



National Centre in HIV Epidemiology and Clinical Research

# Australian HIV Surveillance Report

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## Use of non-occupational post-exposure prophylaxis in Australia, 1998 – 2001

New South Wales was one of the first health jurisdictions in the world to recommend, in 1998, the use of non-occupational post-exposure prophylaxis (NOCPEP) against HIV after high-risk exposures. These guidelines explicitly recognised that there was an incomplete evidence base on the efficacy of this therapy, and the treatment was introduced in the context of an observational study (NSW Health 1998).

The therapy has gradually become available elsewhere, and NOCPEP is now officially recommended after high-risk non-occupational exposures to HIV in Queensland, the Australian Capital Territory and in Victoria, and elsewhere, it may be available in a non-official context. In July 2001, the Australian National Council on AIDS, hepatitis C and related diseases (ANCAHRD) released national guidelines recommending NOCPEP after high-risk exposures (ANCAHRD 2001).

Worldwide, the widespread availability of NOCPEP has been hindered by perceived lack of evidence regarding efficacy, appropriateness of use, and practicalities of funding. In the United States, for example, NOCPEP is not officially recommended and is available only through a few pilot schemes (CDC 1998). Here, we present data on the first three years of PEP utilisation in Australia.

In New South Wales, Queensland and the Australian Capital Territory, study enrolment packs were forwarded to all registered anti-retroviral prescribers. In Victoria, enrolment packs were forwarded to the Alfred Hospital.

Doctors were asked to certify that they had obtained the verbal consent of patients before enrolment in the study. Data were collected at the time of presentation, and four weeks and six months later (or at end of follow up). At baseline, data were collected on the personal characteristics of the patient (including HIV status), the nature of the risk episode, details of the source (if known), whether PEP was prescribed and the drugs prescribed. At four weeks, data were collected regarding compliance with treatment and any side effects, and HIV status. At six months, the final follow up HIV status was recorded. Doctors were re-imbursed \$50 for each patient on whom they returned the three data forms (whether or not the patient was lost to follow up). The University of New South Wales Human Research Ethics Committee, and ethics committees of participating area health services, approved the study.

Between December 1998 and the end of 2001, 515 participants were enrolled in the study including 29 who elected not to receive PEP. Prescription of non-occupational PEP increased from 16 in the first quarter of 1999 (includes 4 cases in December 1998) to 76 in the last quarter of 2001. The great majority of cases enrolled were from NSW (87%) although

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# Announcements

## National meetings

The **Australasian Sexual Health Conference** will be held in Perth, Western Australia, on 28 May – 1 June 2002. Further information may be obtained from Dr Heather Lyttle,

Telephone: 08 9224 2178  
Facsimile: 08 9224 3557  
E-mail: Heather.Lyttle@health.wa.gov.au

Conference Secretariat: Dart Associates,  
PO Box 781 Lane Cove NSW 2066.

Telephone: 02 9418 9396/9397  
Facsimile: 02 9418 9398  
E-mail: dartconv@mpx.com.au  
Website: www.acshp.org.au

The **19th National Serology Reference Laboratory, Australia, Workshop on Serology** will be held in Melbourne on 20 – 22 August 2002. Further information may be obtained from Debra Irvine, National Serology Reference Laboratory, Australia, 4th Floor, Healy Building, 41 Victoria Parade, Fitzroy VIC 3065.

Telephone: 03 9418 1111  
Facsimile: 03 9418 1155  
E-mail: debra@nrl.gov.au  
Website: www.nrl.gov.au

The **Australasian Society for HIV Medicine Conference 2002 Complex Problems: Emerging Solutions** will be held in Sydney, New South Wales, on 23 – 26 October 2002. Further information may be obtained from OzAccom Conference Services, PO Box 164 Fortitude Valley QLD 4006.

Telephone: 07 3854 1611  
Facsimile: 07 3854 1507  
E-mail: ashm2002@ozaccom.com.au  
Website: www.ashm.org.au

The **10th National Symposium on Hepatitis B and C** will be held at St Vincent's Hospital, Melbourne on Saturday 23 November 2002. Further information may be obtained from Eleanor Belot.

Telephone: 03 9288 3580  
Facsimile: 03 9288 3590  
E-mail: belote@svhm.org.au

## International meeting

The **XIV International AIDS Conference** will be held in Barcelona, Spain on 7 – 12 July 2002. Further information may be obtained from the Communications Department, XIV International AIDS Conference,

Calle Pomaret 21, 08017 Barcelona, Spain.  
E-mail: kbennett@aids2002.com  
Website: www.aids2002.com

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enrolments from Queensland commenced in 1999 (7%), and from Victoria (2%) in 2001. Nearly two-thirds of participants resided in inner-eastern Sydney: either in "Gay Sydney" (postcodes 2010 and 2011, 32%), inner Sydney (21%), and the eastern suburbs (14%). Overall, 8.8% (45) of participants had previously received NOCPEP.

NOCPEP was prescribed predominantly following sexual exposure (80%). Consistent with the epidemiology of HIV in Australia, male homosexual contact was the most frequently reported exposure (76%). Among sexual exposures, 89% involved unprotected anal intercourse, and a small proportion were associated with unprotected vaginal intercourse (9%) and receptive oral sex (2%). The source was reported by the study participant to have HIV infection in 194 (38%) cases (40% of cases of sexual exposure and 24% of those who had percutaneous exposure).

The median periods between exposure and consultation and receiving PEP were 23 hours and 27 hours, respectively. Three or more drugs were prescribed in the majority of PEP prescriptions (70%). The two-drug combination most commonly prescribed was lamivudine and zidovudine (27% of all prescriptions). Three drug combinations most commonly prescribed were combinations of lamivudine and zidovudine with either nelfinavir (39%) or nevirapine (10%). A rapid decline in the use of combinations containing nevirapine occurred after January 2001, when evidence of serious adverse events associated with nevirapine containing regimens was published (CDC 2001).

The overall proportion of people who took PEP who were fully compliant was 63%. This may improve, however, as compliance remains unknown in 19%, and follow-up data may still be received. The median duration of treatment was 12.5 day for those who were less than fully compliant.

Most people (73%) prescribed PEP reported adverse effects. Two thirds of people reported their adverse effects as mild or moderate. Apart from those side effects included in the data collection form (nausea, vomiting, headaches and diarrhoea), other common side effects reported included fatigue, skin rash and insomnia. Severe side effects were reported by 24% of those who received PEP, including common side effects such as gastrointestinal symptoms and headache, and rare side effects such as Stevens-Johnson syndrome (two cases awaiting confirmation), and kidney pain probably related to nephrolithiasis (two cases).

No HIV seroconversions related to NOCPEP failure were observed. Three participants were found to have HIV infection, but two of these were known at baseline. Another participant seroconverted three months after being prescribed PEP, but was poorly compliant, took PEP for only 7 days, and engaged in ongoing high-risk behaviour.

Use of NOCPEP in Australia is expanding. Most prescriptions are for appropriate, that is, high risk exposures, but there has been a tendency to prescribe three rather than two drugs. PEP is usually accompanied by side effects, and these are reported by the patient as severe in about 24% of prescriptions. Compliance is reasonably good.

Enrolment in the PEP study has not been a requirement in the prescription of PEP. Preliminary analyses of PEP prescriptions in south-eastern Sydney suggest that approximately 65% of total prescriptions were included in the PEP study.

Non-occupational PEP is recommended in several European countries, and has been used in research studies in San Francisco (Waldo *et al* 2000; Martin *et al* 2001). In France, among 1,835 PEP prescriptions reported in 1999, serious side effects occurred only among patients using combination therapies including protease inhibitors or non-nucleoside reverse transcriptase inhibitors. Nephrolithiasis was the most common severe event reported (six cases) in participants who received indinavir. Other events reported were three cases of severe rashes,

two of toxic hepatitis, one of cholecystitis and one of haemolysis (Laporte *et al* 2002). In Switzerland, of 176 persons who received antiretroviral prophylaxis for community exposure to HIV between December 1997 and March 2000, 71% experienced at least one type of side effect. Two patients presented with severe side effects; one case treated with indinavir developed pyonephritis as a result of ureteral obstruction, and another treated with zidovudine, lamivudine and nelfinavir developed toxic hepatitis (Bernasconi *et al* 2001).

Practical problems remain in the provision of PEP. First, the lack of available evidence regarding efficacy has meant that PEP is not listed on the pharmaceutical benefits scheme (PBS), and funding for this expensive treatment has fallen on local health jurisdictions. Given the nature of the HIV epidemic in Australia, this has meant a large financial cost for area health services in Central and Eastern Sydney, and may have contributed to the slow uptake of this therapy in other States. A randomised placebo controlled trial of this therapy is unlikely to occur because occupational PEP is standard of care (although again, not funded through the PBS), so the accumulation of evidence based on observational studies such as this will be required to provide evidence of efficacy. Second, a high rate of side effects and the relatively small risk of HIV infection from a single risk event, means that the therapy has the potential to cause more harm than good. The occurrence of rare serious side effects associated with protease inhibitors or non-nucleoside reverse transcriptase inhibitors is one of the reasons why Australian guidelines recommend only two nucleoside reverse transcriptase inhibitors except for the highest risk exposures. In particular, nevirapine and abacavir should probably always be avoided because of the possibility of fatal side effects.

Our data, that more than 500 exposures to HIV, including a substantial proportion of high risk exposures, has not resulted in a single case of HIV infection, except when risk activity continued, adds to the growing data indicating that prompt initiation of NOCPEP following high risk exposure to HIV is effective in preventing HIV transmission.

### **ANCAHRD guidelines<sup>1</sup> for non-occupational post-exposure prophylaxis: a summary**

- \* PEP must be commenced as soon as possible after exposure
- \* All PEP regimens should be prescribed for 28 days
- \* Only 2 drugs are recommended in most circumstances
- \* 3 drugs are recommended if
  - the source is known to be positive, and
  - there has been a “higher” risk exposure (unprotected anal or vaginal intercourse, sharing drug equipment, mucous membrane or non-intact skin exposure), and
  - the source has advanced HIV disease or is known to have an HIV plasma viral load greater than 10,000 copies/ml b DNA (>20,000 copies/ml RT-PCR), or
  - source has evidence of antiretroviral drug resistance

<sup>1</sup> Adapted from the ANCAHRD Bulletin, No. 28 July 2001

**Table 1.1 Antiretroviral drug combinations prescribed for non-occupational post-exposure prophylaxis, December 1998 – December 2001**

Antiretroviral drug combination	Percentage
Lamivudine, zidovudine and nelfinavir	40
Lamivudine, zidovudine	27
Lamivudine, zidovudine and nevirapine	10
Lamivudine, zidovudine and indinavir	5
Lamivudine, stavudine and nevirapine	5
Lamivudine, stavudine and nelfinavir	4
Other combinations	10

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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 31 December 2001, and for two previous yearly intervals**

## Cases

State/Territory	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total†	%
ACT	2	1	0	0	88	9	97	1.1
NSW	101	15	58	6	4 821	208	5 041	57.6
NT	1	0	1	0	37	0	37	0.4
QLD	38	3	22	1	883	51	936	10.7
SA	8	0	7	3	363	28	391	4.5
TAS	1	0	0	0	45	3	48	0.5
VIC	55	2	35	6	1 725	79	1 813	20.7
WA	8	1	4	0	364	27	393	4.5
<b>Total</b>	<b>214</b>	<b>22</b>	<b>127</b>	<b>16</b>	<b>8 326</b>	<b>405</b>	<b>8 756</b>	<b>100.0</b>

## Deaths

State/Territory	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total†	%
ACT	3	1	2	0	71	4	75	1.2
NSW	70	2	32	3	3 342	122	3 473	56.5
NT	0	0	1	0	25	0	25	0.4
QLD	13	2	10	2	592	35	629	10.2
SA	5	1	7	0	242	16	258	4.2
TAS	0	0	0	0	30	2	32	0.5
VIC	26	1	17	6	1 313	57	1 377	22.4
WA	6	1	1	0	264	18	283	4.6
<b>Total</b>	<b>123</b>	<b>8</b>	<b>70</b>	<b>11</b>	<b>5 879</b>	<b>254</b>	<b>6 152</b>	<b>100.0</b>

† Totals include 25 AIDS cases and 19 deaths following AIDS in people whose sex was reported as transgender.

**Table 2.2 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 Jan 2000 – 31 Dec 2000			1 Jan 2001 – 31 Dec 2001		
	Male	Female	Total	Male	Female	Total
ACT	12.9	6.4	9.6	0.0	0.0	0.0
NSW	31.4	4.6	17.9	17.8	1.8	9.8
NT	9.7	0.0	5.1	9.6	0.0	5.1
QLD	21.3	1.7	11.5	12.1	0.6	6.3
SA	10.8	0.0	5.3	9.4	4.0	6.7
TAS	4.3	0.0	2.1	0.0	0.0	0.0
VIC	23.3	0.8	12.0	14.6	2.5	8.7
WA	8.4	1.1	4.8	4.2	0.0	2.1
<b>Total</b>	<b>22.4</b>	<b>2.3</b>	<b>12.3</b>	<b>13.2</b>	<b>1.6</b>	<b>7.4</b>

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 31 December 2001, and for two previous yearly intervals**

**Cases<sup>1</sup>**

Age group (years)	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total†	%
0–2	0	1	0	1	9	9	18	0.2
2–12	0	0	0	1	20	10	30	0.3
0–12	0	1	0	2	29	19	48	0.5
13–19	0	0	0	0	27	4	31	0.4
20–29	20	5	11	2	1 359	102	1 474	16.8
30–39	83	12	49	7	3 492	147	3 647	41.7
40–49	67	3	41	3	2 339	67	2 408	27.5
50–59	30	0	19	2	812	33	847	9.7
60+	14	1	7	0	268	33	301	3.4
<b>Total</b>	<b>214</b>	<b>22</b>	<b>127</b>	<b>16</b>	<b>8 326</b>	<b>405</b>	<b>8 756</b>	<b>100.0</b>

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

Age group (years)	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total†	%
0–2	0	0	0	1	5	6	11	0.1
2–12	0	0	1	0	17	6	23	0.4
0–12	0	0	1	1	22	12	34	0.5
13–19	1	0	0	0	14	3	17	0.3
20–29	10	0	1	2	679	45	735	11.9
30–39	44	6	26	4	2 362	92	2 460	40.0
40–49	44	0	23	1	1 865	44	1 911	31.1
50–59	17	0	8	3	703	27	730	11.9
60+	7	2	11	0	234	31	265	4.3
<b>Total</b>	<b>123</b>	<b>8</b>	<b>70</b>	<b>11</b>	<b>5 879</b>	<b>254</b>	<b>6 152</b>	<b>100.0</b>

1 Cases are classified by age at diagnosis.

2 Deaths are classified by age at death.

**Table 2.4 Cases of AIDS by sex and exposure category, cumulative to 31 December 2001, and for two previous year intervals**

Exposure category	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/ bisexual contact	150	–	92	–	6 920	–	6 920	82.1
Male homosexual/bisexual contact and injecting drug use	11	–	3	–	379	–	379	4.5
Injecting drug use	12	2	2	3	181	90	271	3.2
<i>Heterosexual</i>	7	1	1	2	116	69	185	
<i>Not further specified</i>	5	1	1	1	65	21	86	
Heterosexual contact	23	17	18	11	337	212	549	6.5
<i>Sex with injecting drug user</i>	0	3	0	0	7	22	29	
<i>Sex with bisexual male</i>	–	2	–	0	–	41	41	
<i>From a high prevalence country</i>	7	5	5	6	64	45	109	
<i>Sex with person from a high prevalence country</i>	8	1	5	1	54	15	69	
<i>Sex with person with medically acquired HIV</i>	0	1	0	0	2	10	12	
<i>Sex with HIV infected person, exposure not specified</i>	2	4	1	1	30	27	57	
<i>Not further specified</i>	6	1	7	3	180	52	232	
Haemophilia/coagulation disorder	3	0	0	0	115	3	118	1.4
Receipt of blood/tissue	0	1	0	0	78	63	141	1.7
Health care setting	0	0	0	0	1	3	4	0.0
<b>Total Adults/Adolescents</b>	<b>199</b>	<b>20</b>	<b>115</b>	<b>14</b>	<b>8 011</b>	<b>371</b>	<b>8 382</b>	<b>99.4</b>
<b>Children (under 13 years at AIDS diagnosis)</b>								
Mother with/at risk for HIV infection	0	1	0	2	13	16	29	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>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>29</b>	<b>19</b>	<b>48</b>	<b>0.6</b>
<b>Sub-total</b>	<b>199</b>	<b>21</b>	<b>115</b>	<b>16</b>	<b>8 040</b>	<b>390</b>	<b>8 430</b>	<b>100.0</b>
Other/undetermined <sup>1</sup>	15	1	12	0	286	15	326	
<b>Total</b>	<b>214</b>	<b>22</b>	<b>127</b>	<b>16</b>	<b>8 326</b>	<b>405</b>	<b>8 756</b>	

1 The 'Other/undetermined' exposure category includes 25 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 31 December 2001, and for two previous yearly intervals**

Exposure category	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			%
	Male	Female	Male	Female	Male	Female	Total	
Male homosexual/ bisexual contact	89	–	50	–	4 987	–	4 987	83.9
Male homosexual/bisexual contact and injecting drug use	6	–	8	–	268	–	268	4.5
Injecting drug use	8	1	4	1	110	52	162	2.7
<i>Heterosexual</i>	4	0	2	1	78	43	121	
<i>Not further specified</i>	4	1	2	0	32	9	41	
Heterosexual contact	8	6	2	7	153	120	273	4.6
<i>Sex with injecting drug user</i>	1	3	0	0	4	11	15	
<i>Sex with bisexual male</i>	–	0	–	2	–	29	29	
<i>From a high prevalence country</i>	2	0	1	3	14	15	29	
<i>Sex with person from a high prevalence country</i>	1	0	0	0	18	10	28	
<i>Sex with person with medically acquired HIV</i>	0	0	0	0	2	7	9	
<i>Sex with HIV infected person, exposure not specified</i>	0	0	0	1	22	15	37	
<i>Not further specified</i>	4	3	1	1	93	33	126	
Haemophilia/coagulation disorder	3	0	1	0	92	3	95	1.6
Receipt of blood/tissue	0	0	0	2	68	54	122	2.1
Health care setting	0	0	0	0	1	2	3	0.0
<b>Total Adults/Adolescents</b>	<b>114</b>	<b>7</b>	<b>65</b>	<b>10</b>	<b>5 679</b>	<b>231</b>	<b>5 910</b>	<b>99.4</b>
<b>Children (under 13 years at death following AIDS)</b>								
Mother with/at risk for HIV infection	0	0	1	1	8	10	18	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>0</b>	<b>1</b>	<b>1</b>	<b>22</b>	<b>12</b>	<b>34</b>	<b>0.6</b>
<b>Sub-total</b>	<b>114</b>	<b>7</b>	<b>66</b>	<b>11</b>	<b>5 701</b>	<b>243</b>	<b>5 944</b>	<b>100.0</b>
Other/undetermined <sup>1</sup>	9	1	4	0	178	11	208	
<b>Total</b>	<b>123</b>	<b>8</b>	<b>70</b>	<b>11</b>	<b>5 879</b>	<b>254</b>	<b>6 152</b>	

1 The 'Other/undetermined' exposure category includes 19 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<sup>1</sup> and State/Territory, cumulative to 31 December 2001, and for two previous yearly intervals

State/Territory	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total	Rate <sup>2</sup>
ACT	9	1	5	1	231	28	259	82.4
NSW <sup>3</sup>	326	31	332	35	11 575	672	12 510	191.5
NT	2	1	4	0	112	10	122	61.7
QLD	101	14	86	17	2 148	180	2 335	64.4
SA	21	2	33	9	727	72	799	53.2
TAS	0	0	2	0	80	5	85	18.1
VIC <sup>4</sup>	167	20	182	23	4 203	250	4 493	93.0
WA	36	9	36	9	981	132	1 119	58.6
<b>Total<sup>5</sup></b>	<b>662</b>	<b>78</b>	<b>680</b>	<b>94</b>	<b>20 057</b>	<b>1 349</b>	<b>21 722<sup>6</sup></b>	<b>112.0</b>

1 Fifty one people (22 NSW, 7 QLD, 16 VIC and 6 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 241 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 265 people whose sex was not reported.

6 Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 18 850 (range 18 400 to 19 300). 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 31 December 2001, and for two previous yearly intervals**

Exposure category	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			%
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	
Male homosexual/ bisexual contact	466	–	463	–	13 930	–	13 930	77.6
Male homosexual/ bisexual contact and injecting drug use	23	–	31	–	713	–	713	4.0
Injecting drug use	26	3	30	8	610	187	805	4.5
<i>Heterosexual</i>	16	3	19	7	234	136	371	
<i>Not further specified</i>	9	0	11	1	376	51	434	
Heterosexual contact	89	72	73	74	1 037	858	1 898	10.6
<i>Sex with injecting drug user</i>	0	7	2	0	32	91	123	
<i>Sex with bisexual male</i>	–	4	–	7	–	117	117	
<i>From a high prevalence country</i>	29	31	25	34	204	219	424	
<i>Sex with person from a high prevalence country</i>	32	14	20	12	178	95	273	
<i>Sex with person with medically acquired HIV</i>	0	3	0	0	5	17	22	
<i>Sex with HIV infected person, exposure not specified</i>	3	10	5	10	61	127	189	
<i>Not further specified</i>	25	3	21	11	557	192	750	
Haemophilia/coagulation disorder	0	0	1	0	221	4	225	1.3
Receipt of blood/tissue	0	0	0	0	104	102	206	1.1
Health care setting <sup>2</sup>	0	0	0	0	3	8	11	0.0
<b>Total Adults/Adolescents<sup>1</sup></b>	<b>604</b>	<b>75</b>	<b>598</b>	<b>82</b>	<b>16 618</b>	<b>1 159</b>	<b>17 788</b>	<b>99.1</b>
<b>Children (under 13 years at HIV diagnosis)</b>								
Mother with/at risk for HIV infection <sup>3</sup>	2	1	0	3	39	30	69	0.4
Haemophilia/coagulation disorder	0	0	0	0	66	0	66	0.4
Receipt of blood/tissue	0	0	0	0	13	8	21	0.1
<b>Total children</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>3</b>	<b>118</b>	<b>38</b>	<b>156</b>	<b>0.9</b>
<b>Sub-total</b>	<b>606</b>	<b>76</b>	<b>598</b>	<b>85</b>	<b>16 736</b>	<b>1 197</b>	<b>17 944</b>	<b>100.0</b>
Other/undetermined <sup>4</sup>	56	2	82	9	3 321	152	3 778	
<b>Total<sup>1</sup></b>	<b>662</b>	<b>78</b>	<b>680</b>	<b>94</b>	<b>20 057</b>	<b>1 349</b>	<b>21 722<sup>5</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 A total of 254 children were notified as having been born to women with HIV infection, cumulative to 31 December 2001.

4 The 'Other/undetermined' exposure category includes 3 760 adults/adolescents and 18 children. Fifty one 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 31 December 2001, and for two previous yearly intervals

Age group (years)	1 Jan 00 – 31 Dec 00		1 Jan 01 – 31 Dec 01		Cumulative to 31 Dec 01			
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>	%
0–2	1	1	0	2	43	20	64	0.3
3–12	1	0	0	1	90	20	110	0.5
0–12	2	1	0	3	133	40	174	0.8
13–19	8	3	10	4	424	87	520	2.4
20–29	155	33	153	37	6 758	551	7 430	34.2
30–39	276	28	285	30	7 444	378	7 926	36.5
40–49	130	8	148	13	3 538	145	3 727	17.1
50–59	66	0	56	3	1 194	52	1 259	5.8
60+	20	4	15	1	388	60	450	2.1
Not reported	5	1	13	3	178	36	236	1.1
<b>Total<sup>1</sup></b>	<b>662</b>	<b>78</b>	<b>680</b>	<b>94</b>	<b>20 057</b>	<b>1 349</b>	<b>21 722</b>	<b>100.0</b>

1 See footnotes Table 3.2

**Table 3.4** Number of new diagnoses of HIV infection in the year 1 January 2001 to 31 December 2001 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 Jan 01 – 30 Jun 01		1 Jul 01 – 31 Dec 01		1 Jan 01 – 31 Dec 01		
	Male	Female	Male	Female	Male	Female	Total
ACT	0	0	2	0	2	0	2
NSW	43	5	48	1	91	6	97
NT	2	0	1	0	3	0	3
QLD	13	1	10	1	23	2	25
SA	3	0	6	1	9	1	10
TAS	1	0	0	0	1	0	1
VIC	28	0	22	3	50	3	53
WA	3	0	4	2	7	2	9
<b>Total</b>	<b>93</b>	<b>6</b>	<b>93</b>	<b>8</b>	<b>186</b>	<b>14</b>	<b>200</b>

**Table 3.5** Number of new diagnoses of HIV infection in the year 1 January 2001 to 31 December 2001 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 Jan 01 – 30 Jun 01		1 Jul 01 – 31 Dec 01		1 Jan 01 – 31 Dec 01		
	Male	Female	Male	Female	Male	Female	Total
Male homosexual/bisexual contact	84	–	79	–	163	–	163
Male homosexual/bisexual contact and injecting drug use	0	–	7	–	7	–	7
Injecting drug use (female and heterosexual male)	3	0	2	2	5	2	7
Heterosexual contact	4	5	3	6	7	11	18
Health care setting	0	0	0	0	0	0	0
Other/undetermined	2	1	2	0	4	1	5
<b>Total</b>	<b>93</b>	<b>6</b>	<b>93</b>	<b>8</b>	<b>186</b>	<b>14</b>	<b>200</b>

**Table 3.6** Number of new diagnoses of HIV infection in the year 1 January 2001 to 31 December 2001 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 Jan 01 – 30 Jun 01		1 Jul 01 – 31 Dec 01		1 Jan 01 – 31 Dec 01		
	Male	Female	Male	Female	Male	Female	Total <sup>1</sup>
13–19	1	0	3	0	4	0	4
20–29	25	2	23	3	48	5	53
30–39	42	2	41	3	83	5	88
40–49	20	1	18	1	38	2	40
50–59	4	0	8	1	12	1	13
60+	0	1	0	0	0	1	1
Not reported	1	0	0	0	1	0	1
<b>Total<sup>1</sup></b>	<b>93</b>	<b>6</b>	<b>93</b>	<b>8</b>	<b>186</b>	<b>14</b>	<b>200</b>

<sup>1</sup> Totals include one person whose sex was reported as transgender and one person whose sex was not reported.

## 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, during the quarter 1 October to 31 December 2001

Sexual health clinic	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
	Male	Female	Male	Female	Male	Female	Total
Sydney Sexual Health Centre, NSW	1 293	965	483	332	4	2	6
Livingstone Road Sexual Health Centre, Marrickville, NSW	305	306	113	95	0	0	0
Brisbane Sexual Health Clinic, QLD	923	806	320	239	0	0	0
Gold Coast Sexual Health Clinic, QLD	452	581	140	198	1	2	3
Clinic 275, Adelaide, SA	976	719	701	477	3	0	3
Melbourne Sexual Health Centre, VIC	2 153	1 608	654	460	10	0	10
<b>Total</b>	<b>6 102</b>	<b>4 985</b>	<b>2 411</b>	<b>1 801</b>	<b>18</b>	<b>4</b>	<b>22</b>

**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 October to 31 December 2001

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	762	–	56.7	–	8	–	8	1.8
Male homosexual/bisexual contact and injecting drug use	76	–	60.5	–	1	–	1	2.2
Injecting drug use (female and heterosexual male)	158	124	47.5	44.4	1	0	1	0.9
Heterosexual contact	1 651	1 618	38.8	32.4	1	2	3	0.3
<i>outside Australia</i>	161	136	50.9	53.7	0	1	1	0.6
<i>within Australia only</i>	1 490	1 482	37.5	30.5	1	1	2	0.2
Sex worker	–	436	–	54.3	–	0	0	0.0
Sex worker and injecting drug use	–	30	–	63.3	–	0	0	0.0
Other/undetermined	36	99	22.2	37.4	0	0	0	0.0
<b>Total</b>	<b>2 683</b>	<b>2 307</b>	<b>44.8</b>	<b>37.7</b>	<b>11</b>	<b>2</b>	<b>13</b>	<b>0.6</b>



**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 October to 31 December 2001

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	515	–	42.5	–	4	–	4	1.8
Male homosexual/bisexual contact and injecting drug use	26	–	57.7	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	70	61	58.6	49.2	0	0	0	0.0
Heterosexual contact	1 835	1 909	43.7	35.1	1	1	2	0.1
<i>outside Australia</i>	151	135	58.3	52.6	0	0	0	0.0
<i>within Australia only</i>	1 684	1 774	42.4	33.8	1	1	2	0.1
Sex worker	–	162	–	59.9	–	1	1	1.0
Sex worker and injecting drug use	–	30	–	43.3	–	0	0	0.0
Other/undetermined	540	454	24.4	26.9	2	0	2	0.8
<b>Total</b>	<b>2 986</b>	<b>2 616</b>	<b>40.5</b>	<b>35.6</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>0.4</b>

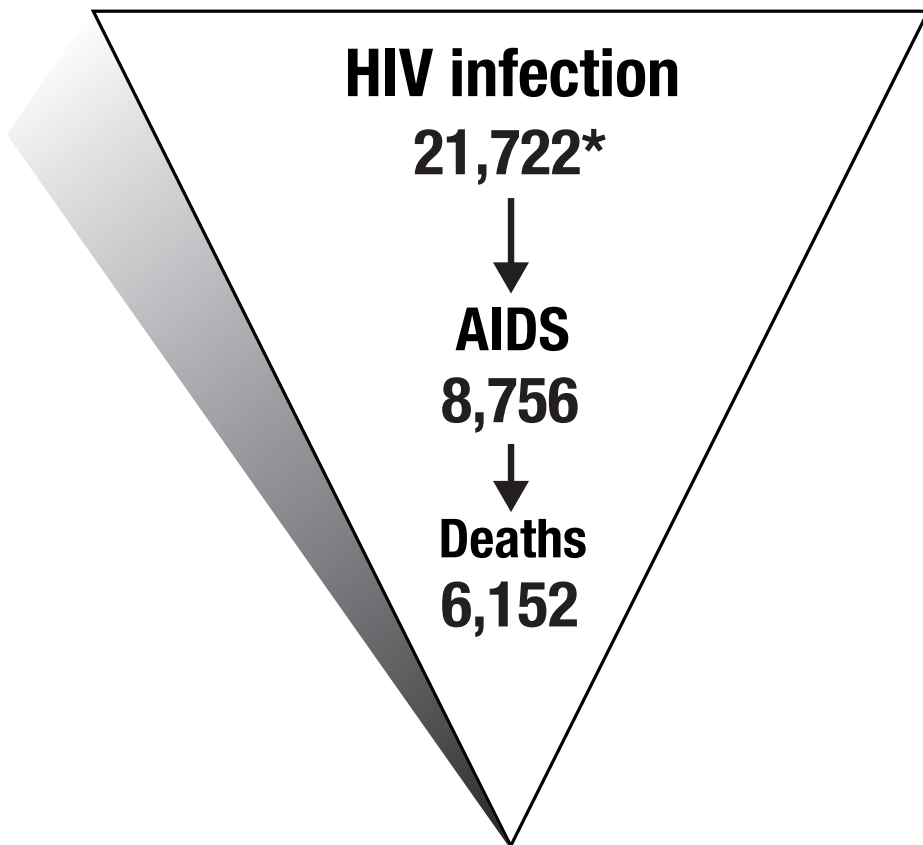
**Table 4.4** Number of people seen, number of people tested for HIV antibody and number of people newly diagnosed with HIV infection, by sex and age group, during the quarter 1 October to 31 December 2001

Age group (years)	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
	Male	Female	Male	Female	Male	Female	Total
13–19	175	494	76	168	3	1	4
20–29	2 302	2 644	1 026	937	6	0	6
30–39	1 963	1 174	758	461	5	3	8
40–49	983	480	338	171	3	0	3
50–59	469	146	153	53	0	0	0
60+	210	47	60	11	1	0	1
<b>Total</b>	<b>6 102</b>	<b>4 985</b>	<b>2 411</b>	<b>1 801</b>	<b>18</b>	<b>4</b>	<b>22</b>

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# The HIV Epidemic in Australia

A cumulative profile to 31 December 2001



\* Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 18,850 (range 18,400 to 19,300), cumulative to 31 December 2001.



National Centre in HIV Epidemiology and Clinical Research

# Australian HIV Surveillance Update

Vol 18 No 2 April 2002

## Diagnoses in the fourth quarter

### 1 October – 31 December

- a total of 199 diagnoses of HIV infection, 32 diagnoses of AIDS and 19 deaths following AIDS were reported, by 31 March 2002, to have occurred in the fourth quarter of 2001
- following adjustment for reporting delay, the estimated numbers of AIDS diagnoses and deaths following AIDS occurring in the fourth quarter of 2001 were 49 and 30
- in comparison, 156 diagnoses of HIV infection, 58 diagnoses of AIDS and 30 deaths following AIDS were reported, by 31 March 2002, to have occurred in the fourth quarter of 2000

### New HIV infection

During the fourth quarter of 2001, 52 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 heterosexual contact only was reported in 4 (7.7%) of cases.

### Diagnoses in the year to 31 December 2001

- 777 diagnoses of HIV infection
- 144 diagnoses of AIDS
- 81 deaths following AIDS were reported by 31 March 2002

## HIV diagnoses

People diagnosed with HIV infection in the year to 31 December 2001 had an average age of 35 years and 1.8% was in the age group 13 – 19 years

- 87.6% were male, 12.0% were female and sex was reported as transgender for 0.1% and was not reported for 0.3% of cases.
- of 681 cases of HIV infection in adult/adolescents, newly diagnosed in the year to 31 December 2001 for which exposure to HIV was recorded, a history of heterosexual contact only was reported in 21.6%.

### Total diagnoses to 31 December 2001

- 21,722 diagnoses of HIV infection
- 18,850 diagnoses of HIV infection following adjustment for multiple reporting
- 8,756 diagnoses of AIDS
- 6,152 deaths following AIDS were reported by 31 March 2002

### HIV testing in sexual health clinics

Six sexual health clinics in Adelaide, Brisbane, Gold Coast, Melbourne and Sydney tested 4,212 people in the quarter 1 October – 31 December 2001 who were not previously known to have HIV infection

- of 2,141 people reported as having been tested for the first time, 9 (0.4%) were found to have HIV infection
- of 2,071 people reported as having been retested following a previous negative test, 13 (0.6%) were found to have HIV infection
- of 559 men and 452 women who reported a history of heterosexual contact only, and who were retested following a previous negative test, 1 male (0.2%) and 1 female (0.2%) 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. 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/public/cdc/bulletin.htm">www.nt.gov.au/nths/public/cdc/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/vidb/">www.dhs.vic.gov.au/phd/vidb/</a>
<b>Disease WAch</b>	<a href="http://www.public.health.wa.gov.au/">www.public.health.wa.gov.au/</a>

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