Surveillance of Sexually Transmissible Diseases in Victoria 1997

Published by the Disease Control Section
Health Intelligence and Disease Control
Department of Human Services

This publication is available at Internet address:
http://www.dhs.vic.gov.au/phb

Contents

Acknowledgements

We thank the following individuals and organisations for the provision of data and assistance in preparation of this report together with the many individuals and laboratories who forwarded AIDS and STD notifications to the Department of Human Services throughout the year; without these data this report would not have been possible.

Victorian Collaborative Group on HIV and AIDS Surveillance

Assoc. Prof. J. Spicer, Ms H. Delimitrios, Ms K. Watson *(Alfred Hospital)*
Dr B. Mayall *(Austin Hospital)*
Dr G. Whyte, Ms C. Carroll *(Australian Red Cross Blood Service–Victoria)*
Mr R. Ward *(Consultant Diagnostic Services)*
Dr T. Kerr *(Dandenong Hospital)*
Dr C. Reed, Dr K. Hayes, Ms F. Martuccio *(Dorevitch-Tresize Pathology)*
Dr J. Carnie, Mr T. Carter, Ms B. Hatch, Ms J. Tomnay, Dr C. Voon *(Department of Human Services)*
Dr C. Villella *(Gay Men's Health Centre)*
Dr S. Graves, Mr J. Wilson *(Geelong Hospital)*
Mr M. Ralston, Mr R. Clough *(Gippsland Pathology Services)*
Mr L. Dunstone, Ms N. James *(Goulburn Valley Base Hospital)*
Dr J. Andrew, Mr W. Dimech *(Gribbles Pathology)*
Mr T. Butler *(Hitech Pathology)*
Dr N. Crofts, Dr. A. Rodger, Dr S. Thompson, Ms E. Stevenson , Dr S. Thompson *(Macfarlane Burnet Centre for Medical Research)*
Dr R. Baird, Ms J. Marler *(Melbourne Pathology)*
Dr D. Jacobs *(Melbourne Sexual Health Centre)*
Dr G. Hogg, Ms D. Tallent *(Microbiological Diagnostic Unit, University of Melbourne)*
Mr E. Russell *(Monash Medical Centre)*
Mr M. Jacombs, Ms K. Hornidge *(Northern Hospital)*
Dr O. Harris *(PathCare Consulting Pathologists)*
Ms D. Giltrap, Dr V. Sinnickas *(Royal Melbourne Hospital)*
Dr S. Garland, Mr W. Debenish *(Royal Women's Hospital)*
Dr M. Waters, Mr T. Wearne *(St Vincent's Hospital)*
Ms D. Eckert, Mr R. Juska *(Unipath Laboratories)*
Dr A. Breschkin, Dr H. Kelly *(Victorian Infectious Diseases Reference Laboratory)*
Ms L. Ireland , Mr A. Ambrose, Ms A. Manjikian *(Victorian Institute of Forensic Pathology)*

Other Individuals and Organisations

Dr A. Fuller, Dr A. Mijch, Ms J. Morgan, Dr D. Spelman *(Alfred Hospital)*
Mr S. Pearson *(Austin Hospital)*
Dr J. Sherman *(Barkly Street Medical Centre)*
Ms A. Parnaby *(Ballarat Community Health Centre)*
Ms T. Butterworth *(Community Health Bendigo)*
Ms K. Ho, Ms I. Benedict, Dr J. Woods *(Family Planning Victoria Inc.)*
Ms M. Randall *(Geelong Community Health Services)*
Mr D. Smith *(Gribbles Pathology)*
Mr J. Munro *(Hitech Pathology)*
Mr S. Loporchio *(Communications Unit, Department of Human Services)*
Dr C. Voon, Mr R. Beck, Mr T. Lauer, Dr G. Tallis *(Disease Control Section, Department of Human Services)*
Dr A. Richards *(La Trobe Community Health Services)*
Ms. J. Hocking, Mrs L. Clark *(Macfarlane Burnet Centre for Medical Research)*
Mr C. Mercer *(Melbourne Inner-City AIDS Prevention Centre Needle Exchange)*
Mr W. Jose *(Melbourne Pathology)*
Ms C. Snell, Dr J. Woods *(Melbourne Sexual Health Centre)*
Mr J. McBride *(Microbiological Diagnostic Unit, University of Melbourne)*
Ms A. McDonald, Ms M. MacDonald *(National Centre in HIV Epidemiology and Clinical Research)*
Mr A. Ritchie *(PathCare Consulting Pathologists)*
Mr M. Lees *(Royal Women's Hospital)*
Mrs C. Dean, Mr P. Rathbone *(Royal Melbourne Hospital)*
Mr C. Campora *(St Kilda Needle Exchange)*
Ms M. Virtue *(Southern Hep/HIV/AIDS Resource & Prevention Service–SHARPS)*
Ms M. Groves, Ms M. Pavlovic *(Trezise Pathology)*
Mr A. Ebrahim, Mrs J. Terlecka *(Unipath Laboratories)*
Ms J. Leydon, Dr W. Maskill *(Victorian Infectious Diseases Reference Laboratory)*
Dr D. Ashton, Ms S. Cardwell *(Wodonga STD Clinic)*

Abbreviations

ABS	Australi an Bureau of Statistics
AIDS	Acquired Immunodeficiency Syndrome
ARCBS-Vic	Australian Red Cross Blood Service–Victoria
BBV	Blood-Borne Virus/es
CD4	Marker for specific T-lymphocyte subset with a central role in immune responses (also known as helper T-cells)
CFR	Case Fatality Rate
EIA	Enzyme Immunoassay
HBcAb	Hepatitis B core Antibody
HBcIgM	Hepatitis B core Immunoglobulin M
HBsAb	Hepatitis B surface Antibody
HBsAg	Hepatitis B surface Antigen
HIV	Human Immunodeficiency Virus
HIV-1	Human Immunodeficiency Virus, type 1
HIV-2	Human Immunodeficiency Virus, type 2
HPV	Human Papillomavirus
HSV	*Herpes simplex* Virus
HTLV-I	Human T-Lymphotrophic Virus, type I
HTLV-II	Human T-Lymphotrophic Virus, type II
IDU	Injecting Drug Use/User
IgM	Immunoglobulin M
MDU	Microbiological Diagnostic Unit
M:F	Male:Female
MIC	Minimum Inhibitory Concentration
mL	Millilitre
MSHC	Melbourne Sexual Health Centre
NCHECR	National Centre in HIV Epidemiology and Clinical Research
NOS	Not Otherwise Specified
NSEP	Needle and Syringe Exchange Program
NSU	Non-Specific Urethritis
PCP	*Pneumocystis carinii* Pneumonia
PCR	Polymerase Chain Reaction
PLWA	People Living With AIDS
PID	Pelvic Inflammatory Disease
PPNG	Penicillinase-Producing *Neisseria gonorrhoeae*
RACGP	Royal Australian College of General Practitioners
RNA	Ribonucleic Acid
STD	Sexually Transmitted/Transmissible Disease
TRNG	Tetracycline-Resistant *Neisseria gonorrhoeae*
TTY	Telephone Typewriter
µG	Microgram
µL	Microlitre
VIDRL	Victorian Infectious Diseases Reference Laboratory
WHO	World Health O rganisation

Introduction

This is the ninth annual report on surveillance of sexually transmissible diseases (STDs) in Victoria and incorporates data from statutory notifications to the Victorian Department of Human Services for 1997 and, where available, comparative data from earlier years. The report also contains information derived from supplementary surveillance and related research activities which would not be possible without the assistance and co-operation of, among others, the doctors, clinics and laboratories who see patients at risk for sexually transmissible diseases in Victoria.

In recent years, surveillance data for syphilis and gonorrhoea has been gradually improved, with integration of clinical and laboratory-based surveillance systems for these diseases. Systems initiated in 1995 to improve surveillance for genital chlamydia have continued with the result that notifications of chlamydia for 1997 are the highest ever recorded for Victoria. Several detailed reports on Victorian surveillance methods and findings for this disease are now available.[1,2,3] Building on this work, a new enhanced surveillance system for chlamydia was introduced from the beginning of 1997 which, for the first time, provides similar epidemiological and demographic data to that already available for syphilis and gonorrhoea.

Detailed epidemiological data continues to be collected on diagnoses of acquired immunodeficiency syndrome (AIDS) and human immunodeficiency virus (HIV), and is of a consistently high standard. Included in this report are the results of surveillance for HIV, including diagnoses and testing, and for other STDs. In addition, findings from several clinical settings including the Melbourne Sexual Health Centre and non-metropolitan sexual health clinics are also reported, as are the results of testing for blood-borne viruses in people seen at selected needle and syringe exchange programs (NSEPs). Surveillance data for hepatitis B and C, which have been included in previous editions of this report, are provided in the companion report entitled *Surveillance of Notifiable Infectious Diseases in Victoria, 1997*.

For the purposes of this report, country of birth has been standardised into regions used by the World Health Organisation. Where possible, diagnoses are also reported as rates, and we are encouraging all sentinel sites which supply data to collect the relevant denominators. This allows calculation of rates, thereby increasing our ability to describe STDs in terms of population rather than individual perspectives.

1 Thompson SC, McEachern A, Stevenson E. Impact of improved laboratory compliance on notification of genital *Chlamydia trachomatis* infection in Victoria. Sex Transm Dis 1997;24(2):84–89.

2 Thompson SC, McEachern KA, Stevenson EM, Forsyth JR. The epidemiology of notified genital *Chlamydia trachomatis* infection in Victoria, Australia: a survey of diagnosing providers. Int J STD AIDS 1997;8(6):382–387.

3 Thompson S, McEachern A, Stevenson E. HIV testing of patients diagnosed with genital *Chlamydia trachomatis* in Victoria. Venereology 1996;9(3):172–175.

Summary

The pattern of sexually transmissible diseases in Victoria for 1997 remains essentially unchanged from 1996. However, there are certain aspects of the surveillance data that are worthy of comment.

By the end of 1997, a total of 1,682 people in Victoria had been diagnosed with AIDS, of whom 78 per cent (1,318 people) were known to have died. During 1997, 68 people were diagnosed with AIDS in Victoria; a reduction from 138 in 1996 and 172 in 1995. This downward trend in AIDS diagnoses has also been observed nationally and is consistent with changes in treatment of HIV-related disease as the group with the largest decline in incidence are those who have known about their positive HIV status for five or more years. As in previous years, most AIDS diagnoses (76 per cent) in 1997 occurred among men with a history of homosexual contact, 6 per cent of whom also reported a history of injecting drug use. There were six AIDS diagnoses in women during the year, all but two of whom reported infection via heterosexual contact, bringing the total number of Victorian AIDS diagnoses among women to 67, 4 per cent of all diagnoses (summary table 1).

There were 187 people newly diagnosed with HIV in 1997, bringing the total number of Victorian HIV diagnoses to 3,923 or 21 per cent of Australian HIV diagnoses. As for AIDS, most HIV diagnoses during the year (74 per cent) were among men with a reported history of homosexual contact. Individuals with a history of injecting drug use accounted for 8 per cent (n=15) of the year's diagnoses. Of these, the majority, 8/15, also reported male homosexual contact. Seven per cent of people diagnosed with HIV during the year were women, of whom 79 per cent (n=11) reported heterosexual contact as their only risk exposure. One-quarter (26 per cent, n=49) of people newly diagnosed with HIV during the year had evidence of either a seroconversion illness and/or a prior negative HIV test in the twelve months preceding their HIV diagnosis, as identified by diagnosing doctors and HIV testing laboratories. This compares with 27 per cent for 1996.

Almost 122,000 voluntary HIV antibody tests were carried out in Victoria during 1997. In contrast to diagnoses, tests in males only slightly outnumbered those in females (M:F ratio = 1.05). The majority of HIV testing (74 per cent) is now performed outside the major public HIV testing laboratories, which has reduced our ability to readily capture data on risk factors and reason for HIV testing. It is disappointing that (as in previous years) information on the reason for testing was only available for just over half (50.9 per cent) of HIV tests during the year.

In 1997, there were 353 cases of gonorrhoea reported within Victoria (summary table 2). The number of diagnoses during 1997 was lower than for 1996 (n=397), and was the third lowest since data were first collected in 1983. The M:F ratio fell slightly for 1997, reflecting an increased number of diagnoses among women (n=36), compared to 1996 (n=31) and 1995 (n=24). Despite this, the rate of diagnosis among males continues to be at least ten times that for females. As in previous years, most cases (52 per cent, n=185) were diagnosed in men with a history of homosexual contact. The number of diagnoses acquired through male homosexual contact (n=185) was somewhat lower than for the previous year (n=251). Almost all men infected through homosexual contact (94 per cent, n=173) acquired their infection locally. In contrast, of the 101 men who reported infection through heterosexual contact, just over one in four acquired their infection overseas (n=27) .

The number of cases of infectious syphilis notified during the year, at 16, was identical to that for 1996, although the number of cases reported with evidence of current (infectious or non-infectious) syphilis (n=172) was higher than for 1996 (n=101) and 1995 (n=156). Improvements in surveillance methods for syphilis have been introduced progressively from 1990 and this is reflected in the increase in notifications

since 1990. Infectious (recently acquired) syphilis continues to remain rare in Victoria and of those cases diagnosed during 1997, 43 per cent were either themselves symptomatic or the partners of symptomatic individuals. All of the remaining cases were diagnosed through routine STD screening or through antenatal testing.

Genital chlamydia remains the most common notifiable STD and, for 1997, 2,116 notifications were received, compared with 1,596 for 1996. Most infections were diagnosed in people aged less than 30 years. In contrast to most other STDs, diagnoses in females outnumbered those in males by a factor of two (summary table 3). Information from the enhanced surveillance system implemented during 1997 suggests that while most males with chlamydia were tested due to the presence of symptoms, a substantial proportion of females with chlamdyia were tested in relation to screening.

Summary Table 1
Number of Tests for Antibody to HIV and Diagnoses of HIV and AIDS, by Year, 1983 to 1997, Victoria

	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
AIDS Diagnoses											
Males	268	145	123	187	182	166	185	160	132	62	1,610
Females	6	3	2	5	3	12	13	11	6	6	67
Transgender	0	0	1	0	0	2	1	1	0	0	5
Total	274	148	126	192	185	180	199	172	138	68	1,682
AIDS Deaths											
Males	110	95	109	129	159	169	164	148	122	62	1,267
Females	2	1	2	2	3	4	7	15	5	6	47
Transgender	0	0	0	1	0	0	3	0	0	0	4
Total	112	96	111	132	162	173	174	163	127	68	1,318
HIV Diagnoses											
Males	1,613	309	287	300	243	213	205	168	180	172	3,690
Females	44	18	16	14	21	21	19	12	15	14	194
Transgender	6	2	2	2	1	1	0	0	0	0	14
Not Specified	23	0	0	0	0	1	0	0	0	1	25
Total	1,686	329	305	316	265	236	224	180	195	187	3,923
HIV Tests	160,925	72,700	96,258	111,580	114,639	125,553	135,069	122,808	122,856	121,804	1,184,192

Summary Table 2
Diagnoses of Gonorrhoea by Sex, and Notifications of Syphilis by Disease Classification, by Year, 1988 to 1997, Victoria

	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Gonorrhoea Diagnoses										
Males	439	455	337	293	377	346	390	317	366	317
Females	122	81	68	44	33	32	23	24	31	36
Total	561	536	405	337	410	378	413	341	397	353
Syphilis Notifications										
Infectious	-	-	13	46	39	27	35	17	16	16
Other/Unspecified	65	33	23	54	76	55	204	139	85	156
Total	65	33	36	100	115	82	239	156	101	172

Summary Table 3
Diagnoses of Chlamydia, Gonorrhoea and Syphilis, by Sex and Male-to-Female Ratio, 1997, Victoria

	Males	Females	Unspecified	Total	M:F Ratio
Chlamydia	802	1,314	0	2,116	0.6
Gonorrhoea	317	36	0	353	8.8
Syphilis	101	70	1	172	1.4
- infectious syphilis	11	5	0	16	2.2
- non-infectious syphilis	55	33	1	89	1.7
- unspecified syphilis	35	32	0	67	1.1

Infection and Disease Due to Human Immunodeficiency Virus (HIV)

In Victoria information on infection and disease due to HIV is collected via four separate mechanisms: statutory notification of all diagnoses of AIDS; non-identifying laboratory and clinical reports of new diagnoses of HIV; basic laboratory data on all HIV tests conducted in Victoria; and, from September 1996, statutory notification for new HIV diagnoses. For both HIV and AIDS, only coded (non-identifying) data are collected and all data are treated as strictly confidential. National statistics on HIV and AIDS are collated by the National Centre in HIV Epidemiology and Clinical Research in Sydney from information forwarded by all states and territories.

To maintain accurate data on survival and geographic distribution of people with AIDS, annual follow-up data are collected for all people living with AIDS (PLWA) who are not yet known to have died. For all new diagnoses of HIV, detailed exposure category and demographic data are sought directly from the diagnosing doctor by partner notification officers from the Victorian Department of Human Services.

Individuals with AIDS appear twice in these data: in the section on AIDS at the time of their diagnosis with AIDS, and in the section on HIV diagnoses at the time of their first positive HIV test in Victoria.

Acquired Immunodeficiency Syndrome (AIDS)

AIDS is the late stage of the illness caused by infection with HIV. Although the average time between infection with HIV and development of AIDS is approximately ten years, some people develop AIDS within a few years of infection with HIV, while others may remain AIDS-free for 15 years or longer.[1] According to accepted criteria, an HIV-infected person receives an AIDS diagnosis after the development of one or more AIDS-indicator illnesses. There are more than 20 AIDS-indicator illnesses in the AIDS case definition including, among others, *Pneumocystis carinii* pneumonia (PCP), Kaposi's sarcoma, oesophageal candidiasis, mycobacterial disease, toxoplasmosis and lymphoma.[2] Typically, AIDS-indicator illnesses are opportunistic diseases which occur only in people with advanced immune deficiency and are therefore rare outside the population of people infected with HIV.

Surveillance for AIDS relies on notification by doctors. Active surveillance for AIDS was implemented in 1991 by the Macfarlane Burnet Centre for Medical Research, which manages the Victorian AIDS data on behalf of the Department of Human Services. The surveillance system incorporates regular follow-up of notifying doctors, infectious diseases physicians and services, and HIV-related deaths. Since 1994, it has also included prospective follow-up for AIDS notifications in individuals presenting concurrently with HIV and AIDS. There has been a gradual downward trend in annual diagnoses of AIDS in Victoria since 1994, which has continued for 1997. This trend is also apparent nationally and is consistent with changes in treatment of HIV-related disease and/or declining AIDS incidence following the decline in HIV incidence in the mid-1980s (table 1.1).

The majority (88 per cent) of the 1,682 people diagnosed with AIDS in Victoria were men with a history of homosexual contact. Of these, 6 per cent (88/1,492) also had a history of injecting drug use. This is similar to the national pattern and the proportion has been relatively constant since the beginning of the epidemic.[3]

1 Stewart, GJ. The challenge: clinical diagnosis of HIV. Med J Aust 1993;158(1):31–4.

2 Australian National Council on AIDS. Definition of HIV infection and AIDS defining illnesses. ANCA Bulletin No. 18. April 1994.

3 National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997.

To date, there have been 67 women diagnosed with AIDS in Victoria, six of whom were diagnosed during 1997. Most of these women reported exposure to the virus via heterosexual contact. The proportion of women diagnosed with AIDS nationally in 1997 was 6 per cent. As in Victoria, the predominant source of exposure to HIV for all women diagnosed with HIV in Australia was heterosexual contact. Overall, the total number of AIDS cases where exposure was attributed to heterosexual contact remains small (4 per cent). Since AIDS cases reflect HIV transmission patterns up to ten years ago, information on HIV infections may more accurately reflect current trends. The case fatality rate (CFR) is lower for women than for men (table 1.2). However, this may reflect that over 70 per cent of women with AIDS have been diagnosed since 1992, compared with just under 45 per cent of men.

In 1997, AIDS cases were diagnosed in all metropolitan regions and in two of the five rural Department of Human Services regions (tables 1.3–1.5). The majority (59 per cent) of all new diagnoses in Victoria were in people living in the Northern and Southern Metropolitan regions of Melbourne; 6 per cent of people diagnosed with AIDS in Victoria live outside the metropolitan area, compared with 28 per cent for the total Victorian population. Deaths from AIDS occurred in all metropolitan regions and all but one rural region during 1997. The regional distribution of deaths was similar to that for new AIDS diagnoses.

Of the 68 AIDS-related deaths which occurred during 1997, 13 per cent were in people who had been diagnosed with AIDS during the year (table 1.6). The majority of the remaining 1997 deaths were in people whose AIDS diagnosis occurred in 1994, 1995 or 1996. By the end of December 1997, 364 of the 1,682 people diagnosed with AIDS were presumed to be living with AIDS, including six people who are currently lost to follow-up.

Approximately 19 per cent of people diagnosed with AIDS in Victoria in 1997 were born in countries where English is not the main language (table 1.7). This proportion is similar to that for the general Victorian population and has remained relatively stable over the course of the epidemic.

PCP continues to be the most commonly notified AIDS-indicator illness, although the proportion of AIDS cases presenting with PCP has decreased substantially since the beginning of the epidemic in line with the availability of prophylaxis. It accounted for one in three new AIDS diagnoses during 1997 (table 1.8). The second most commonly reported AIDS-indicator illness was mycobacterial infection (diagnosed in 19 per cent of new AIDS cases), followed by Kaposi's sarcoma, which was diagnosed in 18 per cent of new AIDS cases. This proportion has remained unchanged since the late 1980s.

In 1997, almost 75 per cent of AIDS diagnoses were made in people with less than 200 CD4 cells per microlitre (μL) indicating a severely compromised immune system. A small proportion of diagnoses continues to be made in individuals with higher CD4 counts (500 and over). Although CD4 counts are often used as surrogate markers for length of time infected, there is much variation both in populations and within individuals. This variation makes the interpretation of a single value, such as that received with an AIDS notification, problematic. Despite this, information on CD4 count at time of AIDS diagnosis has been routinely collected on diagnoses since 1991 and over the subsequent years has become increasingly more complete. These data are shown in table 1.9.

Data on the time between HIV diagnosis and AIDS diagnosis are contained in table 1.10 and show that the proportion of individuals whose AIDS diagnosis occurred less than twelve months after their initial HIV diagnosis, which declined from almost 50 per cent for AIDS diagnoses prior to 1989 to 20 per cent (35/172) in 1995 and 26 per cent (36/138) in 1996, was 59 per cent (38/68) for 1997. While the total number AIDS diagnoses has declined overall, there has been little if any change in the number of people diagnosed with HIV late in the course of their disease. There has been a clear decline in the incidence of AIDS among Victorians who have been aware of their positive HIV status for several years before diagnosis of their initial AIDS-defining illness. The proportion of individuals developing AIDS more than five years after their HIV diagnosis declined from 49 per cent (67/138) in 1996 to 28 per cent (19/68). These findings are consistent with reduced AIDS incidence in those individuals who have had access to treatment.

In 1997, 50 per cent of all Australian AIDS cases were diagnosed in New South Wales; Victorian diagnoses accounted for 20 per cent of 1997 cases (table 1.12). The cumulative rate of AIDS diagnosis (per 100,000 population) was highest in New South Wales. Overall, the rate for males in Victoria was second only to that for New South Wales (table 1.13).

Table 1.1
Notified Cases of AIDS and Notified Deaths from AIDS, by Sex, Exposure Category and Year of Diagnosis, 1983 to 1997, Victoria

Sex	Exposure Category	Year of Diagnosis											
		1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
Males													
	Homosexual	219	127	98	147	131	124	141	110	96	42	1,235	76.7
	Bisexual	34	7	12	18	25	13	25	15	15	5	169	10.5
	IDU: Homo/Bisexual	7	4	8	7	9	17	8	13	12	3	88	5.5
	IDU: Other	1	0	2	2	1	1	1	6	0	0	14	0.9
	Heterosexual Contact	1	2	1	8	8	5	6	9	5	6	51	3.2
	Transfusion Recipient	3	0	0	1	2	0	0	0	1	0	7	0.4
	Haemophilia/Coagulation Disorder	3	4	2	3	3	6	3	7	2	1	34	2.1
	Under Investigation	0	0	0	0	0	0	0	0	0	1	1	0.1
	Information Unavailable	0	1	0	1	3	0	1	0	1	4	11	0.7
	Total Diagnoses	268	145	123	187	182	166	185	160	132	62	1,610	100
	Known Deaths	261	140	118	179	164	141	129	82	44	9	1,267	78.7
Females													
	IDU	1	0	0	0	1	1	1	2	1	2	9	13.4
	Heterosexual Contact	4	2	1	2	2	10	11	8	5	4	49	73.1
	Transfusion Recipient	1	0	0	1	0	1	1	0	0	0	4	6.0
	Coagulation Disorder	0	1	0	0	0	0	0	0	0	0	1	1.5
	Vertical Transmission	0	0	0	1	0	0	0	1	0	0	2	3.0
	Other[1]	0	0	0	1	0	0	0	0	0	0	1	1.5
	Information Unavailable	0	0	1	0	0	0	0	0	0	0	1	1.5
	Total Diagnoses	6	3	2	5	3	12	13	11	6	6	67	100
	Known Deaths	5	2	2	5	3	11	10	6	3	0	47	70.1
All Persons													
	Total Diagnoses[2]	274	148	126	192	185	180	199	172	138	68	1,682	100
	Total Known Deaths[3]	266	142	121	184	167	154	140	88	47	9	1,318	78.4

[1] Includes one person who acquired her infection via blood exposure other than IDU or blood transfusion.

[2] Includes 5 people for whom sex was reported as transgender, diagnosed in 1990 (one person), 1993 (2 people), 1994 (one person) and 1995 (one person).

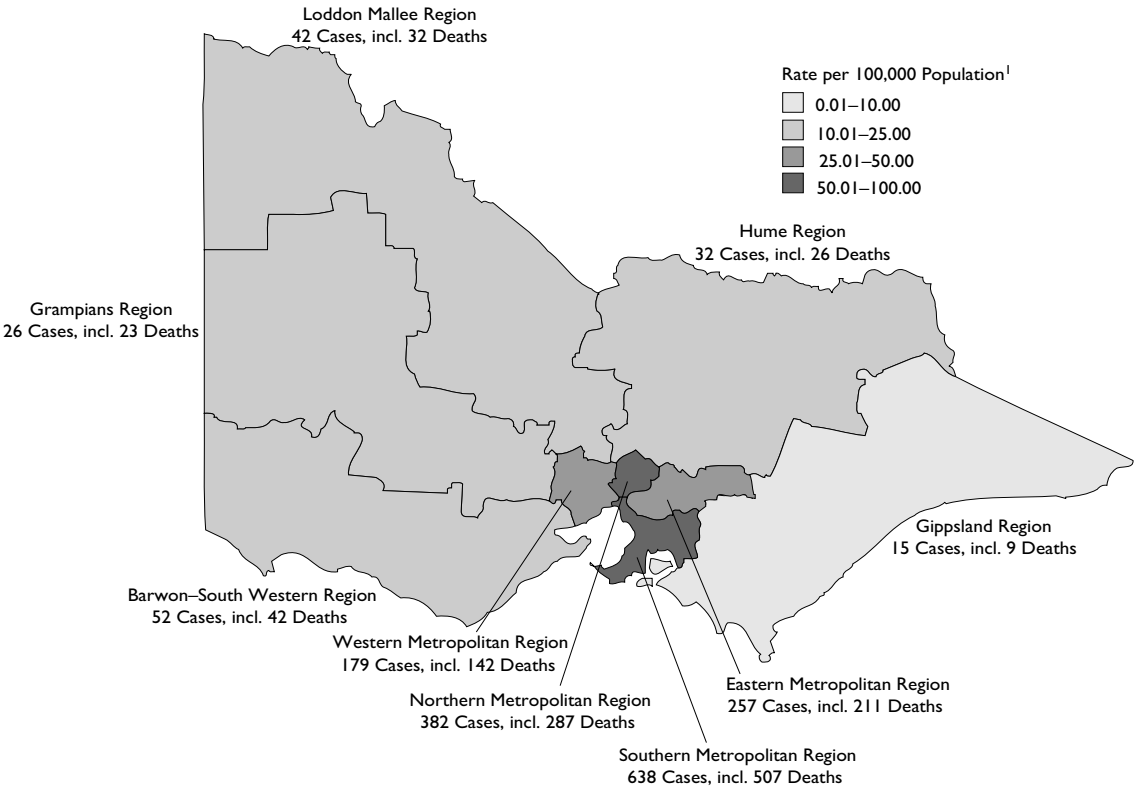
[3] Includes 4 people for whom sex was reported as transgender, who died in 1990 (one person), 1993 (2 people) and 1994 (one person).

Table 1.2
Notified Cases of AIDS by Age at Diagnosis and Sex, 1997 and Cumulative to the End of 1997, Cumulative Deaths and Case Fatality Rate (CFR), Victoria [1]

Age Group	Males				Females			
	1997	1983–97	Deaths	CFR (%)	1997	1983–97	Deaths	CFR (%)
0–12 yrs	0	3	3	100.0	0	3	2	66.7
13–19 yrs	0	7	5	71.4	0	1	1	100.0
20–24 yrs	3	58	41	70.7	0	5	5	100.0
25–29 yrs	4	223	179	80.3	2	14	8	57.1
30–34 yrs	17	340	258	75.9	1	16	11	68.8
35–39 yrs	11	336	260	77.4	1	10	8	80.0
40–44 yrs	7	261	215	82.4	0	4	2	50.0
45–49 yrs	6	180	143	79.4	1	1	0	-
50–54 yrs	4	79	59	74.7	0	8	6	75.0
55–59 yrs	6	68	58	85.3	1	2	1	50.0
60+ yrs	4	55	46	83.6	0	3	3	100.0
Total	62	1,610	1,267	78.7	6	67	47	70.1

[1] Table excludes 5 people for whom sex was reported as transgender, none of whom were diagnosed during 1997.

Figure 1.1
Notified Cases of AIDS and Cumulative Incidence Rates per 100,000 Population [1] **by Department of Human Services Region, 1983 to 1997, Victoria** [2]



[1] Based on ABS mid-year population estimates, 1997.

[2] Excludes 53 people who were originally diagnosed with AIDS interstate and 6 people for whom region of residence at time of AIDS diagnosis was not recorded.

Table 1.3
Notified Cases of AIDS, by Department of Human Services Region of Residence at Time of Diagnosis, 1983 to 1997, Victoria

Region	Year of Diagnosis											
	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
Barwon–South Western	4	7	4	6	6	8	5	6	3	3	52	3.1
Grampians	4	3	2	4	1	3	2	5	2	0	26	1.5
Loddon Mallee	2	3	4	7	2	7	9	5	3	0	42	2.5
Hume	1	3	0	4	2	3	8	5	5	1	32	1.9
Gippsland	0	1	1	0	4	1	3	0	5	0	15	0.9
Western Metropolitan	29	19	12	18	20	19	22	15	16	9	179	10.6
Northern Metropolitan	51	24	31	39	50	41	52	39	38	17	382	22.7
Eastern Metropolitan	38	26	22	39	30	26	21	27	16	12	257	15.3
Southern Metropolitan	135	59	49	70	59	69	72	58	44	23	638	37.9
Other[1]	9	3	1	4	9	1	5	12	6	3	53	3.2
Unavailable	1	0	0	1	2	2	0	0	0	0	6	0.4
Total	274	148	126	192	185	180	199	172	138	68	1,682	100

[1] Includes people who were initially diagnosed with AIDS while living interstate and have since been treated in Victoria.

Table 1.4
People Living with AIDS on the 31st of December Each Year, by Department of Human Services Region of Residence at Time of Diagnosis, 1983 to 1997, Victoria

Region	Year														
	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Barwon–South Western	0	0	0	0	0	3	9	8	11	13	15	14	12	10	10
Grampians	0	0	0	0	1	2	4	4	6	5	4	3	7	4	3
Loddon Mallee	0	0	0	0	2	1	3	7	8	3	7	9	9	10	10
Hume	0	0	0	1	1	1	4	3	6	5	6	8	7	6	6
Gippsland	0	0	0	0	0	0	1	0	0	4	2	5	4	7	6
Western Metropolitan	0	0	2	5	12	16	22	21	28	32	30	33	33	38	37
Northern Metropolitan	0	2	0	3	11	31	36	51	62	75	81	81	83	95	95
Eastern Metropolitan	0	0	0	4	11	20	31	34	48	47	50	52	44	47	46
Southern Metropolitan	1	3	9	23	50	79	95	93	108	109	108	123	130	126	131
Other[1]	0	0	0	2	4	8	8	7	11	19	14	15	24	21	20
Unavailable	0	0	1	1	1	1	1	1	1	0	2	1	0	0	0
Total	1	5	12	39	93	162	214	229	289	312	319	344	353	364	364

[1] Includes people who were initially diagnosed with AIDS while living interstate and have since been treated in Victoria.

Table 1.5
Notified Cases of AIDS, by Department of Human Services Region at Time of Diagnosis and Sex, and Deaths from AIDS, by Department of Human Services Region of Residence at Time of Death and Sex, 1997, Victoria

Region	Diagnoses of AIDS in 1997				Deaths from AIDS in 1997[1]			
	Males	Females	Total	%	Males	Females	Total	%
Barwon–South Western	3	0	3	4.4	4	1	5	7.4
Grampians	0	0	0	0.0	0	0	0	0.0
Loddon Mallee	0	0	0	0.0	1	0	1	1.5
Hume	0	1	1	1.5	1	0	1	1.5
Gippsland	0	0	0	0.0	1	0	1	1.5
Western Metropolitan	8	1	9	13.2	8	0	8	11.8
Northern Metropolitan	16	1	17	25.0	16	2	18	26.5
Eastern Metropolitan	12	0	12	17.6	13	1	14	20.6
Southern Metropolitan	20	3	23	33.8	16	2	18	26.5
Other[2]	3	0	3	4.4	1	0	1	1.5
Unavailable	0	0	0	0.0	1	0	1	1.5
Total	62	6	68	100	62	6	68	100

[1] Includes deaths occurring in 1997 irrespective of year of AIDS diagnosis.

[2] Includes people with AIDS who have been treated in Victoria and were either diagnosed interstate or died interstate.

Table 1.6
Notified Deaths from AIDS, by Year of Death and Year of Diagnosis, 1983 to 1997, Victoria

Year of Death	Year of Diagnosis										
	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
1983–88	112	-	-	-	-	-	-	-	-	-	112
1989	75	21	-	-	-	-	-	-	-	-	96
1990	40	47	24	-	-	-	-	-	-	-	111
1991	26	38	36	32	-	-	-	-	-	-	132
1992	5	17	36	69	35	-	-	-	-	-	162
1993	5	10	12	41	66	39	-	-	-	-	173
1994	2	5	4	27	34	61	41	-	-	-	174
1995	1	0	4	9	20	36	62	31	-	-	163
1996	0	3	4	5	8	13	25	41	28	-	127
1997	0	1	1	1	4	5	12	16	19	9	68
Total Known Deaths	266	142	121	184	167	154	140	88	47	9	1,318
Other Cases as at 31/12/1997[1]	8	6	5	8	18	26	59	84	91	59	364
Total	274	148	126	192	185	180	199	172	138	68	1,682

[1] Includes people who are currently living with AIDS in Victoria, together with 6 people who have been lost to follow-up and 23 people presently living interstate.

Table 1.7
Notified Cases of AIDS, by Country of Birth and Sex, 1983 to 1997, Victoria

Country of Birth	1997				1983–97			
	Males	Females	Total	%	Males	Females	Total	%
Australia	45	5	50	73.5	1,226	46	1,274	75.7
Other Oceania (incl. New Zealand)	2	0	2	2.9	52	0	53	3.2
United Kingdom and Ireland	2	0	2	2.9	97	3	101	6.0
Southern Europe	2	0	2	2.9	71	3	74	4.4
Other Europe	2	0	2	2.9	31	0	31	1.8
South-East Asia	2	0	2	2.9	27	4	32	1.9
Other Asia	1	0	1	1.5	25	0	25	1.5
Africa	3	1	4	5.9	31	6	37	2.2
North America	0	0	0	0.0	25	1	26	1.5
Middle and South America	2	0	2	2.9	13	2	15	0.9
Unavailable	1	0	1	1.5	12	2	14	0.8
Total	62	6	68	100	1,610	67	1,682[1]	100

[1] Includes 5 people for whom sex was reported as transgender.

Table 1.8
Notified Cases of AIDS, by AIDS-Defining Condition and Year of Diagnosis, 1983 to 1997, Victoria

AIDS-Defining Condition	Year of Diagnosis											
	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%[2]
PCP	146	68	51	76	77	63	68	41	44	25	659	39.2
Kaposi's Sarcoma	53	28	23	33	30	22	26	23	15	12	265	15.8
Oesophageal Candidiasis	21	20	21	22	14	19	26	39	24	10	216	12.8
Herpes Simplex	31	9	7	5	5	4	1	5	4	2	73	4.3
Toxoplasmosis	10	10	9	14	15	14	4	9	6	3	94	5.6
Mycobacterial Disease	19	7	6	15	16	23	21	20	16	13	156	9.3
Cytomegalovirus	16	8	7	8	7	4	8	7	13	0	78	4.6
Non-Hodgkin's Lymphoma	8	6	10	7	9	9	14	7	15	3	88	5.2
HIV Wasting Disease	5	7	6	4	12	14	12	8	5	7	80	4.8
Cryptosporidiosis	10	3	2	8	2	4	7	7	3	1	47	2.8
Cryptococcus (meningeal)	6	3	3	4	3	8	11	8	2	0	48	2.9
HIV Encephalopathy	1	5	1	2	4	4	10	3	4	2	36	2.1
Other Conditions[1]	0	0	1	1	2	3	4	3	3	5	22	1.3

[1] Includes diagnoses of recurrent bacterial pneumonia, progressive multi-focal leukoencephalopathy, lymphoid interstitial pneumonitis, salmonellosis, histoplasmosis and isosporiasis.

[2] Percentages are based on 1,682 notified cases. The total number of conditions is greater than 1,682 as some individuals present with more than one AIDS-defining condition.

Table 1.9
Notified Cases of AIDS, by CD4 Count at Time of AIDS Diagnosis, 1992 to 1997, Victoria

CD4 Count	Year of Diagnosis											
	1992	%	1993	%	1994	%	1995	%	1996	%	1997	%
Less than 99 per µL	129	69.7	121	67.2	129	64.8	125	72.7	96	69.6	40	58.8
100 to 199 per µL	22	11.9	35	19.4	44	22.1	30	17.4	12	8.7	10	14.7
200 to 499 per µL	26	14.1	15	8.3	16	8.0	12	7.0	19	13.8	10	14.7
500 per µL and over	3	1.6	2	1.1	4	2.0	4	2.3	4	2.9	3	4.4
Unavailable	5	2.7	7	3.9	6	3.0	1	0.6	7	5.1	5	7.4
Total	185	100	180	100	199	100	172	100	138	100	68	100

Table 1.10
Notified Cases of AIDS, by Time between HIV Diagnosis and AIDS Diagnosis, 1983 to 1997, Victoria

Time between HIV Diagnosis and AIDS Diagnosis	Year of AIDS Diagnosis											
	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
Less than 1 yr	129	46	31	51	53	36	50	35	36	38	505	30.0
1 yr to < 3 yrs	82	33	20	42	35	27	30	34	14	7	324	19.3
3 yrs to < 5 yrs	36	45	42	35	32	30	29	23	21	4	297	17.7
5 yrs and over	2	6	28	63	65	87	90	80	67	19	507	30.1
Unavailable	25	18	5	1	0	0	0	0	0	0	49	2.9
Total	274	148	126	192	185	180	199	172	138	68	1,682	100
% within 1 year	47.1	31.1	24.6	26.6	28.6	20.0	25.1	20.3	26.1	55.9	30.0	

Table 1.11
Notified Cases of AIDS, by Year of Diagnosis and Year of Notification to the Department of Human Services, 1983 to 1997, Victoria

Year of Diagnosis	Year of Notification										
	1983–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
1983–88	237	5	6	12	5	2	5	0	1	1	274
1989	-	118	7	9	9	3	0	1	1	0	148
1990	-	-	96	24	2	1	1	1	1	0	126
1991	-	-	-	147	30	12	2	0	1	0	192
1992	-	-	-	-	146	31	5	0	3	0	185
1993	-	-	-	-	-	129	36	9	6	0	180
1994	-	-	-	-	-	-	152	39	7	1	199
1995	-	-	-	-	-	-	-	144	26	2	172
1996	-	-	-	-	-	-	-	-	122	16	138
1997	-	-	-	-	-	-	-	-	-	63	68
Total	237	123	109	192	192	178	201	194	168	83	1,682[1]

[1] Includes 5 cases notified during the first three months of 1998, all diagnosed during 1997.

Figure 1.2
Notified Cases of AIDS, by Year of Diagnosis and Year of Notification, 1983 to 1997, Victoria

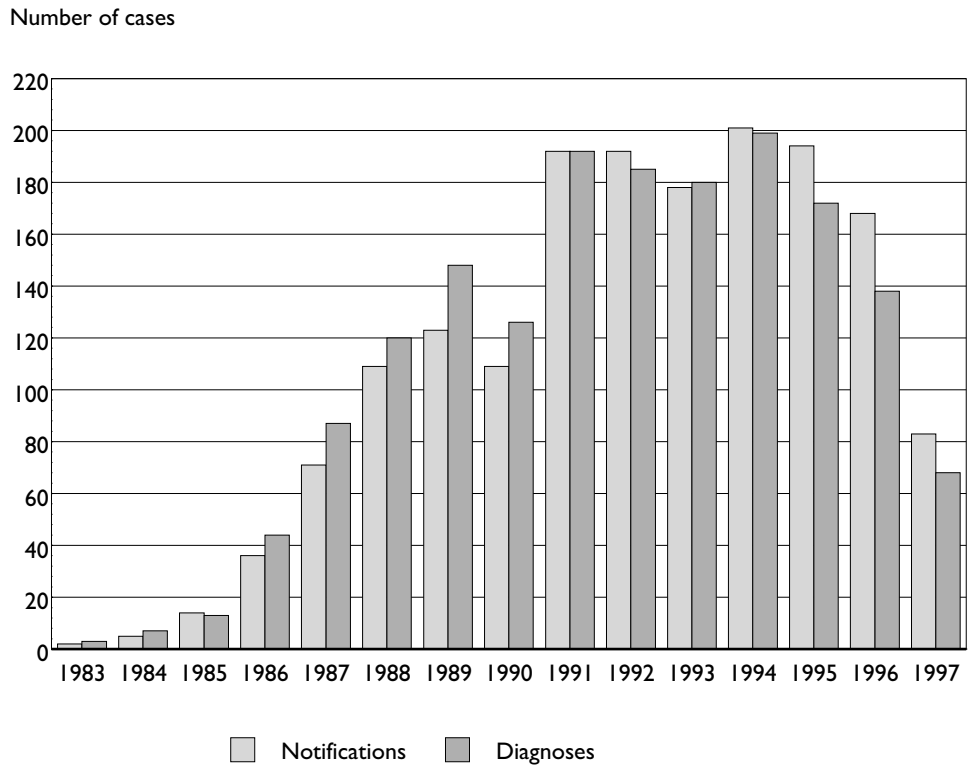


Table 1.12
Notified Cases of AIDS, Australia, [1] and Percentage of Cases Diagnosed in Victoria, by Year of Diagnosis, 1981 to 1997

	Year of Diagnosis										
	1981–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total
Total Cases Australia[1]	1,334	614	671	802	786	838	948	786	641	311	7,731
% of National Cases Diagnosed in Victoria	20.5	24.1	18.8	23.9	23.5	21.5	21.0	21.9	21.5	21.9	21.8

[1] Data provided by the National Centre in HIV Epidemiology and Clinical Research.

Table 1.13
Cumulative Incidence Rate for Notified Cases of AIDS, by State/Territory of Diagnosis and Sex, 1981 to 1997, Australia [1]

State/Territory	Cumulative Incidence Rate per 100,000 population		
	Males	Females	Total
New South Wales	138.8	4.9	71.6
Victoria	66.6	2.6	34.4
Australian Capital Territory	52.5	4.8	28.1
Western Australia	36.9	2.6	19.9
Queensland	44.1	2.5	23.4
South Australia	43.4	2.5	22.7
Tasmania	17.5	0.8	9.1
Northern Territory	30.4	0.0	16.6
Australia	80.2	3.4	41.7

[1] Data provided by the National Centre in HIV Epidemiology and Clinical Research.

Human Immunodeficiency Virus (HIV)

Human Immunodeficiency Virus Type 1 (HIV-1)

HIV is the retrovirus which causes AIDS. The retrovirus associated with most of the world's HIV disease is designated HIV type 1 (HIV-1) and the virus which is detected principally in West Africa, is called HIV type 2 (HIV-2). In common usage 'HIV' usually indicates HIV-1 as HIV-2 is rare in Australia.

Information on new diagnoses of HIV in Victoria is obtained from three sources: laboratory reports of new HIV diagnoses; data obtained from telephone call-back to all diagnosing doctors (carried out since 1994 by partner notification officers from the Department of Human Services to clarify the source of exposure, and to collect additional demographic and clinical information); and, since September 1996, notification by diagnosing doctors. Information from these three sources is combined to form the Victorian HIV database, which is maintained by the Macfarlane Burnet Centre for Medical Research on behalf of the Victorian Department of Human Services.

As part of routine surveillance, basic anonymous information on all HIV tests performed by laboratories is also collected and provides detail on testing patterns in Victoria. These data include age and sex on each HIV test, together with reason for testing and basic exposure data. Collection of standard reason for testing and exposure information is facilitated via a special HIV test request form which has been in use in Victoria since HIV testing began. This form has in the past been widely used in public laboratory settings. The introduction of 'user-pays' HIV testing in Victoria midway through 1994 has changed the nature of these data. Since July 1994, more than half of the HIV testing in Victoria has been performed in private pathology laboratories, with many of the requests for testing on standard pathology request forms, resulting in information on risk, reason for testing and test history being less often available.

Since 1991, a system has also been in place to record the dates of any previous negative HIV tests for all new HIV diagnoses. Initially, information on negative HIV tests was only accessible from Victoria's State HIV Reference Laboratory and the Microbiological Diagnostic Unit. During 1992 and 1993, the system was expanded and now all laboratories that test for HIV are sent coded data on all new HIV diagnoses to ascertain whether the person has had a previous negative HIV test at that laboratory. However, some private laboratories archive records relating to negative test results after a short time, so that not all previous negative test results are able to be confirmed. In 1994, the system was augmented by the revised call-back procedures and now incorporates the date of the most recent negative HIV test recorded on the diagnosing doctor's records, including patient self-report and, if available, the date of a recorded seroconversion illness.

To the end of December 1997, there remained 116 individuals on whom there is no data on exposure (3.0 per cent of all diagnoses in Victoria from the beginning of the epidemic). In two cases the possibility exists for provision of further information about the exposure. For the remaining 114 cases, the exposure has now been classed as 'information unavailable' as insufficient records exist to be able to obtain further information from either the laboratory or the diagnosing doctor. Most of these cases relate to diagnoses made in the mid-1980s and it is likely that a large proportion of them would be men with a history of homosexual contact (table 1.4).

A total of 3,923 people have been diagnosed with HIV in Victoria to the end of 1997. The number of people diagnosed with HIV in 1997, at 187, was slightly lower than that for 1996 (n=195). The majority of diagnoses continue to be among men with a history of homosexual contact, accounting for 76 per cent of all diagnoses in 1997.

Infections due to heterosexual contact accounted for 14 per cent of diagnoses during the year. Almost half (13/27) were related to overseas epidemics in that the case was either from a specified high prevalence country or the sexual partner of someone from a high-prevalence country. High-prevalence countries are those countries where HIV is transmitted primarily through heterosexual contact and include the countries of Sub-Saharan Africa, Myanmar, Thailand, Cambodia, and Haiti. Two of the remaining 14 cases (both women) were the sexual partners of people with a history of male homosexual contact and/or injecting

drug use while for the remainder (12/27) either the case and their sexual partner/s did not report HIV specific risk factors other than heterosexual contact.

A continuing feature of the HIV epidemic in Victoria has been the low rate of detection of infection among IDUs. Overall, 8 per cent of diagnoses have been among IDUs. In 1997, there were 15 new diagnoses (8 per cent) made in this group, compared with 14 (7 per cent) for 1996. Of the 15, eight also had a history of male homosexual contact.

The highest rate of diagnosis of HIV-1 infection in 1997 was in the 30-34 year age group (tables 1.15–1.16). Eleven per cent of all people diagnosed with HIV-1 in 1997 were less than 25 years of age, the majority being young homosexual men. This is comparable with 1996 where the proportion of people newly diagnosed with HIV and aged less than 25 years of age was also 11 per cent.

Country of birth was available for 182 of the 187 HIV diagnoses for 1997 (table 1.17). The majority of all 1997 diagnoses were in people born in Australia, although 7 per cent of these reported having acquired their infection overseas. Almost 60 per cent of individuals whose infection was attributed to heterosexual contact and 36 per cent of women diagnosed with HIV in 1997 reported having acquired their infection overseas, compared with 8 per cent of men with a history of homosexual contact (table 1.18).

In 1997, information on CD4 cell count around the time of HIV diagnosis was available for 83 per cent of new diagnoses. Twenty-eight per cent of individuals had CD4 cell counts of less than 200 per μL and were therefore severely immunocompromised. As CD4 counts are more likely to be done later in the disease it is likely that the data presented are biased in favour of individuals with lower CD4 counts. Therefore, the individuals in table 1.19 for whom CD4 counts were available may not be representative of the remaining 17 per cent for whom these data were unavailable.

The majority of diagnoses were in people from metropolitan Melbourne, with the highest rates of diagnosis occurring in people from the Northern Metropolitan and Southern Metropolitan regions (6.7 and 5.8 per 100,000 respectively). There were diagnoses recorded in all rural regions during 1997; however, the rates were considerably lower than for the metropolitan areas (0.5 to 1.8 per 100,000).

Of diagnoses made during 1997, 57 per cent were in people who were reported to have had a previous negative or indeterminate HIV test prior to their HIV diagnosis. As these people have a documented change from negative to positive HIV status they are often referred to as seroconverters. Cases of recently acquired HIV infection, where diagnosis of HIV infection was within twelve months of a non-positive HIV test, or where the individual was reported as having had an HIV seroconversion illness in the preceding twelve months, made up 26 per cent of all HIV diagnoses during 1997, compared with 27 per cent for 1996 (table 1.20). The proportion of diagnoses that are believed to represent recently acquired infections for 1994 to 1997 reflects improved case ascertainment derived from collecting reports of previous test history directly from the treating doctor rather than relying upon confirmation through the laboratory network. Some private laboratories may fail to identify previous negative tests because they lack the capability to look back for previous HIV tests, or, in some instances, testing has previously occurred under a false namecode.

Most cases of recently acquired HIV infection detected during 1997, as for HIV diagnoses in general, were in men with history of homosexual contact (table 1.21). Three recent infections (6 per cent) were detected in people with a history of IDU, all of whom also had a history of homosexual contact. Individuals with recently acquired HIV were on average 2.6 years younger than individuals who had not previously been tested for HIV, and although the majority (76 per cent) were aged less than 40 years at the time of their HIV diagnosis, there were seven recent infections detected during the year among men aged 50 years and over (table 1.22).

The data on seroconverters and recently acquired HIV infection should be interpreted with caution as they are based, in the main, on those people who have had two or more HIV tests, and are therefore likely to include individuals who consider themselves at increased risk of acquiring HIV infection. The data exclude any individuals with recent infection who do not report either a prior negative test or a seroconversion illness and therefore give an incomplete picture of the extent of incident HIV infection in Victoria.

People diagnosed with HIV in Victoria represent only a small proportion of those people who undergo HIV tests. In 1997, data were collected on the 121,804 HIV tests performed in Victoria. Approximately the same number of men and women were tested for HIV during the year. However, tests in women between the ages of 13 and 34 years continue to outnumber those in men (tables 1.24–1.26). With the introduction of user-pays HIV testing in 1994, the majority (60 per cent) of HIV testing is now conducted in private pathology laboratories.

Human Immunodeficiency Virus Type 2 (HIV-2)

There were no diagnoses of HIV-2 in Victoria in 1997 and therefore the total number of HIV-infected people who have been diagnosed with HIV-2 in Victoria remains at three. All three cases are male. Two cases were homosexual men who were diagnosed during 1993 while the third was infected in his country of origin (in West Africa) where HIV-2 is endemic. There is also a fourth person who was diagnosed with HIV in Victoria during 1995 and, although HIV-1 reactive, has had test results that may represent possible (but unconfirmed) HIV-2 infection. This person is a woman who acquired her infection via heterosexual contact in her country of origin (also in West Africa) where HIV-2 is endemic. These are the only cases of HIV-2 to be detected in Victoria since combined testing for HIV-1 and HIV-2 was commenced in Australian blood banks and public health laboratories during 1992.

Table 1.14
Diagnoses of HIV, by Sex, Exposure Category and Year of Diagnosis, 1984 to 1997, Victoria

Sex	Exposure Category[1]	Year of Diagnosis 1984–88	1989	1990	1991	1992	1993	1994	1995	1996	1997	Total	%
Male	Homosexual	1,250	257	217	238	172	167	143	118	127	117	2,806	76.0
	Bisexual	84	15	23	17	23	6	24	16	20	17	245	6.6
	IDU: Homo/Bisexual	69	14	17	13	11	10	12	7	10	8	171	4.6
	IDU: Other	32	7	13	8	7	9	6	7	2	5	96	2.6
	Heterosexual Contact	14	11	8	20	26	13	16	15	19	16	158	4.3
	- with IDU	1	0	1	1	0	1	1	3	1	0	9	
	- person from specified country[2]	6	5	1	2	3	2	8	4	9	3	43	
	- with person from specified country[2]	1	1	2	1	2	3	3	2	2	4	21	
	- with person whose exposure is other than the above	1	0	0	1	3	0	1	1	1	0	8	
	- with HIV-infected person not otherwise specified	1	0	0	1	5	2	0	2	0	0	11	
	- not otherwise specified	4	5	4	14	13	5	3	3	6	9	66	
	Haemophilia/Coagulation Disorder	97	0	1	0	0	0	0	0	0	0	98	2.7
	Transfusion Recipient	8	4	3	1	1	2	0	0	0	0	19	0.5
	Vertical Transmission	0	0	1	0	0	0	0	1	0	0	2	0.1
	Other[3]	1	0	0	0	1	0	1	0	0	1	4	0.1
	Unavailable	58	1	4	3	2	6	3	4	2	6	89	2.4
	Under Investigation	0	0	0	0	0	0	0	0	0	2	2	0.1
	Total Males	1,613	309	287	300	243	213	205	168	180	172	3,690	100
Female	IDU	13	3	5	1	2	3	2	1	2	2	34	17.5
	Heterosexual Contact	21	10	10	11	17	16	15	10	13	11	134	69.1
	- with IDU	3	1	2	1	2	4	1	0	0	1	15	
	- with bisexual male	6	3	3	3	5	4	3	0	5	1	33	
	- person from specified country[2]	3	1	1	0	2	1	2	4	2	4	20	
	- with person from specified country[2]	0	0	2	1	0	2	2	2	4	2	15	
	- with person with medically acquired HIV infection	3	1	0	0	1	0	0	0	1	0	6	
	- with person whose exposure is other than the above	0	0	0	0	0	0	1	1	0	0	2	
	- with HIV-infected person not otherwise specified	3	2	1	3	6	4	2	1	0	3	25	
	- not otherwise specified	3	2	1	3	1	1	4	2	1	0	18	
	Transfusion Recipient	5	4	0	1	2	0	0	0	0	1	13	6.7
	Coagulation Disorder	1	0	0	0	0	0	0	0	0	0	1	0.5
	Vertical Transmission	1	1	0	1	0	1	1	1	0	0	6	3.1
	Other[3]	1	0	0	0	0	1	1	0	0	0	3	1.5
	Unavailable	2	0	1	0	0	0	0	0	0	0	3	1.5
	Total Females	44	18	16	14	21	21	19	12	15	14	194	100
Unspecified													
	IDU	2	0	0	0	0	1	0	0	0	0	3	12.0
	Unavailable	21	0	0	0	0	0	0	0	0	1	22	88.0
	Total Sex Unspecified	23	0	0	0	0	1	0	0	0	1	25	100
Transgender		6	2	2	2	1	1	0	0	0	0	14	
Total		1,686	329	305	316	265	236	224	180	195	187	3,923	100

[1] Exposure categories are based on self-report of the patient to the diagnosing doctor.

[2] High-prevalence countries in Sub-Saharan Africa, the Caribbean and specified countries in South-East Asia (Cambodia, Myanmar [Burma] and Thailand), where HIV is transmitted predominantly by heterosexual contact.

[3] Includes people whose infection is attributed to more than one category and those whose exposure does not fit the categories.

Table 1.15
Diagnoses of HIV, by Age at Diagnosis and Sex, 1997 and Cumulative to the End of 1997, Victoria

Age Group	1997				1984–97			
	Males	Females	Total	%	Males	Females	Total	%
0–12 yrs	0	0	0	0.0	31	9	40	1.0
13–19 yrs	1	2	3	1.6	92	11	104	2.7
20–24 yrs	15	2	17	9.1	543	33	586	14.9
25–29 yrs	27	1	28	15.0	822	49	876	22.3
30–34 yrs	49	2	51	27.3	751	29	785	20.0
35–39 yrs	23	0	23	12.3	547	19	568	14.5
40–44 yrs	18	3	21	11.2	354	12	368	9.4
45–49 yrs	12	3	15	8.0	191	11	202	5.1
50–54 yrs	7	0	7	3.7	111	10	121	3.1
55–59 yrs	13	0	13	7.0	89	3	92	2.3
60+ yrs	7	1	8	4.3	55	7	62	1.6
Unavailable	0	0	1	0.5	103	1	119	3.0
Total	172	14	187[1]	100	3,689	194	3,923[2]	100

[1] Includes one people for whom sex was not recorded.

[2] Includes 26 people for whom sex was not recorded and 14 people for whom sex was reported as transgender.

Table 1.16
Diagnoses of HIV, by Age at Diagnosis and Exposure Category, 1997, Victoria

Age Group	Exposure Category						
	Male Homo/Bisexual	IDU: Male Homo/Bisexual	IDU: Other	Heterosexual Contact	Other/ Unavailable[1]	Total	%
13–19 yrs	0	0	2	1	0	3	1.6
20–24 yrs	13	0	0	3	1	17	9.1
25–29 yrs	22	1	0	5	0	28	15.0
30–34 yrs	37	5	2	6	1	51	27.3
35–39 yrs	17	2	1	2	1	23	12.3
40–44 yrs	15	0	0	6	0	21	11.2
45–49 yrs	8	0	2	3	2	15	8.0
50–54 yrs	7	0	0	0	0	7	3.7
55–59 yrs	9	0	0	0	4	13	7.0
60+ yrs	6	0	0	1	1	8	4.3
Unavailable	0	0	0	0	1	1	0.5
Total	134	8	7	27	11	187	100
Mean Age	36.7	33.1	32.1	35.1	48.2	36.8	

[1] Includes 2 people for whom the mode of infection does not fit within the specified categories, together with 2 people for whom exposure is currently under investigation and 7 people for whom exposure is unavailable.

Table 1.17
Diagnoses of HIV, by Sex, Country of Birth and Probable Place Infection Acquired, 199 7, Victoria [1]

Sex	Country of Birth	Probable Place Infection Acquired				
		Australia	Overseas	Unavailable	Total	%
Males	Australia	112	9	9	130	75.6
	Other Oceania (incl. New Zealand)	1	0	0	1	0.6
	United Kingdom and Ireland	2	0	1	3	1.7
	Other Europe	7	1	3	11	6.4
	Africa	0	2	0	2	1.2
	Asia	6	8	0	14	8.1
	North America	0	3	1	4	2.3
	Middle and South America	1	1	1	3	1.7
	Unavailable	2	0	2	4	2.3
	Total	131	24	17	172	100
	%	76.2	14.0	19.9	100	
Females	Australia	6	0	0	6	42.9
	Africa	0	3	1	4	28.6
	Asia	1	2	1	4	28.6
	Total	7	5	2	14	100
	%	50.0	35.7	14.3	100	

[1] Excludes one person for whom sex, country of birth and probable place of acquisition of infection were not reported.

Table 1.18
Diagnoses of HIV, by Sex, Exposure Category and Probable Place Infection Acquired, 1997, Victoria [1]

Sex	Exposure Category	Probable Place Infection Acquired				
		Australia	Overseas	Unavailable	Total	%
Males	Male Homosexual Contact	114	12	8	134	77.9
	IDU: Male Homo/Bisexual	7	0	1	8	4.7
	IDU: Other	4	1	0	5	2.9
	Heterosexual Contact	5	10	1	16	9.3
	Other/Unavailable	1	1	7	9	5.2
	Total	131	24	17	172	100
Females	IDU	2	0	0	2	14.3
	Heterosexual Contact	4	5	2	11	78.6
	Transfusion Recipient	1	0	0	1	7.1
	Total	7	5	2	14	100

[1] Excludes one person for whom sex, country of birth and probable place of acquisition of infection were not reported.

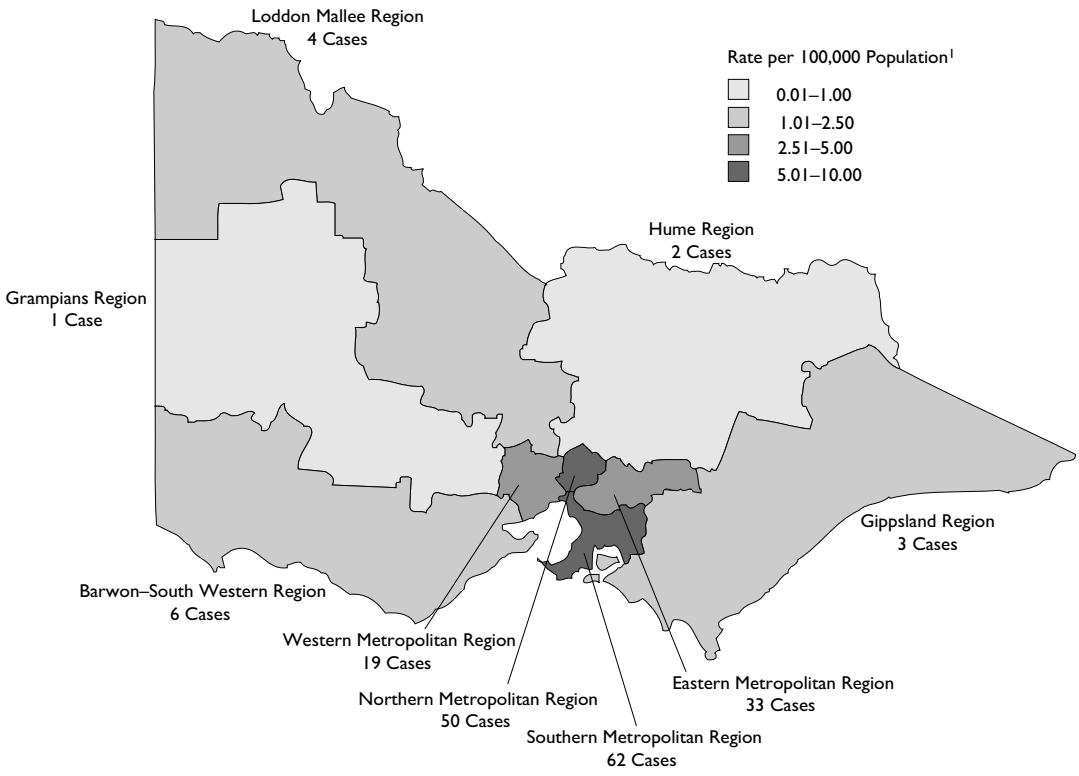
Table 1.19
Diagnoses of HIV, by CD4 Count at Time of HIV Diagnosis and Sex, 1997, Victoria

CD4 Count	Males	Females	Total	%
Less than 100 per µL	31	4	35	18.7
100 to 199 per µL	16	2	18	9.6
200 to 499 per µL	46	3	49	26.2
500 per µL and over	50	4	54	28.9
Unavailable[2]	29	1	31	16.6
Total	172	14	187	100

[1] Includes one person for whom sex and CD4 count were not reported.

[2] Includes individuals for whom CD4 counts have not been requested together with those for whom the information is presently unavailable.

Figure 1.3
Diagnoses of HIV and Rate of Diagnosis per 100,000 Population [1] by Department of Human Services Region, 1997, Victoria [2]



[1] Based on ABS mid-year population estimates, 1997.

[2] Excludes 4 people for whom region of residence was not recorded and 3 people for whom place of residence was recorded as either interstate or overseas.

Table 1.20
Diagnoses of HIV, by Test History and Year of HIV Diagnosis, 1992 to 1997, Victoria

Basis of Classification	Time before HIV Diagnosis	1992	%	1993	%	1994	%	1995	%	1996	%	1997	%
Prior Negative or Indeterminate HIV Test	< 1 year	39	14.7	37	15.7	62	27.7	36	20.0	42	21.5	35	18.7
	1 to < 3 years	16	6.0	29	12.3	31	13.8	38	21.1	41	21.0	33	17.6
	3 years and over	13	4.9	16	6.8	29	12.9	17	9.4	23	11.8	36	19.3
	Date Unavailable	0	0.0	0	0.0	7	3.1	5	2.8	5	2.6	3	1.6
	Other Diagnoses[1]	197	74.3	154	65.3	95	42.4	84	46.7	84	43.1	80	42.8
Prior HIV Seroconversion Illness	< 1 year	-	-	2	0.8	28	12.5	21	11.7	26	13.3	33	17.6
	1 to < 3 years	-	-	-	-	1	0.4	6	3.3	6	3.1	6	3.2
	3 years and over	-	-	-	-	1	0.4	3	1.7	0	0.0	3	1.6
	Date Unavailable	-	-	-	-	4	1.8	0	0.0	3	1.5	1	0.5
	Other Diagnoses[2]	265	100	234	99.2	190	84.8	150	83.3	160	82.1	144	77.0
All Diagnoses		265	100	236	100	224	100	180	100	195	100	187	100
% Prior Negative/HIV Test and/or Seroconversion Illness within One Year[3]		39	14.7	39	16.5	67	29.9	42	23.3	52	26.7	49	26.2

[1] HIV diagnoses in people for whom a previous negative or indeterminate HIV test was not reported.

[2] HIV diagnoses in people for whom a previous seroconversion illness was not reported.

[3] Determined on the basis of either doctor's report and/or laboratory records.

Table 1.21
Diagnoses of HIV within Twelve Months of a Previous Negative or Indeterminate HIV Test and/or Seroconversion Illness, by Exposure Category and Sex, 1997, Victoria

Exposure Category	Males	Females	Total	%
Male Homosexual Contact	40	-	40	81.6
IDU: Male Homo/Bisexual	3	-	3	6.1
Heterosexual Contact	2	4	6	12.2
Total	45	4	49	100
%	91.8	8.2	100	

Table 1.22
Diagnoses of HIV within Twelve Months of a Previous Negative or Indeterminate HIV Test and/or Seroconversion Illness, by Age and Sex, 1997, Victoria

Age Group	Males	Females	Total	%
13–19 yrs	0	1	1	2.0
20–24 yrs	3	1	4	8.2
25–29 yrs	9	0	9	18.4
30–34 yrs	14	1	15	30.6
35–39 yrs	3	0	3	6.1
40–44 yrs	4	1	5	10.2
45–49 yrs	5	0	5	10.2
50+ yrs	7	0	7	14.3
Total	45	4	49	100
Mean Age	36.9	28.5	36.2	

Table 1.23
Diagnoses of HIV by Reason for Testing and Sex, and Percentage with a Previous Negative HIV Test and/or Seroconversion Illness in the Previous Twelve Months, 1997, Victoria

Reason for HIV Test	Males	Females	Total	%	% with Previous Negative HIV Test and/or Seroconversion Illness in Previous Twelve Months
HIV-related Symptoms	52	4	56	29.9	14.3
Sexual and/or Injecting Risk	97	9	106	56.7	35.8
Needlestick Injury	2	0	2	1.1	0.0
Screening	6	0	6	3.2	33.3
- immigration	3	0	3		
- blood/tissue donation	1	0	1		
- other screening	2	0	2		
Confirmation[2]	7	1	8	4.3	0.0
Coronial Enquiry	1	0	1	0.5	0.0
Other	3	0	3	1.6	33.3
Unavailable	4	0	5	2.7	0.0
Total	172	14	187[1]	100	26.2

[1] Includes one person for whom sex and reason for testing were not reported.

[2] Includes cases where the individual reported a previous positive test interstate or overseas.

Table 1.24
Number of Specimens Tested for Antibody to HIV, by Age and Sex, 1997, Victoria

Age Group	Males	Females	Unspecified	Total	%
0–12 yrs	590	402	278	1,270	1.0
13–19 yrs	3,346	4,564	72	7,982	6.6
20–24 yrs	9,166	10,836	211	20,213	16.6
25–29 yrs	10,397	12,818	197	23,412	19.2
30–34 yrs	9,562	9,801	201	19,564	16.1
35–39 yrs	8,126	6,695	104	14,925	12.3
40–44 yrs	6,098	4,030	73	10,201	8.4
45–49 yrs	4,345	2,643	55	7,043	5.8
50–54 yrs	2,951	1,560	31	4,542	3.7
55–59 yrs	1,922	988	14	2,924	2.4
60+ yrs	4,916	3,603	69	8,588	7.1
Unavailable	253	576	311	1,140	0.9
Total	61,672	58,516	1,616	121,804	100
Mean Age	36.0	33.0	27.1	34.5	

Table 1.25
Number of Specimens Tested for Antibody to HIV, by Reason for Testing and Sex, 1997, Victoria

Reason	Male	Female	Unspecified	Total	%
Sexual Contact or Injecting Drug Use	12,119	10,363	259	22,741	18.7
- male homosexual contact	3,172	100	39	3,311	
- IDU: male homo/bisexual	95	12	2	109	
- IDU: other	1,748	1,048	29	2,825	
- sex work	77	1,081	15	1,173	
- heterosexual[1] contact	3,112	3,289	49	6,450	
- multiple specified risk	67	49	0	116	
- not otherwise specified	3,848	4,784	125	8,757	
Occupational	3,051	4,608	50	7,709	6.3
Transfusion Recipient	962	1,167	6	2,135	1.8
Screening	15,572	13,396	436	29,404	24.1
- blood/tissue donors	1,522	1,609	312	3,443	
- immigration	1,888	1,947	46	3,881	
- insurance	7,278	1,871	30	9,179	
- pregnancy/infertility	1,014	6,950	26	7,990	
- prisoners	2,671	4	22	2,697	
- other screening[2]	1,199	1,015	0	2,214	
Reason Other or Unspecified	29,968	28,982	865	59,815	49.1
Total	61,672	58,516	1,616	121,804	100

[1] Includes people for whom personal category was specified as none of 'Gay', 'IDU' or 'Sex Worker' and therefore heterosexual by exclusion.

[2] Includes renal dialysis and pre-operative screening.

Figure 1.4
Number of Specimens Tested for Antibody to HIV, 1984 to 1997, Victoria

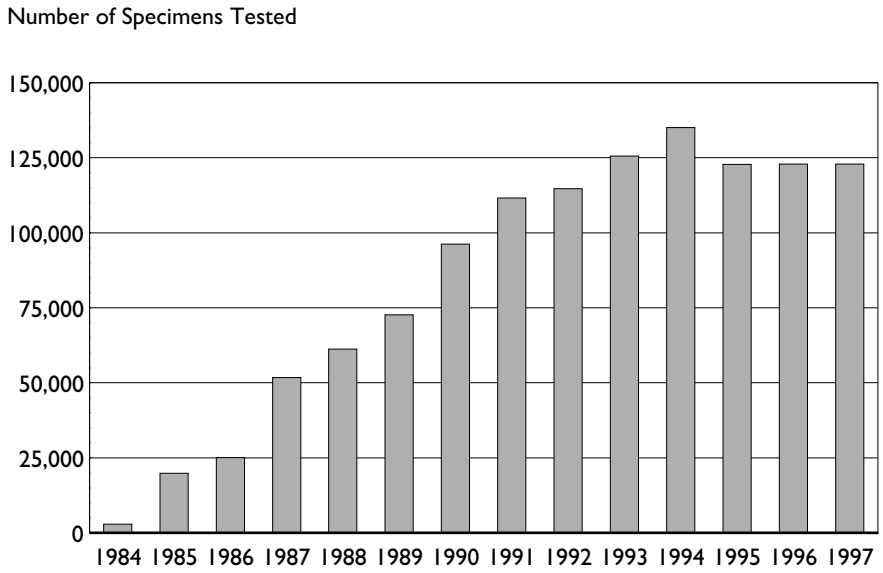


Table 1.26
Number of Specimens Tested for Antibody to HIV, by Laboratory Type, Sex, Male-to-Female Ratio and Year of HIV Test, 1992 to 1997, Victoria

		Year of HIV Test					
		1992	1993	1994	1995	1996	1997
Laboratory Type	Public Health Laboratory	98,684	91,315	57,371	34,810	33,290	28,339
	Other Public Hospital Laboratory	3,489	4,947	12,144	16,632	17,712	20,703
	Private Pathology Laboratory	12,466	29,291	65,554	71,366	71,854	72,762
Sex	Males	58,966	62,635	65,576	58,725	63,236	61,672
	Females	54,385	57,980	58,406	50,424	58,311	58,516
	Information Unavailable	1,288	4,938	11,087	13,659	1,309	1,616
	M:F Ratio	1.08	1.08	1.12	1.16	1.08	1.05
Mean Age	Males	34.5	34.5	35.6	36.0	36.1	36.0
	Females	31.1	31.1	32.5	33.4	33.1	33.0
	Information Unavailable	30.6	30.0	30.9	31.0	30.8	27.1
	Total	32.8	32.8	34.1	34.8	34.7	34.5
Total Tests		114,639	125,553	135,069	122,808	122,856	121,804

Gonorrhoea

Gonorrhoea, caused by the bacterium *Neisseria gonorrhoeae*, is transmitted predominantly through sexual contact. The mucous membranes of the lower genital tract are most commonly affected and, less frequently, the rectum, pharynx and conjunctiva. In women, ascending genital infection can lead to pelvic inflammatory disease and/or possible future fertility problems.[1]

Information on diagnoses of gonorrhoea in Victoria is collected by the Microbiological Diagnostic Unit (MDU) at the University of Melbourne. It includes epidemiological data received from the diagnosing doctor, together with information on serotyping and antibiotic sensitivity testing which is performed by the MDU on all Victorian gonococcal isolates as part of the Australian Gonococcal Surveillance Program. In late 1994, the laboratory-based surveillance system operated by MDU was integrated with the statutory notification system managed by the Macfarlane Burnet Centre for Medical Research on behalf of the Victorian Department of Human Services. Thus, since 1995, Victorian data on diagnoses of gonorrhoea have been reported as a single dataset and, as a result, detailed epidemiological data are available for almost all cases. The quality of the data is only possible because of the co-operation of the laboratories who ensure that the diagnosing doctors receive a form requesting detailed epidemiological information at around the time of microbiological confirmation, and by the efforts of the contact tracers from the Department of Human Services, who liaise with the doctors to collect any missing information.

In 1997, there were 353 cases of gonorrhoea reported within Victoria (table 2.1), 11 per cent (n=38) of which were diagnosed at the Melbourne Sexual Health Centre. The number of diagnoses during 1997 was lower than for 1996 (n=397), and was the third lowest since data were first collected in 1983 (figure 2.1). This is in sharp contrast to the situation in New South Wales where, since 1994, there has been a steady increase each year in the number of diagnoses of *N. gonorrhoeae,* as evidenced by an increase in the number of gonococcal isolates received, from 498 in 1994, to 606 in 1995, 705 in 1996 and 902 in 1997.[2]

In Victoria, the M:F rate ratio (10.2) fell slightly for 1997 (from 12.4 in 1996), reflecting an increased number of diagnoses among women (n=36), compared to 1996 (n=31) and 1995 (n=24). Despite this, the rate of diagnosis among males continues to be nearly ten times that for females. Most people diagnosed with gonorrhoea in 1997 were aged in their twenties and thirties. However, 4 per cent (n=14) of all diagnoses and 17 per cent (n=6) of diagnoses in women were in people aged less than 20 (table 2.2). The majority of cases (75 per cent, n=265) were acquired locally (i.e. within Australia) for both males and females (tables 2.3–2.5). Rates of diagnosis were highest in metropolitan areas, with most cases residing in either the Northern or Southern Metropolitan regions. There were cases reported from all but one of the five rural regions (figure 2.2).

As in previous years, the majority (52 per cent, n=185) of all cases were in men with a history of homosexual contact, while 38 per cent (n=134) were diagnosed in people reporting acquisition through heterosexual contact (tables 2.3 and 2.4). The number of diagnoses acquired through male homosexual contact (n=185) was somewhat lower than for the previous year (n=251). Almost all men infected through homosexual contact (94 per cent, n=173) acquired their infection locally. In contrast, of the 101 men who reported infection through heterosexual contact, just over one in four acquired their infection overseas (n=27). Of these overseas infections, 40 per cent (11/27) were acquired from a sex worker, compared with 1 per cent (n=1) of locally acquired infections in heterosexual men.

[1] Holmes KK, Mardh P-A, Sparling PF, Wiesner PJ, Cates W, Lemon SM, eds. Sexually transmitted diseases. New York: McGraw-Hill, 1990.

[2] Tapsall, JW. (for the Australian Gonococcal Surveillance Program). Annual report of the Australian Gonococcal Surveillance Program 1 January to 31 December 1997. Communicable Disease Intelligence. (submitted).

Details on the actual sites from which the bacterium *N. gonorrhoeae* was isolated are provided in table 2.6. In males, the bacterium was most commonly isolated from the urethra, regardless of sexual orientation. All but five of the men who reported heterosexual contact had evidence of urethral infection; only two had concurrent pharyngeal infection. Four of the men reporting heterosexual contact had evidence of rectal infection, which raises the possibility of risk factors in this group from other than heterosexual contact (an observation also noted in relation to self-reported risk factors for HIV infection).[3] For men infected through homosexual contact, 71 per cent (n=131) had evidence of urethral infection, 24 per cent (n=45) rectal infection and 9 per cent (n=17) pharyngeal infection, including 11 men for whom the pharynx was the only infected site. *N. gonorrhoeae* was isolated from the infected nipples of two homosexual men, and in both cases was associated with body-piercing. The organism was also isolated from the joint of one male whose sexual orientation was not known. Twenty-eight females with gonorrhoea had evidence of vaginal or cervical infection. For three females the bacterium was isolated from a urethral specimen, while three showed evidence of pharyngeal infection. There was one female case with evidence of rectal infection and another with an eye infection.

All isolates of *N. gonorrhoeae* were examined to determine patterns of resistance to antibiotics used in the treatment of gonorrhoea. Resistance is measured in terms of minimum inhibitory concentrations (MICs) which are determined for the different antibiotics used in the treatment of gonorrhoea. The MIC represents the lowest concentration of antibiotic which will inhibit the growth of the test organism and gives an indication of whether the particular antibiotic will be effective in treating the disease. Some gonococcal isolates were resistant to more than one antibiotic, although, in 1997, all strains were sensitive to ceftriaxone and spectinomycin. Data collected on the sexual orientation of patients acquiring strains resistant to antibiotics indicate that these resistant strains tended to be acquired by heterosexuals. For males they were acquired abroad, while females infected with these strains, in general, were infected locally.

Although penicillin and tetracycline are no longer recommended as drugs of first choice for the treatment of gonorrhoea in Victoria, information on the resistance of isolates of *N. gonorrhoeae* to these antibiotics is still collected for epidemiological purposes. As in earlier years, although a number of strains were fully 'sensitive' to penicillin (n=82), most fell within the 'less sensitive' or 'resistant' categories (table 2.7). About 10 per cent (n=40) of isolates produced penicillinase (PPNG). Of these, most (31/40) were from people reporting heterosexual contact. Nearly half of the isolates (17/40) were acquired overseas by heterosexual males (n =16), seven of whom acquired their infection from a sex worker. There were only two PPNG isolates from homosexual men, one of whom was infected in Victoria; the place of infection of the other is not known. Five of the PPNG isolates were from men for whom there was no information on their sexual orientation. In contrast, for females, the majority of PPNG isolates (6/7) were acquired in Australia, mostly in Victoria. Only one was acquired overseas. Similarly, 14 of the 20 isolates with high-level tetracycline resistance (TRNG) were from heterosexuals. Eight of the ten TRNG isolates from heterosexual males were acquired overseas, whereas those from homosexual men were acquired locally. Likewise, most TRNG infections in females (3/4) were also acquired within Australia (table 2.8).

Oral ciprofloxacin (500 mg) is currently recommended as one of the first-line drugs for the treatment of gonorrhoea in Victoria. Strains of *N. gonorrhoeae* have been slow to develop resistance to ciprofloxacin; those classified 'sensitive' and 'less sensitive' to ciprofloxacin respond to treatment with a single dose of 500 mg ciprofloxacin given orally. Most isolates categorised as either 'less sensitive' (3/6) or 'resistant' (14/15) to ciprofloxacin were from heterosexuals. As in previous year, ciprofloxacin-resistant infections in males tended to originate overseas (8/9). Five females were infected with resistant strains, including two with infections acquired overseas. Ciprofloxacin-resistant strains may be further classified as 'highly resistant' with MICs of ≥4μg ciprofloxacin/ml, a phenomenon first observed in Victoria in 1994.[4] In 1997,

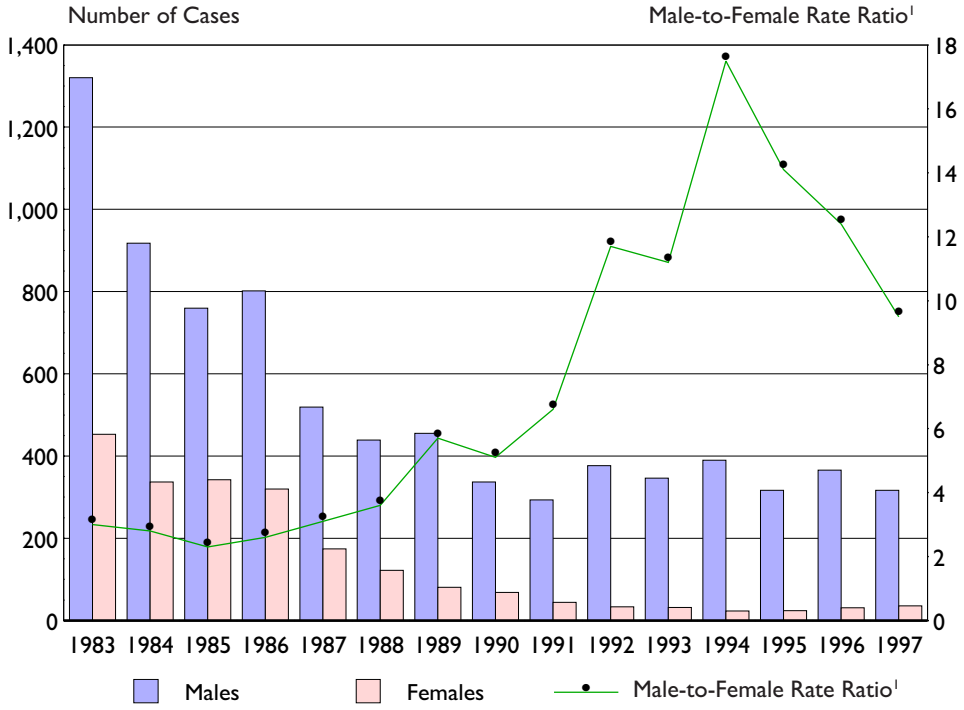
[3] National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997.

[4] Griffith J, Barclay LM, de Petra V, Forsyth JRL, Hogg GG. High-level ciprofloxacin-resistant *Neisseria gonorrhoeae* and heterosexually acquired infections in Victoria. Med J Aust 1996;164:125.

there were six isolates classified as highly-resistant to ciprofloxacin. As in the preceding years, these were all acquired via heterosexual contact. Three of these highly resistant strains were isolated from males who acquired their infection abroad, all of whom acquired their infection from sex workers. Of the three cases reported in females, two were acquired locally, including one from a partner who had travelled both interstate and within South-East Asia.

The increased incidence of gonorrhoea observed in 1996 among men with a documented history of homosexual contact has not continued into 1997 with the result that the number of infections is similar to that seen in 1995 (table 2.3). The number of diagnoses made in heterosexual men has remained fairly stable since 1995. For women, there has been a slight increase in the number of diagnoses made; however, since the numbers are so low, it is difficult to determine whether this is a significant increase. It is also worth noting, as in previous years, that infections from heterosexual men returning from overseas are likely to be resistant to a range of antibiotics. At least some of the infections in women represent local secondary transmission of these resistant strains. Medical practitioners, faced with prescribing treatment for gonorrhoea, should take into account not only the sexual orientation of the patient, but also details of recent travel abroad. In the case of infected females, travel history of the partners involved should also be obtained. The dangers for travellers having unprotected sex overseas cannot be over-emphasised.

Figure 2.1
Isolations of *N. gonorrhoeae*, by Sex and Rate Ratio [1] of Isolates from Males to those from Females, by Year of Isolation, MDU Compilation, 1983 to 1997, Victoria



[1] Per 100,000 population aged 15 years and over.

Table 2.1
Number of People from whom *N. gonorrhoeae* was Isolated, by Year of Isolation, Rate, Male-to-Female Rate Ratio and Source of Specimens, MDU Compilation, 1986 to 1997, Victoria

	Year of Diagnosis											
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Number Diagnosed	1,124	693	561	536	405	337	410	378	413	341	397	353
Rate[1]	34.3	21.0	16.7	15.8	11.8	9.6	11.9	10.9	11.9	9.6	11.1	10.2
M:F Rate Ratio	2.6	3.1	3.6	5.7	5.1	6.6	11.7	11.2	17.5	14.1	12.4	9.5
(%) MSHC	38.7	36.8	31.4	27.6	22.7	17.8	11.4	11.6	14.0	15.2	17.1	10.8

[1] Per 100,000 population aged 15 years and over.

Table 2.2
Number of People from whom *N. gonorrhoeae* was Isolated, by Age and Sex, MDU Compilation, 1997, Victoria

Age Group	Males	%	Females	%	Total	%
0–12 yrs	0	0.0	0	0.0	0	0.0
13–19 yrs	8	2.5	6	16.7	14	4.0
20–24 yrs	50	15.8	3	8.3	53	15.0
25–29 yrs	77	24.3	8	22.2	85	24.1
30–34 yrs	77	24.3	8	22.2	85	24.1
35–39 yrs	47	14.8	3	8.3	50	14.2
40–44 yrs	21	6.6	2	5.6	23	6.5
45–49 yrs	10	3.2	2	5.6	12	3.4
50–54 yrs	10	3.2	0	0.0	10	2.8
55–59 yrs	0	0.0	1	2.8	1	0.3
60+ yrs	0	0.0	0	0.0	0	0.0
Unavailable	17	5.4	3	8.3	20	5.7
Total	317	100	36	100	353	100

Table 2.3
Males from whom *N. gonorrhoeae* was Isolated, by Sexual Orientation, Probable Place of Acquisition and Year of Diagnosis, MDU Compilation, 1986 to 1997, Victoria

Sexual Orientation	Place of Acquisition	Year of Diagnosis											
		1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Homosexual/Bisexual	Local	35	25	47	124	63	101	142	145	235	172	241	173
	Abroad	0	4	2	4	5	2	2	4	9	2	4	5
	Unavailable	18	7	9	14	19	7	13	11	6	4	6	7
Heterosexual													
- acquired from sex	Local	25	11	5	6	13	4	3	6	3	2	6	1
worker	Abroad	42	20	30	30	28	30	20	24	10	24	14	11
	Unavailable	1	0	0	0	0	0	1	0	0	0	0	1
- acquired from	Local	188	101	83	102	64	48	46	50	57	73	62	69
other/unavailable	Abroad	63	37	20	23	22	14	16	12	12	16	18	16
	Unavailable	32	23	14	7	18	4	6	1	1	2	4	3
Sexual Orientation	Local	29	13	11	24	7	2	1	4	5	3	6	10
Unavailable	Abroad	33	17	11	11	9	8	6	3	1	3	0	3
	Unavailable	338	261	207	110	89	73	121	86	51	16	5	18
Total Individuals (Male)		804	519	439	455	337	293	377	346	390	317	366	317
Rate per 100,000		49.8	31.9	26.5	27.2	19.9	16.9	22.2	20.2	22.8	18.3	21.0	18.9

[1] Per 100,000 population aged 15 years and over.

Table 2.4
Females from whom *N. gonorrhoeae* was Isolated, by Source of Infection, Probable Place of Acquisition and Year of Diagnosis, MDU Compilation, 1986 to 1997, Victoria

Source of Infection	Place of Acquisition	Year of Diagnosis											
		1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Acquired from Client	Local	30	21	4	4	0	0	0	1	2	1	0	2
	Abroad	0	1	0	0	0	0	0	0	0	0	0	1
	Unavailable	9	3	0	1	3	0	0	0	0	0	0	0
Acquired from	Local	79	40	36	44	31	19	18	12	9	14	23	24
Other/Unavailable	Abroad	11	1	11	5	5	4	4	5	5	4	7	5
	Unavailable	191	108	71	27	29	21	11	14	7	5	1	4
Total Individuals (Female)		320	174	122	81	68	44	33	32	23	24	31	36
Rate per 100,000		19.3	10.4	7.3	4.8	3.9	2.5	1.9	1.8	1.3	1.3	1.7	2.0

[1] Per 100,000 population aged 15 years and over.

Table 2.5
Number of People from whom *N. gonorrhoeae* was Isolated, by Probable Place of Acquisition and Sex, MDU Compilation, 1997, Victoria

Place of Acquisition	Males	Females	Total	%
Local	241	24	265	75.1
Interstate	12	2	14	4.0
Abroad	35	6	41	11.6
Unavailable	29	4	33	9.3
Total	317	36	353	100

Table 2.6
Number of Sites from which *N. gonorrhoeae* was Isolated, by Sex, Sexual Orientation and Site of Isolation, MDU Compilation, 1997, Victoria

Sex	Sexual Orientation	Site of Isolation					Total Isolates	Total Individuals
		Urethral	Cervical	Rectal	Pharyngeal	Other/ Unavailable		
Males	Heterosexual	96	-	4	2	0	102	101
	Homo/Bisexual	131	-	45	17	2	195	185
	Unavailable	31	-	1	1	1	34	31
	Total	258	-	50	20	3	331	317
Females	Heterosexual	3	28	0	3	3	37	33
	Homo/Bisexual	0	1	0	0	0	1	1
	Unavailable	0	1	1	0	0	2	2
	Total	3	30	1	3	3	40	36
Total		261	30	51	23	6	371	353

Table 2.7
Susceptibility of Isolates of *N. gonorrhoeae* to Penicillin, MDU Compilation, 1990 to 1997, Victoria [1]

Year of Isolation	Penicillin Susceptibility, Minimum Inhibitory Concentration (μg penicillin/mL)					
	Sensitive (≤ 0.03)	Less Sensitive (0.06–0.5)	Resistant (≥ 1.0)	Total	PPNG	% PPNG
1990	49	264	104	417	78	18.7
1991	86	195	70	351	60	17.1
1992	237	137	84	458	65	14.2
1993	177	83	134	394	47	11.9
1994	125	186	118	429	39	9.1
1995	32	219	91	342	54	15.8
1996	64	213	137	414	44	10.6
1997	82	192	92	366	40	10.9

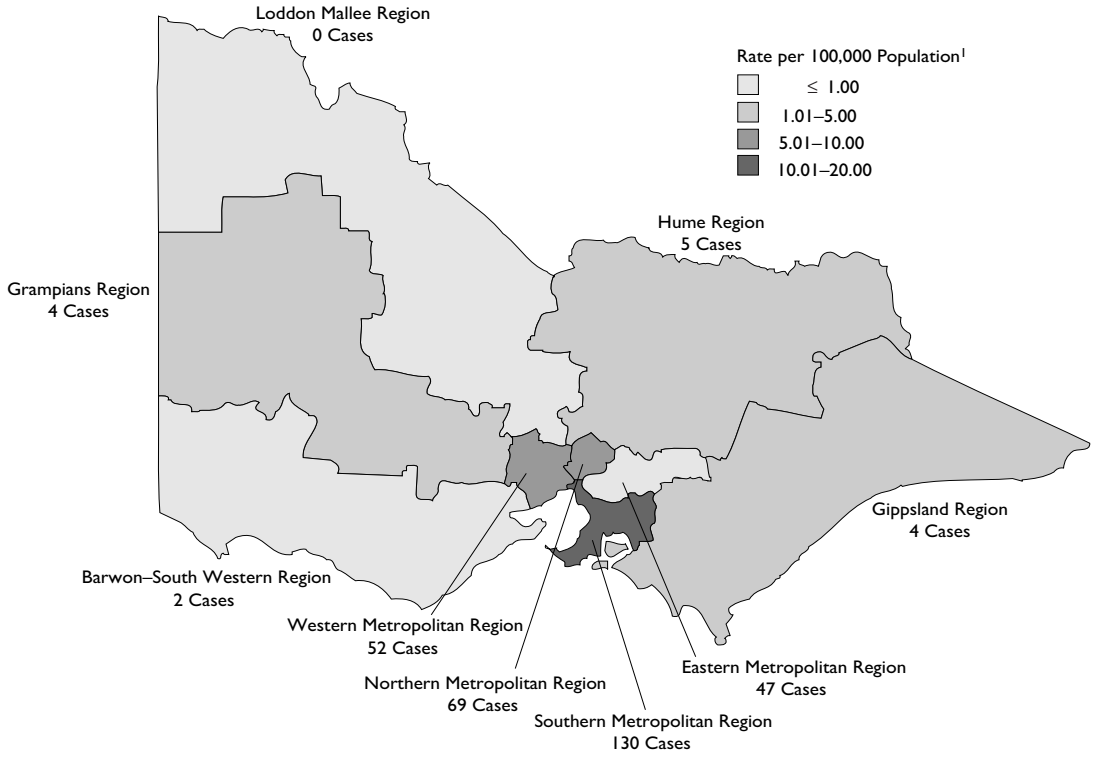
[1] Includes all Victorian isolates on which penicillin susceptibility testing was performed between 1990 and 1997 and therefore includes multiple isolates for patients with more than one infected site. Isolates for which susceptibility testing was not performed are not included in this table.

Table 2.8
Number of Antibiotic-resistant *N. gonorrhoeae* Isolates from People Reporting Heterosexual Contact, by Nature of Resistance, Sex and Place Infection Acquired, MDU Compilation, 1997, Victoria

Sex	Place Infection Acquired	PPNG	TRNG	Ciprofloxacin Resistance[1]	
				Less Sensitive (0.06–0.5)	Resistant (≥ 1.0)
Males	Australia	6	2	2	1
	Overseas	16	8	1	8
	Unknown	2	0	0	0
	Total	24	10	3	9
Females	Australia	6	3	0	3
	Overseas	1	1	0	2
	Unknown	0	0	0	0
	Total	7	4	0	5

[1] Minimum inhibitory concentration (mg penicillin/mL).

Figure 2.2
Number of P eople from whom *N. gonorrhoeae* was Isolated and Annual Incidence Rate per 100,000 Population [1] by Department of Human Services Region, MDU Compilation, 1997, Victoria [2]



[1] Based on ABS mid-year population estimates, 1997.

[2] Excludes 36 people for whom region of residence was not recorded, and 4 people for whom place of residence was recorded as interstate.

Syphilis

Syphilis is a sexually transmissible disease caused by the spirochaete *Treponema pallidum*. The natural history of syphilis can be divided into several distinct stages. The first of these is the primary stage which occurs on average 21 days after infection in the form of a painless ulcer or chancre which spontaneously heals. If untreated, secondary syphilis occurs some two to eight weeks later and a third of cases will then progress to tertiary syphilis after a latent period of usually several years. Tertiary syphilis is manifest in three main forms: neurological (affects the nervous system); cardiovascular (affects the heart and blood vessels); and granulomatous (can affect any organ in the body). As the tertiary sequelae of syphilis usually do not develop for many years after initial infection, screening for syphilis is often included as part of the clinical assessment for people presenting with non-specific neurological or cardiovascular symptoms.[1]

Syphilis may also be transmitted during pregnancy to the unborn child, resulting in congenital syphilis. Screening for syphilis is therefore a routine component of antenatal care since treatment in pregnancy is able to prevent congenital infection.[2]

Like other notifiable infectious diseases, syphilis is notifiable by both doctors and laboratories. Laboratory results for syphilis are problematic as the tests used do not readily discriminate between past (treated) infection, other spirochetal infections such as Yaws or leptospirosis, and late or latent syphilis. To combat this problem, a laboratory-based supplementary surveillance system for syphilis was introduced in 1990, to enable accurate staging of this disease and to collect detailed information on sexual orientation and reason for testing, together with other relevant data. In 1994, this system was merged with the routine infectious diseases notifications for syphilis, and since then detailed epidemiological data has been sought from diagnosing doctors for all notified cases of this disease. With the merger of these two systems, it is now possible to separate reports of past adequately treated infection and other treponemal (non-syphilis) infections from those representing current disease (table 3.1).

In 1997, there were 172 individuals reported with current evidence of syphilis, including: 16 with infectious syphilis, 89 with non-infectious (late) syphilis and 67 for whom stage of disease was not available. An additional 91 cases were reported which were subsequently classified by the diagnosing doctor (on the basis of serology and clinical presentation) as representing previous and adequately treated infection. These cases have not been included in the remaining analyses as they are not indicative of current disease due to *T. pallidum* (tables 3.2 and 3.3).

Twenty-one per cent of the notified syphilis cases were detected as part of STD screening, with antenatal testing detecting 11 cases, including two considered infectious (table 3.4). Most cases of infectious syphilis were diagnosed either due to symptomatic disease (6/16), or STD screening (6/16). There were three cases of syphilis detected in people who were also HIV positive; none represented infectious syphilis.

Of the 16 cases of infectious syphilis, 11 (69 per cent) were men and 69 per cent of the total were specified as heterosexual. Three cases were reported in men with a history of homosexual contact (table 3.5), half of the 16 reported acquiring their infection overseas, while four cases reported acquiring their infection in Australia. It is not known whether the remaining four cases of infectious syphilis were acquired in Australia as the data were unavailable.

[1] Holmes K K, Mardh P-A, Sparling P F, Wiesner P J, Cates W, Lemon S M, eds. Sexually transmitted diseases. New York: McGraw-Hill, 1990.

[2] Cameron ST, Thong KJ, Young H, Liston WA. Routine antenatal screening for syphilis in Lothian: a study of the results 1988 to 1994. Br J Obstet Gynaecol 1997;104(6):734-737.

Four cases of congenitally acquired infection were detected during 1997. All cases were delayed diagnoses made in adulthood and therefore none represent recent infection.

Information on country of birth was available for most cases of infectious and non-infectious syphilis. Almost half the people diagnosed with syphilis were born overseas, primarily in countries where English is not the principal language (table 3.6).

Cases of syphilis were reported from all Department of Human Services regions during 1997 and rates of infection per 100,000 population were generally higher in metropolitan than in rural regions (table 3.7).

Table 3.1
Notified Cases of Syphilis and Related Laboratory Reports, by Category of Disease and Year of Notification, 1985 to 1997, Victoria

Category of Disease[1]	Year of Notification												
	1985	1986	1987	1988	1989	1990	1991[2]	1992	1993	1994[2]	1995	1996	1997
Infectious Syphilis	-	-	-	-	-	13	46	39	27	35	17	16	16
Congenital Syphilis[3]	-	-	-	-	-	3	2	0	1	2	4	3	4
Late Syphilis	-	-	-	-	-	12	52	76	54	202	116	56	85
Unspecified	101	68	71	65	33	8	0	0	0	0	19	26	67
Total	101	68	71	65	33	36	100	115	82	239	156	101	172
Past Treated Syphilis	-	-	-	-	-	-	-	-	-	84	108	98	91
Other Treponemal Infections	-	-	-	-	-	-	-	-	-	2	0	1	0
Total	101	68	71	65	33	36	100	115	82	325	264	200	263

[1] Separate data on infectious, late and congenital syphilis are only available for cases diagnosed after 1989.

[2] Laboratory surveillance for syphilis was introduced in 1991 and in 1994 the parallel laboratory and clinical notification systems were merged.

[3] Includes some cases of congenital syphilis not diagnosed until adulthood (one case in 1993, 2 cases in 1994, 4 cases in 1995, 2 cases in 1996 and 4 cases in 1997).

Table 3.2
Notified Cases of Syphilis, by Age, Sex and Disease Status, 1997, Victoria [1]

Age Group	Infectious Syphilis[2]				Non-Infectious Syphilis				Unspecified Syphilis			
	Males	Females	Total	%	Males	Females	Total	%	Males	Females	Total	%
0–12 yrs	1	1	2	12.5	0	0	0	0.0	1	0	1	1.5
13–19 yrs	1	2	3	18.8	2	5	7	7.9	0	2	2	3.0
20–24 yrs	3	0	3	18.8	2	4	6	6.7	2	7	9	13.4
25–29 yrs	1	1	2	12.5	3	4	7	7.9	2	3	5	7.5
30–34 yrs	0	0	0	0.0	4	3	7	7.9	4	2	6	9.0
35–39 yrs	1	1	2	12.5	4	0	4	4.5	4	1	5	7.5
40–44 yrs	1	0	1	6.3	7	2	9	10.1	2	3	5	7.5
45–49 yrs	1	0	1	6.3	6	3	9	10.1	10	5	15	22.4
50–59 yrs	2	0	2	12.5	27	12	39	43.8	10	9	19	28.4
60+ yrs	0	0	0	0.0	0	0	1	1.1	0	0	0	0.0
Total	11	5	16	100	55	33	89[3]	100	35	32	67	100

[1] Excludes 91 people for whom serology and clinical presentation was reported by the diagnosing doctor as being indicative of past adequately treated infection.

[2] Includes syphilis specified as primary, secondary or early latent.

[3] Includes one person for whom sex was not reported.

Table 3.3
Notified Cases of Syphilis, by Disease Status and Sex, 1997, Victoria [1]

Disease Status	Males	Females	Total	%
Primary	5	3	8	4.7
Secondary	2	0	2	1.2
Early Latent	4	2	6	3.5
Late Latent	10	6	17	9.9
Latent (Unknown Duration)	40	21	61	35.5
Neurosyphilis	1	1	2	1.2
Other Late Syphilis	1	4	5	2.9
Congenital Syphilis	3	1	4	2.3
Syphilis: Unspecified	35	32	67	39.0
Total	101	70	172[2]	100

[1] Excludes 91 people for whom serology and clinical presentation was reported by the diagnosing doctor as being indicative of past adequately treated infection.

[2] Includes one person for whom sex was not reported.

Table 3.4
Notified Cases of Syphilis, by Reason for Testing, Sex and Percentage with Infectious Syphilis, 1997, Victoria [1]

Reason for Testing	Males	Females	Total	%	% Infectious
STD Screen	25	12	37	21.5	16.2
Antenatal Screening	-	11	11	6.4	18.2
Blood Donor Screening	2	0	3	1.7	0.0
Visa Application	2	1	3	1.7	0.0
Symptomatic Individual	31	9	40	23.3	15.0
Asymptomatic Contact	1	2	3	1.7	33.3
Other[4]	5	4	9	5.2	11.1
Unavailable	35	31	66	38.4	0.0
Total	101	70	172[2]	100	9.3

[1] Excludes 91 people for whom serology and clinical presentation was reported by the diagnosing doctor as being indicative of past adequately treated infection.

[2] Includes one person for whom sex was not reported.

[3] Includes syphilis specified as primary, secondary or early latent.

[4] Includes prison entrants and others for whom reason for testing did not fit into one of the specified categories.

Table 3.5
Notified Cases of Infectious Syphilis, by Sexual Orientation and Sex, 1997, Victoria

Sexual Orientation	Males	Females	Total	%
Homosexual	3	0	3	18.8
Bisexual	0	0	0	0.0
Heterosexual	7	4	11	68.8
Unavailable	1	1	2	12.5
Total	11	5	16	100

Table 3.6
Notified Cases of Syphilis, by Country of Birth, Sex and Disease Status, 1997, Victoria [1]

Country of Birth	Infectious Syphilis				Non-Infectious Syphilis			
	Males	Females	Total	%	Males	Females	Total	%
Australia	2	3	5	31.3	27	11	38	42.7
Other Oceania	1	1	2	12.5	1	0	1	1.1
South-East Asia	1	1	2	12.5	10	7	17	19.1
Other Asia	4	0	4	25.0	2	1	3	3.4
United Kingdom and Ireland	0	0	0	0.0	3	3	6	6.7
Southern Europe	0	0	0	0.0	1	3	4	4.5
Other Europe	0	0	0	0.0	0	3	3	3.4
North America	0	0	0	0.0	0	0	0	0.0
South and Middle America	0	0	0	0.0	0	0	1	1.1
Africa	0	0	0	0.0	3	3	6	6.7
Unavailable	3	0	3	18.8	8	2	10	11.2
Total	11	5	16	100	55	33	89[2]	100

[1] Excludes 67 people for whom disease status was not specified together with 91 people for whom serology and clinical presentation was reported by the diagnosing doctor as being indicative of past adequately treated infection.

[2] Includes one person for whom sex was not reported.

Table 3.7
Notified Cases of Syphilis, by Department of Human Services Region, Sex and Annual Incidence Rate per 100,000 Population, 1997, Victoria [1]

Region	Infectious Syphilis					Non-Infectious Syphilis				
	Males	Females	Total	%	Rate[2]	Males	Females	Total	%	Rate[2]
Barwon–South Western	0	0	0	0.0	0.0	3	0	3	3.4	0.9
Grampians	0	1	1	6.3	0.5	1	0	1	1.1	0.5
Loddon Mallee	0	0	0	0.0	0.0	3	1	4	4.5	1.4
Hume	0	0	0	0.0	0.0	4	2	6	6.7	2.5
Gippsland	0	1	1	6.3	0.4	0	0	0	0.0	0.0
Western Metropolitan	1	2	3	18.8	0.5	4	4	8	9.0	1.4
Northern Metropolitan	5	0	5	31.3	0.7	13	6	19	21.3	2.6
Eastern Metropolitan	0	0	0	0.0	0.0	7	6	13	14.6	1.4
Southern Metropolitan	5	1	6	37.5	0.6	19	12	32	36.0	3.0
Unavailable	0	0	0	0.0	n.a.[4]	1	2	3	3.4	n.a.[4]
Total	11	5	16	100	0.3	55	33	89[3]	100	1.9

[1] Excludes 67 people for whom disease status was not specified together with 91 people for whom serology and clinical presentation was reported by the diagnosing doctor as being indicative of past adequately treated infection.

[2] Per 100,000 population, based on ABS mid-year population estimates, 1997.

[3] Includes one person for whom sex was not reported.

[4] Not applicable.

Chlamydia

Genital chlamydia has been the most commonly notified bacterial STD since it first became a notifiable disease in 1990. In 1997, there were a total of 2,116 notifications received in Victoria, of which 2,098 cases (99 per cent) represented genital infection (table 4.1).

The majority of notified chlamydial diagnoses were made by general practitioners, with the remainder from specialist venereological/sexual health services, hospitals and clinics which undertake termination of pregnancy. The adverse sequelae from chlamydial infection in women—pelvic inflammatory disease, tubal infertility and ectopic pregnancy—occur because the infection is commonly asymptomatic or only mildly symptomatic, and the infection may go unrecognised and untreated.[1] For this reason, testing for chlamydia should be undertaken in all persons considered, from their sexual history, to be at risk even if they are asymptomatic.

There has been a steady increase in the number of notifications received for chlamydia over the last few years, which may reflect efforts to improve the notification system,[2] changes in diagnostic testing affecting the number of tests for *Chlamydia trachomatis* requested, including the availability of urine testing via polymerase chain reaction (PCR) testing, or a possible increase in incidence. Despite improvements in notification of this disease, it is likely that chlamydia remains substantially under-reported because of the diagnostic practices of general practitioners, and their use of presumptive treatment without diagnostic testing.[3,4,5] For the first time, selected public and private laboratories have been requested to provide electronic data on the number of chlamydia tests undertaken during 1997. Data from these laboratories appear in table 4.2.

The rate of diagnosis in females continues to be about twice that in males which is generally considered to reflect differences in testing rather than an increased incidence in females, as can be seen clearly by comparing tables 5.1 and 5.2. At the Melbourne Sexual Health Centre where numbers of males screened is similar to females, there is a higher rate of detection of chlamydia infection in males, except in those aged under 20 years. The pattern of infection occurring in adolescence and peaking in the 20–29 year old age group is consistently seen in surveillance data in Victoria and elsewhere.[6]

1 Holmes KK, Mardh P-A, Sparling PF, Wiesner PJ, Cates W, Lemon SM, eds. Sexually transmitted diseases. New York: McGraw-Hill, 1990.

2 Thompson SC, McEachern A, Stevenson E. Impact of improved laboratory compliance on notification of genital *Chlamydia trachomatis* infection in Victoria. Sex Trans Dis 1997;24:84–89.

3 Westgarth F, Crofts F, Gertig DM. Genital chlamydial infection: diagnostic practices of general practitioners in Melbourne, Australia. Sex Transm Dis 1994;21:118–123.

4 Thompson SC, McEachern A, Stevenson E. The epidemiology of notified genital *Chlamydia trachomatis* infection in Victoria, Australia: a survey of diagnosing providers. Int J STD AIDS;1997:382–387.

5 Temple-Smith M, Keogh L, Mulvey G. Testing for chlamydia and other sexually transmitted diseases in general practice in Victoria. Venereology 1997;10:14–18.

6 Garland S, Denham I, Jacobs D, Forsyth J, Meese P. *Chlamydia trachomatis* : updated management guidelines. Venereology 1997;10:48–52.

For the first time in this report, information about people diagnosed with chlamydia in Victoria includes information from the supplementary surveillance, which was introduced progressively in collaboration with testing laboratories, from the beginning of 1997. Information from this system was available for 61 per cent of diagnoses (1288/2116), increasing from 39 per cent for January to 74 per cent for August (see figure 4.1). Almost eighty per cent of cases were born in Australia (table 4.4). Reason for testing differed between males and females, with approximately three in four of the male cases testing in relation to symptoms compared with just over 40 per cent of cases in females. It is likely that is a reflection of the asymptomatic nature of this disease in females, in combination with the likelihood that greater numbers of screening tests for chlamydia are performed among females than among males. The remaining diagnoses consisted predominantly of those who tested in relation to screening and/or who were asymptomatic contacts of infected individuals (table 4.5). Most infections were acquired in Australia, the main exception being cases in males reported as being acquired from sex workers overseas. The majority (62 per cent) of infection in females were acquired from regular partners compared with 38 per cent of infections in males (table 4.6). Over 90 per cent of infections were diagnosed among people reporting heterosexual contact (table 4.7).

Table 4.1
Notified Cases of Chlamydia, by Sex and Age, 1997, Victoria [1]

Age Group	Males	%	Females	%	Total	%
0–12 yrs	8	1.0	4	0.3	12	0.6
13–19 yrs	50	6.2	299	22.8	349	16.5
20–24 yrs	228	28.4	494	37.6	722	34.1
25–29 yrs	229	28.6	264	20.1	493	23.3
30–34 yrs	107	13.3	135	10.3	242	11.4
35–39 yrs	81	10.1	62	4.7	143	6.8
40–44 yrs	45	5.6	26	2.0	71	3.4
45–49 yrs	27	3.4	14	1.1	41	1.9
50–59 yrs	21	2.6	10	0.8	31	1.5
60+ yrs	3	0.4	3	0.2	6	0.3
Unavailable	3	0.4	3	0.2	6	0.3
Total	802	100	1,314	100	2,116	100

[1] Table includes 18 people whose chlamydial infection was isolated from conjunctival isolates, 12 in the 0–12 year age group, 2 in the 20–24 year age group, one in each of the 25–29, 30–34, 40–44 and 50–59 year age groups, and one for whom age was unavailable.

Table 4.2
Chlamydia Tests, by Age, Sex and Test Result, Selected Public and Private Laboratories, 1997, Victoria

Age Group	Males					Females				
	Positive	Negative	Total	%	% Positive	Positive	Negative	Total[1]	%	% Positive
0–12 yrs	3	80	83	1.1	3.6	6	144	150	0.4	4.0
13–19 yrs	24	396	422	5.4	5.7	157	3,282	3,462	10.3	4.5
20–24 yrs	134	1,480	1,626	20.9	8.2	321	8,630	9,024	26.8	3.6
25–29 yrs	138	1,597	1,747	22.4	7.9	160	7,987	8,202	24.4	2.0
30–34 yrs	72	1,189	1,266	16.3	5.7	65	5,060	5,168	15.4	1.3
35–39 yrs	59	914	978	12.6	6.0	36	3,487	3,556	10.6	1.0
40–44 yrs	25	608	636	8.2	3.9	14	1,997	2,023	6.0	0.7
45–49 yrs	22	431	454	5.8	4.8	13	1,109	1,128	3.4	1.2
50–59 yrs	6	390	401	5.2	1.5	3	648	656	1.9	0.5
60+ yrs	2	154	158	2.0	1.3	3	231	234	0.7	1.3
Unavailable	1	10	11	0.1	9.1	1	55	56	0.2	1.8
Total	486	7,249	7,782[2]	100	6.2	779	32,630	33,659[2]	100	2.3

[1] Includes 47 specimens for which the test result was equivocal.

[2] Includes 250 specimens for which the test result was equivocal.

Table 4.3
Notified Cases of Chlamydia, and MDU Chlamydia Cultures, by Sex, 1991 to 1997, Victoria

Data Source	Sex	1991	1992	1993	1994	1995	1996	1997
Notifications to the Department of Human Services	Males	265	450	508	330	409	547	802
	Females	542	909	999	808	908	1,064	1,314
	Unspecified	25	18	16	28	0	0	0
	Total	832	1,377	1,523	1,166	1,317	1,611	2,116
	M:F Ratio	0.5	0.5	0.5	0.4	0.5	0.5	0.6
MDU Positives	Males	138	114	105	100	88	77	55
	Females	72	70	62	52	44	42	57
	Total	210	184	167	152	132	119	112
	M:F Ratio	1.9	1.6	1.7	1.9	2.0	1.8	1.0
All MDU Cultures	Males	2,709	3,126	3,204	3,210	2,943	2,936	1,427
	Females	3,246	3,689	3,727	3,778	3,682	3,729	3,936
	Total	5,955	6,815	6,931	6,988	6,626[1]	6,665	5,420
	M:F Ratio	0.8	0.8	0.9	0.8	0.8	0.8	0.4
	% Positive	3.5	2.7	2.4	2.2	2.0	1.8	2.1

[1] Includes one person for whom sex was not recorded.

Figure 4.1
Notified Cases of Chlamydia, by Month of Diagnosis and Availability of Additional Epidemiological Data, 1997, Victoria

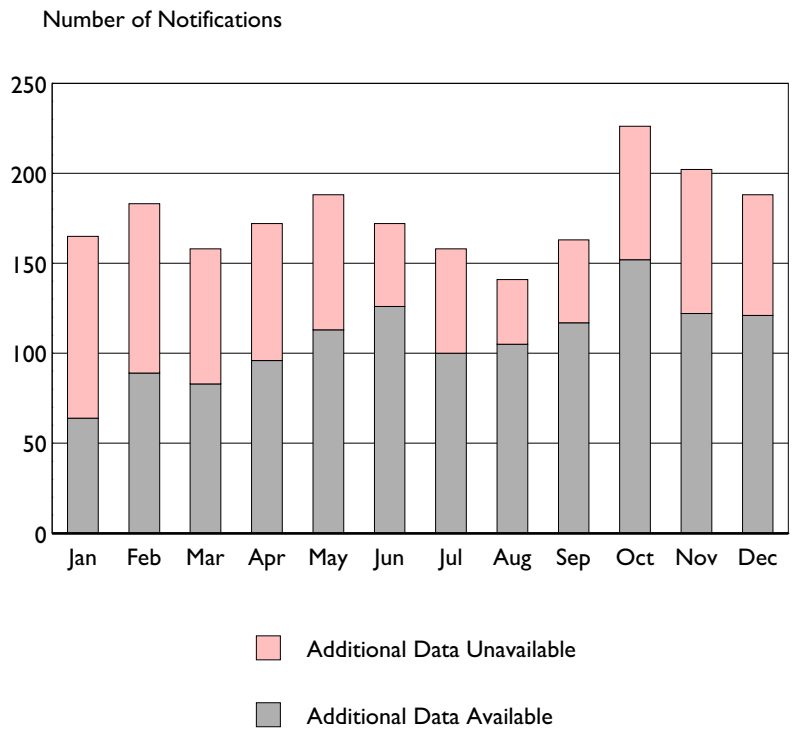


Table 4.4
Notified Cases of Chlamydia, with Additional Epidemiological Data, by Country of Birth and Sex, 1997, Victoria

Country of Birth	Males	Females	Total	%
Australia	375	604	979	76.0
Other Oceania (incl. New Zealand)	8	23	31	2.4
South-East Asia	20	45	65	5.0
Other Asia	22	45	67	5.2
United Kingdom and Ireland	16	10	26	2.0
Southern Europe	14	12	26	2.0
Other Europe	7	10	17	1.3
North America	3	2	5	0.4
South and Middle America	1	7	8	0.6
Africa	4	6	10	0.8
Unavailable	23	31	54	4.2
Total	493	795	1,288	100

Table 4.5
Notified Cases of Chlamydia, with Additional Epidemiological Data, by Reason for Testing and Sex, 1997, Victoria

Reason for Testing	Males	Females	Total	%
STD Screen	35	201	236	18.3
Symptomatic Individual	378	336	714	55.4
Asymptomatic Contact	66	121	187	14.5
Pre-Termination Screen	-	73	73	5.7
Other Medical Indication[1]	2	26	28	2.2
Other[2]	9	32	41	3.2
Unavailable	3	6	9	0.7
Total	493	795	1,288	100

[1] Includes cases tested as a result of abnormalities detected by the doctor during examination.

[2] Includes cases where the reason for testing did not fit within one of the other specified categories.

Table 4.6
Notified Cases of Chlamydia, with Additional Epidemiological Data, by Sex, Source of Infection and Probable Place Infection Acquired, 1997, Victoria

Sex	Source of Infection	Probable Place Infection Acquired				
		Australia	Overseas	Unavailable	Total	%
Males	Regular Partner	170	9	6	185	37.5
	Casual Partner	185	30	6	221	44.8
	Sex Worker	3	11	0	14	2.8
	Client[1]	1	1	0	2	0.4
	Unavailable	44	6	21	71	14.4
	Total	403	57	33	493	100
Females	Regular Partner	460	19	16	495	62.3
	Casual Partner	138	8	3	149	18.7
	Client[1]	30	1	3	34	4.3
	Unavailable	82	3	32	117	14.7
	Total	710	31	54	795	100

1 Includes people with a history of sex work who report acquiring their infection from a client.

Table 4.7
Notified Cases of Chlamydia, with Additional Epidemiological Data, by Sexual Orientation and Sex, 1997, Victoria

Sexual Orientation	Males	Females	Total	%
Homosexual	41	2	43	3.3
Bisexual	5	7	12	0.9
Heterosexual	424	766	1,190	92.4
Unavailable	23	20	43	3.3
Total	493	795	1,288	100

Other Sexually Transmissible Diseases

The Health (Infectious Diseases) Regulations 1990 require the notification of syphilis, gonorrhoea and genital chlamydial infection together with the less common STDs—chancroid, donovanosis and lymphogranuloma venereum. As in 1996, there were no diagnoses of these STDs during the year, and thus the total number of cases of ulcerative STDs (other than syphilis) diagnosed in Victoria in the five years to the end of 1997 remains at nine cases. Six of these nine cases were lymphogranuloma venereum while no diagnoses of donovanosis were reported. More than half of these nine cases were associated with sexual contact overseas, generally in South-East Asian or African countries and the majority were diagnosed in men who acquired their infection from female partners.

Two common STDs, genital herpes simplex virus (HSV) and genital human papillomavirus (HPV) are not notifiable in Victoria. However, data on these two conditions are collected by the MSHC and are represented below in tables 5.2 and 5.3, and in figure 5.1.

Information on diagnoses of non-specific (non-gonococcal/non-chlamydial) urethritis is also available for clients seen by the MSHC and is included in this report in table 6.4. More information on MSHC clients is provided in the section entitled 'Melbourne Sexual Health Centre', which commences on page 61.

Table 5.1
Diagnoses of Chancroid, Donovanosis and Lymphogranuloma Venereum, by Year of Diagnosis and Sex, 1992 to 1997, Victoria

		Chancroid	Donovanosis	Lymphogranuloma Venereum	Total
Year of Diagnosis	1992	1	0	3	4
	1993	0	0	0	0
	1994	0	0	2	2
	1995	2	0	1	3
	1996	0	0	0	0
	1997	0	0	0	0
	Total	3	0	6	9
Sex	Males	2	0	5	7
	Females	1	0	1	2
	Total	3	0	6	9

Table 5.2
Clinical Diagnoses of Genital HSV Infection, by Age and Sex, Melbourne Sexual Health Centre, 1997, Victoria

Age Group	Males	Females	Total	%
13–19 yrs	0	4	4	1.5
20–24 yrs	16	25	41	15.6
25–29 yrs	31	28	59	22.5
30–34 yrs	36	18	54	20.6
35–39 yrs	29	18	47	17.9
40–44 yrs	13	4	17	6.5
45–49 yrs	15	3	18	6.9
50–59 yrs	12	2	14	5.3
60+ yrs	7	1	8	3.1
Total	159	103	262	100

Table 5.3
Clinical Diagnoses of Genital Warts, by Age and Sex, Melbourne Sexual Health Centre, 1997, Victoria

Age Group	Males	Females	Total	%
13–19 yrs	8	21	29	4.7
20–24 yrs	94	59	153	25.0
25–29 yrs	155	51	206	33.7
30–34 yrs	90	18	108	17.7
35–39 yrs	48	5	53	8.7
40–44 yrs	24	5	29	4.7
45–49 yrs	16	5	21	3.4
50–59 yrs	8	2	10	1.6
60+ yrs	2	0	2	0.3
Total	445	166	611	100

Figure 5.1
Clinical Diagnoses of Genital HSV Infections and Genital Warts, Melbourne Sexual Health Centre, 1987 to 1997, Victoria

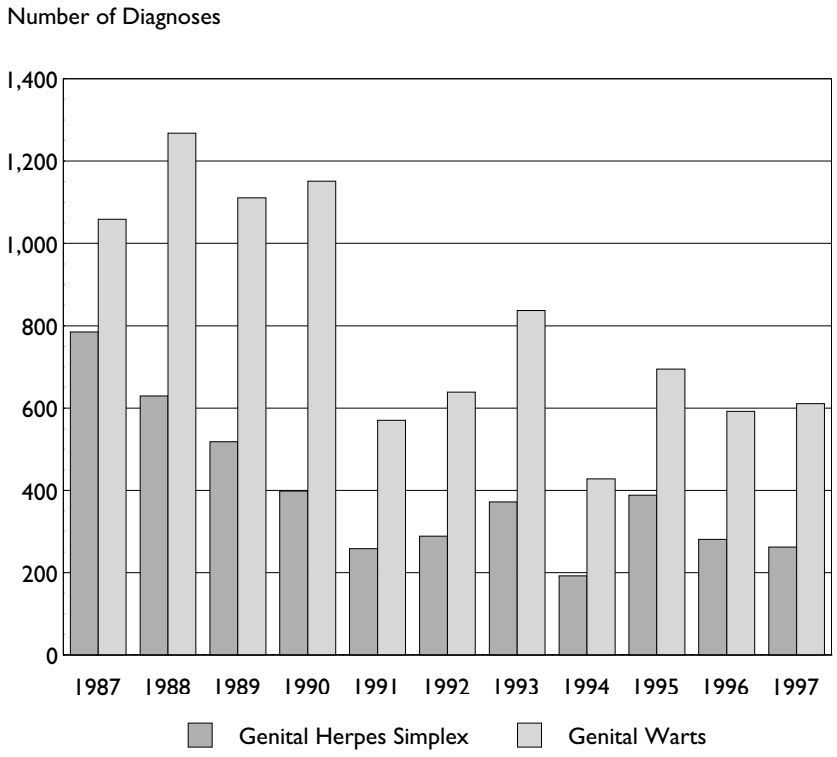


Table 5.4
Clinical Diagnoses of Non-Specific Urethritis, by Age and Sex, Melbourne Sexual Health Centre, 1997, Victoria

Age Group	Males	Females	Total	%
13–19 yrs	9	0	9	1.7
20–24 yrs	72	0	72	13.8
25–29 yrs	124	0	124	23.8
30–34 yrs	110	0	110	21.1
35–39 yrs	90	0	90	17.2
40–44 yrs	47	0	47	9.0
45–49 yrs	31	0	31	5.9
50–59 yrs	31	0	31	5.9
60+ yrs	8	0	8	1.5
Total	522	0	522	100

Specialist Clinics and Services

Australian Red Cross Blood Service—Victoria

During 1997, Australian Red Cross Blood Service–Victoria (ARCBS-Vic) collected 230,851 donations. Of these, 20,453 were collected from 'first-time' donors.

Human Immunodeficiency Virus Infection

One male donor was found to be HIV antibody positive on routine screening. No risk behaviour was identified other than unprotected heterosexual intercourse in Australia and overseas.

Two possible cases of alleged transfusion-associated HIV infection were reported in people transfused prior to 1985. Investigations are in progress on both of these cases.

Hepatitis B

Thirty-nine donors (23 males, 16 females) were found to be hepatitis B surface antigen positive. Of these, 36 (22 males and 14 females) were first-time donors. The age group and country of birth of these donors are shown in tables 6.1 and 6.2.

There were five reported cases of alleged transfusion-associated hepatitis B. In three cases, all donors remained HBsAg negative at least three months after the implicated donation. Investigations are in progress in the remaining two cases.

Table 6.1
Blood Donors Found to be Hepatitis B Surface Antigen Positive on Routine Screening, by Age and Sex, 1997, Victoria

Age Group	Males	Females	Total	%
16–19 yrs	2	4	6	15.4
20–24 yrs	6	4	10	25.6
25–29 yrs	1	1	2	5.1
30–34 yrs	4	1	5	12.8
35–39 yrs	1	1	2	5.1
40–44 yrs	4	1	5	12.8
45–49 yrs	3	2	5	12.8
50–59 yrs	1	2	3	7.7
60+ yrs	1	0	1	2.6
Total	23	16	39	100

Table 6.2
Blood Donors Found to be Hepatitis B Surface Antigen Positive , by Country of Birth and Sex, 1997 , Victoria

Country of Birth	Males	Females	Total	%
Australia	2	4	6	15.4
Other Oceania (incl. New Zealand)	2	1	3	7.7
South-East Asia	4	2	6	15.4
Other Asia	3	0	3	7.7
Southern Europe	1	1	2	5.1
Other Europe[1]	0	0	0	0.0
Africa	0	0	0	0.0
Unavailable	11	8	19	48.7
Total	23	16	39	100

[1] Includes people from Northern Europe (excluding United Kingdom and Ireland).

Hepatitis C

In 1997, 97 donors (71 males, 26 females) were found to be anti-HCV positive or indeterminate. Of these, 47 (36 males, 11 females) were confirmed anti-HCV positive. Risk data are available on 31 donors (23 males, 8 females). One or more risk factors (injecting drug use [9], transfusion [5] or tattoo [13]) were identified in 20 donors. PCR data are available on 29 donors, of whom 20 (14 males, 6 females) were PCR positive.

There were 52 reported cases of alleged transfusion-associated hepatitis C, with transfusions taking place between 1977 and 1997. Of these, five cases related to transfusion after the introduction of routine anti-HCV testing in 1990. Three alleged recipients had not been transfused. Transfusion records were not available for two reported cases. In two cases all donors were found to be anti-HCV negative at least six months after the implicated donation. In 29 cases, look-back investigations have identified a donor later found to be anti-HCV positive. Investigations continue in the remaining 16 cases, with no anti-HCV positive donor yet identified in those cases.

Syphilis

Two donors (both male) were found to be reactive on supplementary treponemal serology. For both donors, serology and history were consistent with past infection. There were no reports of alleged transfusion-associated syphilis.

HTLV-I

Two donors (one male, one female) were found to be anti-HTLV-I positive. Both were also positive for anti-HCV. There was one report of alleged transfusion-associated HTLV-I, relating to transfusions prior to the introduction of routine screening for anti-HTLV-I. Investigations are in progress.

Collaboration of Australian Needle and Syringe Exchange Programs (Victorian Component)

Over a one-week period in October 1997, staff at four fixed site metropolitan needle and syringe exchange programs (NSEPs)—the Melbourne Inner City AIDS Prevention Centre, the St Kilda Crisis Centre, the Southern Hep/HIV/AIDS Resource and Prevention Service (SHARPS) and the Western Region AIDS and Hepatitis Prevention Program (WRAP) in Footscray—asked all clients to complete a brief, self-administered questionnaire and to provide a finger prick blood sample. The survey was part of a larger project carried out in 23 needle exchanges from all states and territories throughout Australia.[1] NSEPs were selected on the basis of numbers of clients, representation from all Australian states and territories, and willingness to participate. Information was sought on demographic characteristics, injecting and sexual behaviour, history of methadone treatment, prison experience, and HIV, HBV and HCV status. The dried blood spots were tested for HIV and HCV antibodies.

The response rate for the four Victorian sites (combined) was 42 per cent. Attendees aged 25 years and over were more likely to have completed the survey than younger attendees (table 6.3). Response rates were higher for females than for males. Most respondents (80 per cent) reported heterosexual contact. Females were more likely than males to report either homosexual contact or bisexual contact (52/142 vs 26/293). Most respondents reported having injected drugs for four years or more, and only 25 per cent reported having injected for less than three years (table 6.4).

Samples from five respondents (1.1 per cent) were found to be HIV positive (table 6.5). Four of the five were males, half of whom reported a history of male homosexual contact. All five reported a duration of injecting of greater than three years. In contrast, samples from 51 per cent of respondents were found to be HCV positive (table 6.6). Over one-quarter (27 per cent) of those aged less than 25 years were found to be infected compared with 66 per cent of older respondents. HCV prevalence was less than 20 per cent for those who had commenced injecting within the past four years. However, 85 per cent of people who reported having injected for more than ten years were found to be infected with hepatitis C, a finding consistent with other studies which show a clear relationship between hepatitis C prevalence and duration of injecting.[2]

[1] MacDonald M, Wodak AD, Ali R et al. HIV prevalence and risk behaviour in needle exchange attenders: a national study. The Collaboration of Australian Needle Exchanges. Med J Aust 1997;166(5):237–240.

[2] Crofts N, Hopper JL, Bowden DS, Breschkin AM, Milner R, Locarnini SA. Hepatitis C virus infection among a cohort of Victorian injecting drug users. Med J Aust 1993;159:237–41.

Table 6.3
Number of Attendees at Participating NSEPs During the Study Period, Number of Attendees Surveyed and Response Rate, by Age and Sex, 1997, Victoria

Age Group	Number of Attendees at Participating NSEPs				Number of Attendees Surveyed				
	Males	Females	Total	%	Males	Females	Total	%	Response Rate (%)
< 25 yrs	354	120	479	46.2	100	69	169	38.8	35.3
25–35 yrs	420	117	539	52.0	191	73	265	60.8	49.2
35+ yrs	14	4	18	1.7	2	0	2	0.5	11.1
Total	788	241	1,036[1]	100	293	142	436[2]	100	42.1

[1] Includes 7 people for whom sex was not reported.

[2] Includes one person for whom sex was not reported.

Table 6.4
NSEP Survey Respondents by Sexual Orientation, Duration of Injecting and Sex, 1997, Victoria

		Males	Females	Total	%
Sexual Orientation	Homosexual	10	15	25	5.7
	Bisexual	16	37	53	12.2
	Heterosexual	261	87	349	80.0
	Not reported	6	3	9	2.1
	Total	293	142	436[1]	100
Duration of Injecting	< 4 yrs	67	43	110	25.2
	4–10 yrs	114	65	180	41.3
	11+ yrs	108	34	142	32.6
	Not reported	4	0	4	0.9
	Total	293	142	436[1]	100

[1] Includes one person for whom sex was not reported.

Table 6.5
NSEP Survey Respondents who Tested Positive for HIV, by Age, Sexual Orientation, Duration of Injecting and Sex, 1997, Victoria

		Males	Females	Total	Prevalence (%)
Age Group	< 25 yrs	0	0	0	0.0
	25+ yrs	3	1	4	1.5
	Total	4[1]	1	5[1]	1.1
Sexual Orientation	Homosexual	1	0	1	4.0
	Bisexual	1	0	1	1.9
	Heterosexual	2	1	3	0.9
	Total	4	1	5	1.1
Duration of Injecting	< 4 yrs	0	0	0	0.0
	4–10 yrs	1	1	2	1.1
	11+ yrs	2	0	2	1.4
	Total	4[2]	1	5[2]	1.1
	Prevalence (%)	1.4	0.7	1.1	

[1] Includes one person for whom age was not reported.

[2] Includes one person for whom duration of injecting was not reported.

Table 6.6
NSEP Survey Respondents who Tested Positive for HCV, by Age, Sexual Orientation, Duration of Injecting and Sex, 1997, Victoria

		Males	Females	Total	Prevalence (%)
Age Group	< 25 yrs	20	25	45	26.6
	25+ yrs	119	57	176	66.4
	Total	139	82	221	50.7
Sexual Orientation	Homosexual	6	3	9	36.0
	Bisexual	5	23	28	52.8
	Heterosexual	126	53	179	51.3
	Not reported	2	3	5	55.6
	Total	139	82	221	50.7
Duration of Injecting	< 4 yrs	9	12	21	19.1
	4–10 yrs	39	39	78	43.3
	11+ yrs	90	31	121	85.2
	Not reported	1	0	1	25.0
	Total	139	82	221	50.7
	Prevalence (%)	47.4	57.7	50.7	

Family Planning Victoria Inc.

Family planning patients are an important sentinel group as they represent sexually active adults. This section contains information on clients seen during 1997 by Family Planning Victoria Inc., both at their main clinic in Box Hill, and from the Action Centre, a service located within the City of Melbourne and specifically targeted to adolescents and young adults. In total, 9,354 people attended these services during 1997. The majority, 59 per cent, attended the main family planning clinic.

Although genital herpes and genital human papillomavirus were the most commonly diagnosed STDs in this population, accurate information on occurrence of these diseases in family planning clients was unavailable for 1997. Aside from these two conditions, chlamydia was the most commonly diagnosed STD, and 34 cases were diagnosed and notified during 1997 (tables 6.10 and 6.11). More cases were diagnosed at the Action Centre than at the main family planning clinic and rates of detection were highest at both sites for people in their late teens and early twenties. There was no difference in screening rates between the two sites and overall 17 per cent of clients were tested for chlamydia during the year.

Six per cent (n=589) of clients seen during the year were tested for HIV (table 6.12). Males were five times more likely to be screened for HIV than females while testing rates were higher in patients of both sexes seen at the Action Centre, a finding consistent with that site's role as a free HIV testing site. There were no new cases of HIV diagnosed at Family Planning Victoria. Information systems to collect data on sexual orientation and other HIV risk factors are presently being implemented so while these data are unavailable for 1997, it is anticipated that they will be able to be reported upon in future years.

Table 6.7
Clients Seen and Clinic Attendances, by Clinic and Sex, 1997, Family Planning Victoria

Clinic	Clients Seen				Clinic Attendances				Mean Visits
	Males	Females	Total	%	Males	Females	Total	%	per Person
Main Clinic	229	5,314	5,543	59.3	355	9,304	9,659	57.6	1.7
Action Centre	203	3,608	3,811	40.7	321	6,800	7,121	42.4	1.9
Total	432	8,922	9,354	100	676	16,104	16,780	100	1.8

Table 6.8
Clients Seen and Clinic Attendances at the Main Family Planning Clinic, by Age and Sex, 1997, Family Planning Victoria

Age Group	Clients Seen				Clinic Attendances				Mean Visits per Person
	Males	Females	Total	%	Males	Females	Total	%	
0–12 yrs	0	3	3	0.1	0	4	4	0.0	1.3
13–19 yrs	19	454	473	8.5	35	799	834	8.6	1.8
20–24 yrs	42	1,053	1,095	19.8	73	2,007	2,080	21.5	1.9
25–29 yrs	51	1,432	1,483	26.8	72	2,562	2,634	27.3	1.8
30–34 yrs	31	1,001	1,032	18.6	54	1,748	1,802	18.7	1.7
35–39 yrs	20	658	678	12.2	23	1,071	1,094	11.3	1.6
40–44 yrs	11	343	354	6.4	39	542	581	6.0	1.6
45–49 yrs	15	178	193	3.5	16	276	292	3.0	1.5
50–59 yrs	21	133	154	2.8	22	218	240	2.5	1.6
60+ yrs	19	59	78	1.4	21	77	98	1.0	1.3
Total	229	5,314	5,543	100	355	9,304	9,659	100	1.7

Table 6.9
Clients Seen and Clinic Attendances at the Action Centre, by Age and Sex, 1997, Family Planning Victoria

Age Group	Clients Seen				Clinic Attendances				Mean Visits per Person
	Males	Females	Total	%	Males	Females	Total	%	
13–19 yrs	87	2,061	2,148	56.4	139	4,008	4,147	58.2	1.9
20–24 yrs	82	923	1,005	26.4	139	1,822	1,961	27.5	2.0
25–29 yrs	19	286	305	8.0	26	465	491	6.9	1.6
30–34 yrs	4	193	197	5.2	5	287	292	4.1	1.5
35–39 yrs	8	82	90	2.4	9	118	127	1.8	1.4
40+ yrs	3	63	66	1.7	3	100	103	1.4	1.6
Total	203	3,608	3,811	100	321	6,800	7,121	100	1.9

Table 6.10
Clients Tested for Chlamydia and Clients Notified with Chlamydia at the Main Family Planning Clinic, by Age, Sex and Rate per 1,000 Clients Seen, 1997, Family Planning Victoria

Age Group	Clients Tested for Chlamydia					Clients Notified with Chlamydia					Rate per 1,000 Tested
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]	
13–19 yrs	7	55	62	6.4	131.1	0	3	3	20.0	6.6	48.4
20–24 yrs	13	199	212	21.8	193.6	2	2	4	26.7	3.8	18.9
25–29 yrs	18	264	282	29.0	190.2	1	4	5	33.3	3.5	17.7
30–34 yrs	11	185	196	20.1	189.9	1	0	1	6.7	1.0	5.1
35–39 yrs	2	107	109	11.2	160.8	0	2	2	13.3	3.0	18.3
40–44 yrs	2	67	69	7.1	194.9	0	0	0	0.0	0.0	0.0
45–49 yrs	2	26	28	2.9	145.1	0	0	0	0.0	0.0	0.0
50–59 yrs	1	12	13	1.3	84.4	0	0	0	0.0	0.0	0.0
60+ yrs	0	2	2	0.2	25.6	0	0	0	0.0	0.0	0.0
Total	56	917	973	100	175.5	4	11	15	100	2.8	15.4

[1] Rate per 1,000 clients seen at the main family planning clinic during 1997.

Table 6.11
Clients Tested for Chlamydia and Clients Notified with Chlamydia at the Action Centre, by Age, Sex and Rate per 1,000 Clients Seen, 1997, Family Planning Victoria

Age Group	Clients Tested for Chlamydia					Clients Notified with Chlamydia					Rate per 1,000
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]	Tested
13–19 yrs	17	308	325	49.5	151.3	0	7	7	36.8	3.3	21.5
20–24 yrs	20	197	217	33.0	215.9	1	9	10	52.6	10.0	46.1
25–29 yrs	6	45	51	7.8	167.2	0	1	1	5.3	3.3	19.6
30–34 yrs	2	36	38	5.8	192.9	0	1	1	5.3	5.1	26.3
35–39 yrs	2	14	16	2.4	177.8	0	0	0	0.0	0.0	0.0
40+ yrs	1	9	10	1.5	151.5	0	0	0	0.0	0.0	0.0
Total	48	609	657	100	172.4	1	18	19	100	5.0	28.9

[1] Rate per 1,000 clients seen at the Action Centre during 1997.

Table 6.12
Clients Tested for HIV at the Action Centre and at the Main Family Planning Clinic, by Age, Sex and Rate per 1,000 Clients Seen, 1997, Family Planning Victoria

Age Group	Clients Tested for HIV at Main Clinic					Clients Tested for HIV at the Action Centre				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[2]
13–19 yrs	7	28	35	13.5	74.0	28	141	169	51.4	78.7
20–24 yrs	9	59	68	26.2	62.1	27	103	130	39.5	129.4
25–29 yrs	19	59	78	30.0	52.6	7	13	20	6.1	65.6
30–34 yrs	10	32	42	16.2	40.7	1	5	6	1.8	30.5
35–39 yrs	1	14	15	5.8	22.1	2	1	3	0.9	33.3
40–44 yrs	2	9	11	4.2	31.1	0	1	1	0.3	15.2
45–49 yrs	1	4	5	1.9	25.9	0	0	0	0.0	0.0
50–59 yrs	0	4	4	1.5	26.0	0	0	0	0.0	0.0
60+ yrs	1	1	2	0.8	25.6	0	0	0	0.0	0.0
Total	50	210	260	100	46.9	65	264	329	100	86.3

[1] Rate per 1,000 clients seen at the main family planning clinic during 1997.

[2] Rate per 1,000 clients seen at the Action Centre during 1997.

Melbourne Sexual Health Centre

In 1997, 11,002 people were seen at the Melbourne Sexual Health Centre (MSHC) for a total of 26,130 consultations, an average of 2.4 per person. Over half of those attending the centre were aged under 30 years. More males than females attended (M:F ratio 1.4:1, table 6.13). Groups more likely to be seen a number of times during the year included female sex workers, reflecting attendance for regular (work-related) sexual screening over the course of the year, and males reporting homosexual or bisexual contact.

Most people attending the centre reported heterosexual contact (60 per cent, table 6.14). Of these, 4 per cent reported a history of heterosexual contact overseas and this group had higher diagnostic rates of hepatitis B, genital herpes, chlamydia, gonorrhoea and non-specific urethritis than those reporting heterosexual exposure in Australia. In general, most STD diagnoses among people reporting sexual contact abroad were in men (tables 6.15–6.19).

The most common diagnosis made at the centre was genital human papillomavirus, which was diagnosed, for the first time, in 5 per cent of all clients seen during the year. Among men, non-specific urethritis was the most common diagnosis, affecting one in 12 men seen at the centre.

There were 8,097 clients tested for HIV during the year, and 21 of these represented new diagnoses. The largest proportion (47 per cent) occurred in men reporting a history of male-to-male sexual contact. One female sex worker was found to be positive. No cases of HIV were detected in those for whom injecting drug use was their only risk factor for transmission of blood-borne viruses. However, this group made up 25 per cent of those diagnosed with hepatitis C. A low prevalence of HIV and a high prevalence of hepatitis C in Victorian IDUs has been reported in Victoria and elsewhere.[1,2]

A total of 37 diagnoses of gonorrhoea were made at the centre during 1997 all but four were in men. Of those 67 per cent reported a history of male-to-male sexual contact and 21 per cent reported heterosexual exposure. Chlamydia was diagnosed in 169 cases of which 70 per cent were in men. The majority of clients (male and female) reported heterosexual exposure (84 per cent). Non-specific urethritis was also more common in men who reported heterosexual contact (71 per cent).

1 Crofts N, Hopper JL, Milner R, Breschkin AM, Bowden DS, Locarnini SA. Blood-borne virus infections among Australian injecting drug users: implications for spread of HIV. Eur J Epidemiol 1994;10(6):687–694.

2 Pont J, Neuwald C, Salzner G. Antibody prevalence of parenterally transmitted viruses (HIV-1, HTLV-I, HBV, HCV) in Austrian intravenous drug users. Infection 1991;19(6):427–430.

Table 6.13
Clients Seen and Clinic Attendances, by Age and Sex, Melbourne Sexual Health Centre, 1997, Victoria

Age Group	Clients Seen				Clinic Attendances				Mean Visits
	Males	Females	Total	%	Males	Females	Total	%	per Person
13–19 yrs	138	316	454	4.1	289	722	1,011	3.9	2.2
20–24 yrs	1,068	1,333	2,401	21.8	2,313	2,992	5,305	20.3	2.2
25–29 yrs	1,556	1,260	2,816	25.6	3,461	2,801	6,262	24.0	2.2
30–34 yrs	1,250	676	1,926	17.5	3,048	1,528	4,576	17.5	2.4
35–39 yrs	924	411	1,335	12.1	2,574	1,005	3,579	13.7	2.7
40–44 yrs	564	263	827	7.5	1,475	586	2,061	7.9	2.5
45–49 yrs	382	156	538	4.9	968	428	1,396	5.3	2.6
50–59 yrs	374	116	490	4.5	1,145	283	1,428	5.5	2.9
60+ yrs	172	40	212	1.9	405	104	509	1.9	2.4
Unavailable	0	3	3	0.0	0	3	3	0.0	1.0
Total	6,428	4,574	11,002	100	15,678	10,452	26,130	100	2.4

Table 6.14
Clients Seen and Clinic Attendances, by Exposure Category, Sex and Mean Visits per Person, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients Seen				Clinic Attendances				Mean Visits
	Males	Females	Total	%	Males	Females	Total	%	per Person
Male Homosexual	707	-	707	6.4	2,563	-	2,563	9.8	3.6
Male Bisexual	300	-	300	2.7	967	-	967	3.7	3.2
IDU: Male Homo/Bisexual	51	-	51	0.5	196	-	196	0.8	3.8
IDU: Female Sex Worker	-	2	2	0.0	-	4	4	0.0	2.0
IDU: Other	104	73	177	1.6	234	171	405	1.5	2.3
Female Sex Worker	-	398	398	3.6	-	1,343	1,343	5.1	3.4
Heterosexual Sex Overseas	156	85	241	2.2	363	199	562	2.2	2.3
Other Heterosexual	3,467	2,844	6,311	57.4	7,445	6,378	13,823	52.9	2.2
Other/Unavailable	1,643	1,172	2,815	25.6	3,910	2,357	6,267	24.0	2.2
Total	6,428	4,574	11,002	100	15,678	10,452	26,130	100	2.4

Table 6.15
Clients Diagnosed with Hepatitis B Infection or Hepatitis C Infection, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients with Hepatitis B					Clients with Hepatitis C				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Male Homosexual	2	-	2	7.7	2.8	0	-	0	0.0	0.0
Male Bisexual	0	-	0	0.0	0.0	0	-	0	0.0	0.0
IDU: Male Homo/Bisexual	0	-	0	0.0	0.0	1	-	1	1.5	19.6
IDU: Female Sex Worker	-	0	0	0.0	0.0	-	0	0	0.0	0.0
IDU: Other	0	0	0	0.0	0.0	15	1	16	23.5	90.4
Female Sex Worker	-	5	5	19.2	12.6	-	2	2	2.9	5.0
Heterosexual Sex Overseas	1	0	1	3.8	4.1	1	0	1	1.5	4.1
Other Heterosexual	9	1	10	38.5	1.6	17	15	32	47.1	5.1
Other/Unavailable	4	4	8	30.8	2.8	10	6	16	23.5	5.7
Total	16	10	26	100	2.4	44	24	68	100	6.2

[1] Rate per 1,000 clients seen by the Melbourne Sexual Health Centre during 1997.

Table 6.16
Clients Diagnosed with Genital HSV Infection or Genital HPV/Genital Warts, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients with Genital HSV					Clients with Genital HPV/Genital Warts				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Male Homosexual	9	-	9	3.4	12.7	28	-	28	4.6	39.6
Male Bisexual	4	-	4	1.5	13.3	12	-	12	2.0	40.0
IDU: Male Homo/Bisexual	1	-	1	0.4	19.6	4	-	4	0.7	78.4
IDU: Female Sex Worker	-	0	0	0.0	0.0	-	0	0	0.0	0.0
IDU: Other	0	0	0	0.0	0.0	7	2	9	1.5	50.8
Female Sex Worker	-	9	9	3.4	22.6	-	5	5	0.8	12.6
Heterosexual Sex Overseas	8	1	9	3.4	37.3	5	1	6	1.0	24.9
Other Heterosexual	104	80	184	70.2	29.2	309	137	446	73.0	70.7
Other/Unavailable	33	13	46	17.6	16.3	80	21	101	16.5	35.9
Total	159	103	262	100	23.8	445	166	611	100	55.5

[1] Rate per 1,000 clients seen by the Melbourne Sexual Health Centre during 1997.

Table 6.17
Clients Tested for Antibody to HIV and Clients Tested and Found Positive for HIV, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients Tested for HIV					Clients Found Positive for HIV					Rate per 1,000
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]	Tested
Male Homosexual	454	-	454	5.6	642	7	-	7	33.3	9.9	15.4
Male Bisexual	269	-	269	3.3	897	2	-	2	9.5	6.7	7.4
IDU: Male Homo/Bisexual	41	-	41	0.5	804	1	-	1	4.8	19.6	24.4
IDU: Female Sex Worker	-	2	2	0.0	1,000	-	0	0	0.0	0.0	0.0
IDU: Other	94	71	165	2.0	932	0	0	0	0.0	0.0	0.0
Female Sex Worker	-	396	396	4.9	995	-	1	1	4.8	2.5	2.5
Heterosexual Sex Overseas	147	84	231	2.9	959	5	1	6	28.6	24.9	26.0
Other Heterosexual	2,584	2,549	5,133	63.4	813	3	0	3	14.3	0.5	0.6
Other/Unavailable	718	688	1,406	17.4	499	0	1	1	4.8	0.4	0.7
Total	4,307	3,790	8,097	100	736	18	3	21	100	1.9	2.6

[1] Rate per 1,000 clients seen by the Melbourne Sexual Health Centre during 1997.

Table 6.18
Clients Diagnosed with Genital Chlamydia or Gonorrhoea, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients with Genital Chlamydia					Clients with Gonorrhoea				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Male Homosexual	2	-	2	1.2	2.8	15	-	15	40.5	21.2
Male Bisexual	4	-	4	2.4	13.3	6	-	6	16.2	20.4
IDU: Male Homo/Bisexual	0	-	0	0.0	0.0	1	-	1	2.7	19.6
IDU: Female Sex Worker	-	0	0	0.0	0.0	-	0	0	0.0	0.0
IDU: Other	0	0	0	0.0	0.0	1	0	1	2.7	5.6
Female Sex Worker	-	6	6	3.6	15.1	-	1	1	2.7	2.5
Heterosexual Sex Overseas	10	0	10	5.9	41.5	0	0	0	0.0	0.0
Other Heterosexual	92	40	132	78.1	20.9	7	3	10	27.0	1.6
Other/Unavailable	10	5	15	8.9	5.3	3	0	3	8.1	1.1
Total	118	51	169	100	15.4	33	4	37	100	3.4

[1] Rate per 1,000 clients seen by the Melbourne Sexual Health Centre during 1997.

Table 6.19
Clients Diagnosed with Non-Specific Urethritis, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Melbourne Sexual Health Centre, 1997, Victoria

Exposure Category	Clients with Non-Specific Urethritis				
	Males	Females	Total	%	Rate[1]
Male Homosexual	46	-	46	8.8	65.1
Male Bisexual	22	-	22	4.2	73.3
IDU: Male Homo/Bisexual	1	-	1	0.2	19.6
IDU: Female Sex Worker	-	0	0	0.0	0.0
IDU: Other	10	0	10	1.9	56.5
Female Sex Worker	-	0	0	0.2	2.5
Heterosexual Sex Overseas	23	0	23	4.4	95.4
Other Heterosexual	347	0	347	66.5	55.5
Other/Unavailable	73	0	73	14.0	25.9
Total	522	0	522	100	47.4

[1] Rate per 1,000 clients seen by the Melbourne Sexual Health Centre during 1997.

Non-Metropolitan STD Clinics

During 1997, there were 4,596 visits by 2,082 individual clients to non-metropolitan STD clinics located in Ballarat, Bendigo, Geelong, Traralgon and Wodonga (table 6.20). Almost four times as many women as men were seen at non-metropolitan STD clinics during 1997, which reflects the inclusion of clients seen in relation to counselling and management of reproductive health matters by two clinics (Ballarat and Wodonga).

Most females (60 per cent) seen during the year were aged in their late teens and early twenties whereas the majority of males (44 per cent) were aged between 25 and 34 years (table 6.21). The most common exposure was heterosexual contact, which was reported for 66 per cent of all clients, and included female family planning clients, classified as heterosexual on the basis of pregnancy or attendance for information about contraception and therefore had had, or planned to have, sexual contact with an opposite sex partner (table 6.22).

Genital human papillomavirus was the most commonly seen STD during the year, affecting 5 per cent of attendees. Rates of occurrence were higher in men (86/1,000) than in women (34/1,000, table 6.23). Genital herpes was the next most commonly seen condition during the year and although more cases were seen among women than men, rates were highest for heterosexual men. There were also 29 cases of chlamydia and 20 cases of non-specific urethritis seen during the year. For both conditions, heterosexual contact was the most commonly reported risk factor (table 6.24).

Twenty-one people seen in the non-metropolitan STD clinics had been diagnosed with HIV or AIDS during or prior to 1997, 62 per cent of whom had a recorded history of either male homosexual contact and/or injecting drug use. The remainder predominantly reported heterosexual contact.

Table 6.20
Clients Seen and Clinic Attendances, by Clinic and Sex, Non-Metropolitan STD Clinics, 1997, Victoria

Clinic	Clients Seen				Clinic Attendances				Mean Visits per Person
	Males	Females	Total	%	Males	Females	Total	%	
Ballarat	155	924	1,084	52.1	337	2,061	2,404	52.3	2.2
Bendigo	51	116	167	8.0	89	216	306	6.7	1.8
Geelong	181	139	321	15.4	342	295	645	14.0	2.0
Traralgon	30	22	68	3.3	62	47	125	2.7	1.8
Wodonga	37	402	442	21.2	67	1,033	1,116	24.3	2.5
Total	454	1,603	2,082[1]	100	897	3,652	4,596[2]	100	2.2

[1] Includes 25 people for whom sex was not specified.

[2] Includes 47 attendances by people for whom sex was not specified.

Table 6.21
Clients Seen and Clinic Attendances, by Age and Sex, Non-Metropolitan STD Clinics, 1997, Victoria

Age Group	Clients Seen				Clinic Attendances				Mean Visits
	Males	Females	Total	%	Males	Females	Total	%	per Person
0–12 yrs	9	11	21	1.0	10	15	26	0.6	1.2
13–19 yrs	63	549	613	29.4	98	1,241	1,342	29.2	2.2
20–24 yrs	129	403	533	25.6	246	974	1,226	26.7	2.3
25–29 yrs	70	208	278	13.4	155	513	671	14.6	2.4
30–34 yrs	62	133	195	9.4	128	281	411	8.9	2.1
35–39 yrs	46	117	163	7.8	97	271	369	8.0	2.3
40–44 yrs	25	72	98	4.7	63	149	213	4.6	2.2
45–49 yrs	23	46	69	3.3	41	92	134	2.9	1.9
50–59 yrs	18	41	59	2.8	40	76	116	2.5	2.0
60+ yrs	5	17	23	1.1	15	26	42	0.9	1.8
Unavailable	4	6	30	1.1	4	14	46	1.0	1.5
Total	454	1,603	2,082[1]	100	897	3,652	4,596[2]	100	2.2

[1] Includes 25 people for whom sex was not specified.

[2] Includes 47 attendances by people for whom sex was not specified.

Table 6.22
Clients Seen and Clinic Attendances, by Exposure Category, Sex and Mean Visits per Person, Non-Metropolitan STD Clinics, 1997, Victoria

Exposure	Clients Seen				Clinic Attendances				Mean Visits
	Males	Females	Total	%	Males	Females	Total	%	per Person
Homosexual Contact	35	10	45	2.2	89	20	109	2.4	2.4
Bisexual Contact	7	0	7	0.3	24	0	24	0.5	3.4
Heterosexual Contact	217	1,157	1,374	66.0	363	2,216	2,579	56.1	1.9
Sex Worker	7	53	60	2.9	13	128	142	3.1	2.4
IDU: Homo/Bisexual	5	0	5	0.2	11	0	11	0.2	2.2
IDU: Sex Worker	0	6	6	0.3	0	6	6	0.1	1.0
IDU: Other	30	18	48	2.3	57	31	88	1.9	1.8
Other	1	6	8	0.4	1	9	11	0.2	1.4
Unavailable	152	353	529	25.4	339	1,242	1,626	35.4	3.1
Total	454	1,603	2,082[1]	100	897	3,652	4,596[2]	100	2.2

[1] Includes 25 people for whom sex was not specified.

[2] Includes 47 attendances by people for whom sex was not specified.

Table 6.23
Clients Seen with Genital HSV Infection or Genital HPV/Genital Warts, by Exposure Category, Sex, and Rate per 1,000 Clients Seen, Non-Metropolitan STD Clinics, 1997, Victoria

Exposure	Clients with Genital HSV					Clients with Genital HPV/Genital Warts				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Homosexual Contact	0	0	0	0.0	0.0	2	0	2	2.1	44.4
Bisexual Contact	1	0	1	2.0	142.9	0	0	0	0.0	0.0
Heterosexual Contact	11	22	33	64.7	24.0	21	36	57	60.6	41.5
Sex Worker	0	1	1	2.0	16.7	0	2	2	2.1	33.3
IDU: Homo/Bisexual	0	0	0	0.0	0.0	1	0	1	1.1	200.0
IDU: Sex Worker	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Other	0	0	0	0.0	0.0	3	2	5	5.3	104.2
Other	0	0	0	0.0	0.0	0	1	1	1.1	125.0
Unavailable	7	9	16	31.4	30.2	12	14	26	27.7	49.1
Total	19	32	51	100	24.5	39	55	94	100	45.1

[1] Rate per 1,000 clients seen in non-metropolitan STD clinics during 1997.

Table 6.24
Clients Seen with Genital Chlamydia or Non-Specific Urethritis, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Non-Metropolitan STD Clinics, 1997, Victoria

Exposure	Clients with Genital Chlamydia					Clients with Non-specific Urethritis				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Homosexual Contact	1	0	1	3.4	22.2	1	0	1	5.0	22.2
Bisexual Contact	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Heterosexual Contact	6	14	20	69.0	14.6	10	0	10	50.0	7.3
Sex Worker	1	0	1	3.4	16.7	0	0	0	0.0	0.0
IDU: Homo/Bisexual	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Sex Worker	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Other	1	1	2	6.9	41.7	1	0	1	5.0	20.8
Other	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Unavailable	2	3	5	17.2	9.5	8	0	8	40.0	15.1
Total	11	18	29	100	13.9	20	0	20	100	9.6

[1] Rate per 1,000 clients seen in non-metropolitan STD clinics during 1997.

Table 6.25
Clients Seen with Syphilis or HIV/AIDS, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Non-Metropolitan STD Clinics, 1997, Victoria

Exposure	Clients with Syphilis					Clients with HIV/AIDS				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Homosexual Contact	0	0	0	0.0	0.0	9	0	9	42.9	200.0
Bisexual Contact	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Heterosexual Contact	1	0	1	100.0	0.7	2	2	4	19.0	2.9
Sex Worker	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Homo/Bisexual	0	0	0	0.0	0.0	1	0	1	4.8	200.0
IDU: Sex Worker	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Other	0	0	0	0.0	0.0	2	1	3	14.3	62.5
Other	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Unavailable	0	0	0	0.0	0.0	4	0	4	19.0	7.6
Total	1	0	1	100	0.5	18	3	21	100	10.1

[1] Rate per 1,000 clients seen in non-metropolitan STD clinics during 1997.

Table 6.26
Clients Seen with Hepatitis B or Hepatitis C, by Exposure Category, Sex and Rate per 1,000 Clients Seen, Non-Metropolitan STD Clinics, 1997, Victoria

Exposure	Clients with Hepatitis B					Clients with Hepatitis C				
	Males	Females	Total	%	Rate[1]	Males	Females	Total	%	Rate[1]
Homosexual Contact	1	0	1	6.3	22.2	0	0	0	0.0	0.0
Bisexual Contact	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Heterosexual Contact	2	4	6	37.5	4.4	0	6	6	22.2	4.4
Sex Worker	0	1	1	6.3	16.7	1	0	1	3.7	16.7
IDU: Homo/Bisexual	0	0	0	0.0	0.0	0	0	0	0.0	0.0
IDU: Sex Worker	0	0	0	0.0	0.0	0	2	2	7.4	333.3
IDU: Other	1	0	1	6.3	20.8	5	4	9	33.3	187.5
Other	0	0	0	0.0	0.0	0	0	0	0.0	0.0
Unavailable	3	4	7	43.8	13.2	4	5	9	33.3	17.0
Total	7	9	16	100	7.7	10	17	27	100	13.0

[1] Rate per 1,000 clients seen in non-metropolitan STD clinics during 1997.

Victorian Sentinel Surveillance Network (STDs and Blood-Borne Viruses)

The data in this section have been compiled from the results of laboratory testing for blood-borne viruses (BBV) performed in four Victorian methadone clinics, all metropolitan. Two of these clinics also see general practice patients, many of whom, although not on methadone, have a history of injecting drug use. Within these settings, individuals are mainly tested for BBV (hepatitis C, HIV and hepatitis B) on clinical grounds and therefore these data do not represent systematic testing in this population.

For hepatitis B information was included on testing for HBsAg (hepatitis B surface antigen), HBcAb (hepatitis B core antibody), and HBcIgM (hepatitis B core immunoglobulin M) serology. In addition, data on testing for HBsAb (hepatitis B surface antibody) were also available for patients from two of the four clinics. However, patients who were only tested for HBsAb, but not for other markers of hepatitis B infection, were excluded.

A total of 747 patients were tested for markers of current or past infection with at least one of these BBVs. Of these, 573 (77 per cent) were tested for markers of current (HBsAg and/or HBcIgM) or past (HBcAb) infection (table 6.27) while 578 (77 per cent) were tested for evidence of infection with hepatitis C (table 6.28) and 395 (53 per cent) for HIV (table 6.29).

In total, 18 per cent of those tested for markers to hepatitis B in this group showed evidence of past or current infection, while 64 per cent of the 36 people in the remaining group who were tested for HbsAb showed evidence of immunity (i.e. were HBsAb positive) to hepatitis B infection.

Rates of exposure to hepatiis C were high, with over 40 per cent of both males and females who were tested during the year found to be infected.

One of the 395 individuals who were tested for HIV during the year was found to be infected although this individual had initially tested positive some years earlier and therefore does not represent a newly diagnosed infection. It should be noted, however, that testing rates for HIV, in this group, were considerably lower than those for the other two BBVs.

Table 6.27
Number of Individuals Tested for Markers of Current or Past Infection with Hepatitis B, in Sentinel Practices (Methadone/General Medicine), by Sex, Stage of Infection and Age, 1997, Victoria [1]

Sex / Infection Stage	Age Group (years) 0–12	13–19	20–24	25–29	30–34	35–39	40–44	45–49	50+	Total[6]
Males										
Infectious[2]	0	0	3	5	2	1	5	1	1	18
- acute HBV	0	0	2	0	0	1	1	0	0	4
- chronic HBV	0	0	0	0	1	0	0	0	0	1
- unspecified	0	0	1	5	1	0	4	1	1	13
Past Infection[3]	0	2	2	8	10	16	9	1	4	53
Not Exposed[4]	0	14	58	75	54	30	18	4	12	267
Total Males	0	16	63	88	66	47	32	6	17	338
% Exposed[5]	0	12.5	7.9	14.8	18.2	36.2	43.8	33.3	29.4	21.0
Females										
Infectious[2]	0	0	3	0	3	0	1	0	0	7
- acute HBV	0	0	0	0	2	0	0	0	0	2
- chronic HBV	0	0	0	0	0	0	0	0	0	0
- unspecified	0	0	3	0	1	0	1	0	0	5
Past Infection[3]	0	1	4	5	7	7	0	0	0	24
Not Exposed[4]	0	18	55	61	25	21	10	0	0	200
Total Females	0	19	62	66	35	28	11	0	0	231
% Exposed[5]	0.0	5.3	11.3	7.6	28.6	25.0	9.1	0.0	0.0	13.4

[1] Excludes 4 individuals, all classified as 'not exposed' for whom sex was not reported.

[2] Includes individuals who were positive for either HBsAg and/or HBcIgM. Where possible, individuals within this group have been classified as being acutely infected (HBcIgM positive with or without HBsAg), or chronically infected (HBsAg positive and HBcIgM negative). All HBsAg positive cases not tested for HBcIgM and therefore unable to be classified, on the basis of serology, as acute or chronic, have been grouped as unspecified.

[3] Includes individuals without evidence of HBsAg or HBcIgM who were tested for HBcAb and found to be positive for this marker. Almost all individuals in this group were tested for HBsAg; however, only one was tested for HBcIgM.

[4] Includes individuals without evidence of HBsAg, HBcIgM or HBcAb. All individuals were tested for HBsAg (92 per cent) and/or HBcAb (44 per cent). HBsAb results were available for 36 cases, and of these 23 were positive; the remainder were all negative.

[5] Includes individuals with markers of current (HBsAg or HBcIgM) or past (HBcAb) infection.

[6] Includes 3 people, all male, for whom age group was not specified.

Table 6.28
Number of Individuals Tested for Hepatitis C in Sentinel Practices (Methadone/General Medicine), by Sex, Age and Test Result, 1997, Victoria

Sex	Age Group	HCV+ve	HCV-ve	Total Tested	% Exposed
Males	0–12 yrs	0	1	1	0.0
	13–19 yrs	4	11	15	26.7
	20–24 yrs	18	49	67	26.9
	25–29 yrs	39	51	90	43.3
	30–34 yrs	31	28	59	52.5
	35–39 yrs	31	14	45	68.9
	40–44 yrs	23	6	29	79.3
	45–49 yrs	8	2	10	80.0
	50+ yrs	10	6	16	62.5
	Unavailable	3	0	3	100.0
	Total Males	167	168	335	49.9
Females	0–12 yrs	0	1	1	0.0
	13–19 yrs	4	15	19	21.1
	20–24 yrs	16	50	66	24.2
	25–29 yrs	26	41	67	38.8
	30–34 yrs	26	13	39	66.7
	35–39 yrs	19	11	30	63.3
	40–44 yrs	5	5	10	50.0
	45–49 yrs	2	1	3	66.7
	50+ yrs	4	1	5	80.0
	Unavailable	0	0	0	0.0
	Total Females	102	138	240	42.5
	Total Individuals	271	307	578[1]	46.9

[1] Includes 3 people for whom sex was not reported.

Table 6.29
Number of Individuals Tested for HIV in Sentinel Practices (General Medicine/Methadone), by Sex, Age and Test Result, 1997, Victoria

Age Group	Males	Females	Total	%	% Infected
0–12 yrs	1	0	1	0.3	0.0
13–19 yrs	9	14	23	5.8	0.0
20–24 yrs	35	54	89	22.5	0.0
25–29 yrs	52	47	101	25.6	0.0
30–34 yrs	56	22	78	19.7	0.0
35–39 yrs	32	18	50	12.7	2.0
40–44 yrs	21	11	32	8.1	0.0
45–49 yrs	7	4	11	2.8	0.0
50+ yrs	8	1	9	2.3	0.0
Unavailable	0	0	1	0.3	0.0
Total	221	171	395[1]	100	0.3

[1] Includes 3 people for whom sex was not reported.

Resources

The following resources may be of use to readers of this report. This list is not comprehensive but merely a guide to some of the assistance available.

Guidelines for Treatment of STDs

Guidelines for the treatment of STDs can be found in the Venereology Society of Victoria's publication *Treatment of Sexually Transmitted Diseases including HIV/AIDS*. Copies of this booklet can be purchased for $5.00 from the society's secretariat, based at the Melbourne Sexual Health Centre, on (03) 9347 0244.

Partner Notification

Partner notification is an effective public health intervention in the control of STDs. If a person is diagnosed as having an STD, the diagnosing practitioner has a responsibility to ensure that the sexual contacts are followed up. Advice and assistance in relation to partner notification are available from the Department of Human Services through its partner notification officers, who can be contacted on (03) 9347 1899.

Department of Human Services

Information and pamphlets on HIV/AIDS, STDs and other blood-borne viruses, and additional copies of this report and the quarterly STD Surveillance Reports, may be obtained through the Population Risk Reduction Unit of the Disease Control Section, Department of Human Services on (03) 9637 4184.

Macfarlane Burnet Centre for Medical Research

The Epidemiology and Social Research Unit of the Macfarlane Burnet Centre conducts surveillance for HIV/AIDS and other STDs on behalf of the Department of Human Services. Additional information about surveillance systems for these diseases can be obtained from the unit on (03) 9282 2290.

Notification of STDs

Under the *Health Act 1958*, and the Health (Infectious Diseases) Regulations 1990, it is incumbent upon diagnosing practitioners and laboratories to notify newly discovered cases of certain STDs. Details of the notification system may be obtained from Ross Andrews, Manager, Surveillance and Risk Assessment Unit, Department of Human Services on (03) 9637 4121.

Training in HIV and Other STDs for Health Professionals

Short, intensive training courses in the diagnosis and management of HIV/AIDS and hepatitis C are available for general practitioners and are co-ordinated through the AIDS Prevention and Support Unit in Dandenong. For further information contact the HIV/GP Education Program on (03) 9794 0790 or the Population Risk Reduction Unit of the Department of Human Services on (03) 9637 4184.

Monash University offers a postgraduate Diploma of Venereology designed to give medical practitioners specialised training in the diagnosis and management of STDs. Scholarships are available to applicants from rural Victoria. For further information contact Dr Stella Heley at the Melbourne Sexual Health Centre on (03) 9347 0244.

The Venereology Society in conjunction with the Victoria Faculty of the Royal Australian College of General Practitioners (RACGP) conducts regular STD update seminars. For further information contact the Victoria Faculty of the RACGP on (03) 9207 0320.

The Centre for Social Health runs training courses for people seeking accreditation to provide pre- and post-HIV antibody test counselling. The centre also conducts courses and seminars in the prevention of HIV/AIDS and other blood-borne viruses. For further information contact Marg Sutherland on (03) 9479 3933.

A course for Dental Practitioners and Dental Auxiliaries on Infection Control in Dental Practice is available. For further information contact Bill Palmer on (03) 9890 1068.

Melbourne Sexual Health Centre and Other Clinical STD Services (Including Free Public HIV Testing)

The Melbourne Sexual Health Centre provides testing, diagnosis, treatment and counselling services for all STDs. Services are free and confidential. Medical, nursing and counselling staff are available to provide advice/assistance to practitioners in the field. The centre is located at 580 Swanston Street, Carlton and can be contacted on (03) 9347 0244 or 1800 032 017 (TTY [03] 9347 8619).

Other centres that also provide free HIV testing, clinical services and counselling in relation to STDs include the following metropolitan and non-metropolitan services:

- Action Centre, 277 Flinders Lane, Melbourne, ph: (03) 9654 4766 or 1800 013 952.
- Alfred Hospital, Infectious Disease Clinic, Commercial Road, Prahran, ph: (03) 9276 6081.
- Frankston Hospital, Sexual Health Clinic, Hastings Road, Frankston, ph: (03) 9784 7650 or (03) 9784 7777.
- Royal Melbourne Hospital, Victorian Infectious Diseases Service, Grattan Street, Parkville, ph: (03) 9342 7212.
- Royal Women's Hospital, Communicable Diseases Clinic, and the Chemical Dependency Unit, 132 Grattan Street, Carlton, ph: (03) 9344 2000.
- Victorian AIDS Council/Gay Men's Health Centre, the Centre Clinic Northcote, Northcote Community Health Centre, 42 Separation Street, Northcote, ph: (03) 9481 7155; and the Centre Clinic St Kilda, 46 Acland Street, St Kilda ph: (03) 9525 5866 or 1800 134 840.
- Western Hospital, STD Clinic, Gordon Street, Footscray, ph: (03) 9319 6666.
- Ballarat Community Health Centre, The Annexe, 105 Humffray Street South, Ballarat, ph: (03) 5333 1635 .
- Community Health Bendigo, Seymoure Street, Eaglehawk, ph: (03) 5434 4300.
- Geelong STD/HIV Clinic, Geelong Community Health Services, 40 Little Malop Street, Geelong, ph: (03) 5221 4735.
- Traralgon STD Service, La Trobe Community Health Services, 11 Seymour Street, Traralgon, ph: (03) 5174 9800.
- Wodonga STD/HIV Clinic, Vermont Street Health Clinic, 4 Benson Court , Wodonga, ph: (02) 6056 1589 .

In addition to these centres, free HIV testing is available from medical practitioners outside the public hospital system for individuals who fall into one of the following groups: men who have sex with men, sex workers, IDUs, patients with a laboratory confirmed notifiable STD, homeless youths, and men and women who have unsafe sex with any of the aforementioned. For the test to be performed without charge the risk category must be specified on the pathology request form. Further information about eligibility for free HIV testing can be obtained directly from testing laboratories, or from the Population Risk Reduction Unit, Disease Control Section, Department of Human Services on (03) 9637 4184. HIV test request forms can be obtained from the Population Risk Reduction Unit, Department of Human Services on (03) 9637 4184 .

References

The following includes a number of published papers and reports which provide more details on some aspects of the data published in this report. This list is not intended to be exhaustive, but rather offers a source from which additional data may be sought.

HIV/AIDS

Ashton LJ, Learmont J, Luo K, Wylie B, Stewart G, Kaldor JM. HIV infection in recipients of blood products from donors with known duration of infection. Lancet 1994;344(8924):718–720.

Becker NG, Cui JS. Comparison of trends in HIV infection for two risk categories. Stat Med 1996;15(16):1779–91.

Becker NG, Cui JS. Estimating a delay distribution from incomplete data, with application to reporting lags for AIDS cases. Stat Med 1997;16(20):2339–47.

Becker NG, Watson LF, Marschner IC, Motika M, Newstead SV, Carlin JB. Assessing the extent of the Australia HIV epidemic from AIDS surveillance data. Aust J Public Health 1993;17(3):226–31.

Chant K, Lowe D, Rubin G, et al. Patient-to-patient transmission of HIV in private surgical consulting rooms. Lancet 1993;342:1548–49 (letter).

Checkley GE, Thompson SC, Crofts N, Mijch AM, Judd FK. HIV in the mentally ill. Aust N Z J Psychiatry 1996;30(2):184–194.

Collignon PJ, Watson DA. Why aren't all pregnant women being tested for HIV? [letter]. Med J Aust 1997;166(12):670–1.

Crofts N, Hopper JL, Milner R, Breschkin AM, Bowden DS, Locarnini SA. Blood-borne virus infections among Australian injecting drug users: implications for spread of HIV. Eur J Epidemiol 1994;10(6):687–694.

Crofts N, Russell D, Dax E, Breschkin A, Locarnini S. Case report: HIV-2 infections in Victoria. Australian HIV Surveillance Report 1994;10(1):1–4.

Darlington R, Thompson SC, Forsyth JRL. Is HIV testing being requested appropriately?: the experience of a public health laboratory. Aust N Z J Public Health 1996;20(3):247–253.

Dax EM, Vandenbelt TA. HIV antibody testing in Australia. J AIDS 1993;6(suppl 1):S24–8.

Dore GJ, Li Y, Grulich AE et al. Declining incidence and later occurrence of Kaposi's sarcoma among persons with AIDS in Australia: the Australian AIDS cohort. AIDS 1996;10(12):1401–6.

Dore GJ, Hoy JF, Mallal SA et al. Trends in incidence of AIDS illnesses in Australia from 1983 to 1994: the Australian AIDS cohort. J Acquir Immune Defic Syndr Hum Retrovirol 1997;16(1):39–43.

Dwyer DE, Ge YC, Bolton WV et al. Subtype B isolates of human immunodeficiency virus type 1 detected in Australia. Ann Acad Med Singapore 1996;25(2):188–91.

Elford J, MacDonald MA, Gabb RG, Ryan MM, Kaldor JM. Antenatal HIV antibody testing in Australia. Med J Aust 1995;163(4):183–185.

Elford J, McDonald A, Kaldor J. Kaposi's sarcoma as a sexually transmissible infection: an analysis of Australian AIDS surveillance data. AIDS 1993;7(12):1667–71.

Garland S, Kaldor J. Monitoring heterosexual transmission of HIV through testing of antenatal women. Med J Aust 1994;160:667–8.

Gertig DM, Crofts N, Stevenson E, Breschkin A. The epidemiology of HIV-1 infection in Victoria. Med J Aust 1993;158:17–20.

Gertig D, Stevenson E, Crofts N. Surveillance for HIV antibody testing in Victoria. Australian HIV Surveillance Report 1993;9(1):1–5.

Gold J, Li Y, Kaldor JM. Premature mortality in Australia 1983–1992: the first decade of the AIDS epidemic. Med J Aust 1994;161(11–12):652–656.

Grulich AE, Kaldor JM, Hendry O et al. Risk of Kaposi's sarcoma and oroanal sexual contact. Am J Epidemiol 1997;145(8):673–9.

Kaldor JM, Crofts N. Controlling an epidemic. Epidemiological surveillance for HIV and AIDS. Med J Aust 1996;165(5):268–271.

Kaldor J, McDonald A, Blumer CE, et al. The acquired immunodeficiency syndrome in Australia: incidence 1982–1991. Med J Aust 1993;158:10–17.

Kaldor J. Patient-to-patient transmission of HIV: editorial comment. Australian HIV Surveillance Report 1994;10(1):5.

Law MG, Kaldor JM. A note on the grouping of surveillance data when adjusting for reporting delays. Am J Epidemiol 1997;146(7):592–5.

Law MG, McDonald AM, Kaldor JM. Estimation of cumulative HIV incidence in Australia, based on national case reporting. Aust N Z J Public Health 1996;20(2):215–217.

Law MG, Rosenberg PS, McDonald A, Kaldor JM. Age-specific HIV incidence among homosexually active men in Australia. Med J Aust 1996;164(12):715–718.

Li Y, Gold J, McDonald AM, Kaldor JM for the National HIV Surveillance Committee. Demographic pattern of AIDS in Australia, 1991 to 1993. Aust N Z J Public Health 1996;20(4):421–425.

Luo K, Law M, Kaldor JM, McDonald AM, Cooper DA. The role of initial AIDS-defining illness in survival following AIDS. AIDS 1995;9(1):57–63.

MacDonald MA, Elford J, Kaldor JM. Reporting of occupational exposures to blood-borne pathogens in Australian teaching hospitals. Med J Aust 1995;163(3):121–123.

MacDonald M, Wodak AD, Ali R, et al. HIV prevalence and risk behaviour in needle exchange attenders: a national study. The Collaboration of Australian Needle Exchanges. Med J Aust 1997;166(5):237–240.

Marks C, Tideman RL, Mindel A. Evaluation of sexual health services within Australia and New Zealand. Med J Aust 1997;166(7):348–352.

McDonald AM. Assessment of reported exposure to HIV for HIV infection newly diagnosed in Australia in 1994. Australian HIV Surveillance Report 1995;11(2):9–13.

McDonald AM, Crofts N, Blumer CE, et al. The pattern of diagnosed HIV infection in Australia, 1984–1992. AIDS 1994;8:513–19.

McDonald AM, Cruickshank M, Ziegler JB et al. Perinatal exposure to HIV in Australia, 1982–1994. Med J Aust 1997;166(2):77–80.

McDonald AM, Gertig DM, Crofts N, Kaldor JM. A national surveillance system for newly acquired HIV infection in Australia. Am J Public Health 1994;84(12):1923–8.

National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997 .

Oman K, Grayson ML, Turnidge J. HIV in the suburbs. (letter) Med J Aust 1993;158(1):31–4.

Padiglione A, Goldstein D, Law MG et al. Prognosis of Kaposi's sarcoma as an initial and later AIDS associated illness. Ann Oncol 1997;8(9):871–5.

Stevenson E, Thompson S, Crofts N. Ascertainment of exposure categories for HIV infected individuals with previously unrecorded risk data. Med J Aust 1995;163:66–9.

Stevenson EM, Thompson SC, Crofts N. Screening—sensitivity, specificity and hepatitis C. (letter) Med J Aust 1996;165(2):120.

Stuart RL, Hellard ME, Jolley D et al. Cryptosporidiosis in patients with AIDS. Int J STD AIDS 1997;8(5):339–41.

Thompson S, Stevenson E, Crofts N. A Profile of HIV Testing in Victoria to the end of 1993. Aust N Z J Public Health 1996;20:165–171.

Ziegler JB, Palasanthiran P. Paediatric HIV update. J Paediatr Child Health 1997;33(5):373–7.

Gonorrhoea

Crofts N, Gertig D, Stevenson E, et al. Surveillance for sexually transmissible diseases in Victoria, 1983 to 1992. Aust J Public Health 1994;18:433–39.

Denham I, Mulhall B. Diagnostic criteria for Australian STD clinics. Venereology 1994;7(2):86–8.

Griffith J, Barclay LM, de Petra V, Forsyth JRL, Hogg GG. High-level ciprofloxacin-resistant *Neisseria gonorrhoeae* and heterosexually acquired infections in Victoria. Med J Aust 1996;164:125.

Hart G. Factors associated with genital chlamydial and gonococcal infection in females. Genitourin Med 1992;68(4):217–220.

Hart G. Risk profiles and epidemiologic interrelationships of sexually transmitted diseases. Sex Transm Dis 1993 May;20(3):126–136.

Marks C, Tideman RL, Mindel A. Evaluation of sexual health services within Australia and New Zealand. Med J Aust 1997;166(7):348–352.

Mulhall BP, Hart G, Harcourt C. Sexually transmitted diseases in Australia: a decade of change. Epidemiology and surveillance. Ann Acad Med Singapore 1995;24(4):569–578.

National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997.

Rowbottom JH, Tapsall JW, Plummer DC, Bodsworth NJ, MacDonald MA, Chambers IW, Kaldor JM. An outbreak of a penicillin-sensitive strain of gonorrhoea in Sydney men. Genitourin Med 1994;70(3):196–199.

Sherrard J, Forsyth JRL. Homosexually acquired gonorrhoea in Victoria, 1983–91. Med J Aust 1993;158:450–3.

Sherrard J, Forsyth JRL. Heterosexually acquired gonorrhoea in Victoria, Australia: a review of epidemiologic and microbiologic data from laboratory confirmed infections, 1983–1992. Venereology 1994;7(4):182–90.

Tapsall J. Annual report of the Australian Gonococcal Surveillance Programme 1996. Commun Dis Intell 1997;21(14):189–92.

Tapsall JW, Phillips EA, Shultz TR, Thacker C. Quinolone-resistant *Neisseria gonorrhoeae* isolated in Sydney, Australia, 1991 to 1995. Sex Transm Dis 1996;23(5):425–8.

Chlamydia

Crofts N, Gertig D, Stevenson E, et al. Surveillance for sexually transmissible diseases in Victoria, 1983 to 1992. Aust J Public Health 1994;18:433–39.

Denham I, Mulhall B. Diagnostic criteria for Australian STD clinics. Venereology 1994;7(2):86–8.

Garland S, Denham I, Jacobs D, Forsyth JRL, Meese P. *Chlamydia trachomatis*: management guidelines. Venereology 1994;7(3):139–42.

Garland S, Gertig DM, McInnes JA. Genital *Chlamydia trachomatis* infection in Australia. Med J Aust 1993;159:90–6.

Hart G. Factors associated with genital chlamydial and gonococcal infection in females. Genitourin Med 1992;68(4):217–220.

Hart G. The epidemiology of genital chlamydial infection in South Australia. Int J STD AIDS 1993;4(4):204–210.

Marks C, Tideman RL, Mindel A. Evaluation of sexual health services within Australia and New Zealand. Med J Aust 1997;166(7):348–352.

National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997.

Thompson SC, MacEachern A, Stevenson E. Impact of improved laboratory compliance on notification of genital *Chlamydia trachomatis* infection in Victoria. Sex Transm Dis 1997;24(2):84–89.

Thompson SC, McEachern KA, Stevenson EM, Forsyth JR. The epidemiology of notified genital *Chlamydia trachomatis* infection in Victoria, Australia: a survey of diagnosing providers. Int J STD AIDS 1997;8(6):382–387.

Thompson S, McEachern A, Stevenson E. HIV testing of patients diagnosed with genital *Chlamydia trachomatis* in Victoria. Venereology 1996;9(3):172–175.

Westgarth F, Crofts N, Gertig D. Diagnostic practices for genital chlamydial infection among general practitioners in Melbourne, Australia. Sexually Transmitted Diseases 1994;21(2):118–23.

Syphilis

Crofts N, Gertig D, Stevenson E, et al. Surveillance for sexually transmissible diseases in Victoria, 1983 to 1992. Aust J Public Health 1994;18:433–39.

Denham I, Mulhall B. Diagnostic criteria for Australian STD clinics. Venereology 1994;7(2):86–8.

Hart G. Risk profiles and epidemiologic interrelationships of sexually transmitted diseases. Sex Transm Dis 1993;20(3):126–136.

Humphrey MD, Bradford DL. Congenital syphilis: still a reality in 1996. Med J Aust 1996;165(7):382–385 .

Marks C, Tideman RL, Mindel A. Evaluation of sexual health services within Australia and New Zealand. Med J Aust 1997;166(7):348–352.

Mulhall BP, Hart G, Harcourt C. Sexually transmitted diseases in Australia: a decade of change. Epidemiology and surveillance. Ann Acad Med Singapore 1995;24(4):569–578.

National Centre in HIV Epidemiology and Clinical Research. HIV/AIDS and related diseases in Australia annual surveillance report, 1997. Sydney: National Centre in HIV Epidemiology and Clinical Research, 1997.