



National Centre in HIV Epidemiology and Clinical Research

# Australian HIV Surveillance Report

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## Epidemiological and social research findings reported at the 13th World AIDS Conference

### Durban, South Africa 9 – 14 July 2000

Previous International AIDS Conferences have been held in countries where HIV prevalence is relatively low and where resources are available to combat local epidemics. The 13th International AIDS Conference finally became a forum of relevance to the global pandemic when it was held in South Africa, a country in which one in five adults is living with HIV infection.

The increasing gap between different settings in responses and resources, the escalating HIV epidemic and patchy governmental response in the host country, and the debate around the cause of AIDS, provided the foundations for a conference highlighted by politics. Given his recent encouragement of AIDS dissidents, who deny a link between HIV infection and AIDS, the remarks made by Thabo Mbeki, the President of South Africa, in his speech during the opening ceremony were not surprising, but were nonetheless a major disappointment. His comments on the role of poverty, lack of power of women, and other social factors contributing to vulnerability to HIV/AIDS, were relevant and widely appreciated. However, the claim that AIDS could not be caused by "one virus" was counter-productive and disturbing.

Following a well conducted and stimulating conference programme, entry of the past president, Nelson Mandela, to the conference centre was eagerly awaited and met with a resounding response. His plea to "end the rhetoric" around the AIDS causation debate, and to move ahead with effective HIV/AIDS programmes including those to prevent mother to child transmission, was greeted with much relief and one of several standing ovations. His intelligent and considered intervention concluded what for many people will be a conference long remembered for its vibrancy and relevance.

### HIV vaccine development

In Rakai, Uganda, a survey of community attitudes to and knowledge of HIV vaccines found that, while the overwhelming majority of people thought that vaccines could be beneficial for children and women, only a minority (28%) thought that vaccines could be useful in men. These results were thought to be due to the history of childhood immunisation programs in their population.

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## Announcements

### National meetings

The 12th Annual Conference of the Australasian Society for HIV Medicine will be held in Melbourne, Victoria, on 12 – 15 October 2000.

Further information may be obtained from ASHM Conference Secretariat,  
GPO Box 2609, Sydney NSW 2001.

Telephone: 02 9241 1478  
Facsimile: 02 9251 3552  
E-mail: ashm2000@icmsaust.com.au  
Website: <http://www.unsw.edu.au/ashm/ashm.html>

The Australasian Sexual Health Conference, 2001: A Sex Odyssey, will be held in Sydney, New South Wales, on 2 – 5 May 2001.

Further information may be obtained from Dart Associates,  
PO Box 781 Lane Cove NSW 2066.

Telephone: 02 9418 9396  
Facsimile: 02 9418 9398  
E-mail: [dartconv@mpx.com.au](mailto:dartconv@mpx.com.au)  
Website: <http://www.acshp.org.au>

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Another vaccine preparedness study measured HIV incidence in an open cohort of female sex workers in Mombasa, Kenya, and found that, despite continuing recruitment into the study, annual incidence fell from 17% to 9% during the first four years of follow up. The decline in incidence, however, was much more dramatic (10 fold, down to a level of close to 1%) when the study was analysed as if it had been a closed cohort. In HIV vaccine trials, there will clearly be a trade-off between people who can be readily followed over a long period of time and those who experience HIV seroconversion, to provide adequate power to demonstrate protection from infection by efficacious vaccines.

Two vaccine efficacy trials have either completed enrolment (North American/European; 5,415 participants) or are nearing completion (Thai; 2,350/2,500 participants). The North American/European trial of a clade B rgp 120 HIV vaccine is being conducted through 61 sites among a population of predominantly men who have sex with men, although 6% are women from high sexual risk groups. The Thai bivalent B/E rgp 120 HIV vaccine is being trialed among injecting drug users (IDUs) attending Bangkok Metropolitan Administration drug rehabilitation programs. Vaccine preparedness studies indicated an HIV incidence of 1.5% among the high sexual risk cohort from North America and Europe and 6% among Bangkok IDUs. Retention rates remain at levels above 98% for both trials and efficacy data from these trials is expected to be available within 18 months. Importantly, there is no evidence of an increase in risk behaviour in either of these trials, although only limited behavioural data was presented. A significant reduction in risk behaviour would prolong the period prior to the availability of efficacy data from these trials.

### Natural history of HIV infection

The devastating impact of HIV infection on life expectancy was shown in the rural district of Rakai, in Uganda. Rates of mortality were approximately 20 fold higher among people with HIV infection compared to the age-matched HIV negative population, and 80% of deaths among people in the 20 – 39 year age group were attributable to HIV infection. Maternal mortality rates were also more than five fold higher among women with HIV infection (1,687/100,000 versus 310/100,000).

HIV disease progression in developing countries had previously been considered to be more rapid than that observed in developed countries. However, information from seroincident cohort studies from rural Uganda and Trinidad and Tobago demonstrated a slower disease progression than originally envisaged, and more in keeping with disease progression rates observed in developed countries prior to the introduction of HAART. In a cohort of 125 seroincident cases of HIV infection in rural Uganda, without exposure to antiretroviral therapy, the cumulative risk of death at 9 years was 35%. A smaller cohort (n=29) of incident HIV cases from Trinidad and Tobago, followed prospectively, had an estimated progression rate to AIDS over 8 years of 35%. The median survival following AIDS in both these cohorts, of approximately 10 months, was somewhat shorter than pre-HAART estimates of around 18 months from developed countries, but consistent with AIDS survival estimates from the mid-1980s in Australia, prior to improved opportunistic infection management and prophylaxis.

A prospective prevalent cohort study from The Gambia compared disease progression among people with HIV-1 infection, HIV-2 infection and dual HIV-1/HIV-2 infection. Overall, disease progression was more rapid with HIV-1 infection compared to HIV-2 infection, while dual infection disease progression was similar to HIV-1 disease progression. Despite these overall differences in disease progression, survival rates were similar for people with HIV-1 and HIV-2 infection and advanced immunodeficiency (CD4 <200/mm<sup>3</sup>).

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The Sydney Blood Bank Cohort (and the index donor) has now been followed for up to 19 years after transfusion-acquired HIV infection. The cohort was infected with an attenuated strain of HIV-1 due to a *nef* deletion in the LTR region. In the first decade following infection there was no evidence of disease progression, on the basis of stable CD4 cell counts and asymptomatic disease. However, several cases have now demonstrated evidence of disease progression in the second decade of infection. Only three cases remain as "long-term non-progressors" on the basis of stable CD4 cell counts in the normal range and consistently undetectable viral loads. Three other cases are considered "long-term survivors", as they now have evidence of disease progression, with declining CD4 cell counts and detectable viral loads. These cases, one of which is the index case, have commenced antiretroviral therapy with subsequent improvements in CD4 cell counts and viral suppression. Disease progression in the cohort, however, clearly diminishes the prospect of using such a *nef* deleted attenuated virus as a vaccine.

### HIV prevalence and incidence among injecting drug use

Wide geographic variability in HIV prevalence was observed among IDUs in India, Vietnam and China. Data from the Chinese National Sentinel Surveillance Program over the period 1995-1998 showed that HIV prevalence was highest in parts of Yunnan (southern) and Xinjiang (north-west) provinces, with levels as high as 80%. Relatively high prevalence (10-30%) was also recorded in cities in southern provinces such as Guangdong and Guangxi. HIV prevalence remained low in several other provinces within the sentinel surveillance system.

Rapid spread of HIV among injecting drug users was reported from several regions in China. Annual HIV incidence among heroin users in Pingxiang City, Guangxi Province, increased from 2.4% in 1998 to 6.9% in 1999. A history of needle sharing was a strong risk factor for HIV acquisition.

In Thailand, HIV transmission among IDUs appeared to be continuing at a high level, despite evidence of declining sexual transmission. In 1999, HIV prevalence among IDUs attending a drug treatment centre in Chiang Mai, in northern Thailand, was 32% compared to only 3% among drug users with no history of injecting. HIV prevalence was high among heroin and poly-drug users and low among amphetamine only drug users. Fifteen new HIV infections were recorded among 202 IDUs followed over the period May-October 1999, giving an annual incidence of 15.5%, compared with no new HIV infections among 387 non-injecting drug users. The vast majority of drug users who continued to inject during the follow-up period reported needle sharing. Some harm reduction measures, such as methadone maintenance therapy, are being considered by the Thai Ministry of Public Health to counter the continuing rapid spread of HIV among IDUs. Needle and syringe provision programs are not a component of the planned interventions.

High rates of HIV transmission among IDUs were also reported from parts of the developed world. Annual HIV incidence was 5.4% in the province of Quebec, Canada, over the period 1998-1999, although there was evidence of a recent decline in some areas. Factors associated with HIV seroconversion included needle sharing, injecting with strangers, and cocaine use. In contrast, HIV seroconversion among street-recruited IDUs in San Francisco was associated with sexual risk behaviour. The strongest risk factor for HIV seroconversion was male homosexual contact among men and sex work among women.

### HIV social research results

In a study of HIV positive injecting drug users carried out in France, no difference in sexual risk behaviour was found between those who were taking antiretroviral treatment and those who were not. Increased sexual risk behaviour was associated with having an HIV positive partner, alcohol use and undetectable viral load. Results from the Australian HIV Futures II study showed that respondents who were taking antiretroviral treatment were more consistent condom users than those who were not. A study of sero-discordant couples, carried out in the United States, found a relationship between unprotected sex and non-adherence to treatment regimes, but the numbers were quite small.

Non-adherence to antiretroviral treatment was associated with depression and alcohol use in cohort studies carried out in France and Italy. The French study also found that having a large number of side effects following treatment, and unstable housing, were associated with non-adherence, whereas in the Italian study, 'running out of pills' was the main reason given for non-adherence.

A Canadian study reported the attitudes of both HIV positive and HIV negative gay men who used sex-on-premises venues. Many men described their use of sex venues in highly functional ways, with a strong sense of agency. They reported that the venues provided a safe way of finding sex partners, as well as being more direct and honest. Other men were dissatisfied with sex-on-premises venues and felt that the depersonalised atmosphere may encourage unprotected intercourse. In Sydney, discussion groups were established of experienced sex venue users and new users, providing an opportunity for the new users to discuss their concerns and expectations, and to develop skills to use the venues effectively and safely.

A number of studies were concerned with the possibility of increasing levels of unsafe sex among homosexually active men. A US study found that HIV positive men were more likely than HIV negative men to engage in anal intercourse in general, and unprotected anal intercourse (UAI) in particular, between 1996 and 1998. During this time, the prevalence of UAI rose by 45%, and was associated with having a regular partner whose HIV status was unknown, low education, injecting drug use, and having five or more sex partners, but it was not related to antiretroviral treatment or CD4 count. A Dutch cohort study found increased levels of UAI among HIV negative men. The Dutch study also identified an 'hooray' effect among HIV positive men: a temporary increase in UAI when positive men first had an undetectable viral load. The large US cohort study (MACS) found that UAI was more likely among men with an optimistic outlook on HIV treatments, and among men with a sero-concordant partner. However, this study, as with many of these studies, suffered from not distinguishing between casual and regular partners.

### **HIV incidence among homosexually active men**

There is now clear evidence of increasing HIV risk practice, most often measured as unprotected anal intercourse with casual partners, in Australia, North America and Europe (United Kingdom/Netherlands). In addition, rates of sexually transmissible infections were increasing among homosexually active men, and may also be increasing in heterosexually active men and women in several countries. For some time, it has been hypothesised that increased levels of unsafe sex may lead to an increase in HIV incidence among homosexually active men. Data examining this hypothesis in two studies were presented at the conference.

Trends in HIV incidence were reported, based on a centralised system of semi-identified HIV testing in Ontario, Canada, which allowed the creation of a population-based cohort for the years 1992 – 1999. During this period there were 674 seroconverters among 269,824 repeat testers followed for 650,000 person years. Incidence in homosexually active men increased from 0.87/100 person years in 1996 to 2.1/100 person years in 1999. In 1999, HIV incidence was the highest it had been since 1992. The increase in incidence occurred in all age groups and exceeded 3% in the 30 – 39 year age group. Incidence was also increasing among injecting drug users but not among heterosexually active men and women.

In San Francisco, HIV incidence was measured using the “detuned ELISA” test. In this technique, all persons with newly diagnosed HIV infection are re-tested using two HIV ELISAs: one highly sensitive, and one less sensitive. The less sensitive test does not become positive until the antibody response to HIV is mature, roughly 4 months following HIV infection. A person who tests positive on the highly sensitive assay, and negative on the less sensitive assay, has been newly infected within the last 4 months. Using this test among people with newly diagnosed HIV at the San Francisco sentinel sexual health clinic, HIV incidence among homosexually active men seeking sexually transmitted disease services was high and constant, at about 5% per year, between 1995 and 1999. At anonymous counselling and testing sites, incidence increased from about 1.5% in 1997 to about 4% a year in 1999. These data are the first showing a recent increase in HIV incidence among homosexually active men in North America.

### **Reported by**

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## National AIDS Registry

**Table 1.1** Cases of AIDS and deaths following AIDS by sex and State/Territory in which diagnosis of AIDS was made, cumulative to 31 March 2000, and for two previous yearly intervals

### Cases

State/Territory	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			%
	Male	Female	Male	Female	Male	Female	Total <sup>†</sup>	
ACT	4	1	0	1	86	9	95	1.1
NSW	131	12	73	12	4 648	188	4 848	58.0
NT	3	0	1	1	35	1	36	0.4
QLD	33	1	25	2	824	48	874	10.5
SA	15	3	8	2	347	25	372	4.5
TAS	2	1	0	0	44	3	47	0.6
VIC	42	1	33	1	1 624	69	1 701	20.4
WA	9	2	5	0	351	26	379	4.5
<b>TOTAL</b>	<b>239</b>	<b>21</b>	<b>145</b>	<b>19</b>	<b>7 959</b>	<b>369</b>	<b>8 352</b>	<b>100.0</b>

### Deaths

State/Territory	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			%
	Male	Female	Male	Female	Male	Female	Total <sup>†</sup>	
ACT	0	0	2	2	66	4	70	1.2
NSW	62	1	39	1	3 172	113	3 293	56.2
NT	1	0	0	0	24	0	24	0.4
QLD	25	2	9	2	567	32	601	10.3
SA	12	1	4	0	231	15	246	4.2
TAS	1	0	1	0	29	2	31	0.5
VIC	42	2	23	2	1 273	49	1 328	22.7
WA	3	0	3	0	248	16	265	4.5
<b>TOTAL</b>	<b>146</b>	<b>6</b>	<b>81</b>	<b>7</b>	<b>5 610</b>	<b>231</b>	<b>5 858</b>	<b>100.0</b>

<sup>†</sup> Totals include 24 AIDS cases and 17 deaths following AIDS in people whose sex was reported as transgender.

**Table 1.2 Incidence of AIDS per million current population<sup>1</sup> by sex and State/Territory of diagnosis for the two most recent yearly intervals**

State/ Territory	1 Apr 98 – 31 Mar 99			1 Apr 99 – 31 Mar 00		
	Male	Female	Total	Male	Female	Total
ACT	26.0	6.5	16.2	0.0	6.4	3.2
NSW	41.5	3.8	22.7	22.8	3.7	13.2
NT	29.8	0.0	15.7	9.8	11.0	10.3
QLD	19.0	0.6	9.8	14.2	1.1	7.7
SA	20.4	4.0	12.1	10.8	2.6	6.7
TAS	8.6	4.2	6.4	0.0	0.0	0.0
VIC	18.2	0.4	9.2	14.1	0.4	7.4
WA	9.7	2.2	6.0	5.3	0.0	2.7
<b>TOTAL</b>	<b>25.6</b>	<b>2.2</b>	<b>13.9</b>	<b>15.3</b>	<b>2.0</b>	<b>8.7</b>

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

**Table 1.3 Cases of AIDS and deaths following AIDS by sex and age group, cumulative to 31 March 2000, and for two previous yearly intervals**

Cases <sup>1</sup>									
Age Group (years)	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00				
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	%	
0–2	1	0	0	0	9	7	16	0.2	
2–12	1	0	0	0	20	9	29	0.3	
0–12	2	0	0	0	29	16	45	0.5	
13–19	0	0	1	0	26	4	30	0.4	
20–29	26	7	13	2	1 324	96	1 430	17.2	
30–39	93	8	66	11	3 353	132	3 493	41.8	
40–49	73	5	38	3	2 225	60	2 287	27.4	
50–59	29	0	23	1	759	29	789	9.4	
60+	16	1	4	2	243	32	275	3.3	
<b>TOTAL</b>	<b>239</b>	<b>21</b>	<b>145</b>	<b>19</b>	<b>7 959</b>	<b>369</b>	<b>8 352</b>	<b>100.0</b>	

**Deaths<sup>2</sup>**

Age Group (years)	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	%
0–2	0	0	0	0	5	5	10	0.2
2–12	0	1	0	0	16	6	22	0.4
0–12	0	1	0	0	21	11	32	0.6
13–19	0	0	0	0	13	3	16	0.3
20–29	13	0	5	1	660	42	712	12.1
30–39	48	3	34	4	2 260	84	2 349	40.1
40–49	43	2	30	2	1 781	42	1 825	31.1
50–59	26	0	11	0	663	22	685	11.7
60+	16	0	1	0	212	27	239	4.1
<b>TOTAL</b>	<b>146</b>	<b>6</b>	<b>81</b>	<b>7</b>	<b>5 610</b>	<b>231</b>	<b>5 858</b>	<b>100.0</b>

<sup>1</sup> Cases are classified by age at diagnosis.

<sup>2</sup> Deaths are classified by age at death.

**Table 1.4 Cases of AIDS by sex and exposure category, cumulative to 31 March 2000, and for two previous yearly intervals**

Exposure Category	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			%
	Male	Female	Male	Female	Male	Female	Total	
Male homosexual/ bisexual contact	164	–	100	–	6 654	–	6 654	82.6
Male homosexual/ bisexual contact and injecting drug use	10	–	4	–	358	–	358	4.4
Injecting drug use	14	4	6	4	169	86	255	3.2
<i>Heterosexual</i>	5	3	3	4	111	67	178	
<i>Not further specified</i>	9	1	3	0	58	19	77	
Heterosexual contact	31	14	22	12	299	186	485	6.0
<i>Sex with injecting drug user</i>	0	2	0	3	7	20	27	
<i>Sex with bisexual male</i>	–	1	–	0	–	38	38	
<i>From a high prevalence country</i>	7	9	8	4	54	36	90	
<i>Sex with person from a high prevalence country</i>	4	0	2	0	40	13	53	
<i>Sex with person with medically acquired HIV</i>	0	0	0	1	2	10	12	
<i>Sex with HIV infected person, exposure not specified</i>	0	0	0	1	27	22	49	
<i>Not further specified</i>	20	2	12	3	169	47	216	
Haemophilia/coagulation disorder	1	0	0	0	111	3	114	1.4
Receipt of blood/tissue	2	2	0	2	78	62	140	1.7
Health care setting	0	0	0	0	1	3	4	0.1
<b>Total Adults/Adolescents</b>	<b>222</b>	<b>20</b>	<b>132</b>	<b>18</b>	<b>7 670</b>	<b>340</b>	<b>8 010</b>	<b>99.4</b>
<b>Children (under 13 years at AIDS diagnosis)</b>								
Mother with/at risk for HIV infection	2	0	0	0	13	13	26	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
<b>Total children</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>	<b>16</b>	<b>45</b>	<b>0.6</b>
<b>Sub–total</b>	<b>224</b>	<b>20</b>	<b>132</b>	<b>18</b>	<b>7 699</b>	<b>356</b>	<b>8 055</b>	<b>100.0</b>
Other/undetermined <sup>1</sup>	15	1	13	1	260	13	297	
<b>TOTAL</b>	<b>239</b>	<b>21</b>	<b>145</b>	<b>19</b>	<b>7 959</b>	<b>369</b>	<b>8 328</b>	

<sup>1</sup> The 'Other/undetermined' exposure category includes 24 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 1.5 Deaths following AIDS by sex and exposure category, cumulative to 31 March 2000, and for two previous yearly intervals**

Exposure Category	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			%
	Male	Female	Male	Female	Male	Female	Total	
Male homosexual/ bisexual contact	113	–	59	–	4 784	–	4 784	84.3
Male homosexual/bisexual contact and injecting drug use	7	–	5	–	252	–	252	4.4
Injecting drug use	7	0	4	0	97	49	146	2.6
<i>Heterosexual</i>	3	0	2	0	73	42	115	
<i>Not further specified</i>	4	0	2	0	24	7	31	
Heterosexual contact	8	3	5	6	141	108	249	4.4
<i>Sex with injecting drug user</i>	0	0	0	2	2	10	12	
<i>Sex with bisexual male</i>	–	1	–	0	–	26	26	
<i>From a high prevalence country</i>	0	1	2	1	11	12	23	
<i>Sex with person from a high prevalence country</i>	3	0	0	0	16	10	26	
<i>Sex with person with medically acquired HIV</i>	0	0	0	1	2	7	9	
<i>Sex with HIV infected person, exposure not specified</i>	0	0	0	0	22	15	37	
<i>Not further specified</i>	5	1	3	2	88	28	116	
Haemophilia/coagulation disorder	1	0	2	0	87	3	90	1.6
Receipt of blood/tissue	0	1	0	1	67	51	118	2.1
Health care setting	0	0	0	0	1	2	3	0.0
<b>Total Adults/Adolescents</b>	<b>136</b>	<b>4</b>	<b>75</b>	<b>7</b>	<b>5 429</b>	<b>213</b>	<b>5 642</b>	<b>99.4</b>
<b>Children (under 13 years at death following AIDS)</b>								
Mother with/at risk for HIV infection	0	1	0	0	7	9	16	0.3
Haemophilia/coagulation disorder	0	0	0	0	3	0	3	0.1
Receipt of blood/tissue	0	0	0	0	11	2	13	0.2
<b>Total children</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>11</b>	<b>32</b>	<b>0.6</b>
<b>Sub–total</b>	<b>136</b>	<b>5</b>	<b>75</b>	<b>7</b>	<b>5 450</b>	<b>224</b>	<b>5 674</b>	<b>100.0</b>
Other/undetermined <sup>1</sup>	10	1	6	0	160	7	184	
<b>TOTAL</b>	<b>146</b>	<b>6</b>	<b>81</b>	<b>7</b>	<b>5 610</b>	<b>231</b>	<b>5 841</b>	

<sup>1</sup> The 'Other/undetermined' exposure category includes 17 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 2.1** Number of new diagnoses of HIV infection by sex<sup>1</sup> and State/Territory, cumulative to 31 March 2000, and for two previous yearly intervals

State/Territory	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			
	Male	Female	Male	Female	Male	Female	Total	Rate <sup>2</sup>
ACT	6	3	8	2	223	26	249	80.1
NSW <sup>3</sup>	347	43	331	28	10 987	607	11 863	184.5
NT	12	1	5	3	110	11	121	62.5
QLD	90	11	113	20	2 002	155	2 164	61.4
SA	23	5	23	3	679	61	740	49.5
TAS	0	1	2	1	79	5	84	17.9
VIC <sup>4</sup>	124	10	132	13	3 907	214	4 159	88.0
WA	30	17	31	9	920	118	1 042	55.8
<b>TOTAL<sup>5</sup></b>	<b>632</b>	<b>91</b>	<b>645</b>	<b>79</b>	<b>18 907</b>	<b>1 197</b>	<b>20 422<sup>6</sup></b>	<b>107.4</b>

1 Forty five people (20 NSW, 7 QLD, 14 VIC and 4 WA) whose sex was reported as transgender are included in the total columns of Tables 2.1 – 2.3

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 249 people whose sex was not reported.

4 Cumulative total for VIC includes 24 people whose sex was not reported.

5 Cumulative total for Australia includes 273 people whose sex was not reported.

6 Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 17 650 (range 17 230 to 18 060). 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 2.2** Number of new diagnoses of HIV infection for which exposure category was reported, by sex and exposure category, cumulative to 31 March 2000, and for two previous yearly intervals

Exposure Category	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			%
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	
Male homosexual/bisexual contact <sup>4</sup>	–	–	386	–	12 976	–	12 976	78.2
Male homosexual/bisexual contact and injecting drug use	31	–	32	–	641	–	641	3.9
Injecting drug use	21	6	27	4	559	174	740	4.5
<i>Heterosexual</i>	10	4	15	2	198	122	321	
<i>Not further specified</i>	11	2	12	2	361	52	419	
Heterosexual contact	91	76	84	69	908	729	1 641	9.9
<i>Sex with injecting drug user</i>	6	3	1	3	31	82	114	
<i>Sex with bisexual male</i>	–	5	–	7	–	106	106	
<i>From a high prevalence country</i>	30	32	25	22	149	154	304	
<i>Sex with person from a high prevalence country</i>	19	7	25	14	149	78	227	
<i>Sex with person with medically acquired HIV</i>	1	0	0	1	5	14	19	
<i>Sex with HIV infected person, exposure not specified</i>	4	16	6	8	52	110	163	
<i>Not further specified</i>	31	13	27	14	522	185	708	
Haemophilia/coagulation disorder	2	0	1	0	229	4	233	1.4
Receipt of blood/tissue	1	4	0	0	104	102	206	1.2
Health care setting <sup>2</sup>	0	0	0	0	3	8	11	0.0
<b>Total Adults/Adolescents<sup>1</sup></b>	<b>559</b>	<b>86</b>	<b>530</b>	<b>73</b>	<b>15 420</b>	<b>1 017</b>	<b>16 448</b>	<b>99.1</b>
<b>Children (under 13 years at HIV diagnosis)</b>								
Mother with/at risk for HIV infection	3	0	0	1	37	26	63	0.4
Haemophilia/coagulation disorder	0	0	1	0	67	0	67	0.4
Receipt of blood/tissue	0	0	0	1	13	8	21	0.1
<b>Total children</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>117</b>	<b>34</b>	<b>151</b>	<b>0.9</b>
<b>Sub-total</b>	<b>562</b>	<b>86</b>	<b>531</b>	<b>75</b>	<b>15 537</b>	<b>1 051</b>	<b>16 599</b>	<b>100.0</b>
Other/undetermined <sup>3</sup>	70	5	114	4	3 370	146	3 823	
<b>TOTAL<sup>1</sup></b>	<b>632</b>	<b>91</b>	<b>645</b>	<b>79</b>	<b>18 907</b>	<b>1 197</b>	<b>20 422<sup>4</sup></b>	

1 Total column includes people whose sex was not reported.

2 'Health care setting' includes 5 cases of occupationally acquired HIV infection and 4 cases of HIV transmission in surgical rooms.

3 The 'Other/undetermined' exposure category includes 3 805 adults/adolescents and 18 children. Forty five 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.

4 See footnote Table 2.1

**Table 2.3** Number of new diagnoses of HIV infection by sex and age group, cumulative to 31 March 2000, and for two previous yearly intervals

Age group (years)	1 Apr 98 – 31 Mar 99		1 Apr 99 – 31 Mar 00		Cumulative to 31 Mar 00			
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	%
0–2	2	0	0	1	42	17	60	0.3
3–12	1	0	3	1	90	19	109	0.5
0–12	3	0	3	2	132	36	169	0.8
13–19	9	11	5	5	409	82	500	2.5
20–29	159	37	148	29	6 470	489	7 077	34.7
30–39	233	29	276	27	6 979	328	7 413	36.3
40–49	142	11	122	10	3 290	127	3 466	17.0
50–59	60	0	61	2	1 084	48	1 144	5.6
60+	25	3	24	3	360	56	418	2.0
Not reported	1	0	6	1	183	31	235	1.1
<b>TOTAL<sup>1</sup></b>	<b>632</b>	<b>91</b>	<b>645</b>	<b>79</b>	<b>18 907</b>	<b>1 197</b>	<b>20 422</b>	<b>100.0</b>

1 See footnotes Table 2.2

**Table 2.4** Number of new diagnoses of HIV infection in the year 1 April 1999 to 31 March 2000 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

State/Territory	1 Apr 99 – 30 Sep 99		1 Oct 99 – 31 Mar 00		1 Apr 99 – 31 Mar 00		
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>
ACT	1	0	2	0	3	0	3
NSW	45	0	28	3	73	3	76
NT	0	0	1	0	1	0	1
QLD	16	1	8	2	24	3	27
SA	2	0	5	0	7	0	7
TAS	1	0	0	0	1	0	1
VIC	15	2	19	0	34	2	36
WA	0	0	4	0	4	0	5
<b>TOTAL<sup>1</sup></b>	<b>80</b>	<b>3</b>	<b>67</b>	<b>5</b>	<b>147</b>	<b>8</b>	<b>156</b>

1 Totals include one person whose sex was reported as transgender.

**Table 2.5** Number of new diagnoses of HIV infection in the year 1 April 1999 to 31 March 2000 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

Exposure Category	1 Apr 99 – 30 Sep 99		1 Oct 99 – 31 Mar 00		1 Apr 99 – 31 Mar 00		
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>
Male homosexual/bisexual contact	63	–	55	–	118	–	118
Male homosexual/bisexual contact and injecting drug use	7	–	3	–	10	–	11
Injecting drug use (female and heterosexual male)	5	1	1	1	6	2	8
Heterosexual contact	5	2	4	4	9	6	15
Health care setting	0	0	0	0	0	0	0
Other/undetermined	0	0	4	0	4	0	4
<b>TOTAL<sup>1</sup></b>	<b>80</b>	<b>3</b>	<b>67</b>	<b>5</b>	<b>147</b>	<b>8</b>	<b>156</b>

1 Totals include one person whose sex was reported as transgender.

**Table 2.6** Number of new diagnoses of HIV infection in the year 1 April 1999 to 31 March 2000 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

Age Group (years)	1 Apr 99 – 30 Sep 99		1 Oct 99 – 31 Mar 00		1 Apr 99 – 31 Mar 00		
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>
13–19	2	0	2	0	4	0	4
20–29	27	1	19	2	46	3	49
30–39	33	2	34	3	67	5	73
40–49	10	0	7	0	17	0	17
50–59	4	0	5	0	9	0	9
60+	4	0	0	0	4	0	4
<b>TOTAL<sup>1</sup></b>	<b>80</b>	<b>3</b>	<b>67</b>	<b>5</b>	<b>147</b>	<b>8</b>	<b>156</b>

1 Totals include one person whose sex was reported as transgender.

## Sentinel surveillance of HIV infection in sexual health clinics

**Table 3.1** 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, during the quarter 1 January to 31 March 2000

Sexual Health Clinic	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection	
	Male	Female	Male	Female	Male	Female
Sydney Sexual Health Centre, NSW	1 176	775	463	272	3	0
Livingstone Road Sexual Health Centre, Marrickville, NSW	343	376	128	143	0	0
Brisbane Sexual Health Clinic, QLD	895	618	295	197	1	0
Gold Coast Sexual Health Clinic, QLD	353	458	124	180	2	0
Clinic 275, Adelaide, SA	963	644	661	386	1	0
Melbourne Sexual Health Centre, VIC	1 954	1 553	1 334	1 170	0	0
<b>TOTAL</b>	<b>5 684</b>	<b>4 424</b>	<b>3 005</b>	<b>2 348</b>	<b>7</b>	<b>0</b>

**Table 3.2** 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 January to 31 March 2000

Exposure Category	Previous negative HIV antibody test		% Retested for HIV antibody		Newly diagnosed with HIV infection			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	758	–	70.0	–	3	–	3	0.6
Male homosexual/bisexual contact and injecting drug use	67	–	61.2	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	181	144	56.4	56.9	0	0	0	0.0
Heterosexual contact	1 688	1 585	57.6	58.4	0	0	0	0.0
<i>outside Australia</i>	221	186	57.5	47.8	0	0	0	0.0
<i>within Australia only</i>	1 467	1 399	57.7	59.9	0	0	0	0.0
Sex worker	–	288	–	77.4	–	0	0	0.0
Sex worker and injecting drug use	–	37	–	51.4	–	0	0	0.0
Other/undetermined	160	130	93.1	80.0	0	0	0	0.0
<b>TOTAL</b>	<b>2 854</b>	<b>2 184</b>	<b>63.0</b>	<b>62.0</b>	<b>3</b>	<b>0</b>	<b>3</b>	<b>0.1</b>

**Table 3.3** 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 January to 31 March 2000

Exposure Category	No previous HIV antibody test		% Tested for HIV antibody		Newly diagnosed with HIV infection			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	389	–	48.1	–	2	–	2	1.1
Male homosexual/bisexual contact and injecting drug use	26	–	65.4	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	88	95	69.3	54.7	1	0	1	0.9
Heterosexual contact	1 617	1 564	50.5	45.0	0	0	0	0.0
<i>outside Australia</i>	159	134	66.7	44.0	0	0	0	0.0
<i>within Australia only</i>	1 158	1 430	48.7	45.1	0	0	0	0.0
Sex worker	–	100	–	77.0	–	0	0	0.0
Sex worker and injecting drug use	–	17	–	82.4	–	0	0	0.0
Other/undetermined	395	428	31.9	34.1	1	0	1	0.4
<b>TOTAL</b>	<b>2 515</b>	<b>2 204</b>	<b>48.0</b>	<b>45.1</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0.2</b>

**Table 3.4** 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 January to 31 March 2000

Age Group (Years)	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
	Male	Female	Male	Female	Male	Female	Total
13–19	177	453	94	192	0	0	0
20–29	2 231	2 392	1 246	1 297	2	0	2
30–39	1 908	1 012	981	565	5	0	5
40–49	813	406	405	223	0	0	0
50–59	384	121	197	57	0	0	0
60+	170	38	82	14	0	0	0
Not reported	1	2	0	0	0	0	0
<b>TOTAL</b>	<b>5 684</b>	<b>4 424</b>	<b>3 005</b>	<b>2 348</b>	<b>7</b>	<b>0</b>	<b>7</b>

**Table 3.5** Number of people diagnosed with specific sexually transmissible infections<sup>1</sup> other than HIV, by sex, exposure category and whether or not they were tested for HIV antibody<sup>2</sup> during the quarter 1 January to 31 March 2000

Exposure Category	Tested for HIV antibody		Not tested for HIV antibody	
	Male	Female	Male	Female
Male homosexual/bisexual contact	35	–	50	–
Male homosexual/bisexual contact and injecting drug use	3	–	2	–
Injecting drug use (female and heterosexual male)	4	2	3	2
Heterosexual contact	36	20	83	37
<i>outside Australia</i>	10	7	21	4
<i>within Australia only</i>	26	13	62	33
Sex worker	–	4	–	2
Sex worker and injecting drug use	–	1	–	1
Other/undetermined	1	0	6	6
<b>TOTAL</b>	<b>79</b>	<b>27</b>	<b>144</b>	<b>48</b>

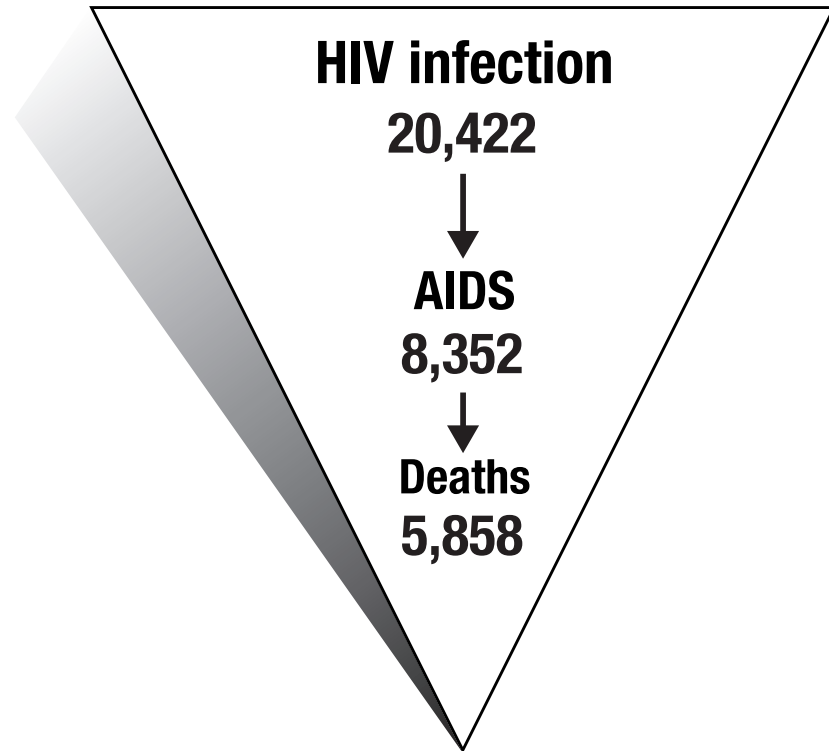
<sup>1</sup> Specific sexually transmissible infections are gonorrhoea, syphilis and chlamydia.

<sup>2</sup> Includes people who may have been previously tested for HIV antibody and excludes people previously known to have HIV infection.



# The HIV epidemic in Australia

A cumulative profile to 31 March 2000



## Diagnoses in the first quarter

### 1 January – 31 March

- a total of 180 diagnoses of HIV infection, 50 diagnoses of AIDS and 21 deaths following AIDS were reported, by 30 June 2000, to have occurred in the first quarter of 2000
- following adjustment for reporting delay, the estimated numbers of AIDS diagnoses and deaths following AIDS occurring in the first quarter of 2000 were 95 and 35
- in comparison, 179 diagnoses of HIV infection, 39 diagnoses of AIDS and 37 deaths following AIDS were reported, by 30 June 2000, to have occurred in the first quarter of 1999

### New HIV infection

During the first quarter of 2000, 30 cases 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 only was reported in 25 (83.3%) cases.

### Diagnoses in the year to 31 March 2000

- 728 diagnoses of HIV infection
- 165 diagnoses of AIDS
- 88 deaths following AIDS were reported by 30 June 2000

## HIV diagnoses

People diagnosed with HIV infection in the year to 31 March 2000 had an average age of 36 years and 1.4% were in the age group 13 – 19 years

- 88.6% were male, 10.7% were female and sex was reported as transgender for 0.4% and was not reported for 0.3% of cases
- of 83.5% of cases of HIV infection newly diagnosed in the year to 31 March 2000 for which exposure to HIV was recorded, a history of male homosexual contact only was reported in 63.8%

### Total diagnoses to 31 March 2000

- 20,422 diagnoses of HIV infection
- 17,650 diagnoses of HIV infection following adjustment for multiple reporting
- 8,352 diagnoses of AIDS
- 5,858 deaths following AIDS were reported by 30 June 2000

### HIV testing in sexual health clinics

Six sexual health clinics in Adelaide, Brisbane, Gold Coast, Melbourne and Sydney tested 5,353 people in the quarter 1 January – 31 March 2000 who were not previously known to have HIV infection

- of 2,201 people reported as having been tested for the first time, 4 (0.2%) were found to have HIV infection
- of 3,152 people reported as having been retested following a previous negative test, 3 (0.1%) were found to have HIV infection
- of 533 men who reported a history of homosexual contact only and who were retested following a negative test, 3 (0.6%) were 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. Specified countries are those of sub-Saharan Africa and the Caribbean, where transmission of HIV 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:

<b>NSW Public Health Bulletin</b>	<a href="http://www.health.nsw.gov.au/public-health/phb/phb.html">www.health.nsw.gov.au/public-health/phb/phb.html</a>
<b>The Northern Territory Disease Control Bulletin</b>	<a href="http://www.nt.gov.au/nths/publicch/bulletin.htm">www.nt.gov.au/nths/publicch/bulletin.htm</a>
<b>Sexually Transmitted Diseases in South Australia</b>	<a href="http://www.stdservices.on.net/publications">www.stdservices.on.net/publications</a>
<b>Victorian Infectious Diseases Bulletin</b>	<a href="http://www.dhs.vic.gov.au/phd/vldb/">www.dhs.vic.gov.au/phd/vldb/</a>
<b>Disease WAtch</b>	<a href="http://www.public.health.wa.gov.au/">www.public.health.wa.gov.au/</a>

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