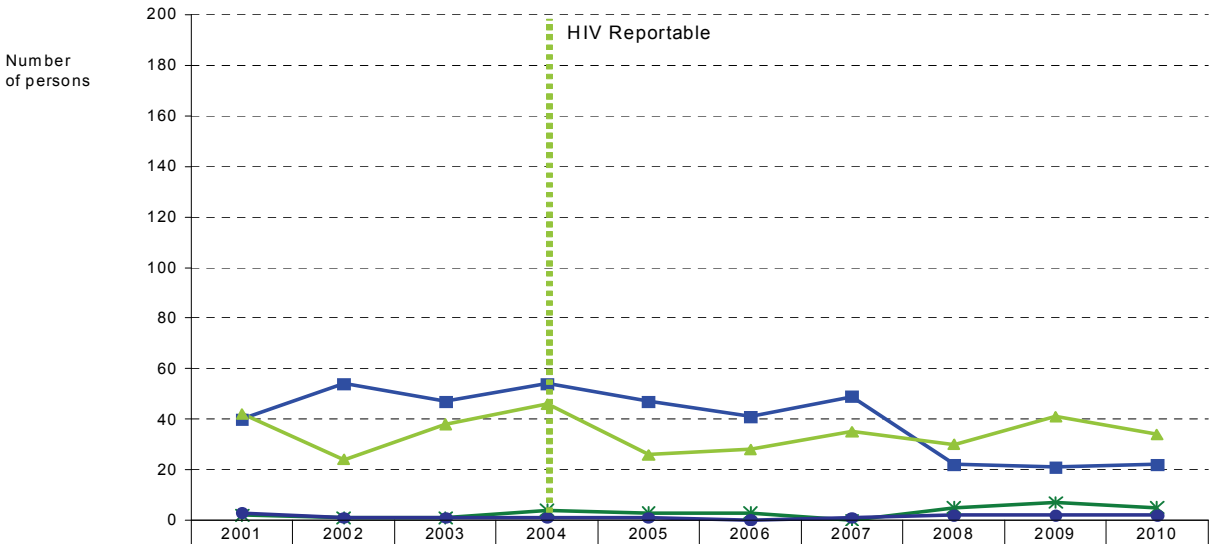
7.10 Persons testing newly positive for HIV in BC by exposure category, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MSM	147	158	158	187	181	160	173	181	153	152
IDU	132	156	136	138	125	115	118	63	64	51
HET	98	88	105	104	82	73	90	83	92	83
Other	6	7	5	9	8	11	7	7	12	7
NIR/Unknown	37	9	4	4	4	2	3	11	16	8

MSM = Men having Sex with Men IDU = Injection Drug Use HET = Heterosexual Contact NIR = No Identified Risk / Unknown Risk
Other = Blood/Blood Products, Occupational, Perinatal and Other Exposures

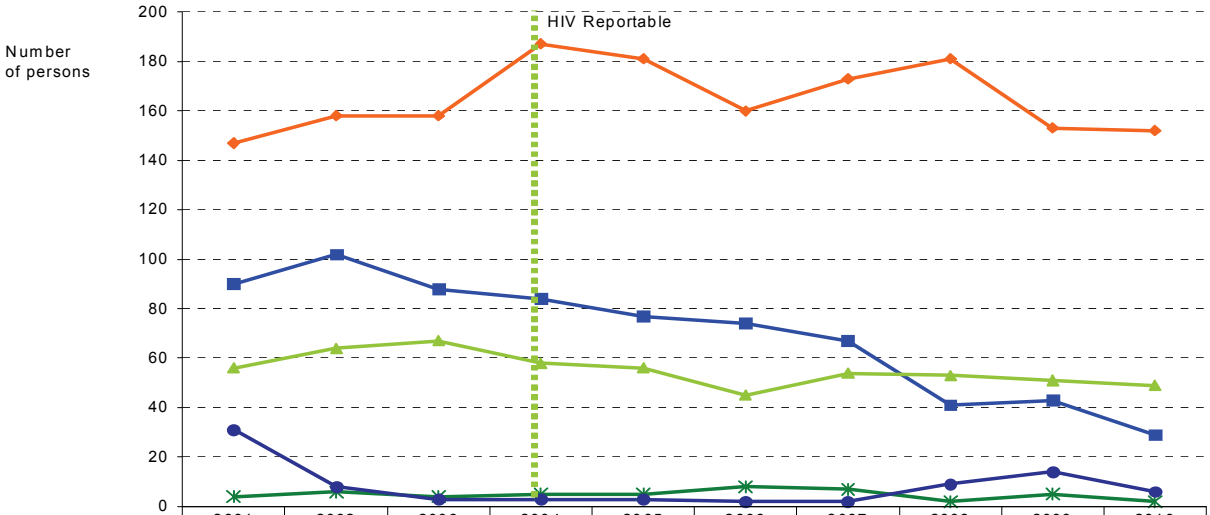
7.11 Females testing newly positive for HIV in BC by exposure category, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IDU	40	54	47	54	47	41	49	22	21	22
HET	42	24	38	46	26	28	35	30	41	34
Other	2	1	1	4	3	3	0	5	7	5
NIR/Unknown	3	1	1	1	1	0	1	2	2	2

IDU = Injection Drug Use HET = Heterosexual Contact NIR = No Identified Risk / Unknown Risk
Other = Blood/Blood Products, Occupational, Perinatal and Other Exposures

7.12 Males testing newly positive for HIV in BC by exposure category, 2001 to 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
MSM	147	158	158	187	181	160	173	181	153	152
IDU	90	102	88	84	77	74	67	41	43	29
HET	56	64	67	58	56	45	54	53	51	49
Other	4	6	4	5	5	8	7	2	5	2
NIR/Unknown	31	8	3	3	3	2	2	9	14	6

MSM = Men having Sex with Men IDU = Injection Drug Use HET = Heterosexual Contact NIR = No Identified Risk / Unknown Risk
Other = Blood/blood products, Occupational, Perinatal and Other Exposures

7.D Persons testing newly positive for HIV in BC by exposure category and health authority, 2001 to 2010

		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
IHA	MSM	5	6	12	5	7	8	4	10	4	4
	IDU	13	5	8	8	5	7	9	6	1	2
	HET	8	2	7	6	8	1	4	9	11	5
	Other	0	0	0	1	0	1	0	1	2	0
	NIR/UNK	4	0	1	0	0	0	0	0	0	1
FHA	MSM	16	20	27	42	26	26	30	30	27	22
	IDU	29	42	25	33	34	20	16	8	18	10
	HET	28	33	40	32	23	24	33	26	35	30
	Other	1	4	1	1	4	2	1	3	4	5
	NIR/UNK	13	2	2	1	1	1	1	2	3	5
VCHA	MSM	119	122	110	119	135	114	128	121	104	112
	IDU	60	71	57	45	47	39	41	25	20	21
	HET	43	40	44	42	27	31	39	31	29	33
	Other	4	3	4	5	3	3	1	2	5	1
	NIR/UNK	18	6	1	1	1	0	0	7	6	0
VIHA	MSM	7	10	7	16	11	8	9	18	16	12
	IDU	25	29	31	35	20	32	30	11	10	9
	HET	14	11	10	20	14	7	10	9	8	10
	Other	1	0	0	0	0	3	4	0	1	1
	NIR/UNK	2	1	0	0	0	1	0	1	4	1
NHA	MSM	0	0	2	4	1	3	0	2	1	1
	IDU	5	9	15	17	19	15	22	12	15	9
	HET	4	2	4	3	7	9	4	8	9	5
	Other	0	0	0	2	0	2	1	1	0	0
	NIR/UNK	0	0	0	0	1	0	1	1	2	1

IHA = Interior Health Authority
FHA = Fraser Health Authority
VCHA = Vancouver Coastal Health Authority
VIHA = Vancouver Island Health Authority
NHA = Northern Health Authority

MSM = Men having Sex with Men
IDU = Injection Drug Use
HET = Heterosexual Contact
NIR/UNK = No Identified Risk / Unknown Risk
Other = Blood/Blood Products, Occupational, Perinatal and Other Exposures

HIV in Pregnancy

In this annual report we present data from two information sources to describe HIV infection among pregnant women in BC: data from prenatal HIV testing, and data from the Oak Tree Clinic (OTC). The OTC provides antenatal care directly or indirectly for pregnant women with HIV infection in BC.

There are important differences between these data sources that need to be understood in order to interpret the data correctly:

- ***Prenatal HIV tests*** are assigned to the year in which the HIV test was performed, and this data includes all pregnant women **(including women who do and do not have a live birth)**. This data comes from laboratory and surveillance data, which have established limitations to data quality (see Technical Appendix for details).

- ***Data provided by the Oak Tree Clinic*** includes pregnant women accessing care who have a live birth**.** The year assigned is based on the year of birth. This data comes from clinical data abstraction for women for whom the OTC provides direct or indirect antenatal HIV care (estimated at close to complete coverage of all pregnant women with HIV infection in BC).

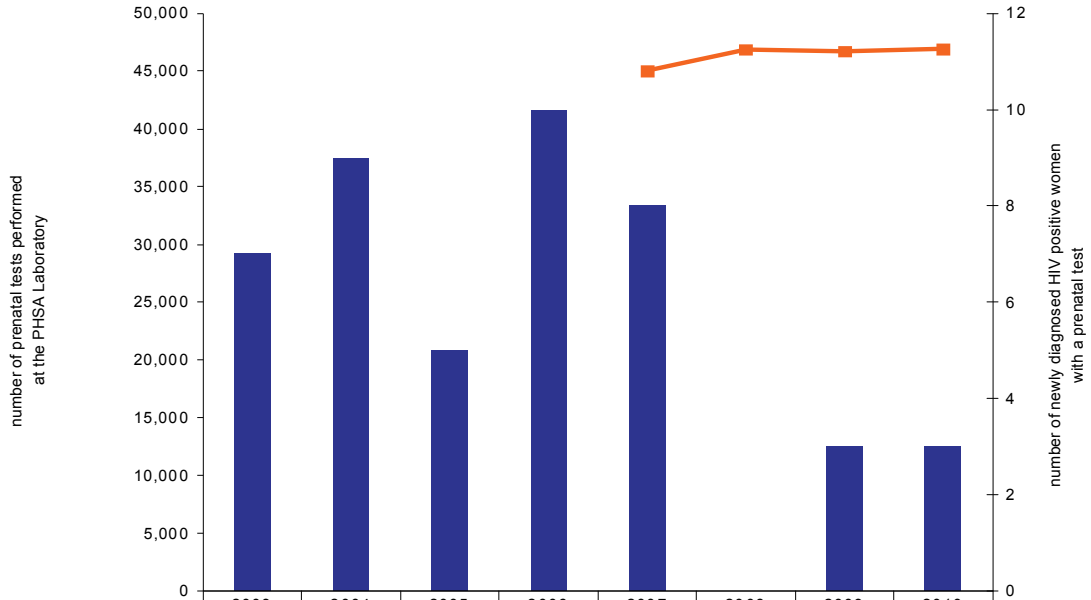
For these reasons, these two data sources are not directly comparable. However, taken together these data provide a more comprehensive overview of HIV in pregnancy in British Columbia.

Prenatal HIV Testing

In 2010, 46,918 women were tested prenatally for HIV. Overall the number of women being tested prenatally each year in BC is relatively stable.

Between 2003 and 2010 in HIV surveillance data, 45 women were newly diagnosed as HIV positive through prenatal screening (i.e., "Prenatal Testing" indicated as the reason for testing during the follow-up of new positive HIV tests). Three women were diagnosed as HIV positive through prenatal screening in 2010.

7.13 Women newly diagnosed HIV positive as part of a prenatal test panel in BC, 2003 to 2010 (based on year of HIV test)



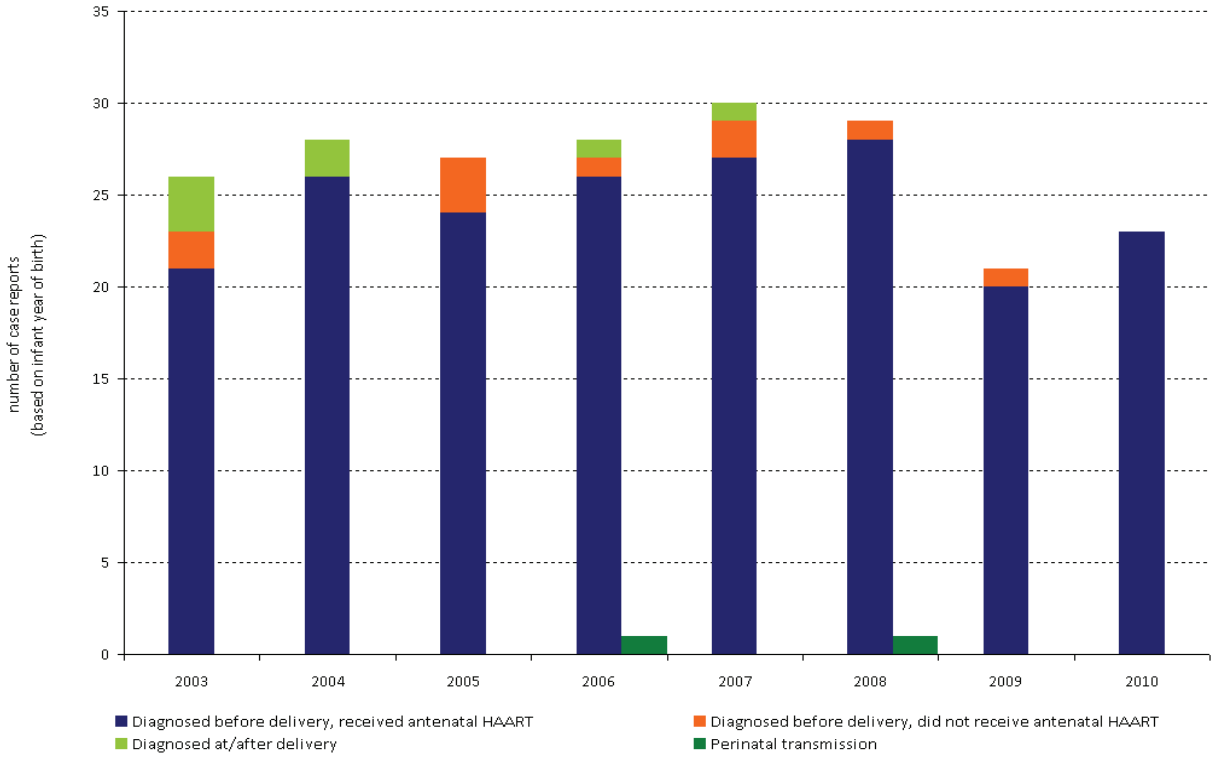
	2003	2004	2005	2006	2007	2008	2009	2010
Newly diagnosed HIV positive women with a prenatal test	7	9	5	10	8	0	3	3
Total # of prenatal tests					45,007	46,852	46,704	46,918

Data Provided by the Oak Tree Clinic

The Oak Tree Clinic (OTC) at BC Children's & Women's Hospital directly or indirectly provides antenatal care for pregnant women with HIV infection and their children, including antenatal highly active antiretroviral therapy (HAART) for the prevention of mother to child transmission of HIV.

In the absence of antenatal HAART, the transmission rate of HIV to infants born to HIV positive women is estimated at 25%. Between 2003 and 2010, 212 HIV positive pregnant women having live births accessed care at OTC, ranging from 21 to 30 women per year. The majority of women were diagnosed with HIV before conception or delivery (205/212, 96.7%). Of these 205 women, 195 (95.1%) received antenatal HAART prior to delivery and HIV was not diagnosed in any infants born to these women (transmission rate 0% among women accessing antenatal HAART). However, perinatally acquired HIV infection was diagnosed in two infants during this time period among women who did not receive antenatal HAART prior to delivery.

7.14 HIV positive pregnant women having live births and accessing care at Oak Tree Clinic, 2003 to 2010 (based on infant year of birth)



	2003	2004	2005	2006	2007	2008	2009	2010
	21	26	24	26	27	28	20	23
	2	0	3	1	2	1	1	0
	3	2	0	1	1	0	0	0
	0	0	0	1	0	1	0	0

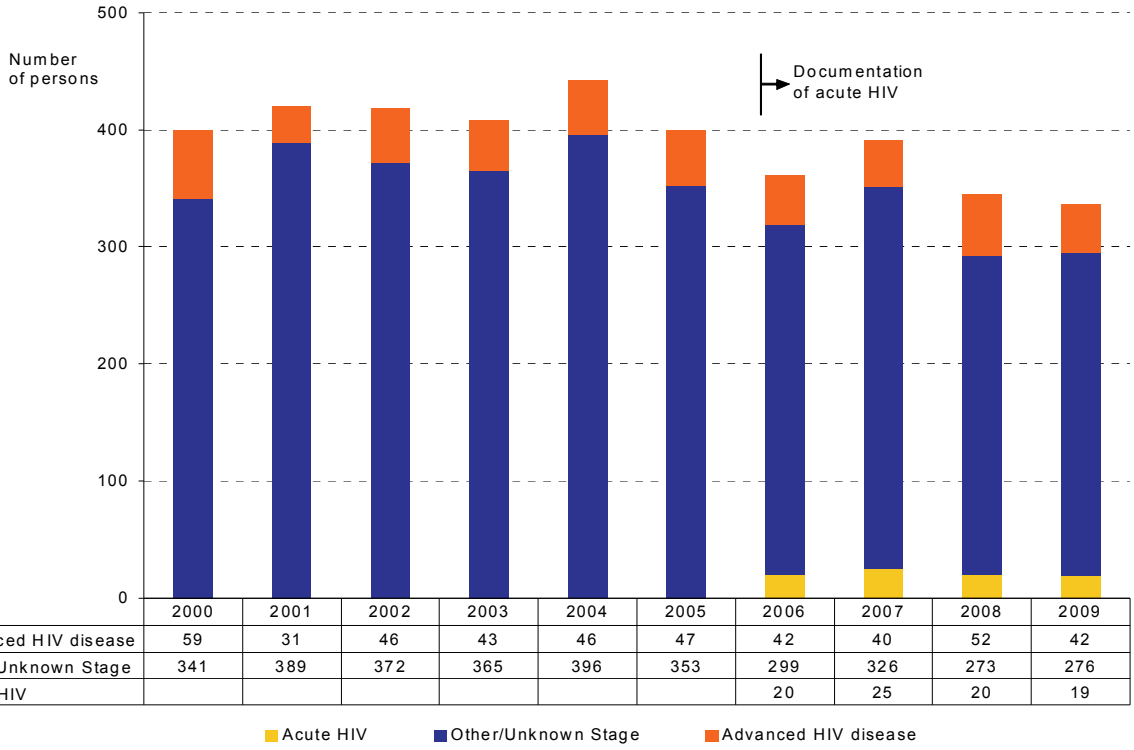
Stage of Infection at HIV Diagnosis

Individuals who test positive for HIV may have tested for HIV at any time from weeks to years after the time that they are infected with HIV. Accordingly, individuals could be at different stages of HIV infection at the time of diagnosis, and understanding the trends in stage of infection at HIV diagnosis may provide insights into the timeliness of engagement in and access to HIV testing following infection. To do this, in this section we describe the trends in the number of individuals identified with either acute HIV or advanced HIV disease at the time of HIV diagnosis. Due to expected delays in AIDS case reporting, data is only presented to 2009.

Individuals with acute HIV infection at the time of diagnosis have tested soon after infection with HIV. Acute HIV infection refers to the period of the first 6 to 8 weeks after the time of infection with HIV, and is identified through characteristic patterns of laboratory HIV tests in the period prior to an established antibody response. Individuals with acute HIV infection have high blood viral loads and are more likely to transmit HIV compared to individuals at other stages of HIV infection. Data on acute HIV infections is available from 2006 onwards. In 2009, 5.6% (19 cases) of individuals diagnosed with HIV were in the acute phase, which is a slight decrease from 2008 (5.8%).

Individuals with advanced HIV disease at diagnosis have had delayed access to HIV testing, and have had undiagnosed infection likely for years prior to diagnosis. Advanced HIV disease at diagnosis is defined as an individual with an AIDS case report within 12 months after testing newly positive for HIV. The percentage of newly diagnosed individuals with advanced HIV disease at diagnosis decreased in 2009 to 12.5% (42 cases) from 15.1% (52 cases) in 2008, however this is still within the historic range (from 7.4% to 15.1% between 2001 and 2008). Also, this percentage may be an underestimate due to under-reporting of AIDS cases.

7.15 Stage of infection at time of HIV diagnosis, 2000 to 2009



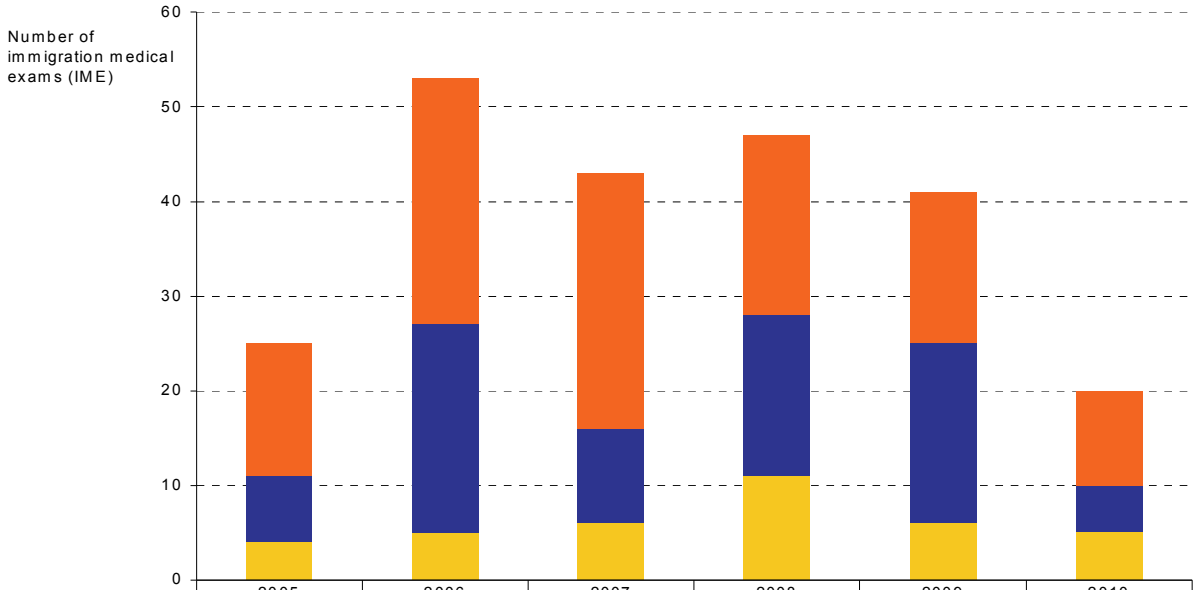
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Advanced HIV disease	59	31	46	43	46	47	42	40	52	42
Other/Unknown Stage	341	389	372	365	396	353	299	326	273	276
Acute HIV							20	25	20	19

Immigration of Individuals with HIV

In 2002, Citizenship and Immigration Canada (CIC) included HIV testing as part of the immigration medical examination (IME) required for all immigration applications, Convention refugees, and refugee claimants. As of September 2004, CIC notifies Clinical Prevention Services at BCCDC of individuals who undergo an IME outside of Canada, test positive for HIV, and indicate BC as their intended province of residence. Individuals who undertake their IME within BC and test positive for HIV are reported to the BCCDC by the Provincial Public Health Microbiology and Reference Laboratory through routine surveillance.

The number of HIV positive individuals immigrating into BC varies annually and may reflect global migration patterns. In 2010, a total of 20 HIV positive immigrants arrived in BC, 5 (25.0%) coming from countries where HIV is considered to be endemic.

7.16 Immigration-related HIV positive reports from endemic and non-endemic countries, 2005 to 2010



	2005	2006	2007	2008	2009	2010
Non-Endemic Countries	14	26	27	19	16	10
Endemic Countries	7	22	10	17	19	5
Country Unspecified	4	5	6	11	6	5

Estimates of HIV Incidence and Prevalence

The HIV surveillance data presented in this report is based on individuals with a new positive HIV test (or new diagnosis of HIV). Individuals who have undiagnosed HIV infection and have not yet tested are not captured in the data. Furthermore, a person with a new positive test for HIV can be diagnosed months or years after the time that they became infected with HIV. For these reasons, HIV surveillance data based on new positive HIV tests does not provide accurate information on HIV incidence (i.e., the number of new infections in a one-year period, both diagnosed and undiagnosed) or prevalence (i.e., the number of people living with HIV). Knowing incidence and prevalence is important in order to monitor the HIV epidemic and to guide the development and evaluation of HIV-related prevention, treatment, care and support programs.

Based on HIV surveillance data and using multiple estimation methods, the Public Health Agency of Canada (PHAC) generates periodic national estimates of HIV incidence and prevalence. To arrive at national estimates, specific estimates for provinces including BC are generated (see tables on following page). These estimates have recently been updated for 2008, and the updated previous estimates for 2005 are provided for comparison. For further details of national estimates of HIV incidence and prevalence, including estimates of HIV burden in Aboriginal persons, please see: http://www.phac-aspc.gc.ca/aids-sida/publication/survreport/estimat08-eng.php [2]

In BC, estimates of the total number of incident or new HIV infections in 2008 ranged from 280 to 540 cases, and were slightly lower than 2005 estimates (range 320 to 620 cases). Estimates of prevalent HIV infections or the total number of people living with HIV in the province in 2008 was 11,400 (range 9,300 to 13,500 cases), an increase from 10,350 (8,300 to 12,400 cases) in 2005. In 2008, gay, bisexual and other men who have sex with men (MSM) continued to comprise the greatest proportion of incident and prevalent HIV infections, followed by persons who use injection drugs (IDU), and heterosexual (non-endemic) persons.

[2] Data provided courtesy of the Surveillance and Risk Assessment Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada (2009). For more information on the methods used to generate these estimates, please refer to: http://origin.phacaspc.gc.ca/publicat/ccdr-rmtc/06pdf/cdr3215.pdf.

7.E Estimated number of incident HIV infections in BC by exposure category, 2005 & 2008

Exposure Category	2005			2008		
	Number	Range	% of Total	Number	Range	% of Total
MSM		150-260	44%		140-250	47%
MSM-IDU		10-20	3%		10-20	3%
IDU		90-190	30%		70-140	25%
HET (non-endemic)		50-130	19%		50-120	21%
HET (endemic)		10-30	4%		<20	4%
Other		<10	- - -		<10	- - -
All		320-620			280-540	

7.F Estimated number of prevalent HIV infections in BC by exposure category, 2005 & 2008

Exposure Category	2005			2008		
	Number	Range	% of Total	Number	Range	% of Total
MSM	4,260	3,280-5,240	41%	4,770	3,640-5,900	42%
MSM-IDU	340	240-440	3%	360	250-470	3%
IDU	3,580	2,660-4,500	35%	3,760	2,820-4,700	33%
HET (non-endemic)	1,750	1,300-2,200	17%	2,030	1,520-2,540	18%
HET (endemic)	300	220-380	3%	350	260-440	3%
Other	120	70-170	1%	130	80-180	1%
All	10,350	8,300-12,400		11,400	9,300-13,500	

MSM = Men having Sex with Men
IDU = Injection Drug Use
HET (non-endemic) = Heterosexual contact with a person who is either HIV-infected or at risk for HIV or heterosexual as the only identified risk
HET (endemic) = Heterosexual contact and origin from a country where HIV is endemic
Other = recipients of blood transfusion or clotting factor, perinatal and occupational transmission

8. AIDS

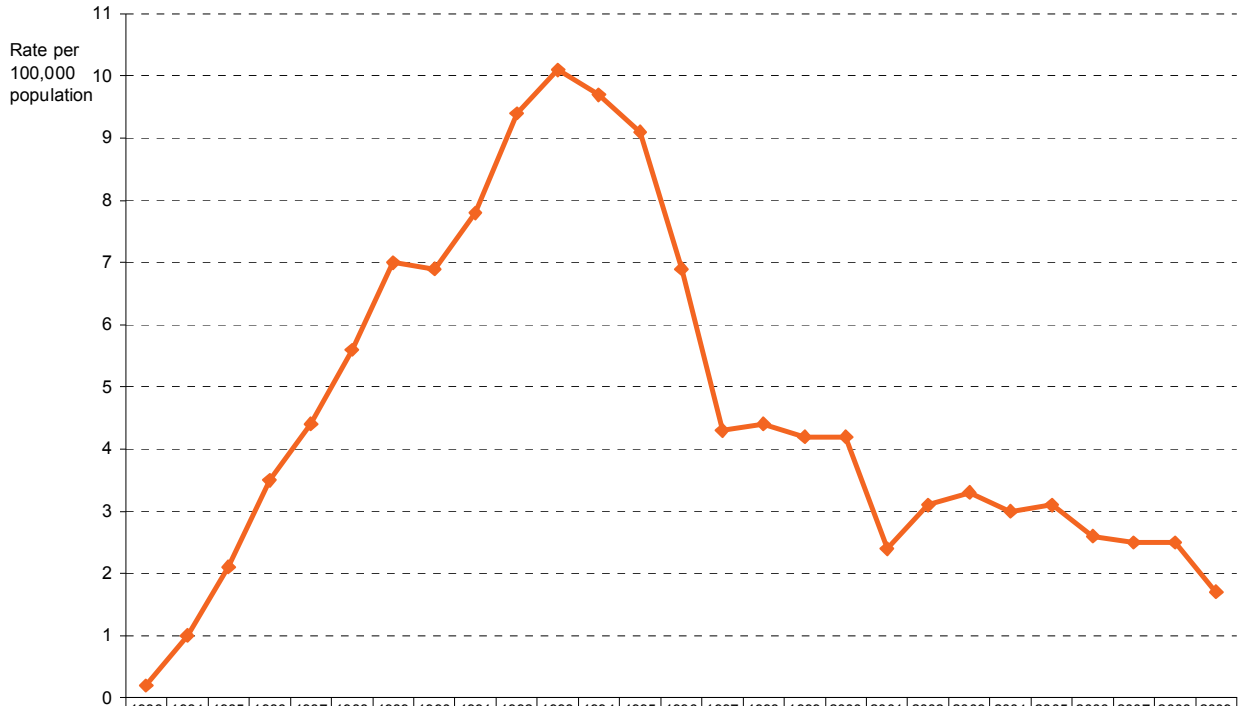
The historic number of AIDS cases has increased slightly from previous reports, due to improved identification of cancer-related AIDS-defining illness (see Technical Appendix for details).

Due to expected delays associated with reporting AIDS cases, this report only includes cases to 2009. The rate of AIDS and the number of AIDS case reports per year have decreased from a peak in 1993, due primarily to advances in HIV treatment which includes highly active antiretroviral therapy.

The rate of AIDS in BC decreased in 2009 to 1.7 (77 cases) from 2.5 per 100,000 population (110 cases) in 2008 and remains approximately two times higher than the Canadian rate. Rates are variable by HSDA per year and are influenced by the small number of cases in most regions. In 2009, the highest rate was reported in Vancouver HSDA.

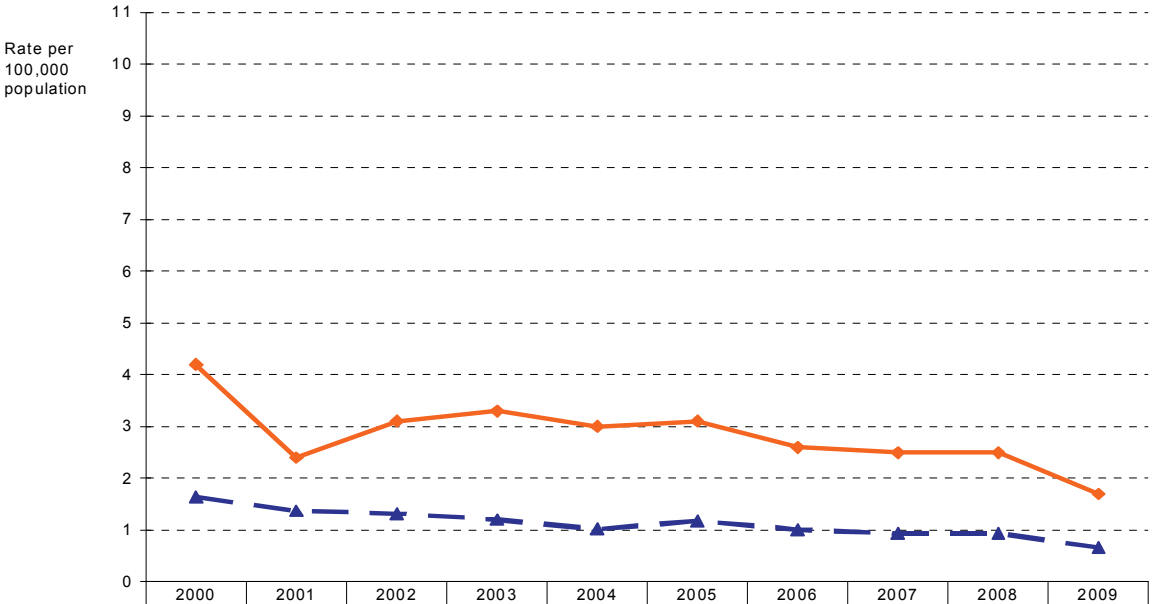
The rate of AIDS among males continues to be greater than the rate among females, which likely reflects the distribution of HIV between males and females in BC. Rates among males have been gradually decreasing while rates in females appear relatively stable. As with new positive HIV tests, Aboriginal persons continue to be disproportionately represented in AIDS cases in BC, constituting 19% of cases in 2009.

8.1 AIDS case reports and rates in BC by historical trend, 1983 to 2009



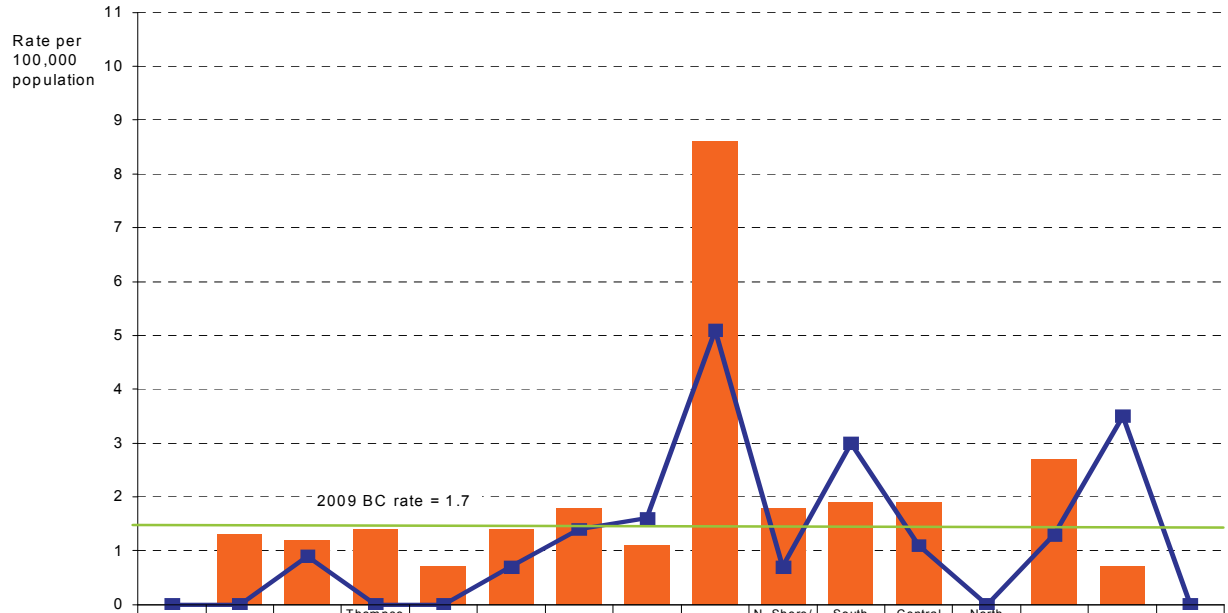
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BC Reports	7	29	62	106	134	175	223	227	263	325	359	355	342	269	170	175	168	170	99	129	135	125	129	109	107	110	77
BC Rate	0.2	1.0	2.1	3.5	4.4	5.6	7.0	6.9	7.8	9.4	10.1	9.7	9.1	6.9	4.3	4.4	4.2	4.2	2.4	3.1	3.3	3.0	3.1	2.6	2.5	2.5	1.7

8.2 AIDS rates in BC and Canada, 2000 to 2009



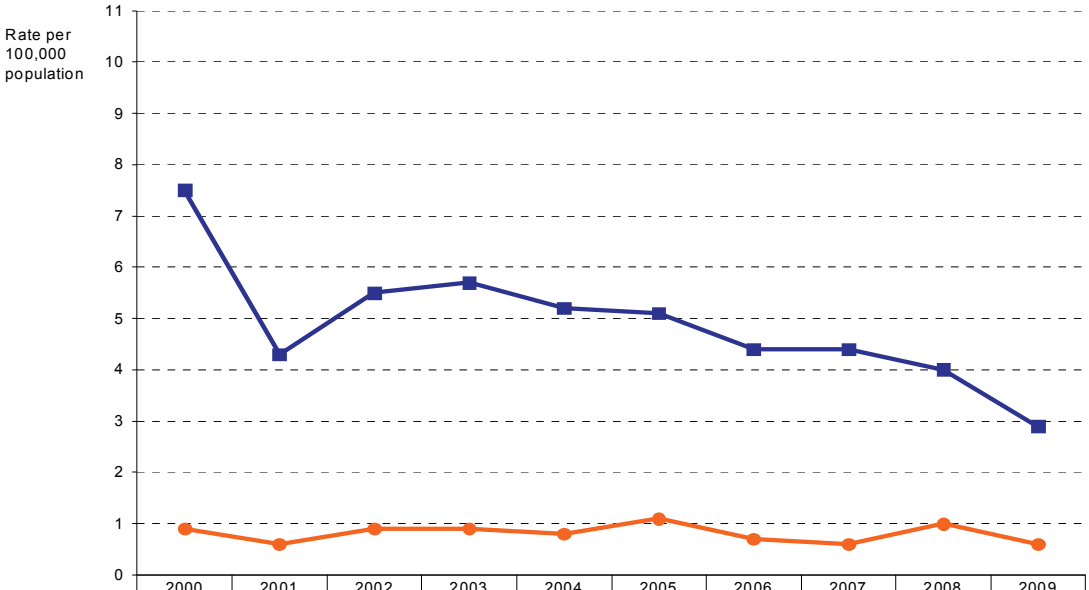
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BC Reports	170	99	129	135	125	129	109	107	110	77
BC Rate	4.2	2.4	3.1	3.3	3.0	3.1	2.6	2.5	2.5	1.7
Canadian Rate	1.6	1.4	1.3	1.2	1.0	1.2	1.0	0.9	0.9	0.7

8.3 AIDS case reports and rates in BC by health service delivery area, 2008 & 2009



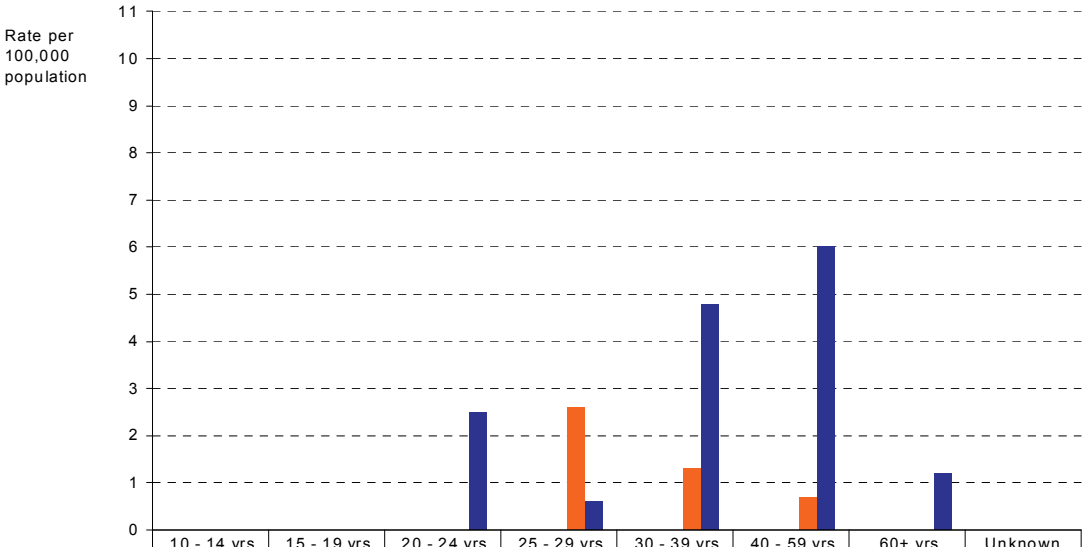
	East Kootenay	Kootenay Boundary	Okanagan	Thompson Cariboo Shuswap	Fraser East	Fraser North	Fraser South	Richmond	Vancouver	N. Shore/ Coast Garibaldi	South Vancouver Island	Central Vancouver Island	North Vancouver Island	Northwest	Northern Interior	Northeast
Reports 2009	0	0	3	0	0	4	10	3	33	2	11	3	0	1	5	0
Rate 2008	0.0	1.3	1.2	1.4	0.7	1.4	1.8	1.1	8.6	1.8	1.9	1.9	0.0	2.7	0.7	0.0
Rate 2009	0.0	0.0	0.9	0.0	0.0	0.7	1.4	1.6	5.1	0.7	3.0	1.1	0.0	1.3	3.5	0.0

8.4 AIDS case reports and rates in BC by sex, 2000 to 2009



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Reports - Female	18	12	18	18	17	23	16	13	23	13
Reports - Male	150	87	111	117	108	106	93	94	87	64
Rate - Female	0.9	0.6	0.9	0.9	0.8	1.1	0.7	0.6	1.0	0.6
Rate - Male	7.5	4.3	5.5	5.7	5.2	5.1	4.4	4.4	4.0	2.9

8.5 AIDS case reports and rates in BC by age group and sex, 2009



	10 - 14 yrs	15 - 19 yrs	20 - 24 yrs	25 - 29 yrs	30 - 39 yrs	40 - 59 yrs	60+ yrs	Unknown
Reports - Female	0	0	0	4	4	5	0	0
Reports - Male	0	0	4	1	14	40	5	0
Reports - Transgender/Unknown	0	0	0	0	0	0	0	0
Rate - Female	0.0	0.0	0.0	2.6	1.3	0.7	0.0	
Rate - Male	0.0	0.0	2.5	0.6	4.8	6.0	1.2	

8.A Female AIDS case reports and rates in BC by age group, 2000 to 2009

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
10 - 14 yrs	Cases	1	0	0	0	0	0	0	0	1	0
	Rate	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0
15—19 yrs	Cases	0	0	0	1	0	0	0	0	0	0
	Rate	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
20 - 24 yrs	Cases	1	1	3	1	1	0	0	1	1	0
	Rate	0.8	0.8	2.2	0.7	0.7	0.0	0.0	0.7	0.7	0.0
25 - 29 yrs	Cases	2	4	3	1	2	0	2	2	1	4
	Rate	1.5	3.0	2.3	0.8	1.5	0.0	1.4	1.4	0.7	2.6
30 - 39 yrs	Cases	3	7	5	3	4	7	5	3	8	4
	Rate	0.9	2.2	1.6	1.0	1.3	2.4	1.7	1.0	2.7	1.3
40 - 59 yrs	Cases	10	0	6	10	9	15	7	5	10	5
	Rate	1.7	0.0	1.0	1.6	1.4	2.3	1.1	0.7	1.5	0.7
60+ yrs	Cases	1	0	0	2	1	1	2	2	2	0
	Rate	0.3	0.0	0.0	0.5	0.2	0.2	0.5	0.4	0.4	0.0
Total*	Cases	18	12	18	18	17	23	16	13	23	13
	Rate	0.9	0.6	0.9	0.9	0.8	1.1	0.7	0.6	1.0	0.6

Rate per 100,000 population
*Includes cases under age 10 yrs and unknown/missing age

8.B Male AIDS case reports and rates in BC by age group, 2000 to 2009

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
10 - 14 yrs	Cases	1	2	0	0	0	0	1	0	0	0
	Rate	0.7	1.5	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
15—19 yrs	Cases	0	0	0	0	0	0	0	0	0	0
	Rate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20 - 24 yrs	Cases	1	0	0	1	2	0	1	0	0	4
	Rate	0.7	0.0	0.0	0.7	1.4	0.0	0.7	0.0	0.0	2.5
25 - 29 yrs	Cases	8	5	5	8	4	5	8	0	1	1
	Rate	5.8	3.7	3.8	6.1	3.0	3.7	5.9	0.0	0.7	0.6
30 - 39 yrs	Cases	66	31	42	45	38	25	21	30	17	14
	Rate	20.3	9.7	13.4	14.8	12.8	8.6	7.3	10.4	5.8	4.8
40 - 59 yrs	Cases	66	41	55	55	61	69	51	56	59	40
	Rate	11.6	7.0	9.2	9.0	9.7	10.8	7.9	8.6	8.9	6.0
60+ yrs	Cases	8	7	9	8	3	7	11	8	10	5
	Rate	2.5	2.1	2.7	2.3	0.8	1.9	2.9	2.0	2.4	1.2
Total*	Cases	150	87	111	117	108	106	93	94	87	64
	Rate	7.5	4.3	5.5	5.7	5.2	5.1	4.4	4.4	4.0	2.9

Rate per 100,000 population
*Includes cases under age 10 yrs and unknown/missing age

Appendices

A. HIV and AIDS Supplemental Tables

B. Technical Appendix

A. List of HIV and AIDS Supplemental Tables

HIV

AIDS

1.1 Persons testing newly positive for HIV in BC, 1985 to 2010

Year of Testing	Cases	Rate	Tests*
1985	220	7.4	1,362
1986	670	22.3	5,328
1987	929	30.5	35,783
1988	746	24.0	28,866
1989	726	22.7	29,960
1990	645	19.6	37,675
1991	704	20.9	54,126
1992	788	22.7	83,568
1993	706	19.8	91,915
1994	840	22.9	103,406
1995	681	18.0	128,246
1996	702	18.1	135,067
1997	519	13.1	137,149
1998	471	11.8	134,228
1999	416	10.4	132,042
2000	400	9.9	132,078
2001	420	10.3	131,784
2002	418	10.2	141,604
2003	408	9.9	138,761
2004	442	10.6	149,821
2005	400	9.5	156,378
2006	361	8.5	165,475
2007	391	9.1	170,338
2008	345	7.9	177,102
2009	337	7.6	174,250
2010	301	6.7	177,397
TOTAL	**13,986**		**2,853,709**

1985 annual total is only for the months of October, November and December
RATE per 100,000 population
*TESTS is the number of HIV tests, both positive and negative, performed by the provincial Public Health Microbiology and Reference Laboratory located at the BC Centre for Disease Control

1.2 Persons testing newly positive for HIV in BC by age group and sex—CASES, 2004 to 2010

Age Group	Gender	2004	2005	2006	2007	2008	2009	2010	TOTAL 1985-2010
< 1 yr	Female	0	0	0	0	1	0	0	2
	Male	0	0	1	0	0	0	0	5
	Other	0	0	0	0	0	0	0	0
	Total	0	0	1	0	1	0	0	7
1 - 9 yrs	Female	2	1	1	0	0	1	0	13
	Male	0	0	0	0	0	0	0	13
	Other	0	0	0	0	0	0	0	0
	Total	2	1	1	0	0	1	0	26
10 - 14 yrs	Female	2	0	0	0	2	0	0	4
	Male	0	0	1	0	0	0	0	4
	Other	0	0	0	0	0	0	0	0
	Total	2	0	1	0	2	0	0	8
15 - 19 yrs	Female	3	3	2	1	0	3	1	48
	Male	2	2	3	1	1	4	1	40
	Other	0	0	0	0	0	0	0	0
	Total	5	5	5	2	1	7	2	88
20 - 24 yrs	Female	12	7	15	15	6	4	4	195
	Male	17	18	18	21	18	18	17	303
	Other	0	0	0	0	0	0	0	1
	Total	29	25	33	36	24	22	21	499
25 - 29 yrs	Female	17	11	10	22	8	8	10	273
	Male	32	23	36	34	41	36	35	700
	Other	0	0	0	1	0	0	0	5
	Total	49	34	46	57	49	44	45	978
30 - 39 yrs	Female	38	19	23	21	13	26	15	529
	Male	99	110	87	103	83	64	71	2,027
	Other	0	1	0	0	0	0	0	16
	Total	137	130	110	124	96	90	86	2,572
40 - 59 yrs	Female	28	34	15	25	25	27	32	385
	Male	167	154	122	130	125	130	108	2,152
	Other	0	0	0	2	0	0	0	8
	Total	195	188	137	157	150	157	140	2,545
60+ yrs	Female	3	2	6	1	4	2	1	29
	Male	20	15	21	14	18	14	6	237
	Other	0	0	0	0	0	0	0	0
	Total	23	17	27	15	22	16	7	266
unknown	Female	0	0	0	0	0	0	0	568
	Male	0	0	0	0	0	0	0	6,113
	Other	0	0	0	0	0	0	0	316
	Total	0	0	0	0	0	0	0	6,997
TOTAL	**Female**	**105**	**77**	**72**	**85**	**59**	**71**	**63**	**2,046**
	Male	**337**	**322**	**289**	**303**	**286**	**266**	**238**	**11,594**
	Other	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**346**
	BC	**442**	**400**	**361**	**391**	**345**	**337**	**301**	**13,986**

Other = Gender Unknown + Transgender

1985 annual total is only for the months of October, November and December

1.3 Persons testing newly positive for HIV in BC by age group and sex—RATES, 2004 to 2010

Age Group	Gender	2004	2005	2006	2007	2008	2009	2010
< 1 yr	Female	0.0	0.0	0.0	0.0	4.7	0.0	0.0
	Male	0.0	0.0	4.7	0.0	0.0	0.0	0.0
	Other							
	Total	0.0	0.0	2.4	0.0	2.3	0.0	0.0
1 - 9 yrs	Female	2.5	0.9	0.9	0.0	0.0	1.2	0.0
	Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other							
	Total	1.2	0.4	0.4	0.0	0.0	0.6	0.0
10 - 14 yrs	Female	1.6	0.0	0.0	0.0	1.6	0.0	0.0
	Male	0.0	0.0	0.8	0.0	0.0	0.0	0.0
	Other							
	Total	0.8	0.0	0.4	0.0	0.8	0.0	0.0
15 - 19 yrs	Female	2.3	2.2	1.5	0.7	0.0	2.2	0.7
	Male	1.4	1.4	2.0	0.7	0.7	2.7	0.7
	Other							
	Total	1.8	1.8	1.8	0.7	0.3	2.4	0.7
20 - 24 yrs	Female	8.5	4.9	10.5	10.4	4.1	2.7	2.6
	Male	11.7	12.2	12.1	13.9	11.5	11.1	10.3
	Other							
	Total	10.1	8.6	11.3	12.2	7.9	7.0	6.6
25 - 29 yrs	Female	12.9	8.2	7.2	15.4	5.4	5.2	6.3
	Male	24.3	17.2	26.4	24.0	27.7	23.2	21.6
	Other							
	Total	18.6	12.7	16.7	20.0	16.5	14.2	14.0
30 - 39 yrs	Female	12.7	6.5	7.9	7.2	4.4	8.7	5.0
	Male	33.5	37.8	30.2	35.7	28.5	21.9	24.1
	Other							
	Total	23.0	22.2	19.0	21.3	16.4	15.3	14.4
40 - 59 yrs	Female	4.4	5.2	2.3	3.7	3.7	3.9	4.6
	Male	26.7	24.1	18.8	19.9	18.9	19.5	16.0
	Other							
	Total	15.4	14.6	10.5	11.9	11.2	11.6	10.3
60+ yrs	Female	0.7	0.5	1.4	0.2	0.8	0.4	0.2
	Male	5.6	4.1	5.5	3.5	4.3	3.3	1.3
	Other							
	Total	3.0	2.1	3.3	1.8	2.5	1.7	0.7
unknown	Female							
	Male							
	Other							
	Total							
RATE	**Female**	**5.0**	**3.6**	**3.4**	**3.9**	**2.7**	**3.2**	**2.8**
	Male	**16.4**	**15.5**	**13.7**	**14.2**	**13.2**	**12.0**	**10.6**
	Other							
	BC	**10.6**	**9.5**	**8.5**	**9.1**	**7.9**	**7.6**	**6.7**

Other = Gender Unknown + Transgender
Rate per 100,000 population

1.4 Persons testing for HIV in BC by age group and sex—TESTS*, 2004 to 2010

Age Group	Gender	2004	2005	2006	2007	2008	2009	2010	TOTAL 1995-2010
< 1 yr	Female	146	136	160	138	91	89	84	2,131
	Male	117	122	142	130	133	108	94	2,047
	Other	6	10	42	10	4	3	5	167
	Total	269	268	344	278	228	200	183	4,345
1 - 9 yrs	Female	260	211	253	235	237	224	212	3,940
	Male	253	240	246	278	262	261	265	4,691
	Other	31	27	41	9	5	3	1	339
	Total	544	478	540	522	504	488	478	8,970
10 - 14 yrs	Female	399	352	382	363	395	331	336	7,397
	Male	154	164	212	185	179	175	166	3,378
	Other	31	23	11	11	7	9	5	313
	Total	584	539	605	559	581	515	507	11,088
15 - 19 yrs	Female	6,655	6,488	6,850	6,628	6,740	6,205	5,917	112,634
	Male	2,709	2,873	3,071	2,932	3,005	2,894	2,830	44,069
	Other	298	333	169	199	174	148	103	3,575
	Total	9,662	9,694	10,090	9,759	9,919	9,247	8,850	160,278
20 - 24 yrs	Female	15,796	16,857	17,832	17,791	17,904	17,068	16,743	252,661
	Male	8,302	9,173	9,603	9,572	9,920	9,643	9,568	133,387
	Other	551	644	307	370	250	234	198	7,331
	Total	24,649	26,674	27,742	27,733	28,074	26,945	26,509	393,379
25 - 29 yrs	Female	19,181	20,242	22,129	23,106	24,496	24,650	25,037	316,558
	Male	8,227	9,127	9,736	10,125	10,747	10,983	11,567	142,070
	Other	516	563	317	313	215	178	187	7,328
	Total	27,924	29,932	32,182	33,544	35,458	35,811	36,791	465,956
30 - 39 yrs	Female	30,908	32,004	34,353	35,920	37,678	37,898	38,843	487,528
	Male	14,621	15,389	15,661	16,055	16,935	16,648	17,390	243,825
	Other	794	741	358	364	220	205	211	10,776
	Total	46,323	48,134	50,372	52,339	54,833	54,751	56,444	742,129
40 - 59 yrs	Female	13,671	14,428	15,936	16,595	17,114	16,782	17,122	214,327
	Male	17,332	17,898	19,036	19,649	20,519	19,812	20,190	257,248
	Other	965	923	457	392	191	162	198	8,798
	Total	31,968	33,249	35,429	36,636	37,824	36,756	37,510	480,373
60+ yrs	Female	2,025	2,221	2,868	3,162	3,369	2,989	3,218	34,010
	Male	3,399	3,559	4,315	4,769	5,313	4,936	5,382	53,574
	Other	370	355	121	116	62	48	53	2,813
	Total	5,794	6,135	7,304	8,047	8,744	7,973	8,653	90,397
unknown	Female	1,316	238	125	139	74	66	51	8,435
	Male	113	132	93	92	52	43	42	4,394
	Other	675	905	649	690	811	1,455	1,379	11,976
	Total	2,104	1,275	867	921	937	1,564	1,472	24,805
TOTAL	**Female**	**90,357**	**93,177**	**100,888**	**104,077**	**108,098**	**106,302**	**107,563**	**1,439,621**
	Male	**55,227**	**58,677**	**62,115**	**63,787**	**67,065**	**65,503**	**67,494**	**888,683**
	Other	**4,237**	**4,524**	**2,472**	**2,474**	**1,939**	**2,445**	**2,340**	**53,416**
	BC	**149,821**	**156,378**	**165,475**	**170,338**	**177,102**	**174,250**	**177,397**	**2,381,720**

Other = Gender Unknown + Transgender

*TESTS is the number of HIV tests, both positive and negative, performed by the provincial Public Health Microbiology and Reference Laboratory located at the BC Centre for Disease Control

1.5 Persons testing newly positive for HIV in BC by ethnicity and sex—CASES, 2004 to 2010

Ethnicity	Gender*	2004	2005	2006	2007	2008	2009	2010	TOTAL 1995-2010
Caucasian	Female	53	40	22	36	25	31	23	684
	Male	244	224	205	206	167	149	151	3,565
	Other	0	0	0	1	0	0	0	13
	Total	297	264	227	243	192	180	174	4,262
First Nations	Female	30	25	26	29	19	16	20	454
	Male	30	28	27	28	25	35	17	562
	Other	0	1	0	0	0	0	0	6
	Total	60	54	53	57	44	51	37	1,022
Inuit	Female	0	0	0	0	0	0	0	1
	Male	0	0	0	0	0	0	1	5
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	1	6
Métis	Female	4	2	1	4	1	1	1	25
	Male	6	4	1	2	1	4	0	42
	Other	0	0	0	0	0	0	0	0
	Total	10	6	2	6	2	5	1	67
Asian	Female	2	1	2	2	2	2	4	28
	Male	12	18	15	15	29	24	25	259
	Other	0	0	0	0	0	0	0	0
	Total	14	19	17	17	31	26	29	287
South Asian	Female	3	2	7	4	1	1	2	38
	Male	8	12	3	8	7	6	6	150
	Other	0	0	0	0	0	0	0	1
	Total	11	14	10	12	8	7	8	189
Black	Female	10	5	6	4	8	11	6	115
	Male	9	12	9	6	9	12	10	166
	Other	0	0	0	0	0	0	0	1
	Total	19	17	15	10	17	23	16	282
Hispanic	Female	0	0	1	1	0	0	1	15
	Male	11	16	14	17	23	22	9	225
	Other	0	0	0	1	0	0	0	2
	Total	11	16	15	19	23	22	10	242
Arab/West Asian	Female	0	1	1	0	0	0	0	4
	Male	2	0	1	2	3	0	2	19
	Other	0	0	0	0	0	0	0	0
	Total	2	1	2	2	3	0	2	23
Other/Mixed Race	Female	1	1	1	2	1	1	2	10
	Male	3	0	1	2	5	6	3	24
	Other	0	0	0	0	0	0	0	1
	Total	4	1	2	4	6	7	5	35
unknown	Female	2	0	5	3	2	8	4	107
	Male	12	8	13	17	17	8	14	477
	Other	0	0	0	1	0	0	0	13
	Total	14	8	18	21	19	16	18	597
TOTAL	**Female**	**105**	**77**	**72**	**85**	**59**	**71**	**63**	**1,481**
	Male	**337**	**322**	**289**	**303**	**286**	**266**	**238**	**5,494**
	Other	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**37**
	BC	**442**	**400**	**361**	**391**	**345**	**337**	**301**	**7,012**

*Other = Gender Unknown + Transgender
Rate per 100,000 population

1.6 Persons testing newly positive for HIV in BC by exposure category and sex—CASES, 2004 to 2010

Exposure Category*	Gender**	2004	2005	2006	2007	2008	2009	2010	TOTAL 1985-2010
MSM	Female	0	0	0	0	0	0	0	0
	Male	187	181	160	173	181	153	152	6,477
	Other	0	0	0	0	0	0	0	93
	Total	187	181	160	173	181	153	152	6,570
IDU	Female	54	47	41	49	22	21	22	1,006
	Male	84	77	74	67	41	43	29	2,057
	Other	0	1	0	2	0	0	0	35
	Total	138	125	115	118	63	64	51	3,098
HET	Female	46	26	28	35	30	41	34	648
	Male	59	56	45	54	53	53	49	1,084
	Other	0	0	0	1	0	0	0	18
	Total	104	82	73	90	83	92	83	1,750
Other	Female	4	3	3	0	5	7	5	113
	Male	5	5	8	7	2	5	2	231
	Other	0	0	0	0	0	0	0	9
	Total	9	8	11	7	7	12	7	353
NIR/UNK	Female	1	1	0	1	2	2	2	279
	Male	3	3	2	2	9	14	6	1,745
	Other	0	0	0	0	0	0	0	191
	Total	4	4	2	3	11	16	8	2,215
TOTAL	**Female**	**105**	**77**	**72**	**85**	**59**	**71**	**63**	**2,046**
	Male	**337**	**322**	**289**	**303**	**286**	**266**	**238**	**11,594**
	Other	**0**	**1**	**0**	**3**	**0**	**0**	**0**	**346**
	BC	**442**	**400**	**361**	**391**	**345**	**337**	**301**	**13,986**

*Exposure categories:
MSM = Men having Sex with Men
IDU = Injection Drug Use
HET = Heterosexual Contact
Other= Blood/blood products, occupational, perinatal and other exposures
NIR/UNK = No Identified Risk / Unknown Risk

**Other Gender= Gender Unknown + Transgender

1.7 Persons testing newly positive for HIV in BC by health service delivery area—CASES, 2004 to 2010

Health Authority	Health Service Delivery Area	2004	2005	2006	2007	2008	2009	2010	TOTAL 1995-2010
Fraser	Fraser East	18	14	9	15	7	10	7	210
	Fraser North	55	41	33	34	41	40	24	717
	Fraser South	36	33	31	32	21	37	41	606
	Total	109	88	73	81	69	87	72	1,533
Interior	East Kootenay	1	1	2	0	0	1	3	23
	Kootenay Boundary	0	5	4	3	7	1	1	46
	Okanagan	13	10	4	8	11	8	3	167
	Thompson Cariboo Shuswap	6	4	7	6	8	8	5	133
	Total	20	20	17	17	26	18	12	369
Northern	Northwest	8	6	10	4	13	9	6	74
	Northern Interior	14	21	19	23	10	16	8	178
	Northeast	4	1	0	1	1	2	2	19
	Total	26	28	29	28	24	27	16	271
Vancouver Coastal	Richmond	8	7	1	4	4	6	10	96
	Vancouver	192	195	178	192	174	151	148	3,688
	North Shore/Coast Garibaldi	12	11	8	13	8	7	9	220
	Total	212	213	187	209	186	164	167	4,004
Vancouver Island	South Vancouver Island	46	32	38	36	22	30	21	531
	Central Vancouver Island	19	11	9	10	13	8	8	191
	North Vancouver Island	6	2	4	7	4	1	4	67
	Total	71	45	51	53	39	39	33	789
non-BC		4	6	4	3	0	2	1	21
unknown		0	0	0	0	1	0	0	25
BC TOTAL		**442**	**400**	**361**	**391**	**345**	**337**	**301**	**7,012**

1.8 Persons testing newly positive for HIV in BC by health service delivery area —RATES, 2004 to 2010

Health Authority	Health Service Delivery Area	2004	2005	2006	2007	2008	2009	2010
Fraser	Fraser East	6.9	5.3	3.4	5.5	2.5	3.6	2.5
	Fraser North	9.9	7.3	5.8	5.9	7.0	6.7	3.9
	Fraser South	5.7	5.1	4.7	4.8	3.1	5.3	5.8
	Total	7.5	6.0	4.9	5.4	4.5	5.5	4.5
Interior	East Kootenay	1.3	1.3	2.7	0.0	0.0	1.3	3.7
	Kootenay Boundary	0.0	6.6	5.3	3.9	8.9	1.3	1.3
	Okanagan	4.1	3.1	1.2	2.4	3.2	2.3	0.8
	Thompson Cariboo Shuswap	2.8	1.9	3.3	2.8	3.6	3.6	2.2
	Total	3.0	2.9	2.5	2.4	3.6	2.5	1.6
Northern	Northwest	10.2	7.8	13.2	5.4	17.4	12.0	8.0
	Northern Interior	9.7	14.8	13.5	16.3	7.0	11.2	5.6
	Northeast	6.2	1.5	0.0	1.5	1.5	2.9	2.9
	Total	9.0	9.9	10.3	9.9	8.5	9.5	5.6
Vancouver Coastal	Richmond	4.5	3.9	0.5	2.1	2.1	3.1	5.1
	Vancouver	32.1	32.3	29.1	30.8	27.6	23.5	22.7
	North Shore/Coast Garibaldi	4.5	4.1	3.0	4.8	2.9	2.5	3.2
	Total	20.3	20.2	17.6	19.3	17.0	14.7	14.8
Vancouver Island	South Vancouver Island	13.2	9.1	10.7	10.0	6.0	8.2	5.6
	Central Vancouver Island	7.8	4.5	3.6	3.9	5.0	3.1	3.0
	North Vancouver Island	5.3	1.8	3.5	6.0	3.4	0.8	3.3
	Total	10.1	6.3	7.1	7.3	5.3	5.2	4.3
non-BC								
unknown								
BC RATE		**10.6**	**9.5**	**8.5**	**9.1**	**7.9**	**7.6**	**6.7**

Rate per 100,000 population

1.9 Persons testing for HIV in BC by health service delivery area—TESTS, 2004 to 2010

Health Authority	Health Service Delivery Area	2004	2005	2006	2007	2008	2009	2010	TOTAL 1995-2010
Fraser	Fraser East	6,738	7,370	8,098	8,517	8,837	8,818	8,461	116,645
	Fraser North	19,207	18,691	19,784	21,018	21,650	22,130	22,772	287,683
	Fraser South	14,787	15,591	16,697	17,040	17,974	18,362	19,103	237,641
	Total	40,732	41,652	44,579	46,575	48,461	49,310	50,336	641,969
Interior	East Kootenay	1,879	1,898	2,042	2,223	2,278	2,203	2,269	27,537
	Kootenay Boundary	2,038	2,148	2,447	2,465	2,657	2,611	2,626	33,498
	Okanagan	8,933	9,583	10,181	10,874	11,540	12,193	11,801	144,987
	Thompson Cariboo Shuswap	5,765	6,261	6,391	6,407	6,055	5,762	6,264	94,528
	Total	18,615	19,890	21,061	21,969	22,530	22,769	22,960	300,550
Northern	Northwest	2,336	2,623	2,700	2,804	2,907	2,686	2,730	40,669
	Northern Interior	4,644	4,955	5,550	5,645	5,649	5,437	5,340	75,840
	Northeast	1,963	2,200	2,412	2,650	2,685	2,761	2,597	32,496
	Total	8,943	9,778	10,662	11,099	11,241	10,884	10,667	149,005
Vancouver Coastal	Richmond	3,690	3,936	4,119	4,663	4,596	4,566	4,758	60,572
	Vancouver	47,369	48,267	50,818	52,074	54,999	56,030	57,720	731,656
	North Shore/Coast Garibaldi	7,598	8,078	8,767	8,839	9,131	9,320	9,358	126,878
	Total	58,657	60,281	63,704	65,576	68,726	69,916	71,836	919,106
Vancouver Island	South Vancouver Island	12,663	13,804	14,690	14,433	16,142	12,998	12,587	203,188
	Central Vancouver Island	6,774	7,205	7,401	7,332	7,217	6,008	6,421	109,987
	North Vancouver Island	3,219	3,402	3,319	3,354	2,785	2,365	2,590	53,060
	Total	22,656	24,411	25,410	25,119	26,144	21,371	21,598	366,235
unknown		218	366	59					4,855
BC TOTAL		**149,821**	**156,378**	**165,475**	**170,338**	**177,102**	**174,250**	**177,397**	**2,381,720**

Tests is the number of HIV tests, both positive and negative, performed by the Provincial Public Health Microbiology and Reference Laboratory located at the BC Centre for Disease Control

2.1 AIDS case reports in BC, 1983 to 2009

Year of Diagnosis	Cases	Rate	Cumulative Cases
1983	7	0.2	7
1984	29	1.0	36
1985	63	2.1	99
1986	107	3.6	206
1987	136	4.5	342
1988	174	5.6	516
1989	226	7.1	742
1990	232	7.0	974
1991	279	8.3	1,253
1992	326	9.4	1,579
1993	358	10.0	1,937
1994	357	9.7	2,294
1995	342	9.1	2,636
1996	269	6.9	2,905
1997	170	4.3	3,075
1998	175	4.4	3,250
1999	168	4.2	3,418
2000	170	4.2	3,588
2001	99	2.4	3,687
2002	129	3.1	3,816
2003	135	3.3	3,951
2004	125	3.0	4,076
2005	129	3.1	4,205
2006	109	2.6	4,314
2007	107	2.5	4,421
2008	110	2.5	4,531
2009	77	1.7	4,608
TOTAL	**4,608**		

Rate per 100,000 population

2.2 AIDS case reports in BC by age group and sex—CASES, 2003 to 2009

Age Group	Gender	2003	2004	2005	2006	2007	2008	2009	TOTAL 1983-2009
< 1 yr	Female	0	0	0	0	0	0	0	5
	Male	0	0	0	0	0	0	0	3
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	8
1 - 9 yrs	Female	0	0	0	0	0	0	0	5
	Male	0	0	0	0	0	0	0	8
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	13
10 - 14 yrs	Female	0	0	0	0	0	1	0	2
	Male	0	0	0	1	0	0	0	4
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	1	0	1	0	6
15 - 19 yrs	Female	1	0	0	0	0	0	0	3
	Male	0	0	0	0	0	0	0	10
	Other	0	0	0	0	0	0	0	0
	Total	1	0	0	0	0	0	0	13
20 - 24 yrs	Female	1	1	0	0	1	1	0	25
	Male	1	2	0	1	0	0	4	75
	Other	0	0	0	0	0	0	0	0
	Total	2	3	0	1	1	1	4	100
25 - 29 yrs	Female	1	2	0	2	2	1	4	57
	Male	8	4	5	8	0	1	1	408
	Other	0	0	0	0	0	0	0	0
	Total	9	6	5	10	2	2	5	465
30 - 39 yrs	Female	3	4	7	5	3	8	4	149
	Male	45	38	25	21	30	17	14	1,775
	Other	0	0	0	0	0	0	0	2
	Total	48	42	32	26	33	25	18	1,926
40 - 59 yrs	Female	10	9	15	7	5	10	5	130
	Male	55	61	69	51	56	59	40	1,767
	Other	0	0	0	0	0	0	0	2
	Total	65	70	84	58	61	69	45	1,899
60+ yrs	Female	2	1	1	2	2	2	0	16
	Male	8	3	7	11	8	10	5	161
	Other	0	0	0	0	0	0	0	0
	Total	10	4	8	13	10	12	5	177
unknown	Female	0	0	0	0	0	0	0	0
	Male	0	0	0	0	0	0	0	1
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	1
TOTAL	**Female**	**18**	**17**	**23**	**16**	**13**	**23**	**13**	**392**
	Male	**117**	**108**	**106**	**93**	**94**	**87**	**64**	**4,212**
	Other	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
	BC	**135**	**125**	**129**	**109**	**107**	**110**	**77**	**4,608**

Other = Gender Unknown + Transgender

2.3 AIDS case reports in BC by age group and sex —RATES, 2003 to 2009

Age Group	Gender	2003	2004	2005	2006	2007	2008	2009
< 1 yr	Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other							
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 - 9 yrs	Female	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other							
	Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10 - 14 yrs	Female	0.0	0.0	0.0	0.0	0.0	0.8	0.0
	Male	0.0	0.0	0.0	0.8	0.0	0.0	0.0
	Other							
	Total	0.0	0.0	0.0	0.4	0.0	0.4	0.0
15 - 19 yrs	Female	0.7	0.0	0.0	0.0	0.0	0.0	0.0
	Male	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other							
	Total	0.4	0.0	0.0	0.0	0.0	0.0	0.0
20 - 24 yrs	Female	0.7	0.7	0.0	0.0	0.7	0.7	0.0
	Male	0.7	1.4	0.0	0.7	0.0	0.0	2.5
	Other							
	Total	0.7	1.0	0.0	0.3	0.3	0.3	1.3
25 - 29 yrs	Female	0.8	1.5	0.0	1.4	1.4	0.7	2.6
	Male	6.1	3.0	3.7	5.9	0.0	0.7	0.6
	Other							
	Total	3.4	2.3	1.9	3.6	0.7	0.7	1.6
30 - 39 yrs	Female	1.0	1.3	2.4	1.7	1.0	2.7	1.3
	Male	14.8	12.8	8.6	7.3	10.4	5.8	4.8
	Other							
	Total	7.9	7.1	5.5	4.5	5.7	4.3	3.1
40 - 59 yrs	Female	1.6	1.4	2.3	1.1	0.7	1.5	0.7
	Male	9.0	9.7	10.8	7.9	8.6	8.9	6.0
	Other							
	Total	5.3	5.5	6.5	4.4	4.6	5.2	3.3
60+ yrs	Female	0.5	0.2	0.2	0.5	0.4	0.4	0.0
	Male	2.3	0.8	1.9	2.9	2.0	2.4	1.2
	Other							
	Total	1.3	0.5	1.0	1.6	1.2	1.4	0.5
unknown	Female							
	Male							
	Other							
	Total							
Total	**Female**	**0.9**	**0.8**	**1.1**	**0.7**	**0.6**	**1.0**	**0.6**
	Male	**5.7**	**5.2**	**5.1**	**4.4**	**4.4**	**4.0**	**2.9**
	Other							
	BC	**3.3**	**3.0**	**3.1**	**2.6**	**2.5**	**2.5**	**1.7**

Rate per 100,000 population
Other = Gender Unknown + Transgender

2.4 AIDS case reports in BC by ethnicity and sex—CASES, 2003 to 2009

Ethnicity	Gender	2003	2004	2005	2006	2007	2008	2009	TOTAL 1983-2009
Caucasian	Female	8	8	9	7	6	10	7	183
	Male	62	55	61	53	54	53	40	3,049
	Other	0	0	0	0	0	0	0	1
	Total	70	63	70	60	60	63	47	3,233
First Nations	Female	3	4	5	4	3	4	5	88
	Male	13	10	12	10	12	5	9	241
	Other	0	0	0	0	0	0	0	1
	Total	16	14	17	14	15	9	14	330
Inuit	Female	0	0	0	0	0	0	0	1
	Male	0	0	0	0	0	0	0	6
	Other	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	7
Métis	Female	1	0	0	0	0	1	0	4
	Male	1	1	3	0	0	1	1	14
	Other	0	0	0	0	0	0	0	0
	Total	2	1	3	0	0	2	1	18
Asian	Female	0	1	0	0	0	1	0	6
	Male	6	7	4	0	3	3	5	87
	Other	0	0	0	0	0	0	0	0
	Total	6	8	4	0	3	4	5	93
South Asian	Female	0	0	1	0	0	0	0	4
	Male	4	2	1	2	3	3	0	49
	Other	0	0	0	0	0	0	0	0
	Total	4	2	2	2	3	3	0	53
Black	Female	2	0	2	2	2	2	0	27
	Male	6	6	2	3	1	4	1	74
	Other	0	0	0	0	0	0	0	0
	Total	8	6	4	5	3	6	1	101
Hispanic	Female	1	0	0	0	0	0	0	5
	Male	2	0	4	3	4	3	1	72
	Other	0	0	0	0	0	0	0	0
	Total	3	0	4	3	4	3	1	77
Arab/West Asian	Female	0	0	0	0	0	0	0	0
	Male	0	1	0	1	0	1	0	14
	Other	0	0	0	0	0	0	0	0
	Total	0	1	0	1	0	1	0	14
Other/Mixed Race	Female	0	1	0	0	1	0	0	3
	Male	1	0	0	0	0	0	0	23
	Other	0	0	0	0	0	0	0	0
	Total	1	1	0	0	1	0	0	26
unknown	Female	3	3	6	3	1	5	1	71
	Male	22	26	19	21	17	14	7	583
	Other	0	0	0	0	0	0	0	2
	Total	25	29	25	24	18	19	8	656
TOTAL	**Female**	**18**	**17**	**23**	**16**	**13**	**23**	**13**	**392**
	Male	**117**	**108**	**106**	**93**	**94**	**87**	**64**	**4,212**
	Other	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
	BC	**135**	**125**	**129**	**109**	**107**	**110**	**77**	**4,608**

Other = Gender Unknown + Transgender

2.5 AIDS case reports in BC by exposure category and sex —CASES, 2003 to 2009

Exposure Category*	Gender**	2003	2004	2005	2006	2007	2008	2009	TOTAL 1983-2009
MSM	Female	0	0	0	0	0	0	0	0
	Male	38	36	39	33	36	44	25	3,017
	Other	0	0	0	0	0	0	0	0
	Total	38	36	39	33	36	44	25	3,017
IDU	Female	8	8	12	9	8	13	7	187
	Male	25	21	26	20	21	15	21	476
	Other	0	0	0	0	0	0	0	1
	Total	33	29	38	29	29	28	28	664
HET	Female	6	5	7	6	4	5	6	139
	Male	19	21	18	20	21	19	9	316
	Other	0	0	0	0	0	0	0	0
	Total	25	26	25	26	25	24	15	455
Other	Female	0	0	2	0	1	1	0	23
	Male	2	2	3	4	3	1	1	61
	Other	0	0	0	0	0	0	0	1
	Total	3	2	6	4	4	2	2	85
NIR/UNK	Female	3	4	2	1	0	4	0	43
	Male	33	28	19	16	13	8	7	342
	Other	0	0	0	0	0	0	0	2
	Total	36	32	21	17	13	12	7	387
TOTAL	**Female**	**18**	**17**	**23**	**16**	**13**	**23**	**13**	**392**
	Male	**117**	**108**	**106**	**93**	**94**	**87**	**64**	**4,212**
	Other	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**4**
	Total	**135**	**125**	**129**	**109**	**107**	**110**	**77**	**4,608**

*Exposure categories:
MSM = Men having Sex with Men
IDU = Injection Drug Use
HET = Heterosexual Contact
Other= Blood/blood products, occupational, perinatal and other exposures
NIR/UNK = No Identified Risk / Unknown Risk

**Other = Gender Unknown + Transgender

2.6 AIDS case reports in BC by health service delivery area—CASES, 2003 to 2009

Health Authority	Health Service Delivery Area	2003	2004	2005	2006	2007	2008	2009	TOTAL 1983-2009
Fraser	Fraser East	1	2	5	0	2	2	0	70
	Fraser North	10	14	14	11	9	8	4	276
	Fraser South	6	10	11	8	9	12	10	219
	Total	17	26	30	19	20	22	14	565
Interior	East Kootenay	0	0	2	2	0	0	0	14
	Kootenay Boundary	1	0	0	1	1	1	0	28
	Okanagan	4	1	4	5	3	4	3	97
	Thompson Cariboo Shuswap	3	2	2	1	1	3	0	48
	Total	8	3	8	9	5	8	3	187
Northern	Northwest	0	4	0	0	1	2	1	23
	Northern Interior	3	4	2	3	4	1	5	53
	Northeast	0	1	0	0	0	0	0	7
	Total	3	9	2	3	5	3	6	83
Vancouver Coastal	Richmond	5	1	4	2	1	2	3	71
	Vancouver	62	52	60	42	54	54	33	2,802
	North Shore/Coast Garibaldi	5	4	5	1	5	5	2	183
	Total	72	57	69	45	60	61	38	3,056
Vancouver Island	South Vancouver Island	14	13	9	19	6	7	11	366
	Central Vancouver Island	4	3	1	5	3	5	3	94
	North Vancouver Island	3	1	0	0	2	0	0	26
	Total	21	17	10	24	11	12	14	486
non-BC		0	0	0	0	1	0	1	6
unknown		14	13	10	9	5	4	1	225
BC TOTAL		**135**	**125**	**129**	**109**	**107**	**110**	**77**	**4,608**

2.7 AIDS case reports in BC by health service delivery area —RATES, 2003 to 2009

Health Authority	Health Service Delivery Area	2003	2004	2005	2006	2007	2008	2009
Fraser	Fraser East	0.4	0.8	1.9	0.0	0.7	0.7	0.0
	Fraser North	1.8	2.5	2.5	1.9	1.6	1.4	0.7
	Fraser South	1.0	1.6	1.7	1.2	1.3	1.8	1.4
	Total	1.2	1.8	2.0	1.3	1.3	1.4	0.9
Interior	East Kootenay	0.0	0.0	2.7	2.7	0.0	0.0	0.0
	Kootenay Boundary	1.3	0.0	0.0	1.3	1.3	1.3	0.0
	Okanagan	1.3	0.3	1.3	1.5	0.9	1.2	0.9
	Thompson Cariboo Shuswap	1.4	0.9	0.9	0.5	0.5	1.4	0.0
	Total	1.2	0.4	1.2	1.3	0.7	1.1	0.4
Northern	Northwest	0.0	5.1	0.0	0.0	1.3	2.7	1.3
	Northern Interior	2.1	2.8	1.4	2.1	2.8	0.7	3.5
	Northeast	0.0	1.6	0.0	0.0	0.0	0.0	0.0
	Total	1.1	3.1	0.7	1.1	1.8	1.1	2.1
Vancouver Coastal	Richmond	2.8	0.6	2.2	1.1	0.5	1.1	1.6
	Vancouver	10.5	8.7	9.9	6.9	8.7	8.6	5.1
	North Shore/Coast Garibaldi	1.9	1.5	1.9	0.4	1.8	1.8	0.7
	Total	6.9	5.5	6.6	4.2	5.5	5.6	3.4
Vancouver Island	South Vancouver Island	4.1	3.7	2.6	5.3	1.7	1.9	3.0
	Central Vancouver Island	1.7	1.2	0.4	2.0	1.2	1.9	1.1
	North Vancouver Island	2.7	0.9	0.0	0.0	1.7	0.0	0.0
	Total	3.0	2.4	1.4	3.3	1.5	1.6	1.9
non-BC								
unknown								
BC RATE		**3.3**	**3.0**	**3.1**	**2.6**	**2.5**	**2.5**	**1.7**

Rate per 100,000 population

2.8 AIDS case reports in BC by first disease indicative of AIDS—CASES, 2003 to 2009

First Disease	2003	2004	2005	2006	2007	2008	2009	TOTAL 1983-2009
Kaposi's sarcoma	14	14	17	13	14	11	9	686
Peneumosystis carinii pneumonia	40	52	41	31	34	34	19	1,711
Other opportunistic infections	55	34	42	45	41	37	34	1,493
Other malignancies	16	15	14	13	13	19	3	295
HIV wasting syndrome	7	8	10	6	5	7	10	282
HIV encephalopathy	3	2	5	1	0	2	2	138
Diseases affecting pediatric cases only	0	0	0	0	0	0	0	3
TOTAL	**135**	**125**	**129**	**109**	**107**	**110**	**77**	**4,608**

B. Technical Appendix

DATA LIMITATIONS

There are several key limitations to surveillance data which are important to understand in order to interpret surveillance data appropriately:

- The majority of surveillance data presented in this report is extracted from case report forms completed by either health care providers or public health nurses as part of the follow-up process (which includes ensuring appropriate treatment, patient education, and referral to appropriate services). There is an expected reporting delay to receipt of these forms. In this report this primarily affects the reporting of HIV and AIDS data. For HIV data this affects the classification of cases according to exposure category and ethnicity, resulting in a number of cases for the most recent year where this information is unknown. These numbers are not considered final until the following year's annual report. For AIDS data, there is typically a one year reporting delay and data is presented for the previous year only.

- Surveillance trends can be affected by factors which do not represent a true increase or decrease in infection rates. For example, trends are influenced by patient or provider testing behaviours, which may result in changes to the number of tests performed each year (e.g., an increasing number of HIV tests are performed each year by the Provincial Public Health Microbiology and Reference Laboratory). Changes to laboratory testing may also affect results; for example, the greater acceptability of urine nucleic acid antigen testing for chlamydia and gonorrhea may affect uptake of testing (particularly among males), and these tests have increased sensitivity and capacity for detection compared to other methods such as culture.

- Surveillance data is only reflective of the proportion of the population who test for STI or HIV. Individuals with infections who have not tested would not be represented in surveillance data.

- Cases are classified by exposure category and ethnicity according to information elicited during follow-up from the case or their health care provider, and under-reporting of this information may lead to misclassification.

- HIV is reported as the number of new positive HIV tests, and does not reflect the number of new HIV infections (i.e., HIV incidence) as individuals may test positive years after the time of HIV infection.

- The system of enhanced follow-up for HIV was established following the addition of HIV to the reportable diseases list in 2003 and has resulted in improved data quality in subsequent years (see section 7 for details).

CASE DEFINITIONS FOR REPORTABLE INFECTIONS

Diseases included in this annual report are listed as reportable diseases in the *Communicable Disease Regulation* (Schedule A) of the *Public Health Act.*

Chlamydia

Genital: Detection and confirmation of *C. trachomatis* in anogenital or urinary specimens by appropriate laboratory techniques (e.g., isolation of *C. trachomatis* by culture, demonstration of *C. trachomatis* nucleic acid or antigen).

Extra-genital: Detection and confirmation of *C. trachomatis* in specimens from the conjunctiva, pharynx and other extra-genital sites by appropriate laboratory techniques (e.g., isolation of *C. trachomatis* by culture, demonstration of *C. trachomatis* nucleic acid or antigen).

Perinatally-acquired: Detection and confirmation[1] of *C. trachomatis* in nasopharyngeal or other respiratory tract specimens from an infant who developed pneumonia in the first 6 months of life, or conjunctival specimens from an infant who developed conjunctivitis in the first month of life.

Gonorrhea

Genital: Detection and confirmation of *N. gonorrhoeae* in anogenital or urinary specimens by appropriate laboratory techniques (e.g., culture, detection of *N. gonorrhoeae* nucleic acid).

Extra-genital: Detection and confirmation of *N. gonorrhoeae* in specimens from the conjunctiva, pharynx, joint, blood and other extra-genital sites by appropriate laboratory techniques (e.g., culture, detection of *N. gonorrhoeae* nucleic acid).

Perinatally-acquired: Detection and confirmation of N. gonorrhoeae infection in the first 4 weeks of life leading to the diagnosis of gonococcal conjunctivitis, scalp abscess, vaginitis, bacteremia, arthritis, meningitis or endocarditis, by an appropriate laboratory technique (e.g., culture, detection of N. gonorrhoeae nucleic acid).

[1] By appropriate laboratory techniques (e.g., isolation of *C. trachomatis* by culture, demonstration of *C. trachomatis* nucleic acid or antigen).

Syphilis

Syphilis is a complex sexually transmitted infection that has a highly variable clinical course. Classification by a clinician with expertise in syphilis may take precedence over the following case definitions developed for surveillance purposes.

Infectious Syphilis

Meets the case definition for primary, secondary, or early latent syphilis.

Primary Syphilis: Current clinical presentation compatible with primary syphilis (e.g., one or more ulcers/chancres), and one of the following:

- Identification of *T. pallidum* in clinical specimens (e.g., from chancre, regional lymph node) by dark-field microscopy, direct fluorescent antibody, or nucleic acid amplification test (NAAT), or
- Reactive serology (treponemal, regardless of non-treponemal serology reactivity) in individuals with no previous history of syphilis, or
- Significant (e.g., four-fold or greater) increase in titre over the last known non-treponemal test.

Secondary Syphilis: Clinical presentation compatible with secondary syphilis (e.g., rash, fever, malaise, lymphadenopathy, mucus lesions, condyloma lata, alopecia, meningitis, headaches, uveitis, retinitis, recent hearing impairment), and one of the following:

- Identification of *T. pallidum* in clinical specimens (e.g., from chancre, regional lymph node) by dark-field microscopy, direct fluorescent antibody, or nucleic acid amplification test (NAAT), or
- Reactive serology (non-treponemal and treponemal) serology in individuals with no previous history of syphilis, or
- Significant (e.g., four-fold or greater) increase in titre over the last known non-treponemal test.

Early Latent Syphilis: An individual without symptoms of primary or secondary syphilis, and reactive serology (non-treponemal and treponemal), or four-fold increase in titre over the last known non-treponemal test, and one of the following within the previous 12 months:

- Non-reactive serology, or
- Symptoms suggestive of primary or secondary syphilis, or
- Exposure to a sexual partner with primary, secondary or early latent syphilis, or
- Is a member of (or has had sexual partners in the previous 12 months from) groups at known increased risk of syphilis infection in BC, or
- Has a titre of ≥ 1:16.

Early Congenital Syphilis: A stillbirth, neonate, or older individual with clinical presentation[2] compatible with congenital syphilis, onset less than two years of age, and one of the following:

- Four-fold higher RPR than maternal titre and positive treponemal confirmatory test, or
- Detection of *T. pallidum* in clinical specimens (e.g., lesions, placenta, umbilical cord, autopsy) through darkfield microscopy, direct fluorescent antibody assay, or PCR, or
- Mother with untreated or inadequately treated syphilis (primary, secondary, early or late latent syphilis) during pregnancy or at birth.

Maternal Syphilis: A woman who meets the case definition of infectious syphilis (primary, secondary, early latent syphilis) or late latent syphilis, and one of the following:

- Syphilis serology conducted as part of prenatal blood screening, or
- Known to have given birth to an infant (live or stillborn) with congenital syphilis, or
- Clinical presentation with infectious syphilis during pregnancy.

Human Immunodeficiency Virus (HIV)

Adults, adolescents and children ≥ 18 months: Detection of HIV antibody by screening test (i.e., ELISA or Point of Care HIV test) followed by positive confirmatory test (i.e., Western Blot or Nucleic Acid Amplification Test), or detection of HIV nucleic acid (RNA or DNA) or detection of p24 antigen with confirmation by neutralization assay, or isolation of HIV in culture.

Children < 18 months: Detection of HIV DNA by nucleic acid amplification testing on two separate samples collected at different times.

Stage of Infection at Time of HIV Diagnosis

Acute HIV Infection: Meets definition for HIV case, and has laboratory findings suggestive of acute HIV infection in the absence of confirmed detection of HIV antibody (detection of HIV DNA or RNA by NAAT, detection of p24 antigen with confirmation by neutralization assay), and is not diagnosed with AIDS before or up to 12 months after the date of first positive HIV test.

Advanced HIV Disease: Meets definition for HIV case, and is diagnosed with AIDS (based on receipt of an AIDS case report form) before or up to 12 months after the date of the first positive HIV test.

Other/Unknown Stage: Meets the definition for HIV case and does not meet the definitions for acute HIV infection or advanced HIV disease at the time of HIV diagnosis.

[2] Clinical presentation includes any evidence of congenital syphilis on physical examination (e.g., hepatosplenomegaly), evidence of congenital syphilis on radiographs of long bones, a reactive CSF VDRL, an elevated CSF cell count or protein without other cause. Note that neonates may not display clinical manifestations of congenital syphilis and may meet laboratory criteria

Acquired Immune Deficiency Syndrome (AIDS)

One or more of the specified indicator diseases, and meets the case definition for HIV infection.

Indicator diseases for adult and pediatric cases:

- Bacterial pneumonia (recurrent)*
- Candidiasis (bronchi, trachea or lungs)
- Candidiasis (esophageal)*
- Cervical cancer (invasive)
- Coccidioidomycosis (disseminated or extrapulmonary)
- Cryptococcosis (extrapulmonary)
- Cryptosporidiosis chronic intestinal (> 1 month duration)
- Cytomegalovirus diseases (other than in liver, spleen or nodes)
- Cytomegalovirus retinitis (with loss of vision)*
- Encephalopathy, HIV-related (dementia)
- Herpes simplex: chronic ulcer(s) (> 1 month duration) or bronchitis, pneumonitis or esophagitis
- Histoplasmosis (disseminated or extrapulmonary)
- Isosporiasis, chronic intestinal (> 1 month duration)
- Kaposi's sarcoma*
- Lymphoma, Burkitt's (or equivalent term
- Lymphoma, immunoblastic (or equivalent term)
- Lymphoma (primary in brain)
- Mycobacterium avium complex or M. kansasii (disseminated or extrapulmonary)*
- Mycobacterium of other species or unidentified species*
- M. tuberculosis (disseminated or extrapulmonary
- M. tuberculosis (pulmonary)*
- Pneumocvstis iirovecii (formerly Pneumocystis carinii) pneumonia (PCP)*
- Progressive multifocal leukoencephalopathy
- Salmonella septicemia (recurrent)
- Toxoplasmosis of brain*
- Wasting syndrome due to HIV

Indicator diseases that apply only to pediatric cases (< 15 years old):

- Bacterial infections (multiple or recurrent, excluding recurrent bacterial pneumonia)
- Lymphoid interstitial pneumonia and/or pulmonary lymphoid hyperplasia*

*These conditions may be diagnosed presumptively; otherwise, definitive diagnosis is required.

DATA SOURCES

HIV Data—Surveillance

All confirmatory laboratory testing for HIV antibodies is done at the Provincial Public Health Microbiology and Reference Laboratory (PPHRL) located at the BC Centre for Disease Control (BCCDC). BCCDC determines which of these individuals are testing positive for HIV for the first time then informs the appropriate designated public health nurse (PHN) about these individuals. The PHN provides follow-up for these individuals that include completing two forms – Case Report and Risk Assessment. The completed forms are then forwarded to BCCDC where the collected information is entered into the provincial HIV/AIDS database.

Persons testing HIV positive as part of immigration requirements are obtained though two separate sources. As of September 2004, Citizenship and Immigration Canada notifies STI/HIV Prevention and Control at BCCDC of individuals who undergo an immigration medical exam (IME) outside of Canada, test positive for HIV, and indicate BC as their intended province of residence. Individuals who undertake their IME within BC (as indicated by reason for testing) and test positive for HIV are reported to BCCDC by the Provincial Public Health Microbiology and Reference Laboratory through routine surveillance.

HIV Data—Testing

HIV testing data presented in this report is based on HIV testing conducted by the PPHRL which is estimated to conduct > 95% of all screening tests for HIV in the province. The annual numbers of HIV tests presented in this report are slightly less than in previous reports. The following refinements have been made to the algorithm used for counting tests: instead of counting each test we now count test "episodes" (i.e., a person who has multiple HIV tests done in a 30 day period will now be counted as one test episode); proficiency lab tests are now removed from the count; and HIV tests that are submitted by agencies outside of BC are now excluded from the count. Please note that point of care (rapid) HIV tests are not captured in the PPHRL data.

Provincial testing volumes for females undergoing HIV testing as part of prenatal care (reason for testing is prenatal screening) are available from 2007 onwards and include all prenatal HIV tests conducted by the Provincial Public Health Microbiology and Reference Laboratory.

AIDS Data

Due to expected delays associated with AIDS case reports, this report only includes cases to 2009. AIDS case reports are allocated according to the year a client is diagnosed with his/her first AIDS defining illness. Prior to 1997, AIDS case reports were complied courtesy of the Vancouver Health Department. From 1997 to 2000, Clinical prevention Services at the BC Centre for Disease Control (BCCDC) compiled AIDS case reports in collaboration with the Division of HIV/AIDS Surveillance, Bureau of HIV/AIDS and STD, Laboratory Centre for Disease Control, Health Protection Branch, Health Canada.

Since 2000, AIDS case reports have been compiled by Clinical prevention Services at the BC CDC in collaboration with the BC Centre for Excellence in HIV/AIDS. AIDS case report forms are received from health care providers who have made a diagnosis of an AIDS defining illness in a person who is HIV positive, or from public health nurses if this is elicited during follow-up of a new positive HIV test (e.g., AIDS at the time of HIV diagnosis). A twice-yearly review of clinical records maintained by the BC Centre for Excellence in HIV/AIDS is also conducted to identify new diagnoses of AIDS defining illness and the information is entered into the provincial HIV/AIDS database.

Please note that AIDS data presented in this report differs from previous reports, as the review of clinical report from the BC Centre for Excellence in HIV/AIDS in 2010 included additional reports of historic AIDS cases. These cases were identified through a retrospective data linkage with the BC Cancer Agency and identification of new cancer diagnoses meeting the definition for an AIDS defining illness for HIV positive individuals registered with the provincial drug treatment program.

STI Data (gonorrhea, chlamydia, infectious syphilis)

When an individual is diagnosed with a reportable STI, the care provider completes a case report form (Health 208 form) then forwards it to BCCDC where the information is entered into the provincial STI database. Public health clinics with access to the provincial STI database directly enter the information for their newly diagnosed individuals.

Pelvic Inflammatory Disease and Ectopic Pregnancy Data

The diagnoses of pelvic inflammatory disease (PID) and ectopic pregnancy (EP) are captured in the Discharge Abstract Database (DAD) and the Medical Service Plan (MSP) payment database maintained by the BC Ministry of Health . The DAD includes data on patient discharges and day surgeries directly from hospitals in BC, including all known facilities for acute care and day surgery and most facilities for chronic care and rehabilitation. The MSP database contains data on insured medical services which are available to over 95% of the population of BC. This data includes physician billings for inpatient and outpatient care, claims from supplementary healthcare practitioners, and claims for laboratory services and diagnostic procedure. Data is extracted for women of reproductive age (15-44 years) who have at least one physician billing or hospital discharge per year based on the following International Classification of Disease (ICD) codes:

Pelvic Inflammatory Disease

ICD 9 Codes: MSP (1992-2009), DAD (1992-2000)

- Salpingitis and oophoritis (614, 614.0-614.2
- Parametritis and pelvic cellulitis/ peritonitis (614.3-614.5, 614.7)
- Other or unspecified inflammatory disease of female pelvic organs and tissues (614.8, 614.9
- Inflammatory diseases of uterus except cervix (615, 615.0-615.9)

ICD 10 Codes: DAD (2001-2009)

- Salpingitis and oophoritis (N70, N70.0-N70.9
- Parametritis and pelvic cellulitis/peritonitis (N73.0-N73.5)
- Other or unspecified female pelvic inflammatory disease (N73.8, N73.9)
- Inflammatory diseases of uterus except cervix (N71, N71.0-N71.9)

Ectopic Pregnancy

ICD 9 Codes: MSP (1992-2009), DAD (1992-2000)

- Ectopic pregnancy (633)
- Abdominal pregnancy (633.0)
- Tubal pregnancy (633.1)
- Ovarian pregnancy (633.2)
- Other or unspecified ectopic pregnancy (633.8, 633.9)

ICD 10 Codes: DAD (2001-2009)

- Ectopic pregnancy (O00)
- Abdominal pregnancy (O00.0)
- Tubal pregnancy (O00.1)
- Ovarian pregnancy (O00.2)
- Other or unspecified ectopic pregnancy (O00.8, O00.9)

Population Data

Population data and associated rates were based on the P.E.O.P.L.E. 35 Population Estimates and Projections released by BC STATS, BC Ministry of Labour and Citizens' Services (September 2010).

ADDITIONAL NOTES

Classification of Health Region

Cases are assigned to health regions (i.e., health authority, health service delivery area (HSDA)) by patient residence. If residence is unknown, the case is assigned to the health region where the individual was tested.

Classification of Ethnicity

Cases are classified by ethnicity according to information elicited from the case or health care provider during follow-up:

Aboriginal: e.g., First Nations, Inuit, Metis
Arab/West Asian: e.g., Armenian, Egyptian, Iranian, Moroccan, Lebanese, Afghani, Iranian
Asian: e.g., Chinese, Japanese, Vietnamese, Cambodian, Indonesian, Filipino, Korean, Laotian
Black: e.g., African, Haitian, Jamaican, Somali

Caucasian (White): e.g., Irish, Scottish, English, Portuguese, Italian, Russian
Hispanic: e.g., Mexican, Central/South American
South Asian: e.g., East Indian, Pakistani, Sri Lankan, Punjabi, Bangladeshi
Other / Mixed Ethnicity: ethnicity is known but is not included in one of the above categories or case has dual ethnicity
Unspecified: if information about ethnicity is not elicited from case or health care provider

HIV

New or Previous Positive HIV Test: If a report of a new positive HIV test is identified in an individual having a history of a previous positive test (i.e., previous positive test result identified in the Provincial Public Health Microbiology and Reference Laboratory database, or elicited during case follow-up), this is considered a previous positive HIV test and excluded from surveillance reporting. If no such history is elicited, the report is considered to represent a new positive HIV diagnosis and included in surveillance reporting. The exception is for persons testing as part of immigration requirements in that persons who tested previously positive for non immigration purposes are included in section 7 for immigration of persons with HIV.

Endemic Country: Individuals are categorized as being from an endemic country according to the Endemic Countries List maintained by the Public Health Agency of Canada.[3]

Exposure Group Hierarchy: Individuals having a new positive HIV test may belong to more than one exposure category (e.g., a person may have a history of using injection drugs and heterosexual sex). These individuals are assigned to the exposure category listed first (or highest) in the following hierarchy.

1. **MSM:** Male who reports having male sex partner(s), with or without female sex partners.
2. **IDU**: Person who reports current or prior history of injection drug use.
3. **Blood / Blood Product Recipient:** Person who reports receipt of whole blood or blood product (e.g., packed red cells, plasma, platelets, cryoprecipitate, pooled concentrates of clotting factor).
4. **Heterosexual Contact:** Male who reports having female sex partner(s) only, and females who report having male sex partner(s) only.
5. **Occupational Exposure:** Exposure to HIV contaminated blood or body fluids, or concentrated virus in an occupational setting.
6. **Perinatal Transmission:** Transmission of HIV from an HIV-infected mother to her child either in utero, during childbirth, or through breastfeeding.
7. **Other Risk Factor:** Likely route of exposure to HIV is known but cannot be classified into any of the major exposure categories listed here. For example, receipt of semen from an HIV positive donor, or females reporting female sex partner(s) only.
8. **No Identified Risk (NIR):** Route of exposure to HIV is not identified at the time of completion of case follow-up (e.g., route of exposure not provided by case).
9. **Unknown:** Route of exposure to HIV is unknown.

Note that in this report, individuals with a new positive HIV test are categorized into five groups: MSM, IDU, Heterosexual, Other (i.e., blood/blood product recipient, occupational exposure, perinatal transmission, other risk factor) and No Identified Risk (NIR)/Unknown.

Infectious Syphilis

Exposure Group Hierarchy: Infectious syphilis cases may belong to more than one exposure category. These individuals are assigned to the exposure category listed first (or highest) in the following hierarchy.

[3] Public Health Agency of Canada. HIV and AIDS in Canada: Surveillance Report to December 31, 2008. Appendix 4. Surveillance and Risk Assessment Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2008. <www.phac-aspc.gc.ca/aids-sida publication/index.html#surveillance>

1. **MSM**: Male who reports having male sex partner(s), with or without female sex partners.

2. **Street-Involved, Sex Trade Worker and Patron**: includes
   - Sex trade worker (STW) – Reports providing sex to another individual in exchange or money, shelter, food, drugs, etc.
   - Patron of STW – Reports payment (with money, shelter, drugs, food, etc.) for sex with a STW.
   - Street-involved – Reports either: (i) living on the street or in a single room occupancy (SRO) hotel; or (ii) attached to the street; or (iii) having no fixed address; or (iv) transient.

3. **Heterosexual**: Includes
   - Heterosexual contact – Male or female who reports having sex partner(s) of the opposite gender only.
   - Casual heterosexual contact – Reports having more than one sexual partner of the opposite gender during the stage-specific trace-back period.
   - One partner - Reports one sexual partner of the opposite gender during the stage-specific trace-back period.
   - Partner at risk – Reports a sexual partner having an identified risk (e.g., STW, multiple sexual partners, MSM).

4. **Acquired Outside of Canada**: Includes
   - Foreign acquired – Case currently residing in Canada but likely acquired syphilis outside of Canada (i.e., reports sexual partner(s) in other countries).
   - Immigration – Individual immigrating to Canada and identified with syphilis through testing done as part of the immigration process.

5. **Other/Unknown**: Includes
   - WSW – Female who reports having female sex partner(s), with or without male sex partners.
   - No Identified Risk – No risk reported.