

9. Sexually transmissible infections

Surveillance objectives

In general, the objectives of sexually transmissible infection surveillance are to:

- Monitor the epidemiology of sexually transmissible infections in Victoria in terms of time, person and place;
- Provide accessible, relevant and timely disease pattern and trend information to policy makers, researchers, clinicians, the government, other key stakeholders and the public;
- Inform the development of policy, service provisions and timely, appropriate and targeted prevention strategies and interventions;
- Measure the impact of interventions;
- Identify and treat contacts to limit further transmission.

Chlamydia

Summary of notifications

The department received notifications for 12,379 cases of chlamydia in 2008, a 10 per cent increase on the 11,208 cases notified in 2007. The number of notified cases of chlamydia continues to increase by an average of ten per cent per year (figure 32).

The age and sex distributions of cases were consistent with those observed in recent years. There were 7,238 female cases (58 per cent) with a median age of 22 years (range: 17 days to 78 years) and 5,073 male cases (41 per cent) with a median age of 25 years (range: seven days to 74 years). Sex was not reported for 68 cases. The number of cases notified and the combined sex rate were highest in the 20 to 24 years age group (figure 33). The 16 cases in the 0 to 4 years age group were all infant ocular infections.

Region of residence was reported for 11,763 cases (95 per cent) with the highest number and rate of cases among residents of South Metropolitan Region and North and West Metropolitan Region (figure 34). The notification rate was also elevated in residents of the Barwon-South Western Region.

Indigenous status was reported for 6,984 cases, which comprised 56 per cent of the total chlamydia cases and 98 per cent of those cases for which a medical practitioner notification was made. Of the cases where Indigenous status was reported, 72 cases (0.6 per cent) were reported as being of Aboriginal and/or Torres Strait Islander origin.

In addition to the routine surveillance data, the department also collects additional 'enhanced' data about reason for testing and risk factors such as sex of sexual partner, type of sexual partner and place of infection. In 2008, enhanced data were received for 5,619 cases (45 per cent). Of these, 3,740 (67 per cent) were reported as Australian born. Fifty-one per cent of the cases reported screening as the reason for testing followed by 28 per cent that presented with signs or symptoms and 13 per cent from contact tracing (table 20).

Risk factors

Enhanced data were collected for 2,371 male cases, of which 1,658 (70 per cent) reported a female sexual partner and 498 (21 per cent) reported a male sexual partner. Six cases reported sexual partners of both sexes and this information was unknown or not reported for the remaining 203 cases (nine per cent).

Among the males that reported a female sexual partner, 830 cases (50 per cent) reported a casual sexual partner and 632 cases (38 per cent) reported a regular sexual partner as the source of infection. Thirty-eight cases (two per cent) reported a sex worker as the source of infection, one case identified as a sex worker and for the remaining cases this information was unknown (n=156, nine per cent). Among the males that reported a male partner, 385 cases (77 per cent) reported a casual sexual partner, 81 (16 per cent) reported having a regular sexual partner and one case reported a sex worker as the source of the infection. For the

Figure 32: Notified cases of chlamydia by year, Victoria, 2000–2008

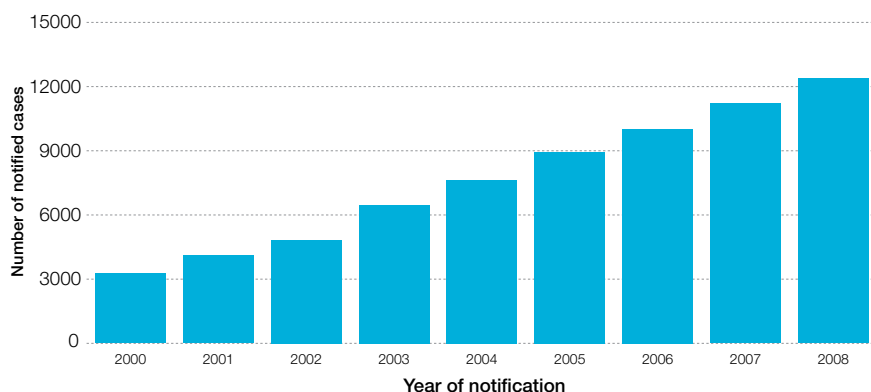


Table 20: Notified cases of chlamydia by reported reason for testing, Victoria, 2008

Reason for testing*	Cases (per cent)
Screening	2,877 (51)
Presented with signs or symptoms	15,80 (28)
Contact tracing	725 (13)
Other	365 (6)
Unknown	71 (1)

Figure 33: Notified cases and notification rates of chlamydia by age group and sex, Victoria, 2008

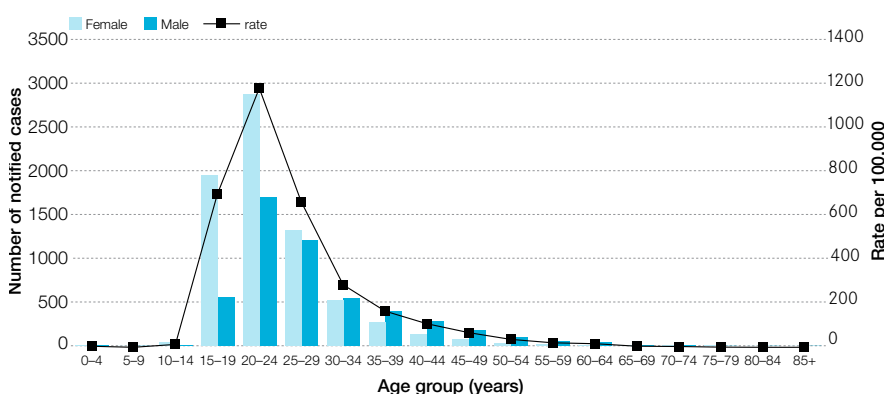
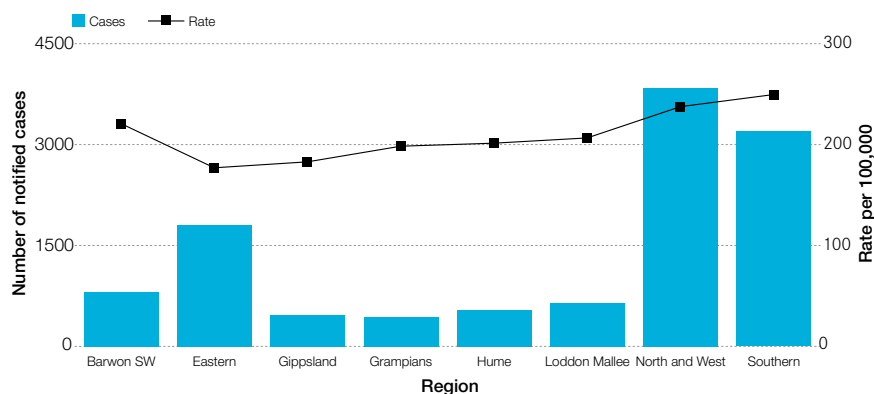


Figure 34: Notified cases and notification rates of chlamydia by region, Victoria, 2008



remaining 31 cases, information about partner type was unknown or not reported.

Eighty-one per cent of the male infections (n=1,927) were reportedly acquired in Victoria. One per cent (n=35) and eight per cent of cases (n=191) reported interstate and overseas acquisition respectively; the remainder were unknown or not reported (n=218, nine per cent).

Enhanced data were collected for 3,232 female cases of which 2,883 (89 per cent) reported a male sexual partner, 39 (one per cent) reported a female sexual partner and three cases reported sexual partners of both sexes. For the remaining 307 cases (nine per cent), this information was unknown or not reported. Fifty-four per cent of the female cases (n=1,747) reported regular sexual partners as the source of infection and 29 per cent (n=924) indicated casual partners. Twenty cases were reported as being sex workers, thirteen cases reported a sex worker as the source of infection and for the remainder of cases this information was not reported or unknown (n=528, 16 per cent).

Eighty-five per cent of the female cases (n=2,754) reported acquiring their infections in Victoria followed by overseas (n=118, four per cent) and interstate (n=45, one per cent). For the remaining cases, this information was not reported or unknown (n=315, 10 per cent).

Outbreak investigations

No outbreaks were identified.

Comment

Chlamydia is the most frequently notified sexually transmissible infection (STI) in Victoria with 12,379 cases in 2008, the highest annual number notified since it became notifiable in 1990. Between 2000 and 2008, the rate of chlamydia infections in Victoria increased from 69 to 238 cases per 100,000 population. The number of notified cases of chlamydia continues to increase by an average of 10 per cent per year. Chlamydia is most commonly reported in women aged 16 to 24 years. However, the number of cases among men is likely to be underestimated because infections in men are more frequently asymptomatic.

Enhanced surveillance data relating to notified cases of chlamydia increased in 2008. The enhanced surveillance system commenced in 2002, and provides additional data to assist in the development of departmental policy relating to the prevention of chlamydia.

Risk factor data collected through the enhanced surveillance system indicated that chlamydia transmission occurs most commonly through heterosexual sex. Among men, infections were most commonly reported to be acquired through casual sexual contacts; whereas among women, the infections were most commonly reported to be acquired through regular sexual contacts.

The increase in the rate of chlamydia notifications may reflect a true increase in incidence characterised by increase in unsafe sexual practices, or it may reflect an increase in screening and testing by medical practitioners. The distribution of cases by age and sex may be an artefact of differential testing. An analysis of testing rates, which is provided by the Victorian Primary Care Network for Sentinel Surveillance on BBVs and STIs is able to help make this distinction. This collaborative project between the Burnet Institute, the department, VIDRL and the Melbourne Sexual Health Centre commenced in March 2006, with summary reports available from http://www.health.vic.gov.au/ideas/surveillance/descriptive_reports and an update article that was published in Volume 10, Issue 2 of the Victorian Infectious Diseases Bulletin.

Gonorrhoea

Summary of notifications

There were 922 cases of gonorrhoea notified in 2008, an eight per cent reduction on the 1,007 cases notified in 2007. Following a marked increase in annual gonococcal notifications in 2005 and 2006, a decline was observed in 2007 and 2008 (figure 35).

Of the cases, 752 (82 per cent) were males, with a median age of 29 years (range: 14 to 73 years) and 164 (18 per cent) were females, with a median age of 26 years (range: 12 to 65 years). Sex was not reported for six cases. The modal age group was 20 to 24 years for both males and females. The combined sex notification rate was highest in the 20 to 24 year age group (figure 36).

Region of residence was reported for 803 cases (87 per cent). Metropolitan areas, in particular the North and West Metropolitan Region and Southern Metropolitan Region, had the highest number of cases and notification rates (figure 37).

Indigenous status was reported for 612 (66 per cent) cases, of which 11 cases were reported as being of Aboriginal and/or Torres Strait Islander origin.

Risk factors

Enhanced surveillance data were collected for 597 cases (65 per cent). Of the 496 male cases for whom these data were received, 280 (56 per cent) reported a male sexual partner, 151 (30 per cent) reported a female sexual partner and for the remaining 65 cases (13 per cent), this information was unknown or not reported.

Figure 35: Notified cases of gonorrhoea by year, Victoria, 2000–2008

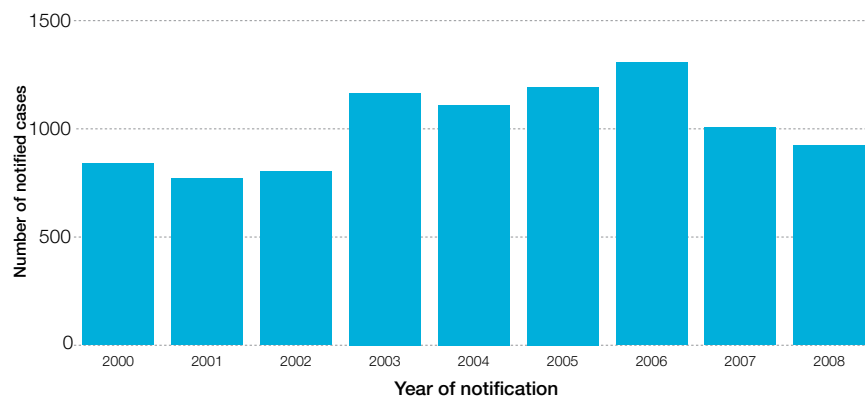


Figure 36: Notified cases and notification rates of gonorrhoea by age group and sex, Victoria, 2008

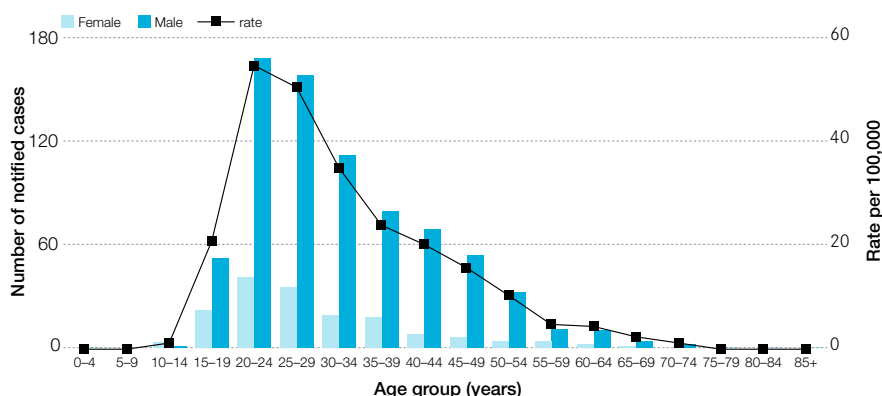
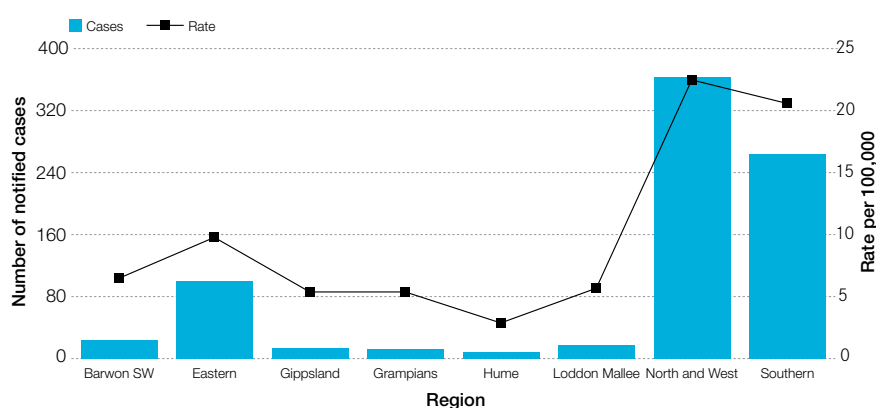


Figure 37: Notified cases and notification rates of gonorrhoea by region, Victoria, 2008



Among male cases reporting a male sexual partner, 220 (79 per cent) reported a casual partner and 44 (16 per cent) reported a regular partner. Among the male cases reporting a female sexual partner, 91 (60 per cent) reported a casual partner, 22 (15 per cent) reported a regular partner and 22 (15 per cent) reported a sex worker as the source of infection. This information was unknown or not reported for the remaining cases. Seventy-five per cent of the male cases (n=373) reported Victoria as

the place of acquisition of infection followed by overseas (n=73, 15 per cent) and interstate (n=9, two per cent). Place of acquisition of infection was unknown or not reported for the remaining 41 cases.

Enhanced data were reported for 98 female cases, of which 87 (89 per cent) cases reported a male partner and one case reported a female partner as the source of infection. Sex of the sexual partner was unknown or not reported for 10 cases. Of the cases for which a male partner was

reported, 42 (48 per cent) reported a regular partner and 32 (37 per cent) reported a casual partner as the source of infection. One case reported a sex worker as the source of infection and five cases reported being sex workers themselves. For the remaining seven cases source of infection was unknown or not reported.

Seventy-eight per cent of the female cases (n=76) reported Victoria as the place of acquisition of infection, 10 cases reported overseas and one case reported interstate as the place of acquisition of infection. For the remaining 11 cases this information was unknown.

Eighty per cent of the gonorrhoea diagnoses in men who reported a female sexual partner were based on urethral or urine specimens; whereas among males with a reported male sexual partner approximately one half and one quarter of diagnoses were made from urethral swabs/urine and rectal swabs respectively (table 21). Twenty per cent of the men who reported a female sexual partner were diagnosed from a pharynx sample compared to nil in 2007. A further 16 per cent were diagnosed from pharyngeal swabs for men who reported male sexual partners. Fifty per cent and 41 per cent of the female cases were diagnosed from cervical/vaginal and urine specimens respectively.

Ciprofloxacin and ceftriaxone susceptibility testing is conducted on *Neisseria gonorrhoeae* isolates forwarded to the Microbiological Diagnostic Unit. There were 578 isolates tested (for 511 cases) for ciprofloxacin susceptibility in 2008

Table 21: Notified cases of gonorrhoea by sex, reported sex of partner and specimen site, Victoria, 2008

Specimen site*	Male cases (per cent)			Female cases (per cent)
	Female partner	Male partner	Unknown	
Rectum	0 (0)	99 (33)	4 (4)	2 (1)
Urethra/urine	209 (79)	148 (49)	81 (88)	89 (41)
Cervix/vagina	–	–	–	110 (50)
Pharynx	53 (20)	53 (18)	0 (0)	4 (2)
Other	1 (<1)	1 (<1)	1 (1)	8 (4)
Unknown	2 (1)	1 (<1)	6 (7)	6 (3)

* Multiple specimens were taken for some individuals

Table 22: Ciprofloxacin susceptibility of *N. gonorrhoeae* isolates by sex, reported sex of partner and likely place where infection was acquired, Victoria, 2008

Sex	Sex of partner	Where acquired	Isolates (per cent)			Total
			Sensitive	Less sensitive	Resistant	
Female	All	Australia	12 (29)	2 (5)	28 (67)	42 (100)
		Overseas	2 (20)	0 (0)	8 (80)	10 (100)
		Unknown	7 (37)	1 (5)	11 (58)	19 (100)
Female total			21 (30)	3 (4)	47 (66)	71 (100)
Male	Female	Australia	26 (37)	1 (1)	43 (61)	70 (100)
		Overseas	3 (10)	0 (0)	28 (90)	31 (100)
		Unknown	1 (33)	0 (0)	2 (67)	3 (100)
	Male	Australia	54 (25)	4 (2)	161 (73)	220 (100)
		Overseas	4 (20)	1 (5)	15 (75)	1 (100)
		Unknown	1 (11)	0 (0)	8 (89)	9 (100)
	Unknown	Australia	6 (35)	0 (0)	11 (65)	17 (100)
		Overseas	0 (0)	0 (0)	5 (100)	5 (100)
		Unknown	2 (28)	0 (0)	5 (71)	7 (100)
Male total			142 (28)	10 (2)	353 (70)	506 (100)
Total			164 (28)	13 (2)	401 (69)	578 (100)

* Multiple isolates from the same individual may be included

(four per cent fewer than the 601 isolates tested in 2007) of which 401 (69 per cent) were ciprofloxacin-resistant (table 22). There was a higher proportion of ciprofloxacin-resistant isolates among those with overseas-acquired infections compared to those reported as acquired in Australia. There was also a higher proportion of ciprofloxacin-resistant isolates among those acquired through male-to-male sexual contact than those acquired through heterosexual contact.

There were 568 isolates tested for ceftriaxone sensitivity of which all were sensitive.

Outbreak investigations

No outbreaks were identified.

Comment

Neisseria gonorrhoea infection is the second most commonly notified STI in Victoria. The annual notification rate of gonococcal infection increased from 17 cases per 100,000 population in 2000 to 25 cases per 100,000 in 2006. A substantial decline in the overall notification rate of gonorrhoea infection occurred from 2006 to 2008 with a 36 per cent reduction in males, however among females there was an 18 per cent increase in the notification rate over the same period. The higher notification rate among men is partly attributable to cases of gonorrhoea in men who have sex with men.

The reasons or significance of this reduction in gonorrhoea is unclear. Despite fewer isolates tested for ciprofloxacin sensitivity, a higher proportion was ciprofloxacin-resistant in 2008 compared to 2007, although universal sensitivity to ceftriaxone continued.

Human immunodeficiency virus – new diagnoses

This section refers to new diagnoses of human immunodeficiency virus (HIV) and only includes individuals whose first positive HIV test was recorded in Victoria. Although HIV antibody testing first became available in Victoria in 1984, a small number of samples collected in 1983 were tested retrospectively. Collection of information on 'postcode', 'clinical presentation at HIV diagnosis', 'reason for test', 'country of birth' and 'HIV testing history' commenced in 1994 and 'partner type' and 'Aboriginal and Torres Strait Islander status' in 1997; therefore the relevant texts and tables do not include data prior to these years.

Throughout this chapter, high prevalence country (HPC) is defined as a country where the adult HIV prevalence is greater than one per cent and HIV is transmitted predominantly by heterosexual contact. This includes countries in sub-Saharan Africa, Cambodia, Thailand, Myanmar, and some Caribbean countries. Analyses of males who reported male-to-male sex as a risk factor also includes those who additionally reported injecting drug use as a risk factor for their exposure to HIV. Finally, there may be minor variations in the numbers provided in this report and previous reports due to ongoing data cleaning, and the receipt of new information enabling duplicates and interstate diagnoses to be identified.

Figure 38: Notified cases and notification rates of new HIV diagnoses, Victoria, 1983–2008

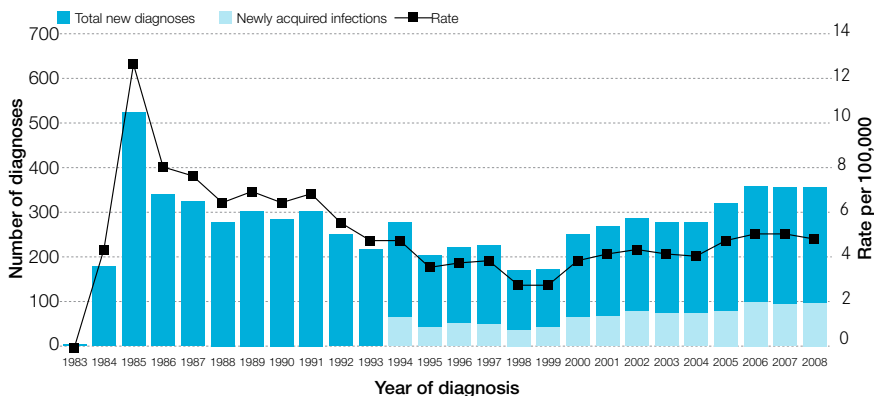
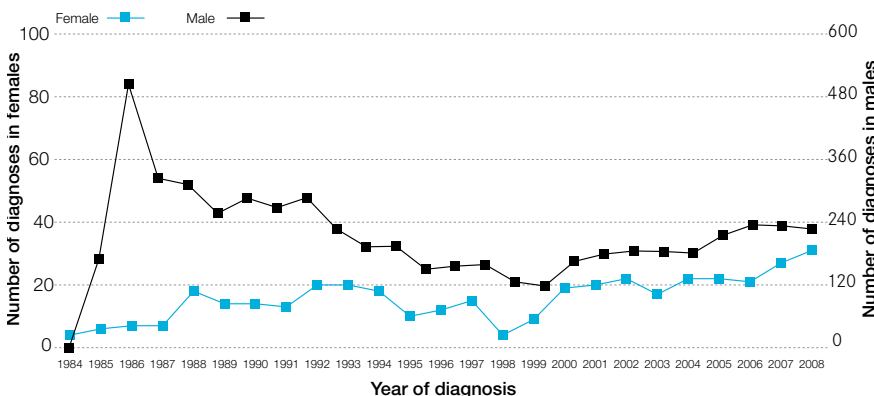


Figure 39: Number of new HIV diagnoses by sex, Victoria, 1983–2008



Summary of notifications

In 2008, there were 261 new HIV diagnoses (table 23) representing a rate of five diagnoses per 100,000 population (figure 38). Of the 261 diagnoses in 2008, 39 per cent were classified as newly acquired infections. Newly acquired infections are determined on the basis of a previous negative HIV test and/or a seroconversion illness within the 12 months preceding HIV diagnosis.

Between 2004 and 2008 there were 1,230 new HIV diagnoses; after initial increases of 16 per cent in 2005 and eight per cent in 2006, the number of new HIV diagnoses has remained relatively stable from 2006 through to 2008.

In 2008, 88 per cent of diagnoses were in males, 39 per cent of which were classified as newly acquired infections. Diagnoses decreased by three per cent in males but increased by 15 per cent in females (representing four additional female cases) in 2008 compared to 2007 (table 23 and figure 39).

There was a change in the age distribution of individuals diagnosed with HIV in 2008 compared to 2007 (table 23). Overall, the median age was 35 years compared to 38 years in 2007, and the number of males diagnosed with HIV within the 40 to 49 years age group decreased by 21 per cent. However, this decrease was offset by an increase in the diagnoses

of younger males less than 30 years of age, with the 20 to 29 years age group increasing by 37 per cent on the previous year (table 23).

Similar to the previous four years (2004–2007), in 2008 the majority (88 per cent) of individuals resided in metropolitan regions at the time of their diagnosis, with 46 per cent of those residing in the Southern Metropolitan Region (n=106) (table 23). This represents a 26 per cent increase in individuals diagnosed with HIV in this region compared to the previous year. Conversely, the number of individuals residing in the other regions decreased or remained the same.

The majority of new HIV diagnoses were in Australian-born individuals (66 per cent) followed by those born in Asia (12 per cent) (table 23). No diagnoses were reported in Aboriginal and/or Torres Strait Islander people in 2008.

Risk factors

The primary route of transmission remains sexual contact between men, representing 72 per cent of total diagnoses, and a rate of 8 cases per 100,000 males (figure 40). Of the 229 males aged over 13 years, 82 per cent (n=188) had been exposed through male-to-male sexual contact (including seven cases also reporting injecting drug use). Thirteen per cent (n=31) had been exposed through heterosexual sexual contact (table 24). This latter group included five cases (16 per cent) from high HIV prevalence countries and 15 cases (47 per cent) for whom the likely heterosexual partner/source was not identified (table 25).

Seventy-eight per cent of men reporting male-to-male sexual contact reported having acquired HIV in Victoria, six per cent elsewhere in Australia, eight per cent overseas, and for eight per cent the place of acquisition of infection was unknown (appendix 2, table 38). As in the previous four years, the majority of cases with a history of male-to-male sex (56 per cent) reported casual sex partners as their likely exposure.

There was a change in the age distribution of HIV notifications reporting male-to-male sexual contact compared to 2007. Between 1999 and 2007 the median age of diagnosis in this exposure category increased from 34 to 39 years. In 2008, however, the median age declined to 35 years. This decline in the median age was driven by an increase in the proportion of HIV diagnoses reporting a history of male-to-male sex aged less than 35 years increasing from 36 per cent in 2007 to 50 per cent in 2008.

Of those exposed through male-to-male sexual contact, 44 per cent (n=82) were classified as having a newly acquired infection, similar to the previous year (appendix 2, table 39). The median age of newly acquired infections in this exposure category was 34 years, and also represented a decline from 2007 (36 years) and 2006 (37 years).

Thirty-one males reported heterosexual exposure, of whom five (16 per cent) were from high prevalence countries: the lowest proportion in this exposure category in the last five years. Among the remaining 26 male cases in the

heterosexual exposure category, eight (31 per cent) reported acquiring their HIV infection overseas. This proportion was similar to that reported in 2007 (appendix 2, table 38).

The median age at diagnosis in males with heterosexual exposure declined from 45 years in 2007 to 38 years in 2008. Of the last five years the median age peaked in 2006 at 47 years.

There were 30 females aged over 13 years with new HIV diagnoses in 2008. Consistent with the previous four years, heterosexual exposure accounted for 90 per cent of female diagnoses (table 24). This included 12 cases (44 per cent) from high HIV prevalence countries and nine cases (33 per cent) where the likely heterosexual partner/source was not identified (table 25).

The median age at diagnosis in females was 31 years in 2008, similar to that reported in 2007. The median age peaked in 2005 at 34 years but dropped to the current level in subsequent years.

Injecting drug use, when reported as the only risk factor for HIV exposure, continued to be low with six diagnoses in males and one in females in 2008 (table 24). In the last five years injecting drug use was the sole exposure to HIV in 38 diagnoses.

In 2008, two children under the age of 13 years were diagnosed with HIV. Both cases were born overseas and were cases of mother-to-child transmission (table 24).

From 2004 through 2008, 33 per cent of those exposed through male-to-male sex reported a negative

Table 23: New diagnoses of HIV, by demographic characteristics, Victoria, 1983–2008

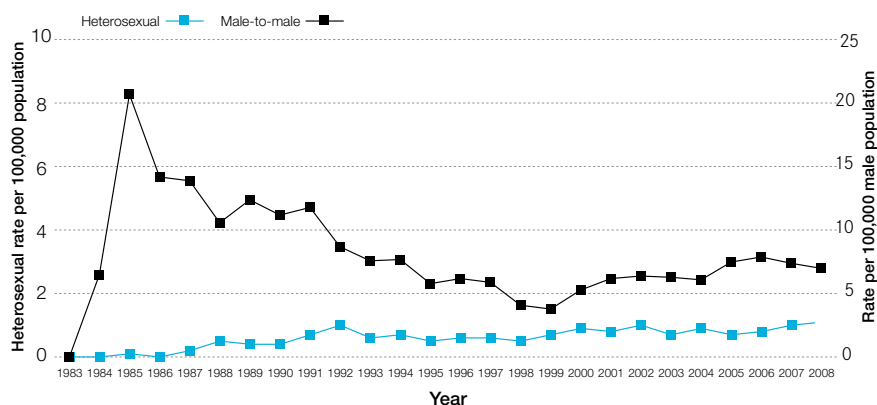
Demographic characteristics	HIV Diagnoses, cases (per cent)							
	1983–1998	1999–2003	2004	2005	2006	2007	2008	Total
Sex								
Male	3658 (95)	846(91)	185 (89)	218 (91)	238 (92)	236 (90)	230 (88)	5611 (93)
Per cent newly acquired	28*	36	37	35	38	37	39	34*
Female	182 (5)	87(9)	22 (11)	22 (9)	21 (8)	27 (10)	31 (12)	392 (7)
Per cent newly acquired	29*	16	23	14	38	22	39	24
Total	3863 (100)	933 (100)	207 (100)	240 (100)	259 (100)	263 (100)	261 (100)	6026 (100)
Per cent newly acquired	28*	34	36	33	38	36	39	33*
Age group – overall								
0–12	38 (1)	7 (1)	1 (0)	1 (0)	1 (0)	4 (2)	2 (1)	54 (1)
13–19	101 (3)	17 (2)	2 (1)	2 (1)	4 (2)	3 (1)	8 (3)	137 (2)
20–29	1415 (37)	237 (25)	47 (23)	50 (21)	54 (21)	52 (20)	70 (27)	1925 (32)
30–39	1325 (35)	386 (41)	84 (41)	92 (38)	86 (33)	92 (35)	90 (34)	2155 (36)
40–49	568 (15)	171 (18)	53 (26)	62 (26)	68 (26)	76 (29)	60 (23)	1058 (18)
50+	292 (8)	115 (12)	20 (10)	33 (14)	46 (18)	36 (14)	31 (12)	573 (10)
Median age (years)	32	35	36	37	38	38	35	36
Age group – Male								
0–12	29 (1)	4 (0)	0 (0)	1 (0)	0 (0)	2 (1)	1 (0)	37 (1)
13–19	92 (3)	15 (2)	2 (1)	1 (0)	2 (1)	1 (0)	4 (2)	117 (2)
20–29	1339 (38)	209 (25)	38 (21)	45 (21)	49 (21)	43 (18)	59 (26)	1782 (32)
30–39	1277 (36)	349 (41)	78 (42)	80 (37)	79 (33)	84 (36)	81 (35)	2028 (37)
40–49	548 (15)	161 (19)	48 (26)	59 (27)	64 (27)	71 (30)	56 (24)	1007 (18)
50+	273 (8)	108 (13)	19 (10)	32 (15)	44 (18)	35 (15)	29 (13)	540 (10)
Median age (years)	32	36	37	37	39	39	36	34
Age group – Female								
0–12	9 (5)	3 (3)	1 (5)	0 (0)	1 (5)	2 (7)	1 (3)	17 (4)
13–19	9 (5)	2 (2)	0 (0)	1 (5)	2 (10)	2 (7)	4 (13)	20 (5)
20–29	76 (42)	28 (32)	9 (41)	5 (23)	5 (24)	9 (33)	11 (35)	143 (37)
30–39	48 (27)	37 (43)	6 (27)	12 (55)	7 (33)	8 (30)	9 (29)	127 (32)
40–49	20 (11)	10 (11)	5 (23)	3 (14)	4 (19)	5 (19)	4 (13)	51 (13)
50+	19 (10)	7 (8)	1 (5)	1 (5)	2 (10)	1 (4)	2 (6)	33 (8)
Median age (years)	30	33	30	34	32	30	30	31
Residence at diagnosis: Metropolitan Victoria *								
Eastern Metropolitan	–	111 (14)	26 (15)	33 (15)	24 (11)	27 (12)	23 (10)	244 (13)
North Western Metropolitan	–	351 (44)	79 (45)	98 (45)	98 (44)	111 (50)	101 (44)	838 (45)
Southern Metropolitan	–	343 (43)	70 (40)	87 (40)	101 (45)	84 (38)	106 (46)	791 (42)
Total	–	805 (100)	175 (100)	218 (100)	223 (100)	222 (100)	230 (100)	1873 (100)
Residence at diagnosis: Regional Victoria *								
Barwon South West	–	19 (23)	7 (33)	6 (35)	12 (39)	5 (16)	1 (4)	50 (24)
Gippsland	–	10 (12)	3 (14)	2 (12)	1 (3)	5 (16)	6 (26)	27 (13)
Grampians	–	16 (19)	1 (5)	3 (18)	7 (23)	5 (16)	4 (17)	36 (17)
Hume	–	18 (21)	4 (19)	1 (6)	2 (7)	10 (31)	5 (22)	40 (19)
Loddon–Mallee	–	21 (25)	6 (29)	5 (29)	9 (29)	7 (22)	7 (30)	55 (26)
Total	–	84 (100)	21 (100)	17 (100)	31 (100)	32 (100)	23 (100)	208 (100)
Region/country of birth *								
Asia	–	97 (10)	16 (8)	16 (7)	25 (10)	31 (12)	30 (12)	215 (10)
Australia	–	637 (68)	157 (76)	177 (74)	187 (72)	177 (67)	173 (66)	1508 (70)
Europe excluding UK/Ireland	–	40 (4)	2 (1)	9 (4)	13 (5)	7 (3)	7 (3)	78 (4)
North Africa & Middle East	–	5 (1)	4 (2)	5 (2)	4 (2)	5 (2)	1 (0)	24 (1)
North America	–	7 (1)	5 (2)	3 (1)	0 (0)	3 (1)	0 (0)	18 (1)
Oceania and Antarctica	–	19 (2)	7 (3)	5 (2)	7 (3)	2 (1)	10 (4)	50 (2)
South/Central America & Caribbean	–	11 (1)	0 (0)	2 (1)	2 (1)	4 (2)	3 (1)	22 (1)
Sub Saharan Africa	–	68 (7)	12 (6)	12 (5)	7 (3)	14 (5)	19 (7)	132 (6)
UK/Ireland	–	30 (3)	3 (1)	5 (2)	9 (4)	5 (2)	8 (3)	60 (3)
Unknown	–	19 (2)	1 (1)	6 (3)	5 (2)	15 (6)	10 (4)	56 (3)

* does not include data prior to 1994 when this information was not collected

test result for HIV in the previous 12 months; this remained largely unchanged in the last five years (appendix 2, table 40). Comparatively, nine per cent of males and 16 per cent of females who reported heterosexual exposure to HIV also reported a previous negative test in the 12 months prior to diagnosis.

In 2008, 76 per cent (n=142) of those exposed to HIV via male-to-male sex were asymptomatic at presentation. Eight per cent (n=15) were concurrently diagnosed with AIDS. The main reasons for presentation among asymptomatic cases in 2008 were STI screening (44 per cent, n=63) and risk behaviour (28 per cent, n=40). Despite the majority of individuals diagnosed with HIV in 2008 being asymptomatic, 45 per cent (n=84) of individuals reporting a history of male-to-male sexual contact

Figure 40: Notification rate of new diagnoses of HIV among heterosexuals and those reporting male to male sex, Victoria, 1983–2008



and 64 per cent (n=37) individuals reporting heterosexual exposure had a CD4 cell count less than 500 cells per μ L at diagnosis (table 26).

There were 33 deaths in people diagnosed with HIV in 2008 (figure 41), 12 of which were attributed to an

AIDS defining illness. This brings the number of deaths following infection since the commencement of the HIV outbreak to 1,954. Ninety-five per cent of the total deaths were in males. It is important to note however, that cause of death information has

Table 24: New diagnoses of HIV by year, sex and exposure category, Victoria, 1983–2008

Exposure category	HIV diagnoses, cases (per cent)							
	1983–1998	1999–2003	2004	2005	2006	2007	2008	Total
Males over 13 yrs of age								
Male-to-male sex	3028 (83)	632 (75)	140 (76)	176 (81)	198 (83)	191 (82)	181 (79)	4546 (82)
Male-to-male sex & injecting drug use	166 (5)	40 (5)	14 (8)	12 (6)	5 (2)	5 (2)	7 (3)	249 (4)
Injecting drug use	87 (2)	35 (4)	7 (4)	8 (4)	7 (3)	3 (1)	6 (3)	153 (3)
Heterosexual contact	169 (3)	118 (14)	23 (13)	15 (7)	25 (10)	30 (13)	31 (13)	411 (7)
Receipt of blood/tissue	88 (2)	1 (0)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	90 (2)
Unavailable	91 (3)	16 (2)	1 (1)	5 (2)	3 (1)	5 (2)	4 (2)	125 (2)
Total	3629 (100)	842 (100)	185 (100)	217 (100)	238 (100)	234 (100)	229 (100)	5574 (100)
Females over 13 yrs of age								
Injecting drug use	29 (17)	5 (6)	1 (5)	2 (9)	1 (5)	2 (8)	1 (3)	41 (11)
Heterosexual contact	130 (76)	77 (92)	20 (95)	20 (91)	18 (90)	23 (92)	27 (90)	315 (84)
Receipt of blood/tissue	10 (6)	1 (1)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	11 (3)
Unavailable	4 (2)	1 (1)	0 (0)	0 (0)	1 (5)	0 (0)	2 (7)	8 (2)
Total	173 (100)	84 (100)	21 (100)	22 (100)	20 (100)	25 (100)	30 (100)	375 (100)
Children under 13 yrs of age								
Mother-to-child transmission	10 (23)	5 (71)	1 (100)	1 (100)	1 (100)	4 (100)	2 (100)	24 (40)
Receipt of blood/tissue	34 (77)	2 (29)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	36 (60)
Total	44 (100)	7 (100)	1 (100)	1 (100)	1 (100)	4 (100)	2 (100)	60 (100)

Table 25: New diagnoses of HIV by year, sex and exposure category among heterosexuals, Victoria, 1983–2008

Likely sources of infection in heterosexuals	HIV diagnoses among heterosexuals, cases (per cent)							Total
	1983–1998	1999–2003	2004	2005	2006	2007	2008	
Males								
Sex with IDU	8 (5)	1 (1)	0 (0)	0 (0)	0 (0)	1 (3)	2 (6)	12 (3)
Sex with person from high prevalence country	24 (14)	20 (17)	5 (22)	1 (7)	6 (24)	10 (32)	4 (13)	70 (17)
Sex with person with HIV	19 (11)	3 (3)	3 (13)	3 (20)	1 (4)	4 (13)	5 (16)	38 (9)
Sex with heterosexual not further specified*	75 (44)	54 (45)	5 (22)	3 (20)	10 (40)	9 (29)	15 (47)	171 (41)
Person is from high prevalence country	43 (25)	40 (35)	10 (44)	8 (53)	8 (32)	6 (23)	5 (16)	120 (30)
Total	169 (100)	118 (100)	23 (100)	15 (100)	25 (100)	30 (100)	31 (100)	411 (100)
Females								
Sex with IDU	12 (9)	4 (5)	0 (0)	3 (15)	1 (6)	1 (4)	1 (4)	22 (7)
Sex with bisexual man	34 (26)	8 (10)	4 (20)	2 (10)	2 (11)	2 (9)	2 (7)	54 (17)
Sex with person from high prevalence country	11 (8)	8 (10)	3 (15)	1 (5)	2 (11)	2 (9)	2 (7)	29 (9)
Sex with person with HIV	27 (21)	12 (16)	3 (15)	4 (20)	2 (11)	3 (13)	1 (4)	52 (17)
Sex with heterosexual not further specified*	20 (15)	5 (6)	2 (10)	1 (5)	5 (28)	6 (26)	9 (33)	48 (15)
Sex with person with other specified risk	6 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (2)
Person is from high prevalence country	20 (15)	40 (52)	8 (40)	9 (45)	6 (33)	9 (39)	12 (44)	104 (33)
Total	130 (100)	77 (100)	20 (100)	20 (100)	18 (100)	23 (100)	27 (100)	315 (100)

* Likely heterosexual partner/source not identified

Table 26: New diagnoses of HIV by year, exposure category and CD4 count at diagnosis, Victoria, 1999–2008

CD4 count per μL at HIV diagnosis	HIV diagnoses, cases (per cent)					
	1999–2003	2004	2005	2006	2007	2008
Male-to-male sexual contact*						
<500	311 (46)	74 (48)	80 (43)	116 (57)	103 (53)	84 (45)
500+	282 (42)	66 (43)	91 (48)	66 (33)	68 (35)	79 (42)
Unavailable	79 (12)	14 (9)	17 (9)	21 (10)	25 (13)	25 (13)
Total	672 (100)	154 (100)	188 (100)	203 (100)	196 (100)	188 (100)
Heterosexual sexual contact						
<500	134 (69)	31 (72)	23 (66)	27 (63)	27 (51)	37 (64)
500+	29 (15)	10 (23)	10 (29)	10 (23)	15 (28)	11 (19)
Unavailable	32 (16)	2 (5)	2 (6)	6 (14)	11 (21)	10 (17)
Total	195 (100)	43 (100)	35 (100)	43 (100)	53 (100)	58 (100)

* Includes MSM who also report injecting drug use as their exposure to HIV

been systematically collected only since 1998. Since 1998, 405 deaths have been recorded following HIV diagnosis in Victoria, and cause of death is available for 85 per cent of these deaths of which 57 per cent (n= 195) were reported to have died from an AIDS defining illness. The proportion of deaths attributable to AIDS decreased from 79 per cent in 1998 to 43 per cent in 2008.

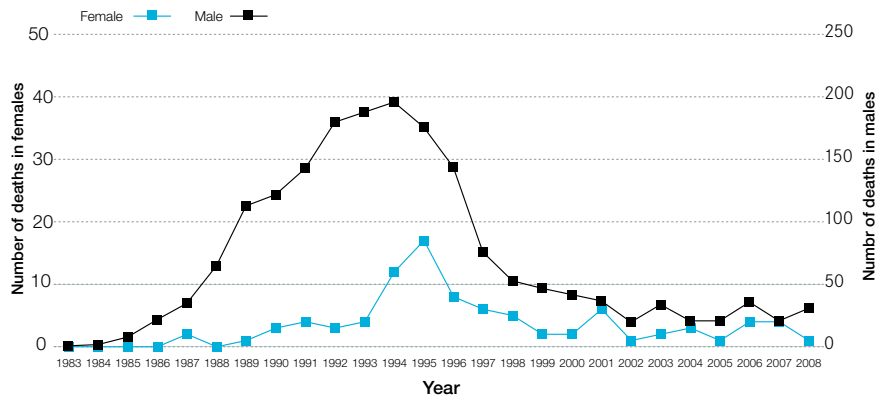
Comment

Following a substantial increase in annual HIV notifications from 2000 onwards, new HIV diagnoses in Victoria have remained unchanged in 2008 compared to 2007 and 2006.

Male-to-male sex continues to account for the majority of HIV diagnoses in Victoria, with most of these diagnoses occurring in men reporting likely routes of exposure as sex with casual partners. The proportion of younger men (aged less than 35 years) diagnosed with HIV and reporting male-to-male sex exposures increased compared to 2007. Whether this indicates a beginning of an increase in the transmission of HIV among young men who have sex with men needs to be followed closely.

The number of HIV diagnoses

Figure 41: Deaths following HIV diagnosis by year and sex, Victoria, 1983–2008



associated with heterosexual exposure needs to be interpreted carefully. Given that for a large proportion of cases in this category heterosexual source of infection was not identified, some misclassification can not be ruled out. For example, married men who do not disclose bisexual history may be classified as having acquired infection via heterosexual exposure. For a more accurate number and trend of heterosexual route of HIV transmission, exposure misclassification needs to be reduced by a better exposure ascertainment during case follow up and contact tracing.

The majority of cases with a history of male-to-male sex were asymptomatic

at presentation. About half of these were diagnosed as a result of opportunistic testing for HIV, showing the value of testing in the detection and prevention of HIV.

Acquired immunodeficiency syndrome (AIDS)

Summary of notifications

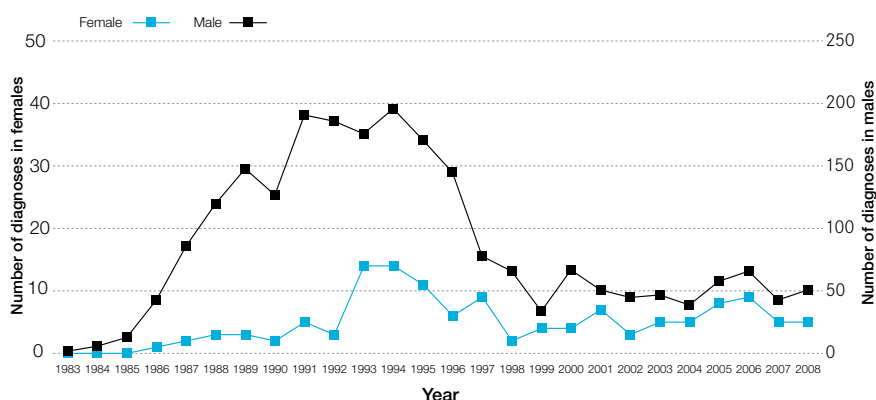
There were 57 AIDS diagnoses in 2008, of which 91 per cent were males (figure 42). The overall number of diagnoses and the median age at diagnoses in 2008 were comparable to the previous five years at 42 years (table 27).

As observed in the previous five years, the majority of AIDS cases were born in Australia (56 per cent) followed by Asia and the UK/Ireland (each 11 per cent). There were no diagnoses of AIDS among Indigenous people.

Consistent with the previous four years, in 2008 the majority (81 per cent) of diagnosed cases resided in metropolitan regions. The North and West Metropolitan Region continued to have the highest number of diagnosed cases (table 27).

In 2008, 39 cases (68 per cent) diagnosed with AIDS presented with CD4 count of less than 200 cells per μL : a similar number and proportion reported in 2007 (table 28). Sixty-nine per cent of these cases were also late presenters, that is they were either diagnosed with HIV and AIDS concurrently or were diagnosed with AIDS within three months after HIV diagnosis. Fifty-five per cent of AIDS cases with male-to-male sexual contact ($n=19$) and 77 per cent with heterosexual exposure ($n=13$) were late presenters in 2008.

Figure 42: Diagnoses of AIDS by sex, Victoria, 1983–2008



Pneumocystis jiroveci pneumonia was the most common AIDS defining illness, reported in 31 per cent of cases (table 28). From 2004 through 2008 the four main AIDS defining illnesses were *Pneumocystis jiroveci*, oesophageal candidiasis, non-Hodgkin's lymphoma and Kaposi's sarcoma, together accounting for 68 per cent of all AIDS defining illnesses.

Risk factors

Compared to the pattern of new diagnoses of HIV, where notifications attributable to male-to-male sexual contact accounted for over 72 per cent, the proportion of AIDS diagnoses attributable to male-to-male sexual contact continued to be lower at 61 per cent in 2008 (table 29).

Comment

Although the number of AIDS diagnoses in 2008 was similar to the previous four years, AIDS diagnoses in Victoria have fallen dramatically since the introduction in the mid 1990s of highly active antiretroviral therapy (HAART). Treatment has resulted in delayed onset of AIDS and

improved survival for the majority of people with HIV who are treated.

As in previous years, the majority of cases diagnosed with AIDS in Victoria continue to be late presenters, thus not likely to benefit from the full potential of HAART. This reinforces the need for increased testing among high risk populations for early detection and treatment, leading to better outcomes for the affected individuals.

The effectiveness of HAART has also meant that AIDS surveillance no longer provides reliable population-based information of the HIV epidemic and it is possible that AIDS will be removed as a notifiable disease in the future.

Table 27: Diagnoses of AIDS by demographic characteristics, Victoria, 1983–2008

Demographic characteristics	AIDS diagnoses, cases (per cent)							
	1983–1998	1999–2003	2004	2005	2006	2007	2008	Total
Sex								
Male	1770 (96)	248 (91)	40 (89)	61 (88)	68 (88)	44 (90)	52 (91)	2283 (95)
Female	75 (4)	24 (9)	5 (11)	8 (12)	9 (12)	5 (10)	5 (9)	131 (5)
Total	1845 (100)	272 (100)	45 (100)	69 (100)	77 (100)	49 (100)	57 (100)	2414 (100)
Age group – overall								
0–12	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2 (4)	3 (0)
13–19	3 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (0)
20–29	2 (0)	5 (2)	1 (2)	3 (4)	2 (3)	4 (8)	1 (2)	18 (1)
30–39	71 (4)	40 (15)	8 (18)	13 (19)	24 (31)	12 (24)	16 (28)	184 (8)
40–49	575 (31)	113 (42)	16 (36)	32 (46)	28 (36)	18 (37)	23 (40)	805 (33)
50+	1194 (65)	113 (42)	20 (44)	21 (30)	23 (30)	15 (31)	15 (26)	1401 (58)
Median age (years)	37	41	45	42	40	42	43	38
Age group – Male								
0–12	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (2)	1 (0)
13–19	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
20–29	1 (0)	5 (2)	1 (3)	2 (3)	1 (2)	3 (7)	1 (2)	14 (1)
30–39	62 (4)	33 (13)	6 (15)	10 (16)	18 (27)	10 (23)	14 (27)	153 (7)
40–49	542 (31)	102 (41)	15 (38)	29 (48)	27 (40)	16 (36)	22 (42)	753 (33)
50+	1165 (66)	108 (44)	18 (45)	20 (33)	22 (32)	15 (34)	14 (27)	1362 (60)
Median age (years)	32	36	37	37	39	39	36	39
Age group – Female								
0–12	0 (0)	1 (4)	0 (0)	0 (0)	0 (0)	0 (0)	1 (20)	2 (2)
13–19	3 (4)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (2)
20–29	1 (1)	0 (0)	0 (0)	1 (13)	1 (11)	1 (20)	0 (0)	4 (3)
30–39	9 (12)	7 (29)	2 (40)	3 (38)	6 (67)	2 (40)	2 (40)	31 (24)
40–49	33 (44)	11 (46)	1 (20)	3 (38)	1 (11)	2 (40)	1 (20)	52 (40)
50+	29 (39)	5 (21)	2 (40)	1 (13)	1 (11)	0 (0)	1 (20)	39 (30)
Median age (years)	30	33	30	34	32	30	30	35
Residence at diagnosis: Metropolitan Victoria*								
Eastern Metropolitan	–	36 (16)	4 (11)	12 (19)	9 (13)	7 (16)	10 (22)	78 (16)
North Western Metropolitan	–	101 (45)	18 (50)	30 (48)	32 (46)	21 (47)	25 (54)	227 (47)
Southern Metropolitan	–	85 (38)	14 (39)	20 (32)	28 (41)	17 (38)	11 (24)	175 (36)
Total	–	222 (100)	36 (100)	62 (100)	69 (100)	45 (100)	46 (100)	480 (100)
Residence at diagnosis: Regional Victoria *								
Barwon South West	–	8 (23)	1 (13)	0 (0)	3 (43)	0 (0)	1 (11)	13 (20)
Gippsland	–	6 (17)	3 (38)	2 (40)	0 (0)	0 (0)	2 (22)	13 (20)
Grampians	–	6 (17)	0 (0)	0 (0)	1 (14)	0 (0)	2 (22)	9 (14)
Hume	–	8 (23)	2 (25)	1 (20)	0 (0)	1 (50)	1 (11)	13 (20)
Loddon-Mallee	–	7 (20)	2 (25)	2 (40)	3 (43)	1 (50)	3 (33)	18 (27)
Total	–	35 (100)	8 (100)	5 (100)	7 (100)	2 (100)	9 (100)	66 (100)
Region/country of birth								
Asia	–	24 (9)	4 (9)	5 (7)	17 (22)	8 (16)	6 (11)	64 (11)
Australia	–	163 (60)	32 (71)	44 (64)	42 (55)	28 (57)	32 (56)	341 (60)
Europe excluding UK/Ireland	–	18 (7)	1 (2)	4 (6)	5 (7)	0 (0)	2 (4)	30 (5)
North Africa & Middle East	–	2 (1)	0 (0)	1 (1)	2 (3)	0 (0)	1 (2)	6 (1)
North America	–	4 (2)	0 (0)	1 (1)	1 (1)	0 (0)	0 (0)	6 (1)
Oceania and Antarctica	–	6 (2)	1 (2)	2 (3)	2 (3)	3 (6)	2 (4)	16 (3)
South/Central America & Caribbean	–	5 (2)	0 (0)	0 (0)	1 (1)	0 (0)	1 (2)	7 (1)
Sub Saharan Africa	–	20 (7)	4 (9)	6 (9)	3 (4)	3 (6)	5 (9)	41 (7)
UK/Ireland	–	11 (4)	2 (4)	3 (4)	1 (1)	4 (8)	6 (11)	27 (5)
Unknown	–	19 (7)	1 (2)	3 (4)	3 (4)	3 (6)	2 (4)	31 (5)

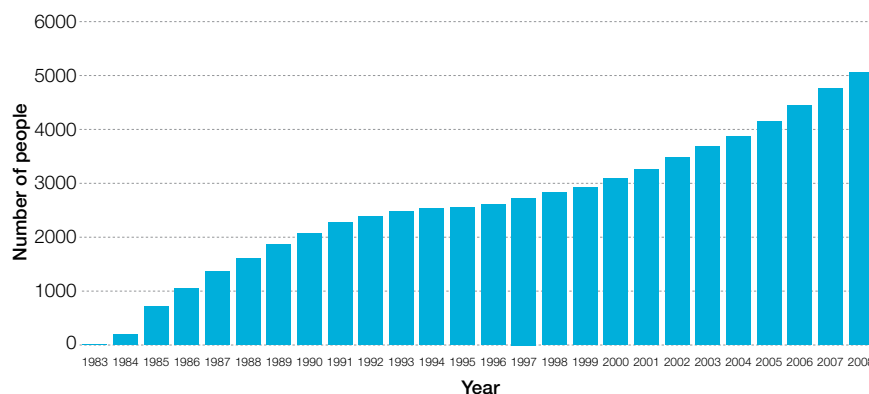
* Excludes data prior to 1994 when this information was not collected. Excludes two cases where post code of residence was not available.

People living with HIV

People living with HIV (PLWH) refers to all people who have been diagnosed with HIV and/or AIDS, are Victorian residents at the most recent contact with Victorian health services and were alive as at 31 December 2008. In this report the number of PLWH is cumulative to the end of 2008. It is important to note that the number of PLWH may be an overestimate owing to unmatched deaths and migration out of Victoria which have not been captured by the surveillance system.

As at 31 December 2008, there were an estimated 5,077 PLWH in Victoria, an increase of seven per cent from the 4,766 reported in 2007 (figure 43). PLWH (excluding those where gender was unknown) comprised 4,660 (91 per cent) males including 16 transgender, and 396 (8 per cent) females (table 30). Seventy-one per cent of males living with HIV were aged 40 years or above compared to 46 per cent of females. The median age of males living with HIV was 45 years compared to 39 years in females and 45 years overall.

Figure 43: People living with HIV, Victoria, 1983 –2008



For 4,058 PLWH (80 per cent) the postcode for current residence was available. In metropolitan Melbourne there were 11 times more PLWH ($n=3,705$) than in regional Victoria ($n=352$). The largest number of PLWH was in the North and West Metropolitan Region and the Southern Metropolitan Region (table 30).

Country of birth data were available for 3,499 PLWH. The majority of males living with HIV in Victoria were born in Australia (75 per cent). In contrast, 59 per cent of females living with HIV were born overseas; 27 per cent were born in Sub-Saharan Africa and 17 per cent in Asia (table 30).

Table 28: Diagnoses of AIDS by CD4 cell count and AIDS defining illness, Victoria, 1983–2008

Presentation at AIDS diagnosis	AIDS diagnoses, cases (per cent)							Total
	1983–1998	1999–2003	2004	2005	2006	2007	2008	
CD4 count per µL								
<100	649 (35)	135 (50)	22 (49)	38 (55)	42 (55)	30 (61)	31 (54)	947 (39)
100–199	166 (9)	50 (18)	9 (20)	11 (16)	11 (14)	7 (14)	8 (14)	262 (11)
200–499	100 (5)	41 (15)	5 (11)	13 (19)	10 (13)	8 (16)	9 (16)	186 (8)
≥500	930 (50)	46 (17)	9 (20)	7 (10)	14 (18)	4 (8)	9 (16)	1019 (42)
AIDS defining illness[^]								
<i>Pneumocystis jiroveci</i>	713	95	15	20	27	20	19	909
Kaposi's sarcoma	282	26	5	10	9	3	9	344
Oesophageal candidiasis	250	60	8	18	19	15	9	379
Herpes simplex	74	5	1	2	0	0	1	83
Toxoplasmosis	99	10	2	2	0	1	2	116
Non-TB mycobacterial disease	152	12	2	1	4	1	0	172
Cytomegalovirus	85	8	4	2	1	2	1	103
Non-Hodgkin's lymphoma	95	20	6	13	7	5	8	154
Myelopathy	85	12	2	3	4	5	1	112
Cryptosporidiosis	55	10	1	0	0	0	2	68
<i>Cryptococcus</i>	56	12	4	1	3	2	1	79
HIV encephalopathy	46	10	0	4	3	2	3	68
Pulmonary tuberculosis [*]	19	17	3	3	8	3	4	57
Recurrent pneumonia [*]	6	3	1	1	1	0	0	12
Cervical cancer [*]	2	0	0	0	0	0	0	2
Other	29	14	2	2	9	2	4	62
Total[^]	2046	312	56	81	92	61	61	2709

[^] Individual may have presented with more than one AIDS-defining illness at the time of diagnosis.

^{*} Included as an AIDS-defining illness in Australia from January 1993.

Table 29: Diagnoses of AIDS by HIV exposure category, Victoria, 1983 – 2008

Exposure category	AIDS diagnoses (per cent)							Total
	1983–1998	1999–2003	2004	2005	2006	2007	2008	
Male-to-male sex	1521 (82)	168 (62)	30 (67)	46 (67)	43 (56)	29 (59)	34 (60)	1871 (78)
Male-to-male sex & injecting drug use	100 (5)	14 (5)	2 (4)	5 (7)	3 (4)	3 (6)	1 (2)	128 (5)
Injecting drug use	29 (2)	12 (4)	1 (2)	2 (3)	4 (5)	1 (2)	1 (2)	50 (2)
Heterosexual contact	101 (6)	36 (13)	4 (9)	7 (10)	14 (18)	7 (14)	9 (16)	178 (7)
Person from high prevalence country	19 (1)	19 (7)	5 (11)	5 (7)	10 (13)	1 (2)	4 (7)	63 (3)
Receipt of blood/tissue	51 (3)	7 (3)	2 (4)	1 (1)	0 (0)	3 (6)	1 (2)	65 (3)
Unavailable	24 (1)	16 (6)	1 (2)	3 (4)	3 (4)	5 (10)	7 (12)	58 (2)
Total	1845 (100)	272 (100)	45 (100)	69 (100)	77 (100)	49 (100)	57 (100)	2413 (100)

Table 30: People living with HIV by selected demographic characteristics, Victoria 1983–2008

Demographic characteristics	People living with HIV, cases (per cent)		
	Male	Female	Total
Age group			
0–12	7 (0)	8 (2)	15 (0)
13–19	3 (0)	12 (3)	15 (0)
20–29	260 (6)	47 (12)	307 (6)
30–39	983 (21)	145 (37)	1128 (22)
40–49	1866 (40)	113 (29)	1979 (39)
50+	1441 (31)	70 (18)	1511 (30)
Unknown	100 (2)	1 (0)	101 (2)
Total	4660 (100)	396 (100)	5077* (100)
Median age (years)	45	39	45
Current residence: Metro Victoria **			
Eastern Metro	460 (14)	47 (15)	507 (14)
North-West Metro	1492 (44)	160 (52)	1652 (45)
Southern Metro	1448 (43)	98 (32)	1546 (42)
Total	3400 (100)	305 (100)	3705 (100)
Current residence: Regional Victoria **			
Barwon S/W	68 (22)	16 (33)	84 (24)
Gippsland	53 (17)	6 (13)	59 (17)
Grampians	53 (17)	7 (15)	60 (17)
Hume	46 (15)	6 (13)	52 (15)
Loddon-Mallee	84 (28)	13 (27)	97 (28)
Total	304 (100)	48 (100)	352 (100)
Region/country of birth			
Asia	251 (8)	61 (17)	312 (9)
Australia	2357 (75)	147 (41)	2504 (72)
Europe excluding UK/Ireland	131 (4)	22 (6)	153 (4)
North Africa & Middle East	20 (1)	10 (3)	30 (1)
North America	44 (1)	2 (1)	46 (1)
Oceania and Antarctica	85 (3)	8 (2)	93 (3)
South/Central America & Caribbean	39 (1)	1 (0)	40 (1)
Sub Saharan Africa	120 (4)	96 (27)	216 (6)
UK/Ireland	96 (3)	9 (3)	105 (3)
Total	3143 (100)	356 (100)	3499 (100)**

* Includes 16 cases where gender was transgender

** Excludes cases where data post code of residence was unknown

Syphilis

Summary of notifications

There were 802 notified cases of syphilis in 2008. Of these, 378 (47 per cent) were classified as infectious syphilis, an 11 per cent reduction compared to the number of infectious syphilis cases notified in 2007 (n=423). This was the first time a decline in infectious syphilis notification occurred since 2000. However, the yearly total for 2008 was still the second highest annual total since it became notifiable in 1991 (figure 44).

Fifty per cent of the infectious syphilis cases were primary infections (n=188), 31 per cent were secondary infections (n=117) and 19 per cent were early latent infections (n=73).

There were 359 male cases (95 per cent) with a median age of 36 years (range: 17 to 79 years); and 19 female cases (five per cent) with a median age of 29 years (range: 15 to 47 years). The modal age group was 35 to 39 years for both males and females. The combined sex five-year age-specific notification rates were highest in the 20 to 24 and 30 to 34 year age groups (figure 45).

Postcode of residence was reported for 338 (89 per cent) cases for which the highest numbers of cases and notification rates were from the North and West Metropolitan Region and Southern Metropolitan Region (figure 46).

Eighty per cent of the cases (n=302) were Australian born. Indigenous status was reported for 366 cases (97 per cent), of which three cases were reported as being of Aboriginal and/or Torres Strait Islander origin.

Figure 44: Notified cases of infectious syphilis by year, Victoria, 2000–2008

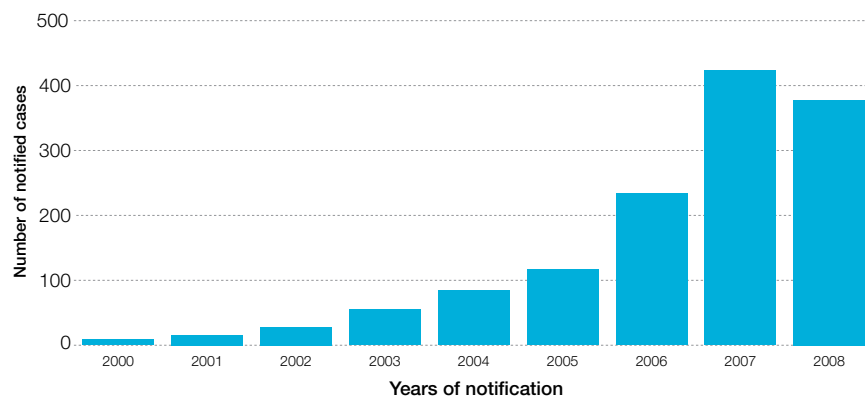


Figure 45: Notified cases and notification rates of infectious syphilis by age group and sex, Victoria, 2008

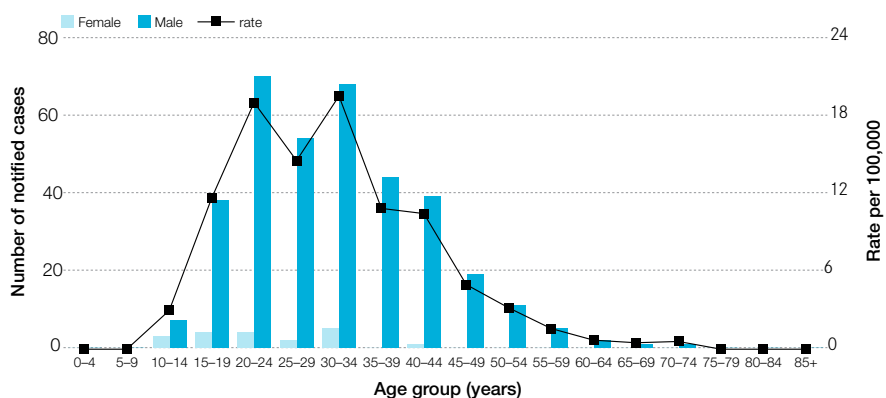
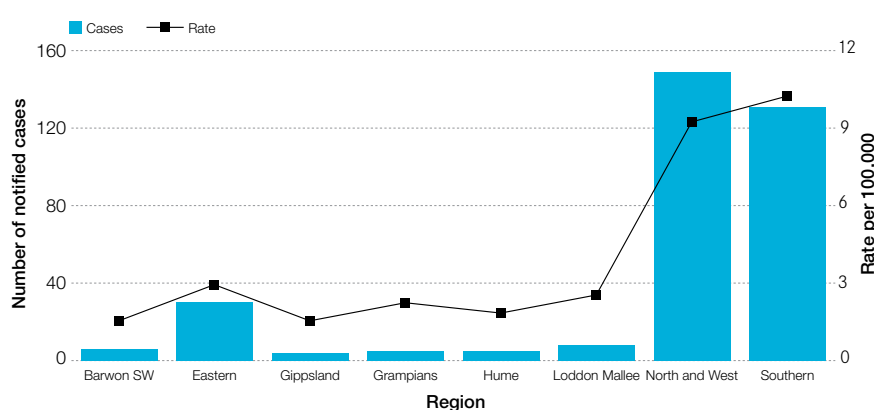


Figure 46: Notified cases and notification rates of infectious syphilis by region, Victoria, 2008



Of the 378 cases, screening for STIs and presenting with a symptomatic infection were the most commonly reported reasons for syphilis testing (table 31).

Table 31: Notified cases of infectious syphilis by reported reason for testing, Victoria, 2008

Reason for testing	Cases (per cent)
STI screen	186 (49)
Presented with signs or symptoms	160 (42)
Other	18 (5)
Sexual contact with infected partner	11 (3)
Unknown or not reported	3 (<1)
Total	378 (100)

Risk factors

Consistent with previous years, a majority of the male cases indicated the likely source of infection was a male sexual partner (n=309, 82 per cent). Seven per cent (n=25) of the male cases reported a female sexual partner as the likely source of infection, five cases reported a male and female partner as the source of infection and for twenty cases this information was unknown or not reported.

Among the males reporting acquisition from a male sexual partner, the partner was reported as casual for 264 cases (85 per cent) and regular for 27 cases (nine per cent). For the remaining 18 cases partner type was unknown or not reported. Among the males reporting a female sexual partner, 64 per cent (n=16) reported acquiring their infection from a casual partner, five cases reported a regular partner, two cases reported a sex worker and for the remaining two cases the likely

source of infection was unknown or not reported.

Eighty-six per cent of male cases (n=309) reported acquisition of infection in Victoria followed by overseas and interstate for 22 (six per cent) and 12 cases (three per cent) respectively. Place of acquisition of infection was unknown or not reported for 16 of the male cases.

Of the 17 female cases notified, 16 cases reported a male sexual partner and sexual partner type was not reported for the remaining case. Source of infection as regular partner was reported for nine cases, casual partner was reported for six cases, sex worker was reported for one case and the remainder were unknown or not reported. Place of infection was reported as Victoria by 14 cases, overseas by four cases and unknown or not reported for the remaining case.

Outbreak investigations

There were no outbreaks identified in 2008.

Comment

The notification rate of infectious syphilis increased more than 40-fold from 0.2 cases per 100,000 population in 2000 to 8 cases per 100,000 population in 2007. However in 2008, the rate of infectious syphilis declined for the first time since 1999. The increase in the notification rate for the period 2002 to 2007 and the decline seen in 2008 was almost exclusively in males. Since 2003, the proportion of male cases reporting acquisition from a male sexual partner has remained steady at approximately 80 per cent.

Between 2002 and 2007, higher notification rates of cases were reported among those aged 20 years or older. The median age of cases increased from 32 years to 40 years over the same period. In 2008 the notification rate among those aged 40 to 49 years declined by nearly 40 per cent compared to 2007 and was accompanied by a decline in the median age of cases to 35 years (from 40 years in 2007).

The changes in trend for syphilis notifications are likely to be multifactorial and complex. Syphilis is one of the diseases included in the Victorian Primary Care Network for Sentinel Surveillance on BBVs and STIs, which provides testing and behavioural data that may help better explain observed trends in syphilis. Summary reports are available from http://www.health.vic.gov.au/ideas/surveillance/descriptive_reports and an update article was published in Volume 10, Issue 2 of the Victorian Infectious Diseases Bulletin.