

8. 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.

Acquired immunodeficiency syndrome

Summary of notifications

Sixty individuals were diagnosed with AIDS in Victoria in 2005, a 34 per cent increase on the 39 cases in 2004. Diagnoses were made in 51 males, eight females and one transgender. The median age of males diagnosed with AIDS was 42 years (range: 23–74 years); 40 percent of individuals diagnosed were aged between 40 and 49 years (table 18).

In 2005, 35 (58 per cent) people diagnosed with AIDS presented with CD4 counts of less than 100 per μL , a proportion that has remained relatively consistent over the last ten years (table 19).

Pneumocystis carinii pneumonia (PCP) as an AIDS defining illness was reported for 30 percent of those diagnosed during 2005. Oesophageal candidiasis was the next most common, reported by 24 percent (table 20).

There has been a total of 1,539 deaths following diagnosis with AIDS notified in Victoria since 1983 in 1,469 males, 61 females and nine transgender individuals. The annual number of deaths following AIDS has steadily decreased over the last decade from 74 deaths in 1997 to 11 in 2005 (table 21).

Table 18: AIDS diagnoses by year, age group and sex, Victoria, 1983–2005

Age group (years)	Sex	AIDS diagnoses																		
		1983–1998		1999		2000		2001		2002		2003		2004		2005		Total		
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
0–12	M	3	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	<1
	F	4	<1	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	5	<1
13–19	M	7	<1	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	8	<1
	F	1	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
20–29	M	314	17	3	8	4	6	2	3	4	9	2	4	1	3	2	3	332	15	
	F	21	1	1	3	1	1	0	0	0	0	0	0	2	5	1	2	26	1	
30–39	M	734	40	9	24	29	41	25	43	14	30	17	33	9	23	12	20	849	39	
	F	29	2	1	3	2	3	4	7	2	4	3	6	0	0	4	7	45	2	
40–49	M	472	26	7	19	20	29	16	28	15	32	15	29	17	44	22	37	584	27	
	F	6	<1	1	3	0	0	2	3	1	2	2	4	3	8	2	3	17	1	
50–59	M	160	9	10	27	8	11	6	10	6	13	6	12	4	10	8	13	208	10	
	F	11	1	1	3	0	0	0	0	0	0	0	0	0	0	1	2	13	1	
60+	M	64	4	2	5	6	9	2	3	5	11	6	12	3	8	7	12	95	4	
	F	3	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	<1	
Total		1,838	100	37	100	70	100	581	100	47	100	51	100	39	100	60	100	2,200*	100	

* Includes 11 people whose sex was reported as transgender

Table 19: AIDS diagnoses by year and CD4 Count, Victoria, 1983–2005

CD4 count per μ L at AIDS diagnosis	AIDS diagnoses																	
	1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
<100	649	35	21	57	35	50	27	47	26	55	27	53	21	54	35	58	841	38
100 to 199	165	9	7	19	10	14	15	26	8	17	8	16	8	21	9	15	230	11
200 to 499	106	6	5	14	13	19	7	12	7	15	8	16	4	10	10	17	160	7
\geq 500	19	1	0	0	1	1	1	2	2	4	0	0	1	3	3	5	27	1
Unavailable*	899	49	4	11	11	16	8	14	4	9	8	16	5	13	3	5	942	43
Total	1,838	100	37	100	70	100	58	100	47	100	51	100	39	100	60	100	2,200	100

* Includes CD4 counts which were not performed or available, and counts performed less than or greater than three months from the date of AIDS diagnosis

Table 20: AIDS diagnoses by year and AIDS defining illness, Victoria, 1983–2005

AIDS defining illness	AIDS diagnoses																	
	1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
PCP	708	35	9	23	28	34	26	39	19	35	12	22	13	27	20	30	835	34
Kaposi's sarcoma	281	14	4	10	7	8	4	6	5	9	5	9	4	8	7	10	317	13
Oesophageal candidiasis	250	12	6	15	18	22	9	13	10	19	11	20	7	15	16	24	327	13
Herpes simplex	66	3	0	0	2	2	1	2	1	2	0	0	0	0	1	2	71	3
Toxoplasmosis	99	5	0	0	1	1	2	3	3	6	4	7	2	4	2	3	113	5
Mycobacterial disease (non TB)	162	8	4	10	4	5	1	2	0	0	3	6	1	2	1	2	176	7
Cytomegalovirus	85	4	4	10	2	2	1	2	1	2	0	0	3	6	2	3	98	4
Non-Hodgkin's lymphoma	95	5	4	10	4	5	4	6	2	4	5	9	6	13	9	13	129	5
Myelopathy	85	4	2	5	4	5	0	0	2	4	2	4	2	4	1	2	98	4
Cryptosporidiosis	55	3	0	0	2	2	1	2	1	2	4	7	0	0	0	0	63	3
Cryptococcus	56	3	3	8	2	2	1	2	2	4	4	7	4	8	1	2	73	3
HIV encephalopathy	45	2	1	3	2	2	5	8	0	0	1	2	0	0	2	3	56	2
Pulmonary tuberculosis [^]	9	<1	1	3	5	6	4	6	3	6	3	6	3	6	3	5	31	1
Recurrent pneumonia [^]	6	<1	0	0	0	0	2	3	1	2	0	0	1	2	1	2	11	<1
Cervical cancer [^]	2	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	<1
Other	28	1	2	5	2	2	6	9	4	7	0	0	2	4	1	2	45	2
Total*	2,032	100	40	100	83	100	67	100	54	100	54	100	48	100	67	100	2,445	100

[^] Included as an AIDS defining illness in Australia from January 1993

* Proportion of all notifications with the AIDS defining illness. Individuals may have presented with more than one AIDS defining illness

Table 21: Deaths following AIDS diagnosis by year and sex, Victoria, 1983–2005

Year	Deaths		
	Males	Females	Total (per cent)
1983–1998	1,323	50	1,381 (90)
1999	38	2	41* (3)
2000	29	1	30 (2)
2001	21	5	26 (2)
2002	13	0	13 (1)
2003	19	1	20 (1)
2004	15	2	17 (1)
2005	11	0	11 (1)
Total	1,469	61	1,539* (100)

* Includes nine people whose sex was reported as transgender

At the end of 2005, there were 668 people who had been diagnosed with AIDS in Victoria, excluding those who had been reported as deceased, in 616 males, 49 females and three transgender individuals. Of these, 558 (84%) resided in metropolitan Melbourne, with the largest numbers in the North and West Metropolitan and Southern Metropolitan regions (table 22).

Table 22: People living with AIDS* by sex and region, Victoria, 31 December 2005

Region	People living with AIDS		
	Males	Females	Total (per cent)
Barwon South-Western	14	0	14 (2)
Grampians	9	0	9 (1)
Loddon Mallee	19	3	22 (3)
Hume	10	2	12 (2)
Gippsland	19	1	20 (3)
North and West Metropolitan	234	23	257 (39)
Eastern Metropolitan	90	3	93 (14)
Southern Metropolitan	193	15	208 (31)
Unknown	28	2	30 (5)
Total	616	49	668^ (100)

* Includes people diagnosed with AIDS prior to 31 December 2005 and not reported as deceased

^ Includes three people whose sex was reported as transgender

Risk factors

The proportion of all AIDS diagnoses in which male-to-male sexual contact (homosexual and bisexual) was reported as the primary risk factor for infection fell from 84 percent prior to 1999 to 60 percent in 2005. The proportion of all AIDS diagnoses attributable to origin from a high prevalence country increased from less than one percent prior to 1999 to eight percent in 2005 (table 23).

Of the 60 AIDS diagnoses in 2005, 20 individuals (33 per cent) were diagnosed within 12 months of their HIV diagnosis (table 24). Of these, 12 (60 per cent) were among males reporting male-to-male sexual contact and six (30 per cent) among individuals reporting heterosexual contact as their primary exposure.

Table 23: AIDS diagnoses by year, exposure category and sex, Victoria, 1983–2005

Exposure category	Sex	AIDS diagnoses								Total (per cent)
		1983–1998	1999	2000	2001	2002	2003	2004	2005	
Male homosexual/bisexual	M	1,507	21	49	32	27	31	24	36	1,727 (79)
Male homosexual/bisexual and injecting drug use	M	98	0	4	1	5	3	2	5	118 (5)
Injecting drug use	M	19	0	4	3	0	1	1	1	29 (1)
	F	10	1	1	0	0	1	0	1	14 (1)
Heterosexual contact	M	53	5	2	6	6	6	3	4	85 (4)
	F	48	3	1	2	1	4	1	3	63 (3)
Person from high prevalence country	M	12	2	4	2	5	2	1	2	30 (1)
	F	7	0	1	2	1	0	4	3	18 (1)
Haemophilia/coagulation disorder	M	37	1	1	1	1	0	1	0	42 (2)
	F	1	0	0	0	0	0	0	0	1 (<1)
Receipt of blood/tissue	M	8	0	0	1	0	0	1	0	10 (1)
	F	5	0	0	0	1	0	0	0	6 (<1)
Other	M	0	1	0	0	0	0	0	0	1 (<1)
	F	2	0	0	1	0	0	0	1	4 (<1)
Unavailable	M	20	2	3	4	0	3	1	3	36 (2)
	F	2	0	0	2	0	0	0	0	4 (<1)
Total		1,838*	37	70	58*	47	51	39	60*	2,200*

* Includes 11 people whose sex was reported as transgender

Table 24: AIDS diagnoses within 12 months of HIV diagnosis by year, exposure category and sex, Victoria, 1983–2005

Exposure category	Sex	AIDS diagnoses								Total (per cent)
		1983–1998	1999	2000	2001	2002	2003	2004	2005	
Male homosexual/bisexual	M	244	2	11	9	4	7	9	12	298 (58)
Male homosexual/bisexual and injecting drug use	M	12	0	0	1	0	0	0	0	13 (3)
Injecting drug use	M	2	0	0	0	0	0	0	0	2 (<1)
	F	0	0	3	0	0	0	0	0	3 (1)
Heterosexual contact	M	6	0	0	0	0	0	0	1	7 (1)
	F	21	2	0	2	2	1	1	2	31 (6)
Person from high prevalence country	M	2	0	0	0	1	0	2	1	6 (1)
	F	3	0	2	0	4	1	1	2	13 (3)
Haemophilia/coagulation disorder	M	0	0	0	0	0	0	0	0	0 (0)
	F	0	0	0	0	0	0	0	0	0 (0)
Receipt of blood/tissue	M	0	0	0	0	0	0	0	0	0 (0)
	F	0	0	0	0	0	0	0	0	0 (0)
Other	M	0	0	0	0	0	0	0	0	0 (0)
	F	0	0	0	0	0	0	0	0	0 (0)
Unavailable	M	8	0	1	1	0	1	0	2	13 (3)
	F	0	0	0	0	0	0	0	0	0 (0)
Total		298	4	17	14*	11	10	13	20	514* (100)

* Includes one person whose sex was reported as transgender. Excludes people whose first diagnosis was overseas or interstate.

Human immunodeficiency virus

Summary of notifications

The HIV report refers to diagnoses rather than notifications as the surveillance system utilises the specimen collection date for HIV rather than notification date for reporting. The report describes annual diagnoses from 1983 onwards and makes reference to the time frame between 1999 and 2005 as it includes the nadir (140 notifications in 1999) and the subsequent upturn in notification numbers. Annual HIV numbers in this report may be slightly different to previous reports due to the receipt of new information enabling duplicate identification and ongoing data cleaning. Collection of enhanced data such as 'clinical presentation at HIV diagnosis' and 'reason for test' commenced in 1994; therefore the relevant tables do not include data prior to this time.

From 1983 to the end of 2005, a total of 5,584 people had been diagnosed with HIV in Victoria in 5,186 males, 355 females, 21 transgender individuals and 23 people whose sex was unknown. In 2005, 286 cases of HIV were diagnosed in Victoria, representing a 29 per cent increase on the total of 222 in 2004 and a 104 per cent increase on the 1999 total of 140 (figure 23).

These 286 diagnoses include 28 individuals (ten per cent) who had been previously diagnosed in other states and were tested in Victoria for confirmatory reasons, compared to eight cases (four per cent) in 2004 (figure 24). After excluding cases previously diagnosed elsewhere, there was a 20 per cent increase in HIV diagnoses in 2005 (258 cases) compared to 2004 (215 cases).

Notifications are classified as newly acquired (incident infections) on the basis of a previous negative HIV test and/or a seroconversion illness within the 12 months preceding HIV diagnosis and provide information about who is currently being infected with HIV.

Of the 286 HIV diagnoses in 2005, 79 (28 per cent) were classified as incident infections compared to 73 (34 per cent) in 2004. Of the incident infections in 2005, 77 were males and two were females (appendix 2, table 50). Of the 77 males, 64 (83 per cent) reported

male-to-male sexual contact (appendix 2, table 49). However, these data should be interpreted with caution as they rely on a history of a past negative test or seroconversion illness, which is biased by health seeking behaviour and HIV testing practices in clinics.

Of the 286 cases, 253 (88 per cent) were males, 32 (11 per cent) were females and one individual was transgender. The median age at diagnosis was 38 years for males (range: 2–74 years) and 35 years for females (range: 13–54 years).

Figure 23: HIV and AIDS diagnoses by year, Victoria, 1983–2005

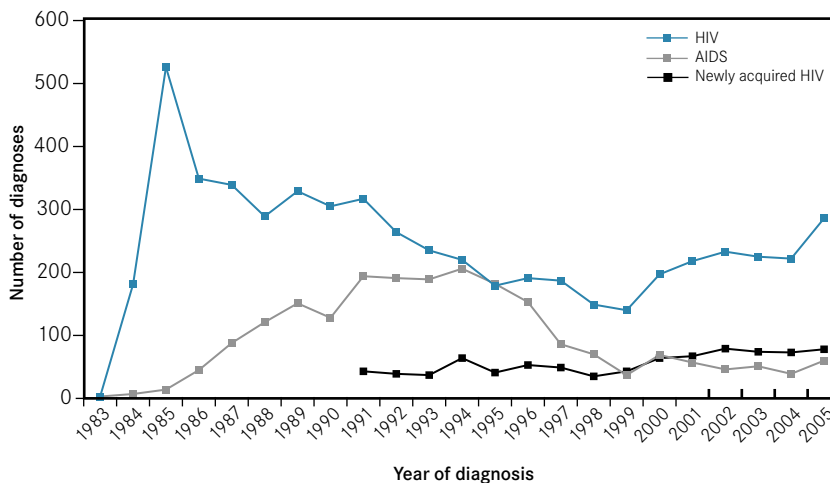
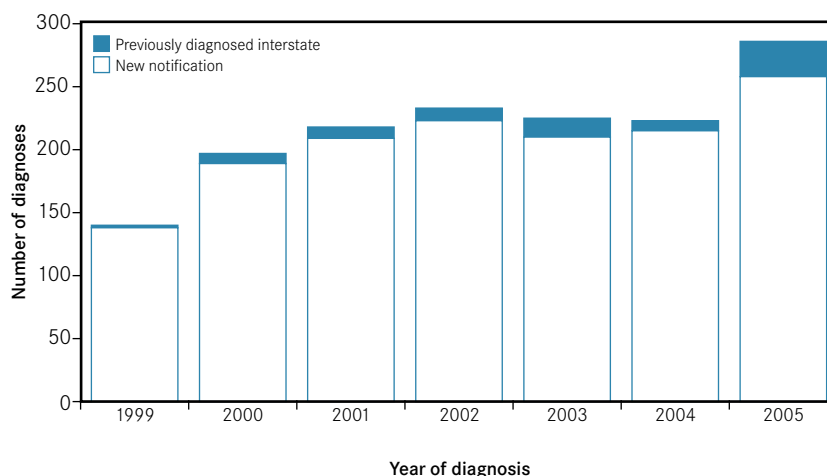


Figure 24: New and previous diagnoses of HIV by year, Victoria, 1999–2005



The highest proportion of diagnoses (40 per cent) was among individuals aged between 30 and 39 years (table 25).

In 2005, 92 per cent of individuals diagnosed with HIV reported residing in metropolitan Melbourne (table 26), with the highest proportions in the North and West Metropolitan (42 per cent) and Southern Metropolitan (37 per cent) regions.

Risk factors

Overall, 5,186 diagnoses (93 per cent) in Victoria have been reported among males. There were 253 males diagnosed with HIV infection in 2005, 29 per cent more than the 2004 total of 196. Male-

to-male sexual contact (homosexual and bisexual) was the most common risk factor, reported for 206 male cases (72 per cent) in 2005, 36 per cent more than the 151 males (68 per cent of total diagnoses) diagnosed in 2004 and 158 per cent more than the 80 males (57 per cent) diagnosed in this category in 1999. The median age of males reporting male-to-male sexual contact in 2005 was 37 years. The median age has been steadily increasing since 1998 (table 25).

Among the 206 male cases with a history of male-to-male sexual contact in 2005, 162 (79 per cent) were born in Australia (appendix 2, table 48) and 174

cases (86 per cent) reported acquisition of their infections in Australia (appendix 2, table 47). Of these males, 26 per cent were reported to have acquired their infection from a regular partner and 38 per cent and 35 per cent from a casual and anonymous partner respectively (appendix 2, table 44).

There were 17 males (seven per cent) who reported heterosexual contact as a risk factor in 2005, a 29 per cent decrease on the 24 males in 2004 (table 27). There was a small decrease in the number of males diagnosed with HIV who originated from a high prevalence country. These countries include those in sub-Saharan Africa,

Table 25: HIV diagnoses by year, age group and sex, Victoria, 1983–2005

Age group (years)	Sex	HIV diagnoses																	
		1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
0-12	M	31	1	3	2	0	0	0	0	1	<1	0	0	0	0	1	<1	36	1
	F	9	<1	1	1	0	0	2	1	0	0	0	0	1	1	0	0	13	<1
13-19	M	98	2	1	1	6	3	6	3	1	<1	3	1	2	1	1	<1	118	2
	F	11	<1	0	0	0	0	1	1	1	<1	1	<1	0	0	2	1	16	<1
20-29	M	1,406	35	38	27	54	27	38	17	44	19	47	21	39	18	50	18	1,716	31
	F	85	2	4	3	9	5	7	3	7	3	4	2	11	5	5	2	132	2
30-39	M	1,343	33	50	36	62	32	87	40	95	41	88	39	82	37	94	33	1,901	34
	F	50	1	5	4	8	4	8	4	11	5	10	4	7	3	20	7	119	2
40-49	M	573	14	20	14	32	16	45	21	40	17	40	18	54	24	68	24	872	16
	F	23	1	1	1	1	1	5	2	2	1	3	1	5	2	4	1	44	1
50-59	M	209	5	10	7	16	8	13	6	20	9	21	9	12	5	30	11	331	6
	F	14	<1	1	1	0	0	0	0	1	<1	1	<1	1	1	1	<1	19	<1
60+	M	65	2	6	4	6	3	4	2	6	3	7	3	7	3	9	3	110	2
	F	7	<1	0	0	2	1	0	0	2	1	0	0	0	0	0	0	11	<1
Unavailable	M	102	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	102	2
	F	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total		4,064*	100	140	100	1971	100	218*	100	233*	100	225	100	222*	100	286*	100	5,585*	100
Median age	M			35		34		36		36		35		37		38		33	
	F			33		30		32		33		35		29		35		35	
	MSM [^]			34		34		36		36		36		37		37		34	

* Includes 21 people whose sex was reported as transgender and 23 people whose sex was unknown

[^] Men who have sex with men

Cambodia, Myanmar, and certain countries within the Caribbean where HIV is transmitted predominantly by heterosexual contact; eight cases (three per cent) were diagnosed in 2005 compared with 11 (five per cent) in 2004 (table 27). Six cases (75 per cent) were born in Africa and two (25 per cent) were born in Asia. Of these eight males, seven reported they had acquired their infection overseas and one was unknown (appendix 2, table 47).

Of the nine other males with a history of heterosexual contact (not born in a high prevalence country), one was reported to have acquired their infection from a partner from a high prevalence country, four from a female with HIV and

four reported heterosexual contact (no further information provided) (table 28). Of these nine males, five (56 per cent) reported that they had acquired their infection in Australia, and four (44 per cent) overseas (appendix 2, table 47). Seven (78 per cent) of these males were born in Australia (appendix 2, table 48).

Overall, 355 (six per cent) of HIV diagnoses in Victoria have been reported among females. The proportion of females increased from eight per cent (67 cases) to ten per cent (123 cases) across the time periods from 1996–2000 to 2001–2005. The number of new HIV diagnoses among females in Victoria increased in 2005, with 32 females notified compared with 25 in

2004 and 12 in 1999. This increase was largely attributable to a greater number of notifications in women from high prevalence countries (table 27).

Of the 32 females notified in 2005, 14 were born in a high prevalence country and reported acquiring their infections from a partner born in a high prevalence country. Three of these females (21 per cent) were born in Asia, ten (71 per cent) in Africa and one (seven per cent) in Europe. Of these 14 females, all but one (93 per cent) reported they had acquired their infection overseas (appendix 2, table 47).

Of the other 13 females with a history of heterosexual contact (not born in a high prevalence country), one reported

Table 26: HIV diagnoses by year, region and sex, Victoria, 1983–2005

Region	Sex	HIV diagnoses																	
		1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Barwon South-Western	M	56	1	2	1	3	2	5	2	3	1	4	2	7	3	4	1	84	2
	F	4	<1	0	0	2	1	1	1	0	0	1	<1	2	1	2	1	12	<1
Grampians	M	40	1	5	4	6	3	0	0	3	1	3	1	1	1	4	1	62	1
	F	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	2	0
Loddon Mallee	M	61	2	2	1	2	1	6	3	4	2	6	3	5	2	4	1	90	2
	F	4	<1	1	1	0	0	1	1	2	1	0	0	1	1	1	<1	10	<1
Hume	M	39	1	4	3	4	2	5	2	2	1	4	2	4	2	1	<1	63	1
	F	9	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	<1
Gippsland	M	36	1	4	3	5	3	0	0	2	1	1	<1	4	2	3	1	55	1
	F	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
North and West Metropolitan	M	937	23	47	34	73	37	75	34	89	38	72	32	75	34	105	37	1,473	26
	F	57	1	5	4	7	4	12	6	10	4	10	4	12	5	15	5	128	2
Eastern Metropolitan	M	387	10	12	9	21	11	21	10	21	9	27	12	23	10	32	11	544	10
	F	31	1	1	1	2	1	2	1	5	2	1	<1	3	1	4	1	49	1
Southern Metropolitan	M	1,019	25	39	28	58	29	76	35	80	34	87	39	75	34	97	34	1,531	27
	F	49	1	3	2	6	3	7	3	5	2	7	3	4	2	10	4	91	2
Unavailable	M	1,252	31	13	9	4	2	5	2	3	1	2	1	2	1	3	1	1,284	23
	F	44	1	2	1	1	1	0	0	2	1	0	0	3	1	0	0	52	1
Total		4,064*	100	140	100	197*	100	218*	100	233*	100	225	100	222*	100	286*	100	5,585*	100

* Includes 21 people whose sex was reported as transgender and 23 people whose sex was unknown

Table 27: HIV diagnoses by year, sex and exposure category, Victoria, 1983–2005

		HIV diagnoses																	
		1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
Sex		n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
M		3,827	94	128	91	176	89	193	89	207	89	206	92	196	88	253	88	5,186	94
F		200	5	12	9	20	10	23	11	24	10	19	8	25	11	32	11	355	6
T		14	<1	0	0	1	1	2	1	2	1	0	0	1	1	1	<1	21	<1
HIV exposure category																			
Male homosexual	M	3,154	78	80	57	126	64	150	69	162	70	163	72	151	68	206	72	4,192	76
Male homosexual and injecting drug use	M	182	5	12	9	8	4	7	3	8	3	10	4	13	6	13	5	253	5
Injecting drug use	M	100	3	5	4	11	6	8	4	4	2	8	4	7	3	7	2	150	3
	F	35	1	0	0	1	1	2	1	0	0	2	1	1	1	3	1	44	1
Heterosexual contact	M	133	3	16	11	13	7	17	8	19	8	16	7	13	6	9	3	236	4
	F	118	3	4	3	7	4	12	6	13	6	10	4	13	6	13	5	190	3
Heterosexual contact (person from high prevalence country)	M	46	1	9	6	11	6	5	2	12	5	6	3	11	5	8	3	108	2
	F	22	1	6	4	12	6	7	3	11	5	7	3	10	5	14	5	89	2
Haemophilia/coagulation disorder	M	99	2	1	1	0	0	1	1	0	0	0	0	0	0	0	0	101	2
	F	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	<1
Receipt of blood/tissue	M	18	<1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	19	<1
	F	13	<1	2	1	0	0	0	0	0	0	0	0	0	0	0	1	<1	16
Other	M	2	0	1	1	0	0	0	0	1	<1	0	0	0	0	1	<1	5	<1
	F	7	<1	0	0	0	0	2	1	0	0	0	0	1	1	1	<1	11	<1
Unavailable	M	93	2	3	2	7	4	5	2	1	<1	3	1	1	1	9	3	122	2
	F	4	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	<1
Total		4,064*	100	140	100	197*	100	218*	100	233*	100	225	100	222*	100	286*	100	5,541*	100

* Includes 21 people whose sex was reported as transgender and 23 people whose sex was unknown

Table 28: HIV diagnoses with reported heterosexual exposure by year, partner type and sex, Victoria, 1983–2005

		HIV diagnoses																	
		1983-1998		1999		2000		2001		2002		2003		2004		2005		Total	
Partner type	Sex	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Heterosexual contact, person is from high prevalence	M	46	14	9	26	11	26	5	12	12	22	6	15	11	23	8	18	108	17
	F	22	7	6	17	12	28	7	17	11	20	7	18	10	21	14	32	89	14
Heterosexual contact with person from high prevalence country	M	27	9	2	6	7	16	5	12	1	2	6	15	4	9	1	2	53	9
	F	12	4	1	3	2	5	6	15	2	4	2	5	3	6	1	2	29	5
Heterosexual contact with bisexual man	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	F	35	11	1	3	1	2	1	2	3	6	3	8	4	9	3	7	51	8
Heterosexual contact with IDU	M	8	3	0	0	0	0	0	0	1	2	1	3	0	0	0	0	10	2
	F	15	5	0	0	3	7	0	0	1	2	0	0	0	0	3	7	22	4
Heterosexual contact with person with HIV with no / other specified risk	M	21	7	1	3	0	0	1	2	0	0	1	3	4	9	4	9	32	5
	F	34	11	1	3	1	2	3	7	4	7	3	8	4	9	4	9	54	9
Heterosexual contact, not otherwise specified	M	77	24	13	37	6	14	11	27	17	31	8	21	5	11	4	9	141	23
	F	22	7	1	3	0	0	2	5	3	6	2	5	2	4	2	5	34	6
Total		319	100	35	100	43	100	41	100	55	100	39	100	47	100	44	100	623	100

acquiring their infection from a partner from a high prevalence country, three from a bisexual man, three from an injecting drug user partner, four from a person with HIV, and two reported heterosexual contact (no further information provided) (table 28). Of these 13 females, nine (69 per cent) reported that they had acquired their infection in Victoria (appendix 2, table 47). Eleven cases (85 per cent) were born in Australia. In 2005, one female who was diagnosed with HIV reported receipt of blood/tissue as an exposure. This female received a blood transfusion overseas and was tested in Victoria for confirmation of a past diagnosis with HIV overseas.

In 2005, there were five new HIV diagnoses reported among sex workers in Victoria. All were male and all reported a history of having sex with men.

During 2005 there were 23 individuals (20 males and three females) diagnosed with HIV who reported a history of injecting drug use (table 27). Of these, 13 also reported a history of male-to-male sexual contact and 10 reported injecting drug use only. Of the ten individuals with a history of drug use without male-male sexual contact, seven (70 per cent) were born in Australia. In comparison, between 1999 and 2004, there were 49 cases reported with a history of injecting drug use only, of which 22 (45 per cent) were born in Asia, 19 (39 per cent) in Australia and the remaining in various other countries (appendix 2, table 48). The median age of injecting drug users in 2005 was 41 years (range: 23–50 years). Between 1983 and 2005, 194 people (150 males and 44 females) reporting injecting drug

use only as a risk factor for infection had been notified with HIV, representing four per cent of all cases of HIV notified in Victoria (table 27).

Outbreaks and other investigations

Between April 2004 and August 2005, the Burnet Institute piloted a HIV sentinel surveillance system among men-who-have-sex-with-men (MSM) in Victoria using linked methodology. The aims of the pilot were to provide a comprehensive HIV surveillance system in Victoria that could assess changes in the number of HIV notifications relative to the number of HIV tests being performed in a timely fashion and provide behavioural information. The pilot study, which was partly funded by the department, was conducted at five medical clinics with a high caseload of MSM. Clinicians collected demographic data, HIV testing history and sexual behaviour information using a questionnaire from all clients undergoing HIV testing. These data were merged with the HIV laboratory results from the Victorian Infectious Diseases Reference Laboratory (VIDRL). In the study period, 3,441 MSM were tested at the five sentinel clinics, of which 57 (two per cent) were diagnosed with HIV. A higher HIV prevalence was found in 2005 (2.0 per cent) compared to 2004 (1.3 per cent) suggesting that the observed increase in HIV notifications described in this report were not related to changes in testing behaviour.

The Burnet Institute, in collaboration with the Victorian Department of Human Services, The Victorian Infectious Diseases Reference Laboratory and the Melbourne Sexual Health Centre

continued HIV sentinel surveillance and expanded the system in March 2006 to include not only HIV, but also genital chlamydia and hepatitis C at additional primary care sites in Victoria.

Comment

HIV diagnoses have increased in Victoria over the past seven years; the annual total of 286 for 2005 was the highest in 14 years, with 72 per cent of diagnoses among MSM. There was a true increase in HIV diagnoses in 2005 as well as an increase in confirmatory testing (appendix 2, table 51). The increase from two per cent in 1999 to ten per cent in 2005 reflects enhanced efforts by VIDRL to ensure all patients who undergoing viral load testing have a documented HIV test, but does not account for the overall increase in HIV notifications in Victoria over the past five years. Data from the HIV sentinel surveillance system suggests that the increase in 2005 was unrelated to testing practices at VIDRL or an increase in HIV testing overall. Therefore, changes in sexual behaviour, increased STIs and HIV prevalence among MSM are more likely to be contributing factors to the overall rise in HIV notifications.

Changes in the sexual behaviours of MSM in Victoria have been observed since 1998. The Melbourne Gay Community Periodic Survey found that the proportion of men within regular relationships reporting 'sometimes not using a condom' in the previous six months had increased from 45 per cent to 58 per cent from 1998 to 2005. While most reported unprotected anal intercourse (UAI) occurred between HIV seroconcordant (positive-positive or negative-negative) couples,

almost 22 per cent occurred where seroconcordance was unknown. Between 1998 and 2005, there was also an increase in the proportion of men reporting UAI with casual male partners, from 19 per cent in 1998 to 26 per cent in 2004 and 30 per cent in 2005.

Although fewer in number compared to MSM, HIV diagnoses among women have also increased. The majority of cases have occurred in women from high prevalence countries, possibly reflecting immigration patterns, but highlighting the need for culturally appropriate services and programs for these women.

On a cumulative scale the continuation of the sustained increase in HIV diagnoses will have a major impact on service provision in Victoria. Health promotion campaigns, particularly those focusing on MSM, need to be implemented to curb the steep rise in HIV diagnoses we have observed.

Chlamydia

Summary of notifications

The department received notifications for 8,953 cases of chlamydia in 2005, a 17 per cent increase on the 7,651 cases notified in 2004. The age and sex distribution of cases was consistent those observed in previous recent years. There were 5,237 cases (58 per cent) in females with a median age of 22 years (range: 0–82 years) and 3,658

cases (41 per cent) in males with a median age of 26 years (range: 0–77 years). Sex was not reported for 58 cases. The number of cases notified and the overall rate were highest in the 20–24 years age group (figure 25).

Region of residence was reported for 8,559 cases (96 per cent) with the highest number and rate of cases notified for the residents of North and West Metropolitan region (figure 26). A similarly high notification rate was

Figure 25: Notified cases and notification rates of chlamydia by age group and sex, Victoria, 2005

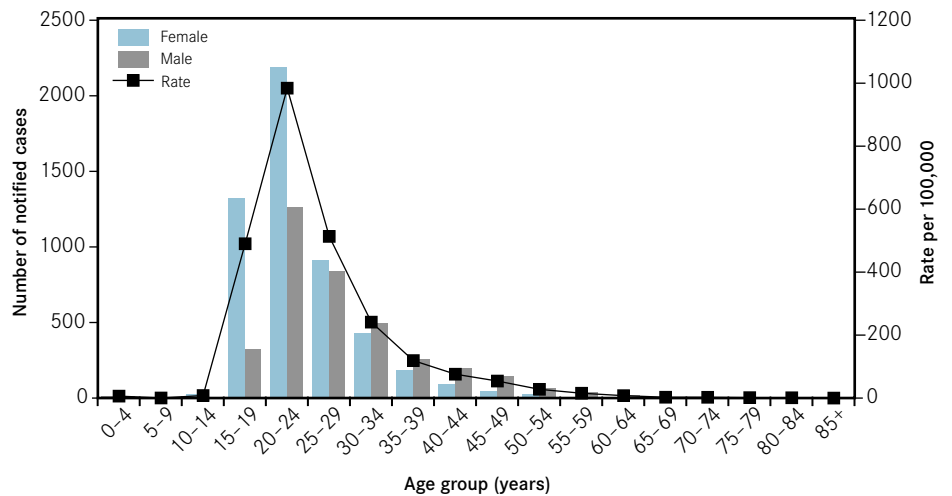
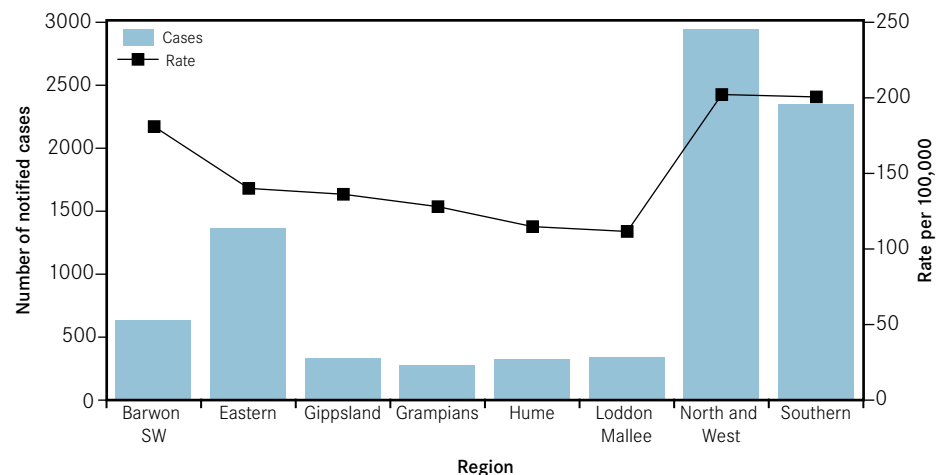


Figure 26: Notified cases and notification rates of chlamydia by region, Victoria, 2005



observed for residents of the Southern Metropolitan region.

Indigenous status was reported for 4,719 cases (53 per cent), of which 55 (one per cent) were reported as being of Aboriginal and/or Torres Strait Islander origin.

Enhanced surveillance is conducted among a subset of notifying clinicians about country of birth, reason for testing and other risk factors (see below). In 2005, enhanced data were received for 2,261 cases (29 per cent). Of these cases, 1,723 (76 per cent) were reported as born in Australia. Accounting for nearly half the cases, screening was the most commonly reported reason for testing (table 29).

Risk factors

Risk factor data collected in enhanced surveillance include sexual orientation, type of sexual partner and where the infection was acquired. The data were collected for 1,109 male cases, of which 711 (64 per cent) reported a female sexual partner and 388 (35 per cent) reported a male sexual partner. Two cases reported sexual partners of both sexes and the remainder were unknown.

Table 29: Notified cases of chlamydia by reported reason for testing, Victoria, 2005

Reason for testing	Cases (per cent)
Screening	1,152 (51)
Presented with signs or symptoms	614 (27)
Contact tracing	378 (17)
Other/not stated	121 (5)
Total	2,261 (17)

Among the males reporting a female sexual partner, 354 cases (50 per cent) reported a casual sexual partner and 278 (39 per cent) reported a regular sexual partner as the source of infection. Sixteen cases (two per cent) reported a sex worker as the source of infection and for the remaining cases this information was unknown. Among the males reporting a male partner, 241 cases (62 per cent) reported a casual sexual partner and 63 (16 per cent) reported having a regular sexual partner. One case reported a sex worker as the source of infection and for the remaining cases this information was unknown or not reported.

Nearly 80 per cent of the male infections were reportedly acquired in Victoria. Two per cent and seven per cent of cases reported interstate and overseas acquisition respectively; the remainder were unknown.

Enhanced data were collected for 1,142 female cases, of which 1,066 (93 per cent) reported a male sexual partner and 21 (two per cent) reported a female sexual partner; the remainder were unknown. Regular sexual partners were reported as the source of infection for 648 female cases (57 per cent) and 312 cases (27 per cent) indicated casual partners as the source. Five cases reported a sex worker as the source of infection, while eight cases were reported as being sex workers; for the remaining cases this information was not reported or unknown.

Eighty-three per cent of the female cases reported acquiring their infections in Victoria followed by overseas (five per cent) and interstate (one per cent); information was not reported or unknown for the remaining cases.

Outbreak and other investigations

No outbreaks were identified.

Comment

Chlamydia is the most commonly notified infectious disease in Victoria. The number of chlamydia cases notified has increased dramatically from 1,304 cases in 1995 to 8,953 cases in 2005, a rise of nearly 700 per cent. The reasons for this rise are likely to be multi-factorial but nevertheless reinforce the need to highlight prevention measures, including education about safe sex practices and the use of condoms, and early detection of infection by testing of those at risk. High-risk individuals include: those with a clinical presentation suggestive of chlamydial infection; individuals attending general practitioners for testing of sexually acquired infection (STI); those attending STI and family planning clinics and gay men's health centres and; partners of those already diagnosed with an STI.

Gonorrhoea

Summary of notifications

There were 1,193 cases of gonorrhoea notified in 2005, a five per cent increase on the 1,112 cases notified in 2004. Of the cases, 1,025 (86 per cent) were males, with a median age of 33 years (range: 8–69 years) and 156 (13 per cent) were in females, with a median age of 28 years (range: 15–83 years). Sex was not reported for 12 cases. The modal age groups for males and females were 30–34 years and 20–24 years respectively (figure 27). The combined sex five-year age group specific notification rate was highest in the 25–29 year age group.

Most cases were residents of metropolitan Melbourne, with the North and West Metropolitan and Southern Metropolitan regions having the highest number of cases and notification rates (figure 28).

Indigenous status was reported for 909 cases (76 per cent), of which four were reported as being of Aboriginal and/or Torres Strait Islander origin.

Risk factors

Enhanced surveillance data were collected for 870 cases (73 per cent). Of the 768 male cases for which these data were received, 438 (57 per cent) reported a male sexual partner, 253 (33 per cent) reported a female sexual partner and three cases reported a transgender sexual partner. This information was unknown or not reported for 74 of the male cases (10 per cent).

Among male cases reporting a male sexual partner, 332 (76 per cent) reported a casual partner and 84 (19

per cent) reported a regular partner as the source of infection. Among the male cases reporting a female sexual partner, 144 (57 per cent) reported a casual partner, 49 (19 per cent) reported a regular partner and 41 (16 per cent) reported a sex worker as the source of infection. This information was unknown or not reported for the remaining cases.

Victoria was the most commonly reported place where infection was acquired, reported for 80 per cent of the

male cases, followed by overseas (nine per cent) and interstate (two per cent). Place where infection was acquired was unknown or not reported for the remaining cases.

Enhanced data were reported for 93 female cases, of which 83 cases (89 per cent) reported a male partner. Forty-four cases in this group (53 per cent) reported a regular partner and 31 (37 per cent) reported a casual partner as the source of infection. Three female cases

Figure 27: Notified cases and notification rates of gonorrhoea by age group and sex, Victoria, 2005

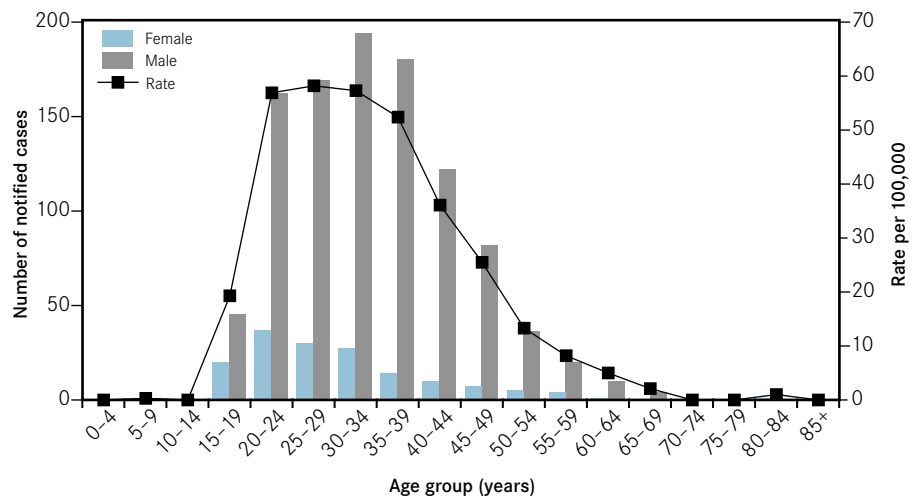
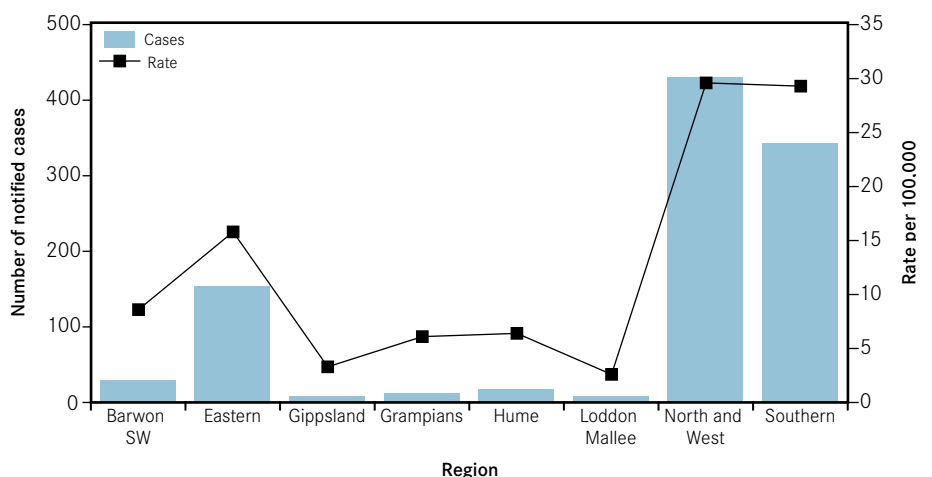


Figure 28: Notified cases and notification rates of gonorrhoea by region, Victoria, 2005



reported a regular female sexual partner as the source of infection, while for the remaining cases information about sexual partners was unknown or not reported.

Seventy-four female cases (80 per cent) reported Victoria as the place

of acquisition of infection followed by overseas (eight per cent) and interstate (two per cent).

Almost all gonorrhoea diagnoses in men who reported a female sexual partner were based on urethral or urine specimens compared to males with a

reported male sexual partner in which 58 per cent were diagnosed from urethral swabs or urine (table 30). A further 20 per cent of diagnoses were made from rectal swabs and 14 per cent from pharyngeal swabs in the latter group. More than half of the female

Table 30: Notified cases of gonorrhoea by sex, reported sex of partner and specimen site, Victoria, 2005

Specimen site*	Male cases (per cent)				Female cases (per cent)
	Male partner	Female partner	Transgender partner	Unknown	
Rectum	98 (22)	1 (<1)	0 (0)	14 (19)	2 (1)
Urethra/urine	278 (63)	245 (97)	2 (67)	49 (66)	49 (31)
Cervix/vagina	-	-	-	-	101 (65)
Pharynx	69 (16)	1 (<1)	1 (33)	10 (14)	7 (4)
Other	3 (1)	4 (2)	0 (0)	2 (3)	5 (3)
Unknown	34 (8)	30 (12)	0 (0)	7 (9)	19 (12)

* Multiple specimens were taken for some individuals

Table 31: Antibiotic susceptibility of *N. gonorrhoeae* isolates* by sex, reported sex of partner and place of acquisition, Victoria, 2005

Sex	Sex of partner	Where acquired	Ciprofloxacin			Ceftriaxone	
			Sensitive	Less sensitive	Resistant	Sensitive	Less sensitive/resistant
Male	Male	Australia	488	8	110	606	0
		Overseas	14	0	6	19	1
		Unknown	24	0	4	28	0
	Female	Australia	206	3	84	293	0
		Overseas	52	2	32	86	0
		Unknown	11	2	3	16	0
	Transgender	Australia	4	0	0	4	0
		Overseas	1	0	1	2	0
		Unknown	0	0	0	0	0
	Unknown	Australia	38	2	8	48	0
		Overseas	7	0	3	10	0
		Unknown	208	8	58	274	0
Male total		1,053	25	309	1,386	1	
Female	All	Australia	72	3	30	105	2
		Overseas	5	0	6	11	0
		Unknown	35	0	14	49	0
Female total		112	3	50	165	2	
Total		1,165	28	359	1,551	3	

* Multiple isolates from the same individual may be included

cases had diagnostic specimens taken from the cervix or vagina.

Antibiotic susceptibility testing is conducted at MDU on a subset of *N. gonorrhoeae* case isolates. Approximately 28 per cent of *N. gonorrhoeae* isolates from heterosexually acquired cases in Australia were resistant to ciprofloxacin, compared to approximately 18 per cent in male cases that reported acquisition from a male sexual partner in Australia (table 31). *N. gonorrhoea* isolates have generally remained universally sensitive to ceftriaxone, although three were found to be less sensitive in 2005.

Comment

As observed for other STIs, notification rates of gonorrhoea continue to increase and prevention measures are the same. The department will also continue to monitor antibiotic resistance to ciprofloxacin and ceftriaxone.

Syphilis – infectious

Summary of notifications

In 2005, the department received notifications for 491 cases of syphilis, of which 116 were classified as infectious syphilis, a 40 per cent increase on the 83 infectious cases notified in 2004. Of the infectious syphilis cases, 51 (44 per cent) were primary infections, 40 (34 per cent) were secondary infections and 25 (22 per cent) were early latent

infections. There were 104 cases (90 per cent) in males aged from 17 to 62 years, with a median age of 36 years. Twelve cases (10 per cent) were in females aged from 18 to 73 years, with a median age of 27 years. Infections were most common in the 35–39 year age group for males and 25–29 year age group for females (figure 29). The combined sex five-year age-specific notification rate was highest in the 35–39 years age group.

Figure 29: Notified cases and notification rates of infectious syphilis by age group and sex, Victoria, 2005

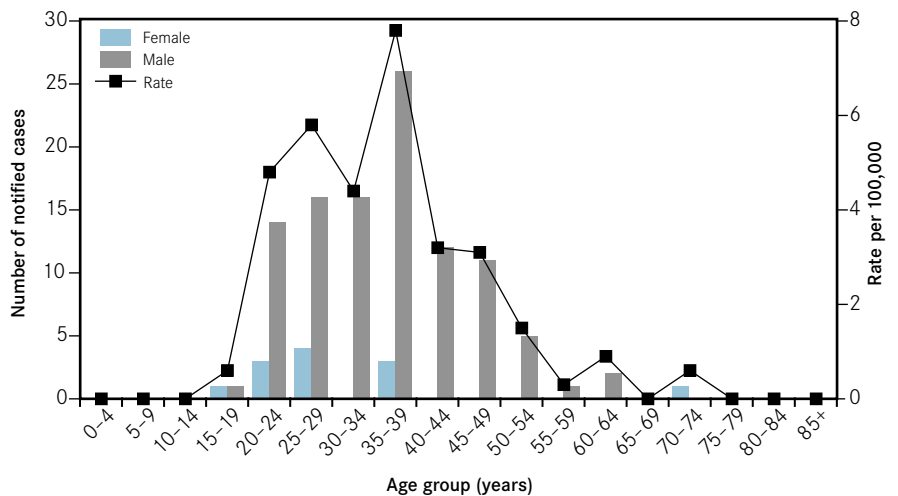
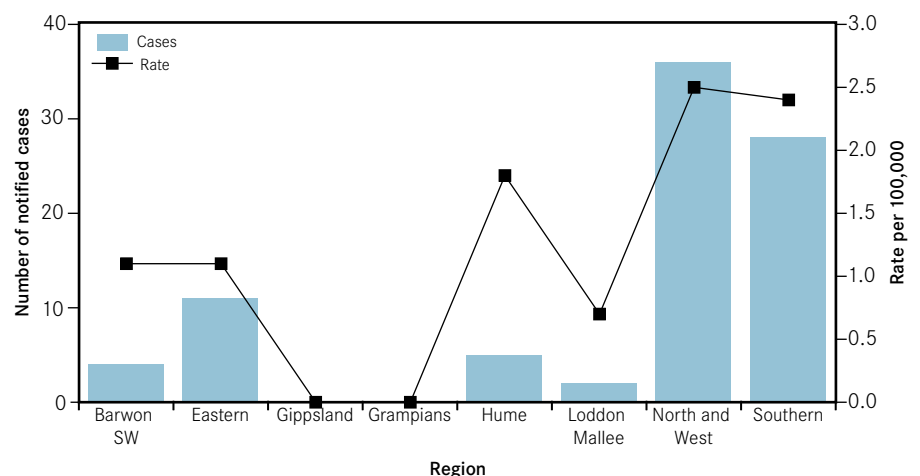


Figure 30: Notified cases and notification rates of infectious syphilis by region, Victoria, 2005



Region of residence was reported for 86 cases (74 per cent) for which the highest numbers of cases and notification rates were the North and West Metropolitan and Southern Metropolitan regions (figure 30).

Indigenous status was reported for 104 cases (90 per cent), of which three were reported as being of Aboriginal and/or Torres Strait Islander origin.

Enhanced surveillance data about reason for testing and risk factors are also collected for cases of infectious syphilis. Clinicians reported that screening for STIs and presenting with a symptomatic infection were the most common reasons for syphilis testing (table 32).

Risk factors

Enhanced surveillance questionnaires about sexual orientation, type of sexual partner and where the infection was acquired were returned for all cases. Of the 104 male cases, 92 (88 per cent) indicated likely acquisition from a male sexual partner, nine (nine per cent) from a female partner; three cases were unknown.

Among the males reporting acquisition from a male sexual partner, 75 (82 per cent) indicated the partner was casual and 14 (15 per cent) reported the partner as regular. Partner type was unknown for three cases. Among the males reporting a female sexual partner nearly all cases (n=8) reported acquiring their infection from a casual partner and for the remaining case this information was unknown.

Infection was reported as acquired in Victoria for 87 cases (85 per cent) and interstate and overseas for 6 cases (six per cent) and 5 cases (five per cent) respectively. Place of acquisition of infection was unknown for six cases.

Of the 12 female cases notified, 10 (83 per cent) reported a male sexual partner and was unknown for two cases. Six cases (46 per cent) reported a regular partner as the source of infection; two cases (18 per cent) indicated a casual sexual partner and the remainder were unknown. Place of infection was reported as overseas by seven cases (54 per cent); four cases (31 per cent) indicated Victoria and one was interstate. One case had an unknown place of acquisition.

Comment

Although syphilis comprises the smallest number of notified STI cases, the annual rate at which they are being notified is increasing the greatest. The increase is being driven primarily among men who have sex with men and prevention strategies need to be aggressively pursued among this high-risk group.

The Burnet Institute, in collaboration with the Melbourne Sexual Health Centre and the Victorian Infectious Diseases Reference Laboratory, is undertaking a sentinel surveillance project for STIs and hepatitis C in clinics with high caseloads of high-risk groups. It is anticipated that this targeted approach to surveillance of high-risk groups will provide added insights about risk factors and behaviours that can subsequently inform future public health policy and action.

Table 32: Notified cases of infectious syphilis by reported reason for testing, Victoria, 2005

Reason for testing	Cases (per cent)
STI screen	54 (47)
Presented with signs or symptoms	44 (38)
Antenatal screen	9 (8)
Sexual contact with infected partner	4 (3)
Other	4 (3)
Not stated	1 (1)
Total	116 (100)