National Centre in HIV Epidemiology and Clinical Research
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Hepatitis A and B infection and vaccination in the Health in Men (HIM) cohort

Compared with the general population, homosexual men are at high risk of sexually acquired hepatitis A (HAV) and hepatitis B virus (HBV) infection (Brook 2002). Outbreaks of HAV infection among homosexually active men have been reported in Australia (Ferson, Young and Stokes 1998) and in other industrialised countries since the early 1990s (CDC 2002 (a)). The epidemiology of HBV infection among homosexual men changed markedly over the past three decades. Before the HIV/AIDS epidemic, HBV was highly prevalent (MacKellar *et al* 2001; Anderson *et al* 1994; Brook 1998). During the early 1980s, the incidence of HBV infection declined markedly, following the adoption of safe sex practices and the advent of an effective HBV vaccine (Alter *et al* 1990).

Safe and effective vaccines for preventing HBV and HAV infection have been available since the early 1980s and the early 1990s, respectively. Health authorities in Australia and other developed countries have recommended that homosexually active men be vaccinated against HAV and HBV (NHMRC 2000; CDC 2002 (b)). However, vaccination coverage has remained low in this population (Anderson *et al* 1994; Gilson *et al* 1998).

The Health in Men (HIM) cohort study

The Health in Men (HIM) study, which commenced in 2001, is a prospective cohort study among HIV negative homosexually active men in Sydney. Selection criteria for enrolment into the study included reporting sexual contact with other men within the previous five years; living in Sydney or participating regularly in the Sydney gay community; and testing HIV negative at baseline.

In addition to annual HIV testing and screening for other sexually transmissible infections (STIs) including syphilis, gonorrhoea and chlamydia, the study offered HAV and HBV testing to all consenting participants. A blood sample taken at the baseline interview was tested for HAV IgG and HBV markers [HBV surface and core antibodies (HBsAb and HBcAb), and HBV surface antigen (HBsAg) if there was evidence of prior infection]. Those who tested negative to either HAV or HBV at baseline were tested again at their annual follow-up interviews.

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Announcements

National meetings

The **22nd National Serology Reference Laboratory, Australia, Workshop on Serology** will be held at the Hilton Hotel, Adelaide, South Australia, on 2 – 5 August 2005. Further information may be obtained from Linda Tracey, NRL,
4th Floor, Healy Building, 41 Victoria Parade, Fitzroy, VIC 3065.
Telephone: +613 9418 1117
Facsimile: +613 9418 1155
E-mail: linda@nrl.gov.au
Website: www.nrl.gov.au

The **Australasian Sexual Health Conference 2004** will be held at the Hotel Grand Chancellor, Hobart, on 22 – 24 August 2005. Further information may be obtained from Sexual Health Conference 2005,
Locked Mail Bag 5057, Darlinghurst NSW 1300.
Telephone: +61 2 9368 2718
Facsimile: +61 2 9331 6537
E-mail: conferenceinfo@ashm.org.au
Website: www.ashm.org.au/conference 2005

The **17th Annual Conference of Australasian Society for HIV Medicine** will be held at the Hotel Grand Chancellor, Hobart, on 24 – 27 August 2005. Further information may be obtained from ASHM Conference 2005,
Locked Mail Bag 5057, Darlinghurst NSW 1300 Australia.
Telephone: +61 2 9368 2718
Facsimile: +61 2 9331 6537
E-mail: conferenceinfo@ashm.org.au
Website: www.ashm.org.au/conference2005

The **5th Australian Update on Paediatric HIV & Hepatitis C for health care professionals, carers and families** will be held at the Sydney Children's Hospital, Randwick, NSW on 22 – 24 September 2005. The guest speaker will be Dr Hermione Lyall, Consultant in Paediatric Infectious Diseases, St. Mary's Hospital, London, United Kingdom. Sessions include updates on paediatric HIV & hepatitis C and related workshops. Further information may be obtained from Dr Pamela Palasanthiran (PalasanthiranP@sesahs.nsw.gov.au), telephone: 02 9382 1508, or from Kidest Nadew (NadewK@sesahs.nsw.gov.au), telephone: (02) 9382 1654.

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Prevalence of HAV seropositivity, HBV infection and vaccination

By mid 2004, 1,421 men had been recruited into the study. Their mean age was 36.4 years, ranging from 17 to 74 years. Over 95% of participants consented to HAV and HBV testing. Overall, 957 (69.5%) men were seropositive to HAV, indicating that they had either a prior HAV infection or vaccination against HAV. HAV seropositivity increased significantly with age, from 44.0% among those aged less than 25 years to 86.0% among those aged 55 years or older (p trend<0.001). For HBV, 18.6% of participants had evidence of prior or current infection. HBV seroprevalence was 2.7% among those aged less than 25 years and was 50.9% among those aged 55 years or older (p trend<0.001). A total of 725 (52.6%) men tested HBsAb positive only, demonstrating vaccination against HBV. For men aged less than 25 years, the vaccination rate was 48.3%. The prevalence of vaccination peaked at 59.3% among men aged between 25 and 34 years, then decreased with age to 33.3% for those aged 55 years or older.

Table 1.1 Correlation between self-report of vaccination and serological status for hepatitis A and hepatitis B virus infection among men enrolled in the HIM cohort

Self-report	HAV IgG			HBV status[1]			
	Number	Positive (%)	Negative (%)	Number	Vaccinated (%)	Prior infection (%)	Negative (%)
Vaccinated	820	83.4	16.6	925	72.1	9.7	18.2
Not vaccinated	459	49.2	50.8	358	9.5	39.7	50.8
Don't know	99	48.0	52.0	96	25.0	26.0	49.0
Total	**1 378**	**69.5**	**30.5**	**1 379**	**52.6**	**18.6**	**28.8**

1 HBV vaccination was defined as testing HBsAb positive and HBcAb negative; prior infection was defined as testing HBcAb positive; negative HBV status was defined as testing HBsAb negative and HBcAb negative.

Comparison of self-report and serological data

Overall, 820 (59.6%) men reported that they had been vaccinated against HAV, 459 (33.3%) reported that they had not, and 99 (7.1%) were not sure. For those who reported they had been vaccinated, 83.4% tested seropositive; for those who reported no history of vaccination, 50.8% were seronegative.

Nine hundred and twenty five (67.1%) men reported that they had been vaccinated against HBV, 358 (26.0%) reported that they had not, and 96 (7.0%) were not sure. For those who reported they had been vaccinated, 72.1% had serological evidence of HBV vaccination. For those who reported that they had not been vaccinated, 90.5% were either seronegative or had serological evidence of prior infection. The correlation between self-report and serological status is shown in Table 1.1.

Incidence of HAV seroconversion and HBV infection and vaccination

Two hundred and eighty men who were HAV seronegative at enrolment completed at least one face-to-face follow-up interview by mid 2004. Among them, 93 developed antibody to HAV, indicating either infection or vaccination, giving an incidence of 22.9 per 100 person-years; 13.1 in 2002, 30.8 in 2003 and 71.8 in the first half of 2004.

A total of 245 men who tested seronegative to HBV at enrolment completed at least one face-to-face follow-up interview by mid 2004. Only one man had serological evidence of HBV infection since joining the study, an incidence of infection of 0.3 per 100 person-years. Seventy five men had evidence of HBV vaccination, giving an incidence of vaccination of 21.2 per 100 person-years; 14.3 in 2002, 26.7 in 2003 and 56.3 in the first half of 2004.

Predictors of HAV and HBV vaccination

Among 93 men who seroconverted to HAV, 71 reported that they had been vaccinated after joining the study and were designated as having incident vaccination. Factors significantly associated with incident HAV vaccination included self-reported non-specific urethritis (HR=2.36, 95% CI 1.12-4.94) and self-reported anal warts (HR=3.02, 95% CI 1.21-7.57) in the previous year. Associations with age, country of birth, occupation, recent overseas travel, income level and number of male partners in the last six months did not reach statistical significance. For HBV, only self-reported anal gonorrhoea in the last year was associated with incident vaccination (HR=2.38, 95% CI 0.96-5.93).

Conclusion

Overall, the vaccination rate against HAV and HBV infection among HIV negative homosexual men in Sydney was relatively high. However, nearly half of those aged less than 25 years remained at risk. The vaccination rate might have been under-estimated as some individuals might have lost antibodies after vaccination, received incomplete vaccination courses or received passive immunisation. The association of incident vaccination with recent STIs might be related to opportunistic vaccination during treatment for the STIs.

Reported by

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National AIDS Registry

Table 2.1 Cases of AIDS and deaths following AIDS by sex and State/Territory in which diagnosis of AIDS was made, cumulative to 30 September 2004, and for two previous yearly intervals

Cases

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
State/Territory	Male	Female	Male	Female	Male	Female	Total†	%
ACT	3	1	0	0	92	9	101	1.1
NSW	106	3	72	3	5 110	221	5 346	56.9
NT	1	1	2	1	41	2	43	0.5
QLD	25	3	23	4	970	61	1 033	11.0
SA	5	1	7	0	386	30	417	4.4
TAS	1	0	1	0	48	4	52	0.6
VIC	36	3	31	4	1 853	94	1 957	20.8
WA	11	1	5	0	407	34	443	4.7
Total	**188**	**13**	**141**	**12**	**8 907**	**455**	**9 392**	**100.0**

Deaths

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
State/Territory	Male	Female	Male	Female	Male	Female	Total†	%
ACT	0	1	1	0	71	6	77	1.2
NSW	44	4	32	1	3 486	128	3 623	56.1
NT	1	0	0	1	26	1	27	0.4
QLD	9	3	12	2	632	41	675	10.5
SA	9	2	10	0	268	20	288	4.5
TAS	1	0	0	0	32	2	34	0.5
VIC	15	0	12	1	1 364	58	1 430	22.1
WA	3	1	2	0	282	22	305	4.7
Total	**82**	**11**	**69**	**5**	**6 161**	**278**	**6 459**	**100.0**

† Totals include 30 AIDS cases and 20 deaths following AIDS in people whose sex was reported as transgender.

Table 2.2 Incidence of AIDS per million current population[1] by sex and State/Territory of diagnosis for the two most recent yearly intervals

	1 Oct 02 – 30 Sep 03			1 Oct 03 – 30 Sep 04		
State/Territory	**Male**	**Female**	**Total**	**Male**	**Female**	**Total**
ACT	18.8	6.1	12.4	0.0	0.0	0.0
NSW	32.0	0.9	16.5	21.6	0.9	11.2
NT	9.6	10.7	10.1	19.1	10.6	15.1
QLD	13.2	1.6	7.4	11.9	2.1	7.0
SA	6.6	1.3	3.9	9.2	0.0	5.2
TAS	4.3	0.0	2.1	4.2	0.0	2.1
VIC	14.9	1.2	8.0	12.7	1.6	7.1
WA	11.3	1.0	6.2	5.1	0.0	2.5
Total	**19.1**	**1.3**	**10.2**	**14.1**	**1.2**	**7.7**

1 Population estimates by sex, State/Territory and calendar period from *Australian Demographic Statistics* (Australian Bureau of Statistics).

Table 2.3 Cases of AIDS and deaths following AIDS by sex and age group, cumulative to 30 September 2004, and for two previous yearly intervals

Cases[1]

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Age group (years)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total†**	**%**
0–2	*0*	*0*	*0*	*0*	*9*	*9*	*18*	*0.2*
2–12	*0*	*0*	*0*	*0*	*21*	*11*	*32*	*0.3*
0–12	0	0	0	0	30	20	50	0.5
13–19	0	0	0	0	27	4	31	0.3
20–29	15	2	4	1	1 401	110	1 524	16.2
30–39	62	7	53	4	3 695	169	3 874	41.2
40–49	58	3	43	3	2 530	78	2 612	27.8
50–59	38	1	28	3	914	39	956	10.2
60+	15	0	13	1	310	35	345	3.7
Total	**188**	**13**	**141**	**12**	**8 907**	**455**	**9 392**	**100.0**

Deaths[2]

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Age group (years)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total†**	**%**
0–2	*0*	*0*	*0*	*0*	*5*	*6*	*11*	*0.2*
2–12	*0*	*0*	*0*	*0*	*17*	*6*	*23*	*0.3*
0–12	0	0	0	0	22	12	34	0.5
13–19	0	0	0	0	14	3	17	0.3
20–29	1	2	1	0	689	48	748	11.6
30–39	23	5	18	3	2 433	102	2 542	39.3
40–49	37	4	24	1	1 981	49	2 032	31.5
50–59	14	0	16	1	761	32	793	12.3
60+	7	0	10	0	261	32	293	4.5
Total	**82**	**11**	**69**	**5**	**6 161**	**278**	**6 459**	**100.0**

1 Cases are classified by age at diagnosis.

2 Deaths are classified by age at death.

† Totals include 30 AIDS cases and 20 deaths following AIDS in people whose sex was reported as transgender.

Table 2.4 Cases of AIDS by sex and exposure category, cumulative to 30 September 2004, and for two previous yearly intervals

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**%**
Male homosexual/ bisexual contact	129	–	94	–	7 350	–	7 350	81.3
Male homosexual/bisexual contact and injecting drug use	16	–	12	–	424	–	424	4.7
Injecting drug use	6	2	8	0	203	93	296	3.3
Heterosexual	*4*	*1*	*5*	*0*	*131*	*70*	*201*	
Not further specified	*2*	*1*	*3*	*0*	*72*	*23*	*95*	
Heterosexual contact	28	11	15	11	402	253	655	7.2
Sex with injecting drug user	*1*	*1*	*1*	*1*	*9*	*26*	*35*	
Sex with bisexual male	*–*	*0*	*–*	*2*	*–*	*45*	*45*	
From a high prevalence country	*3*	*3*	*2*	*6*	*74*	*61*	*135*	
Sex with person from a high prevalence country	*4*	*5*	*5*	*1*	*65*	*21*	*86*	
Sex with person with medically acquired HIV	*0*	*0*	*0*	*0*	*2*	*10*	*12*	
Sex with HIV infected person, exposure not specified	*0*	*1*	*2*	*0*	*37*	*33*	*70*	
Not further specified	*20*	*1*	*5*	*1*	*215*	*57*	*272*	
Haemophilia/coagulation disorder	1	0	0	0	119	3	122	1.3
Receipt of blood/tissue	0	0	1	0	79	65	144	1.6
Health care setting	0	0	0	0	1	3	4	0.0
Total Adults/Adolescents	**180**	**13**	**130**	**11**	**8 578**	**417**	**8 995**	**99.4**
Children (under 13 years at AIDS diagnosis)								
Mother with/at risk for HIV infection	0	0	0	0	14	17	31	0.3
Haemophilia/coagulation disorder	0	0	0	0	5	0	5	0.1
Receipt of blood/tissue	0	0	0	0	11	3	14	0.2
Total children	**0**	**0**	**0**	**0**	**30**	**20**	**50**	**0.6**
Sub-total	**180**	**13**	**130**	**11**	**8 608**	**437**	**9 045**	**100.0**
Other/undetermined[1]	8	0	11	1	299	18	347	
Total	**188**	**13**	**141**	**12**	**8 907**	**455**	**9 392**	

1 The 'Other/undetermined' exposure category includes 30 AIDS cases in people whose sex was reported as transgender. The category was excluded from the calculation of the percentage of cases attributed to each exposure category.

Table 2.5 Deaths following AIDS by sex and exposure category, cumulative to 30 September 2004, and for two previous yearly intervals

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**%**
Male homosexual/ bisexual contact	59	–	48	–	5 200	–	5 200	83.3
Male homosexual/bisexual contact and injecting drug use	6	–	8	–	290	–	290	4.6
Injecting drug use	5	3	5	1	125	58	183	2.9
Heterosexual	*2*	*1*	*2*	*1*	*82*	*47*	*129*	
Not further specified	*3*	*2*	*3*	*0*	*43*	*11*	*54*	
Heterosexual contact	7	7	5	4	175	135	310	5.0
Sex with injecting drug user	*0*	*1*	*0*	*1*	*5*	*13*	*18*	
Sex with bisexual male	*–*	*2*	*–*	*1*	*–*	*32*	*32*	
From a high prevalence country	*0*	*1*	*0*	*1*	*18*	*18*	*36*	
Sex with person from a high prevalence country	*1*	*1*	*2*	*0*	*23*	*10*	*33*	
Sex with person with medically acquired HIV	*0*	*0*	*0*	*0*	*2*	*7*	*9*	
Sex with HIV infected person, exposure not specified	*1*	*0*	*1*	*0*	*25*	*17*	*42*	
Not further specified	*5*	*2*	*2*	*1*	*102*	*38*	*140*	
Haemophilia/coagulation disorder	0	0	0	0	95	3	98	1.6
Receipt of blood/tissue	0	0	0	0	69	56	125	2.0
Health care setting	0	0	0	0	1	2	3	0.0
Total Adults/Adolescents	**77**	**10**	**66**	**5**	**5 955**	**254**	**6 209**	**99.5**
Children (under 13 years at death following AIDS)								
Mother with/at risk for HIV infection	0	0	0	0	8	10	18	0.3
Haemophilia/coagulation disorder	0	0	0	0	3	0	3	0.0
Receipt of blood/tissue	0	0	0	0	11	2	13	0.2
Total children	**0**	**0**	**0**	**0**	**22**	**12**	**34**	**0.5**
Sub-total	**77**	**10**	**66**	**5**	**5 977**	**266**	**6 243**	**100.0**
Other/undetermined[1]	5	1	3	0	184	12	216	
Total	**82**	**11**	**69**	**5**	**6 161**	**278**	**6 459**	

1 The 'Other/undetermined' exposure category includes 20 deaths following AIDS in people whose sex was reported as transgender. The category was excluded from the calculation of the percentage of cases attributed to each exposure category.

The National HIV Database

Table 3.1 Number of new diagnoses of HIV infection by sex[1] and State/Territory, cumulative to 30 September 2004, and for two previous yearly intervals

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
State/Territory	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**Rate[2]**
ACT	4	1	5	2	246	31	277	85.8
NSW[3]	403	37	310	51	12 571	769	13 607	203.5
NT	3	1	5	2	122	17	139	70.1
QLD	125	20	129	20	2 407	224	2 640	69.5
SA	33	2	54	4	828	82	911	59.6
TAS	0	0	4	1	89	8	97	20.3
VIC[4]	198	16	187	22	4 717	306	5 064	103.0
WA	38	14	40	3	1 086	161	1 254	64.2
Total[5]	**804**	**91**	**734**	**105**	**22 066**	**1 598**	**23 989[6]**	**120.7**

1 Sixty four people (28 NSW, 9 QLD, 1 SA, 19 VIC and 7 WA) whose sex was reported as transgender are included in the total columns of Tables 3.1 – 3.3

2 Rate per one hundred thousand current population. Population estimates by sex, State/Territory and calendar interval from *Australian Demographic Statistics* (Australian Bureau of Statistics).

3 Cumulative total for NSW includes 239 people whose sex was not reported.

4 Cumulative total for VIC includes 22 people whose sex was not reported.

5 Cumulative total for Australia includes 261 people whose sex was not reported.

6 Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 21 130 (range 20 630 to 21 630).
Reference: Law MG, McDonald AM and Kaldor JM. Estimation of cumulative HIV incidence in Australia, based on national case reporting. *Aust NZ J Public Health* 1996; 20: 215 - 217

Table 3.2 Number of new diagnoses of HIV infection for which exposure category was reported, by sex and exposure category, cumulative to 30 September 2004, and for two previous yearly intervals

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total[1]**	**%**
Male homosexual/ bisexual contact	590	–	538	–	15 526	–	15 526	77.0
Male homosexual/bisexual contact and injecting drug use	43	–	29	–	858	–	858	4.3
Injecting drug use	26	7	22	6	647	202	855	4.2
Heterosexual	*13*	*6*	*11*	*2*	*265*	*146*	*411*	
Not further specified	*13*	*1*	*11*	*4*	*382*	*56*	*444*	
Heterosexual contact	84	78	83	87	1 238	1 079	2 324	11.5
Sex with injecting drug user	*4*	*3*	*1*	*4*	*33*	*98*	*131*	
Sex with bisexual male	*–*	*11*	*–*	*4*	*–*	*139*	*139*	
From a high prevalence country	*20*	*27*	*21*	*46*	*267*	*324*	*595*	
Sex with person from a high prevalence country	*23*	*9*	*27*	*11*	*237*	*120*	*357*	
Sex with person with medically acquired HIV	*0*	*0*	*0*	*0*	*4*	*18*	*22*	
Sex with HIV infected person, exposure not specified	*8*	*17*	*8*	*7*	*78*	*157*	*236*	
Not further specified	*29*	*11*	*26*	*15*	*619*	*223*	*844*	
Haemophilia/coagulation disorder	0	0	0	0	218	4	222	1.1
Receipt of blood/tissue	0	0	1	0	109	102	211	1.0
Health care setting[2]	0	0	0	0	3	9	12	0.1
Total Adults/Adolescents[1]	**743**	**85**	**673**	**93**	**18 599**	**1 396**	**20 008**	**99.2**
Children (under 13 years at HIV diagnosis)								
Mother with/at risk for HIV infection[3]	1	0	0	3	40	34	74	0.4
Haemophilia/coagulation disorder	0	0	0	0	65	0	65	0.3
Receipt of blood/tissue	0	0	0	0	13	9	22	0.1
Total children	**1**	**0**	**0**	**3**	**118**	**43**	**161**	**0.8**
Sub-total	**744**	**85**	**673**	**96**	**18 717**	**1 439**	**20 169**	**100.0**
Other/undetermined[4]	60	6	61	9	3 349	159	3 820	
Total[1]	**804**	**91**	**734**	**105**	**22 066**	**1 598**	**23 989[5]**	

1 Total column includes people whose sex was not reported.

2 'Health care setting' includes 6 cases of occupationally acquired HIV infection and 4 cases of HIV transmission in surgical rooms.

3 A total of 335 children were notified as having been born to women with HIV infection, cumulative to 30 September 2004.

4 The 'Other/undetermined' exposure category includes 3 800 adults/adolescents and 20 children. Sixty four people whose sex was reported as transgender were included in the 'Other/undetermined' category. The 'Other/undetermined' category was excluded from the calculation of the percentage of cases attributed to each exposure category.

5 See footnote Table 3.1

Table 3.3 Number of new diagnoses of HIV infection by sex and age group, cumulative to 30 September 2004, and for two previous yearly intervals

	1 Oct 02 – 30 Sep 03		1 Oct 03 – 30 Sep 04		Cumulative to 30 Sep 04			
Age group (years)	Male	Female	Male	Female	Male	Female	Total[1]	%
0–2	*0*	*0*	*0*	*1*	*44*	*22*	*67*	*0.3*
3–12	*1*	*0*	*0*	*2*	*90*	*24*	*114*	*0.5*
0–12	1	0	0	3	134	46	181	0.8
13–19	4	4	5	7	440	100	549	2.3
20–29	164	24	164	42	7 221	643	7 987	33.3
30–39	331	41	286	22	8 265	461	8 838	36.8
40–49	173	10	171	22	3 960	178	4 182	17.4
50–59	102	6	76	7	1 419	67	1 498	6.2
60+	29	6	32	2	469	71	543	2.3
Not reported	0	0	0	0	158	32	211	0.9
Total[1]	**804**	**91**	**734**	**105**	**22 066**	**1 598**	**23 989**	**100.0**

1 See footnotes Table 3.1

Table 3.4 Number of new diagnoses of HIV infection in the year 1 October 2003 to 30 September 2004 for which an HIV seroconversion illness was diagnosed or the date of a prior negative test was within one year of diagnosis of HIV infection, by sex and State/Territory and for two six month intervals of HIV diagnosis

	1 Oct 03 – 31 Mar 04		1 Apr 04 – 30 Sep 04		1 Oct 03 – 30 Sep 04		
State/Territory	Male	Female	Male	Female	Male	Female	Total[1]
ACT	1	0	0	0	1	0	1
NSW	56	4	46	1	102	5	107
NT	1	0	1	0	2	0	2
QLD	14	1	24	2	38	3	41
SA	7	2	9	0	16	2	18
TAS	0	0	1	0	1	0	1
VIC[1]	33	0	29	3	62	3	66
WA	6	0	1	0	7	0	7
Total[1]	**118**	**7**	**111**	**6**	**229**	**13**	**243**

1 Total includes one person whose sex was reported as transgender.

Table 3.5 Number of new diagnoses of HIV infection in the year 1 October 2003 to 30 September 2004 for which an HIV seroconversion illness was diagnosed or the date of a prior negative test was within one year of diagnosis of HIV infection, by sex and exposure category and for two six month intervals of HIV diagnosis

	1 Oct 03 – 31 Mar 04		1 Apr 04 – 30 Sep 04		1 Oct 03 – 30 Sep 04		
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total[1]**
Male homosexual/bisexual contact	100	–	98	–	198	–	198
Male homosexual/bisexual contact and injecting drug use[1]	6	–	3	–	9	–	10
Injecting drug use (female and heterosexual male)	1	1	0	1	1	2	3
Heterosexual contact	11	6	7	5	18	11	29
Health care setting	0	0	0	0	0	0	0
Other/undetermined	0	0	3	0	3	0	3
Total[1]	**118**	**7**	**111**	**6**	**229**	**13**	**243**

1 Total includes one person whose sex was reported as transgender.

Table 3.6 Number of new diagnoses of HIV infection in the year 1 October 2003 to 30 September 2004 for which an HIV seroconversion illness was diagnosed or the date of a prior negative test was within one year of diagnosis of HIV infection, by sex and age group and for two six month intervals of HIV diagnosis

	1 Oct 03 – 31 Mar 04		1 Apr 04 – 30 Sep 04		1 Oct 03 – 30 Sep 04		
Age group (years)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total[1]**
13–19	1	1	0	0	1	1	2
20–29	45	3	30	6	75	9	84
30–39[1]	40	0	49	0	89	0	90
40–49	21	3	24	0	45	3	48
50–59	9	0	4	0	13	0	13
60+	2	0	4	0	6	0	6
Total[1]	**118**	**7**	**111**	**6**	**229**	**13**	**243**

1 Total includes one person whose sex was reported as transgender.

Sentinel surveillance of HIV infection in sexual health clinics

Table 4.1 Number of people seen, number of people tested for HIV antibody and number of people newly diagnosed with HIV infection, by sex and sexual health clinic[1], during the quarter 1 July to 30 September 2004

	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
Sexual health clinic	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**
Sydney Sexual Health Centre, NSW	1 461	908	690	364	6	0	6
Livingstone Road Sexual Health Centre, Marrickville, NSW	401	312	185	98	1	0	1
Brisbane Sexual Health Clinic, QLD	955	823	307	187	0	0	0
Cairns Base Hospital Sexual Health Clinic, Cairns, QLD	363	367	137	121	6	0	6
Gold Coast Sexual Health Clinic, QLD	445	496	122	166	0	0	0
Melbourne Sexual Health Centre, VIC	2 337	1 803	829	682	1	0	1
Total	**5 962**	**4 709**	**2 270**	**1 618**	**14**	**0**	**14**

1 Data from Clinic 275, Adelaide, SA, not included for this quarter.

Table 4.2 Number of people seen who had a *previous negative HIV antibody test,* percent retested for HIV antibody and number (percent) newly diagnosed with HIV infection, by sex and exposure category, during the quarter 1 July to 30 September 2004

	Previous negative HIV antibody test		% retested for HIV antibody		Newly diagnosed with HIV infection			
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**%**
Male homosexual/ bisexual contact	1 071	–	64.3	–	6	–	6	0.9
Male homosexual/bisexual contact and injecting drug use	71	–	67.6	–	1	–	1	2.1
Injecting drug use (female and heterosexual male)	105	85	49.5	37.6	0	0	0	0.0
Heterosexual contact	1 340	1 257	40.5	34.8	0	0	0	0.0
outside Australia	*278*	*239*	*59.0*	*42.7*	*0*	*0*	*0*	*0.0*
within Australia only	*1 062*	*1 018*	*35.7*	*33.0*	*0*	*0*	*0*	*0.0*
Sex worker	–	626	–	68.4	–	0	0	0.0
Sex worker and injecting drug use	–	56	–	71.4	–	0	0	0.0
Other/undetermined	64	75	20.3	13.3	0	0	0	0.0
Total	**2 651**	**2 099**	**50.7**	**45.2**	**7**	**0**	**7**	**0.3**

Table 4.3 Number of people seen with *no previous HIV antibody test,* percent tested for HIV antibody for the first time, and number (percent) newly diagnosed with HIV infection, by sex and exposure category, during the quarter 1 July to 30 September 2004

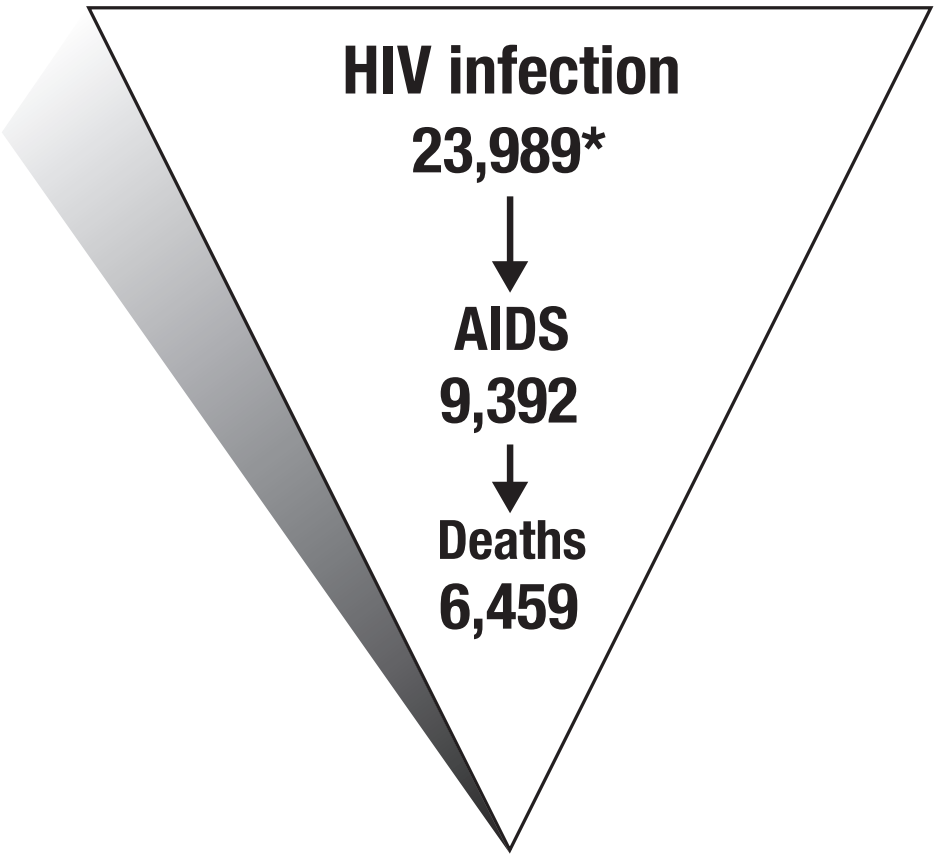
	No previous HIV antibody test		% tested for HIV antibody		Newly diagnosed with HIV infection			
Exposure category	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**	**%**
Male homosexual/ bisexual contact	574	–	42.7	–	3	–	3	1.2
Male homosexual/bisexual contact and injecting drug use	24	–	45.8	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	48	43	62.5	48.8	0	0	0	0.0
Heterosexual contact	2 147	2 083	28.7	26.1	4	0	4	0.3
outside Australia	*251*	*276*	*57.8*	*44.9*	*3*	*0*	*3*	*1.1*
within Australia only	*1 896*	*1 807*	*24.8*	*23.2*	*1*	*0*	*1*	*0.1*
Sex worker	–	161	–	44.1	–	0	0	0.0
Sex worker and injecting drug use	–	28	–	32.1	–	0	0	0.0
Other/undetermined	237	260	9.7	9.6	0	0	0	0.0
Total	**3 030**	**2 575**	**30.5**	**26.0**	**7**	**0**	**7**	**0.4**

Table 4.4 Number of people seen, number of people tested for HIV antibody and number of people newly diagnosed with HIV infection, by sex and age group, during the quarter 1 July to 30 September 2004

	Tested for HIV antibody Seen at Clinic		Newly diagnosed with HIV infection				
Age group (years)	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**	**Total**
13–19	165	516	63	133	0	0	0
20–29	2 241	2 241	1 014	764	2	0	2
30–39	1 832	1 302	713	501	6	0	6
40–49	1 061	490	304	174	3	0	3
50–59	445	133	126	39	2	0	2
60+	218	27	50	7	1	0	1
Total	**5 962**	**4 709**	**2 270**	**1 618**	**14**	**0**	**14**

The HIV Epidemic in Australia

A cumulative profile to 30 September 2004



* Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 21,130 (range 20,630 to 21,630)

National Centre in HIV Epidemiology and Clinical Research

Australian HIV Surveillance Update

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Diagnoses in the third quarter

1 July – 30 September 2004

- a total of 184 diagnoses of HIV infection, 21 diagnoses of AIDS and 16 deaths following AIDS were reported, by 31 December 2004, to have occurred in the third quarter of 2004
- following adjustment for reporting delay, the estimated numbers of AIDS diagnoses and deaths following AIDS occurring in the third quarter of 2004 were 43 and 29
- in comparison, 204 diagnoses of HIV infection, 53 diagnoses of AIDS and 26 deaths following AIDS were reported by 31 December 2004, to have occurred in the third quarter of 2003

New HIV infection

During the third quarter of 2004, 62 cases among males were reported as having newly acquired HIV infection identified by a negative test within the 12 months prior to diagnosis or the diagnosis of HIV seroconversion illness. A history of male homosexual contact, with or without a history of injecting drug use, was reported in 57 (91.9%) cases.

Diagnoses in the year to 30 September 2004

- 846 diagnoses of HIV infection
- 154 diagnoses of AIDS
- 74 deaths following AIDS were reported by 31 December 2004

HIV diagnoses

People diagnosed with HIV infection in the year to 30 September 2004 had an average age of 37 years and 1.4% was in the age group 13 – 19 years

- 86.9% were male, 12.4% were female, and sex was not reported or was reported as transgender in 0.1% and 0.6% of cases, respectively
- of 674 cases of HIV infection, newly diagnosed among men in the year to 30 September 2004 for which an exposure to HIV was reported, 567 (84.1%) were attributed to male homosexual/bisexual contact, with or without a history of injecting drug use.

Total diagnoses to 30 September 2004

- 23,989 diagnoses of HIV infection
- 21,130 diagnoses of HIV infection following adjustment for multiple reporting
- 9,392 diagnoses of AIDS
- 6,459 deaths following AIDS were reported by 31 December 2004

HIV testing in sexual health clinics

Five sexual health clinics in Brisbane, Cairns, Gold Coast, Melbourne and Sydney tested 3,888 people in the quarter 1 July - 30 September 2004 who were not previously known to have HIV infection

- of 925 men reported as having been tested for the first time, 7 (0.8%) were found to have HIV infection
- of 1,345 men reported as having been retested following a previous negative test, 7 (0.5%) were found to have HIV infection
- of 256 men who reported a history of homosexual contact, with or without a history of injecting drug use, who were retested following a previous negative test, 6 (1.2%) was newly diagnosed with HIV infection

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Australian HIV Surveillance Report

National Centre in HIV Epidemiology and Clinical Research

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NOTES

The National AIDS Registry is maintained by NCHECR on behalf of the National HIV Surveillance Committee, which consists of representatives from NCHECR, and the Health Departments of each State and Territory and the Commonwealth of Australia. The Registry is based on reports from doctors who diagnose AIDS, made to the Health Department in the State/Territory of diagnosis. Date of birth and a name code (first two letters of first and last name) are used to minimise duplicate registration, while maintaining confidentiality.

The National HIV Database is maintained by NCHECR on behalf of the National HIV Surveillance Committee. It is based on reports of new diagnoses of HIV infection from HIV Reference Laboratories (ACT, NSW, TAS, VIC), or from a combination of Reference Laboratory and diagnosing doctors (NT, QLD, SA, WA). In order to avoid counting the same case more than once, only diagnoses which are determined to be new by the diagnosing laboratory or doctor are reported for the purposes of national surveillance.

Sentinel surveillance is carried out by six sexual health clinics in five Australian cities, which send quarterly reports on HIV antibody testing to NCHECR. Tabulations from the National AIDS Registry, the National HIV Database and Sentinel HIV Surveillance in sexual health clinics are based on data available three months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information.

Abbreviations: HIV is the human immunodeficiency virus, and unless otherwise specified, refers to HIV-1 only. AIDS is the acquired immunodeficiency syndrome and STI stands for sexually transmissible infection. High prevalence countries are those of sub-Saharan Africa, the Caribbean and specific countries in South East Asia (Cambodia, Myanmar and Thailand), where HIV prevalence is above 1% and transmission is believed to be predominantly heterosexual. The Australian States and Territories are: Australian Capital Territory (ACT), New South Wales (NSW), Northern Territory (NT), Queensland (QLD), South Australia (SA), Tasmania (TAS), Victoria (VIC) and Western Australia (WA). NCHECR is the National Centre in HIV Epidemiology and Clinical Research.

All data in this report are provisional and subject to future revision.

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State/Territory publications of surveillance data, available through the Internet, are listed below:

NSW Public Health Bulletin	www.health.nsw.gov.au/public-health/phb/phb.html
The Northern Territory Disease Control Bulletin	www.nt.gov.au/health/cdc/aids_std/report/index.shtml
Sexually Transmitted Diseases in South Australia	www.stdservices.on.net/publications
Victorian Infectious Diseases Bulletin	www.dhs.vic.gov.au/phd/vidb/
Disease WAtch	www.public.health.wa.gov.au/

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