



Australian HIV Surveillance Report

National Centre in HIV Epidemiology and Clinical Research

Vol 15 No 4
October 1999

HCV - The Evolving Epidemic

2nd Australasian Conference on Hepatitis C
Christchurch, New Zealand, 17 - 19 August 1999

The 2nd Australasian Conference on Hepatitis C, perhaps uniquely in the field of hepatitis C internationally, brought together diverse groups of people to discuss a broad range of issues. The conference was attended by people from the United States, the United Kingdom, Australia and New Zealand and those living with hepatitis C, including current and former injecting drug users, people with medically acquired HCV infection and representatives from community based organisations. Here, we report selected epidemiological, social research and clinical management findings presented at the conference.

HCV genotypes

A presentation on the molecular epidemiology of hepatitis C by Peter Simmonds from the University of Edinburgh was one of the highlights of the conference. Worldwide comparison of HCV nucleotide sequences has resulted in the identification of six main HCV "genotypes", with closely related variants within each genotype. Some genotypes (types 1a, 1b, 2a, 2b) have broad geographical distribution, while others (types 5a, 6a) are found in specific regions. In Australasia, as in Europe and North America, the most common genotypes are 1a, 1b, 2a, 2b, and 3a, although their distribution varies according to age and/or duration of HCV infection. Type 1b is more commonly found among those with longer duration of infection or older age. HCV

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The National Centre is funded by the Commonwealth Department of Health and Aged Care and is affiliated with the Faculty of Medicine, The University of New South Wales

ANNOUNCEMENTS

National meeting

The 11th Annual Conference of the Australasian Society for HIV Medicine will be held in Perth, Western Australia, on 9–11 December 1999. Further information may be obtained from ASHM Conference Secretariat, GPO Box 2609, Sydney NSW 2001.

Telephone: 02 9241 1478

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International meeting

The XIII International AIDS Conference will be held in Durban, South Africa, on 9 – 14 July 2000. Program updates are available through the web page: <http://www.aids2000.com>

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genotypes are of importance in predicting the response to therapy (for example, response to interferon is considerably poorer for genotype 1 compared with genotypes 2 and 3), and may influence the natural history of HCV-related liver disease. There is no evidence, however, for differences in infectivity among HCV genotypes.

The origin of current HCV genotypes is difficult to specify both geographically and temporally. Measurement of the rate of HCV sequence change suggests that HCV has been transmitted for several hundred years, although the confidence intervals around this estimate are particularly wide.

Patterns of HCV transmission

Miriam Alter, from the Centers for Disease Control and Prevention in Atlanta, described three broadly different patterns of HCV transmission: transmission predominantly through injecting drug use in the past 30 years in countries such as Australia and the United States, resulting in most people with HCV infection being aged 20 – 50 years; transmission through unsafe injection practices and use of contaminated equipment in traditional health care and folk medicine settings – this pattern occurred 30 to 50 years ago in countries such as Japan and Italy and resulted in increasing HCV prevalence with age; and high levels of ongoing transmission in countries such as Egypt, largely as a result of continuing unsafe injection – this transmission pattern has also resulted in increasing HCV prevalence with age, to above 20% in many areas.

Based on patient reported risk factors for HCV infection, 20-25% of HCV infections in the United States were attributed to sexual transmission. However, other conference participants argued for minimal, if any, risk of sexual HCV transmission, and suggested that there was substantial underreporting of injecting drug use in the United States.

Campbell Aitken from the Macfarlane Burnet Centre for Medical Research in Melbourne reported the results of a study of risk factors for HCV transmission. Risk factors were assessed by telephone interview with randomly selected adults aged 15 years or older, living in Victoria in 1996. Of 757 people interviewed, 2.2% reported having ever injected drugs, 4.8% reported having had a tattoo and 11.4% reported a blood transfusion prior to 1990. More than 10% of Victorians were estimated as having had a test for HCV infection. The prevalence of a history of injecting drug use in Victoria was similar to that reported from a recent national drug survey and suggests that approximately 300,000 people in Australia have a history of injecting drug use.

Scott Bowden from the Victorian Infectious Diseases Reference Laboratory in Melbourne reported the application of molecular biological techniques to documentation of epidemiological links in cases of HCV transmission. Following

diagnosis in a person with no identifiable risk factor for HCV infection other than a minor surgical procedure, testing of all other people on the surgical list found the person immediately prior to the case to have HCV infection. Confirmation of HCV transmission from patient-to-patient was made through evidence of a high degree of HCV sequence homology, despite the surgery having occurred several years prior to the investigation.

HCV prevalence among people who have injected drugs

Results from cross sectional surveys carried out annually from 1995 among injecting drug users attending needle and syringe programs in Australia were reported by Margaret MacDonald from the National Centre in HIV Epidemiology and Clinical Research in Sydney. Although HCV prevalence has remained high, it had declined significantly from 63% in 1995 to 50% in 1998. Among people who had injected drugs for less than three years, HCV prevalence dropped from 22% in 1995 to 13% in 1997. In concordance with the reduction in HCV prevalence was the decline in reported sharing of injecting equipment.

HCV prevalence was very high (approximately 80%) among people who reported injecting methadone, although HCV prevalence in this group had also declined in recent years. Even following adjustment for age, duration of injecting drug use and other correlates of HCV infection, people who reported methadone as their last drug injected were three times more likely to be HCV antibody positive than people who injected amphetamines. An increase in the prevalence of cocaine injecting was described, especially in New South Wales (6% in 1995 to 17% in 1998), and HCV prevalence among cocaine injectors increased from 61% in 1995 to 70% in 1997. Methadone and cocaine injectors have specific risk behaviours and need specific intervention strategies.

HCV prevention and injecting drug use

Ethnic communities tend to be poorly served by current interventions and are at high risk of HCV infection. However, successful peer led harm reduction projects were reported in various ethnic communities. Peter Higgs from the Centre for Harm Reduction in Melbourne presented on a peer education intervention that resulted in the training of young injecting drug users of Vietnamese ethnicity who now provide a source of accurate information on risk reduction in their communities.

Annie Madden from the NSW Users and AIDS Association (NUAA) argued that peer education not only required information provision but also involved capacity building, skills provision to enable participation in the learning process and empowerment. Michael Kerger, from the Macfarlane Burnet Centre for Medical Research, noted that the whole social and cultural context of people's lives needed to be taken into account when designing prevention programs. Jude Byrne from the

Australian Intravenous League suggested that marginalisation of people who inject drugs limits their participation in the public health response, resulting in a substantially diminished response. The biggest barrier to prevention education, however, remained the illegality of injecting drug use.

Libby Plumridge from the Christchurch School of Medicine presented qualitative analyses of the relationship between self-identity, drug use practices and social networks reported by young injecting drug users in Christchurch, New Zealand. Different social contexts supported different styles of drug use and self-identity. Young men identified as recreational users or as addicts whereas all young women participating in the study identified as addicts. The women offered different rationales for injecting drug use from men who identified as addicts. It was suggested that the relationship between social context, self-identity and drug using practices reported by injecting drug users could be exploited for harm minimisation.

Qualitative studies of injecting behaviours other than sharing of injecting equipment revealed a number of "hidden" practices and accidents which continue to put injecting drug users at risk of exposure to hepatitis C. Susan Carruthers, from the National Centre for Research into the Prevention of Drug Abuse, in Perth, found that although injecting drug users appeared to be knowledgeable about avoiding exposure, small errors were made during the injection process that increased the risks of transmission of blood borne viruses.

HCV disease progression

The risk of progression to advanced liver disease among people with HCV infection now appears to be considerably lower than earlier, predominantly liver clinic-based studies had suggested. Alison Rodger from the Macfarlane Burnet Centre for Medical Research reported that 10% of people hospitalised for acute hepatitis in Melbourne in 1971-1975 had liver cirrhosis at 26 years post HCV infection. People who participated in the study were 8 times more likely to die from drug overdose or suicide than HCV infection in the 26 years of follow up.

Greg Dore from the National Centre in HIV Epidemiology and Clinical Research presented a review of published papers on the natural history of HCV infection. Estimates of progression to advanced liver disease in population-based studies ranged from 2 to 8% at 17 – 24 years following infection whereas estimates of progression in clinic-based studies ranged from 20 to 33% at 12 – 30 years follow up. After adjustment for selection characteristics within clinic populations, the estimated overall progression rate to cirrhosis was 8% (range 4-12%) within 20 years.

Clinical management

A consensus had emerged among clinicians that interferon monotherapy was of limited benefit to people with chronic HCV infection and should not be considered

standard of care. William Sievert from the Monash Medical Centre in Melbourne reported that addition of ribavirin to interferon therapy more than doubled the sustained response rate (clearance of HCV viraemia and normalisation of levels of the liver enzyme alanine aminotransferase (ALT) 6-12 months after completion of therapy) compared with interferon therapy only. Predictors of response to therapy included degree of fibrosis on liver biopsy, HCV viral load and HCV genotype. People with HCV genotypes 2-3 had a sustained response rate of 65% when receiving combination therapy whereas people with HCV genotype 1 had a sustained response rate of 30% after 48 weeks of combination therapy.

Stephen Locarnini from the Victorian Infectious Diseases Reference Laboratory in Melbourne presented on future therapy for chronic HCV infection. Although protease inhibitors have provided major advances in the treatment of HIV infection, development of HCV-specific protease inhibitors has been slow, predominantly due to the more superficial and diffuse nature of the protease site on the surface of HCV. Other possible therapeutic agents include helicase and RNA polymerase enzyme inhibitors but it could be several years before these agents reach the clinical trials stage.

The role of complementary therapies, predominantly Chinese herbal preparations, in the management of HCV infection was discussed in several presentations. Although initial trials have demonstrated some biochemical response (approximately 30% of people normalise their ALT levels), no antiviral effects have been demonstrated. However, Matthew Dolan, from London, encouraged a greater sharing of Western and Eastern approaches to health and observed that many younger people were open to integrated models of care.

Liz Coates, from Adelaide, reported the associations between chronic hepatitis C infection and poor oral health. Dental health needed to be included in strategies for the management of hepatitis C infection.

Community education and support

Sandy Gifford, from Deakin University in Melbourne, reported results of a study of women living with hepatitis C infection and spoke of the urgent need to normalise hepatitis C infection and to reduce the stigma of disclosure. Socioeconomic, gender and ethno-specific considerations needed to be addressed in order to close the gaps that led to poor health outcomes. Appropriate primary care and hepatitis C specific services were required that address the broader issue of disadvantage.

Chris Puplick, Chair of the Australian National Council on AIDS and Related Diseases, observed that discrimination against people with hepatitis C infection continued to occur, in some cases in the health care setting itself. Some general practitioners were reluctant to work with people with hepatitis C infection who continued to inject drugs.

Results of a collaborative study coordinated by the National Centre in HIV Social Research and the Hepatitis C Council of New South Wales were reported by Jan Cregan. An analysis of over 9,000 calls to a community-based hepatitis C telephone information and support service indicated that people with hepatitis C infection were interested in issues related to health whereas transmission issues were the topic of greatest interest among relatives, friends and health care workers.

Michaela Coleborne from the Australian Hepatitis Council described an education workshop involving community-based workers from hepatitis C councils, drug user groups and needle and syringe programs. Through sharing of ideas and resources, thereby reducing duplication of time and effort, the workshop's aim was to increase community organisations' capacity to respond to a range of hepatitis C issues – not least of which is the necessary reduction of discrimination.

Carlo Campora of the Hepatitis C Council of Victoria suggested that the structure of local support groups needed to be re-designed following initial implementation. The changing nature of people's needs meant that constant questioning and adaptation of support groups' modes of operation was required. The Australian Hepatitis Council's Jack Wallace sought adequate funding for community support to ensure an effective partnership response. In some cases, minimal funding from government had hindered the communities' support, information and prevention education provision capabilities.

Government response

Eamonn Murphy from the Commonwealth Department of Health and Aged Care in Canberra reported on the development of Australia's first National Hepatitis C Strategy. The following objectives form the cornerstone of the overall strategy:

- reducing the number of new hepatitis C infections
- improving treatment and care for people living with hepatitis C
- 'getting the research right'
- extending partnerships
- clarifying structures, roles and responsibilities.

A process of wide consultation is underway, with the projected launch date early next year.

A consensus evolved during the conference that a multi-disciplinary (or inter-disciplinary) response to hepatitis C, involving community groups, medical practitioners, research groups and governments, provided the best way forward. The final plenary panel discussion entitled "Co-operation in care, prevention and support: new partnerships for a new millennium" encapsulated the strengthening collaborative response to hepatitis C in Australia, as seen with HIV/AIDS in the 1980s. An acknowledgment of a responsibility by all participants, especially from the various streams of research, to share their findings and developments with the wider

community of HCV affected and other interested people, rounded off a highly successful conference.

Reported by:

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THE 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 30 June 1999, and for two previous yearly intervals.

Cases

STATE/ TERRITORY	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
ACT	2	1	2	0	86	8	94	1.2
NSW	168	6	79	6	4546	173	4731	58.1
NT	3	0	3	0	35	0	35	0.4
QLD	40	7	23	1	793	46	841	10.3
SA	13	2	7	0	330	21	354	4.3
TAS	1	0	1	1	44	3	47	0.6
VIC	62	3	33	1	1595	67	1669	20.5
WA	11	1	4	2	344	26	372	4.6
TOTAL†	300	20	152	11	7773	344	8140	100.0

Deaths

ACT	0	0	1	1	65	3	68	1.2
NSW	85	1	45	1	3135	113	3256	56.4
NT	0	0	1	0	24	0	24	0.4
QLD	21	1	19	2	557	30	589	10.2
SA	9	1	9	0	228	15	243	4.2
TAS	1	0	1	0	28	2	30	0.5
VIC	44	5	35	1	1250	47	1303	22.6
WA	4	2	3	0	245	16	262	4.5
TOTAL†	164	10	114	5	5532	226	5775	100.0

† Total columns in Tables 1.1 - 1.5 and 4.1 include 23 AIDS cases and 17 deaths following AIDS in people whose sex was reported as transgender.

Table 1.2
Incidence of AIDS per million current population¹ by sex and State/Territory of diagnosis for the two most recent yearly intervals.

STATE/ TERRITORY	1 Jul 97 – 30 Jun 98			1 Jul 98 – 30 Jun 99		
	Male	Female	Total	Male	Female	Total
ACT	13.1	6.5	9.8	13.0	0.0	6.5
NSW	53.7	1.9	27.6	24.9	1.9	13.5
NT	30.2	0.0	15.9	29.7	0.0	15.7
QLD	23.3	4.1	13.7	13.2	0.6	6.9
SA	17.7	2.7	10.1	9.5	0.0	4.7
TAS	4.3	0.0	2.1	4.3	4.2	4.2
VIC	27.1	1.3	14.0	14.3	0.4	7.3
WA	12.1	1.1	6.6	4.3	2.2	3.3
TOTAL	32.4	2.1	17.7	16.2	1.2	8.7

1. 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 30 June 1999, and for two previous yearly intervals.

Cases¹

AGEGROUP (years)	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	1	0	0	0	9	7	16	0.2
3 – 12	0	0	1	0	20	9	29	0.4
0 – 12	1	0	1	0	29	16	45	0.6
13 – 19	0	0	0	0	25	4	29	0.3
20 – 29	33	8	18	5	1307	93	1413	17.4
30 – 39	119	7	63	4	3269	118	3394	41.7
40 – 49	91	4	42	2	2177	55	2234	27.4
50 – 59	38	0	20	0	729	28	758	9.3
60 +	18	1	8	0	237	30	267	3.3
TOTAL†	300	20	152	11	7773	344	8140	100.0

Deaths²

AGEGROUP (years)	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	0	0	0	0	5	5	10	0.2
3 – 12	0	1	0	1	16	6	22	0.4
0 – 12	0	1	0	1	21	11	32	0.6
13 – 19	0	0	0	0	13	3	16	0.3
20 – 29	14	1	12	0	655	41	706	12.2
30 – 39	67	5	37	1	2225	80	2310	40.0
40 – 49	43	3	36	3	1753	42	1797	31.1
50 – 59	29	0	20	0	654	22	676	11.7
60 +	11	0	9	0	211	27	237	4.1
TOTAL†	164	10	114	5	5532	226	5775	100.0

1. Cases are classified by age at diagnosis.

2. Deaths are classified by age at death.

Table 1.4
Cases of AIDS by sex and exposure category, cumulative to 30 June 1999, and
for two previous yearly intervals.

Adults/adolescents (13 years and older at diagnosis of AIDS)

EXPOSURECATEGORY	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	220	–	104	–	6529	–	6529	83.1
Male homosexual/bisexual contact and injecting drug use	10	–	8	–	351	–	351	4.5
Injecting drug use	15	5	7	1	156	80	236	3.0
<i>Heterosexual</i>	8	3	4	1	105	62	167	
<i>Not further specified</i>	7	2	3	0	51	18	69	
Heterosexual contact:	32	13	22	10	273	171	444	5.6
<i>Sex with injecting drug user</i>	0	0	0	1	7	16	23	
<i>Sex with bisexual male</i>	–	1	–	0	–	37	37	
<i>From high prevalence country</i>	10	6	6	7	46	32	78	
<i>Sex with person from high prevalence country</i>	5	1	2	0	36	13	49	
<i>Sex with person with medically acquired HIV</i>	0	1	0	0	2	9	11	
<i>Sex with HIV-infected person, exposure not specified</i>	1	2	0	0	27	21	48	
<i>Not further specified</i>	16	2	14	2	155	43	198	
Haemophilia/coagulation disorder	1	0	1	0	110	3	113	1.4
Receipt of blood /tissue	1	1	1	0	79	59	138	1.8
Health care setting	0	0	0	0	1	3	4	0.0
Total Adults/Adolescents†	279	19	143	11	7499	316	7815	99.4

Children (under 13 years at diagnosis of AIDS)

Mother with/at risk for HIV infection	1	0	1	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
Total Children	1	0	1	0	29	16	45	0.6
Sub-total	280	19	144	11	7528	332	7860	100.0
Other/undetermined†	20	1	8	0	245	12	280	
TOTAL†	300	20	152	11	7773	344	8140	

1. The 'Other/undetermined' category includes 23 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 30 June 1999,
and for two previous yearly intervals.

Adults/adolescents (13 years and older at diagnosis of AIDS)

EXPOSURE CATEGORY	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	135	–	87	–	4729	–	4729	84.5
Male homosexual/bisexual contact and injecting drug use	10	–	5	–	246	–	246	4.4
Injecting drug use	3	2	7	0	93	49	142	2.5
<i>Heterosexual</i>	1	1	3	0	71	42	113	
<i>Not further specified</i>	2	1	4	0	22	7	29	
Heterosexual contact:	4	5	8	4	137	104	241	4.3
<i>Sex with injecting drug user</i>	1	1	0	0	2	8	10	
<i>Sex with bisexual male</i>	–	1	–	1	–	26	26	
<i>From high prevalence country</i>	0	1	1	2	11	13	24	
<i>Sex with person from high prevalence country</i>	1	1	3	0	15	10	25	
<i>Sex with person with medically acquired HIV</i>	0	0	0	0	2	6	8	
<i>Sex with HIV-infected person, exposure not specified</i>	1	0	0	0	22	15	37	
<i>Not further specified</i>	1	1	4	1	85	26	111	
Haemophilia/coagulation disorder	3	0	1	0	85	3	88	1.6
Receipt of blood /tissue	0	1	0	0	67	50	117	2.1
Health care setting	0	0	0	0	1	2	3	0.0
Total Adults/Adolescents†	155	8	108	4	5358	208	5566	99.4

Children (under 13 years at diagnosis of AIDS)

Mother with/at risk for HIV infection	0	1	0	1	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
Total Children	0	1	0	1	21	11	32	0.6
Sub-total	155	9	108	5	5379	219	5598	100.0
Other/undetermined ¹	9	1	6	0	153	7	177	
TOTAL†	164	10	114	5	5532	226	5758	

1. The 'Other/undetermined' 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 sex¹ and State/Territory, cumulative to 30 June 1999, and for two previous yearly intervals.

STATE/ TERRITORY	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	Rate ²
ACT	6	1	3	3	188	24	212	68.8
NSW ³	345	30	298	40	10631	590	11499	180.3
NT	7	2	9	2	107	9	116	60.6
QLD	105	17	79	12	1914	139	2060	59.2
SA	29	7	18	3	655	57	712	47.8
TAS	2	0	2	1	79	5	84	17.8
VIC ⁴	142	9	131	12	3813	206	4056	86.6
WA	33	13	26	14	886	110	999	54.1
TOTAL⁵	669	79	566	87	18273	1140	19738	104.7

- 1 Forty two people (19 NSW, 7 QLD, 13 VIC and 3 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 259 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 283 people whose sex was not reported.
- 6 Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 17,000 (range 16,600 to 17,400). 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 30 June 1999 and for two previous yearly intervals.

EXPOSURE CATEGORY	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total ¹	%
Male homosexual/bisexual contact	476	–	340	–	12525	–	12525	78.7
Male homosexual/bisexual contact and injecting drug use	28	–	27	–	590	–	570	3.7
Injecting drug use	14	7	21	6	534	173	714	4.5
<i>Heterosexual</i>	10	6	13	4	185	118	304	
<i>Not further specified</i>	4	1	8	2	349	55	410	
Heterosexual contact:	70	67	79	66	830	660	1494	9.4
<i>Sex with injecting drug user</i>	3	7	5	4	29	82	112	
<i>Sex with bisexual male</i>	–	3	–	6	–	95	95	
<i>From high prevalence country</i>	17	23	25	26	116	129	246	
<i>Sex with person from high prevalence country</i>	15	9	19	8	125	64	189	
<i>Sex with person with medically acquired HIV</i>	0	0	1	0	5	13	18	
<i>Sex with HIV-infected person, exposure not specified</i>	4	12	5	11	47	94	142	
<i>Not further specified</i>	31	13	24	11	508	183	692	
Haemophilia/coagulation disorder	0	0	3	0	227	4	231	1.5
Receipt of blood /tissue	1	2	0	3	105	104	209	1.3
Health care setting²	0	0	0	0	3	8	11	0.0
Total Adults/Adolescents	589	76	470	75	14814	949	15774	99.1

Children (under 13 years at diagnosis of HIV infection)

Mother with/at risk for HIV infection	5	0	1	0	36	25	61	0.4
Haemophilia/coagulation disorder	0	0	0	0	66	0	66	0.4
Receipt of blood /tissue	0	0	0	0	13	7	20	0.1
Total Children	5	0	1	0	115	32	147	0.9
Sub-total	594	76	471	75	14929	981	15921	100.0
Other/undetermined ³	75	3	95	12	3344	159	3817	
TOTAL	669	79	566	87	18273	1140	19738⁴	

- 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' category includes 3799 adults/adolescents and 18 children. Forty two 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 footnotes Table 2.1.

Table 2.3
Number of new diagnoses of HIV infection by sex and age group, cumulative to 30 June 1999, and for two previous yearly intervals.

AGEGROUP (YEARS)	1 Jul 97 – 30 Jun 98		1 Jul 98 – 30 Jun 99		Cumulative to 30 Jun 99			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	4	0	1	0	41	16	58	0.3
3 – 12	1	0	2	0	89	18	107	0.5
0 – 12	5	0	3	0	130	34	165	0.8
13 – 19	4	6	9	10	402	79	490	2.5
20 – 29	188	36	156	34	6332	471	6923	35.1
30 – 39	242	26	201	27	6691	303	7104	36.0
40 – 49	147	10	122	12	3161	120	3329	16.9
50 – 59	64	0	55	1	1035	49	1097	5.5
60 +	18	1	20	3	336	54	392	2.0
Unknown	1	0	0	0	186	30	238	1.2
TOTAL¹	669	79	566	87	18273	1140	19738	100.0

1. See footnotes Table 2.1.

Table 2.4
Number of new diagnoses of HIV infection in the year 1 July 1998 to 30 June 1999 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 Jul 98 –31 Dec 98		1 Jan 99 –30 Jun 99		1 Jul 98 – 30 Jun 99		
	Male	Female	Male	Female	Male	Female	Total
ACT	0	0	0	0	0	0	0
NSW	26	0	26	0	52	0	52
NT	2	0	0	0	2	0	2
QLD	11	0	12	1	23	1	24
SA	2	0	3	0	5	0	5
TAS	0	0	1	0	1	0	1
VIC	19	1	17	2	36	3	39
WA	3	2	0	1	3	3	6
TOTAL	63	3	59	4	122	7	129

Table 2.5

Number of new diagnoses of HIV infection in the year 1 July 1998 to 30 June 1999 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 Jul 98 – 31 Dec 98		1 Jan 99 – 30 Jun 99		1 Jul 98 – 30 Jun 99		
	Male	Female	Male	Female	Male	Female	Total
Male homosexual/bisexual contact	50	–	48	–	98	–	98
Male homosexual/bisexual contact and injecting drug use	9	–	3	–	12	–	12
Injecting drug use (female and heterosexual male)	0	2	4	1	4	3	7
Heterosexual contact	3	1	3	3	6	4	10
Health care setting	0	0	0	0	0	0	0
Other/undetermined	1	0	1	0	2	0	2
TOTAL	63	3	59	4	122	7	129

Table 2.6

Number of new diagnoses of HIV infection in the year 1 July 1998 to 30 June 1999 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.

AGEGROUP (YEARS)	1 Jul 98 – 31 Dec 98		1 Jan 99 – 30 Jun 99		1 Jul 98 – 30 Jun 99		
	Male	Female	Male	Female	Male	Female	Total
13 – 19	2	1	1	0	3	1	4
20 – 29	31	2	26	2	57	4	61
30 – 39	19	0	19	2	38	2	40
40 – 49	9	0	8	0	17	0	17
50 – 59	1	0	3	0	4	0	4
60 +	1	0	2	0	3	0	3
TOTAL	63	3	59	4	122	7	129

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 April 1999 to 30 June 1999.

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	1040	693	388	255	5	0	5
Livingstone Road Sexual Health Clinic, NSW	246	295	133	127	1	0	1
Brisbane Sexual Health Clinic, QLD	821	501	262	136	3	0	3
Gold Coast Sexual Health Clinic, QLD	350	488	152	255	1	1	2
Clinic 275, Adelaide, SA	926	616	610	415	1	0	1
Melbourne Sexual Health Centre, VIC	1967	1502	1147	1017	3	0	3
TOTAL	5350	4095	2692	2205	14	1	15

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 April 1999 to 30 June 1999.

EXPOSURE CATEGORY	Previous negative HIV antibody test		% Retested for HIV antibody		Newly diagnosed with HIV infection			
	Male	Female	Male	Female	Male	Female	Total	%
Homosexual/bisexual contact	704	–	63.9	–	4	–	4	0.9
Homosexual/bisexual contact and injecting drug use	81	–	53.1	–	3	–	3	7.0
Injecting drug use (female and heterosexual male)	196	132	51.5	54.5	1	0	1	1.0
Heterosexual contact	1611	1542	56.0	58.8	0	0	0	0.0
<i>outside Australia</i>	195	134	55.4	43.3	0	0	0	0.0
<i>within Australia only</i>	1416	1408	56.1	60.2	0	0	0	0.0
Sex worker	–	300	–	73.7	–	0	0	0.0
Sex worker and injecting drug use	–	35	–	68.6	–	0	0	0.0
Other/undetermined	80	131	80.0	74.0	0	0	0	0.0
TOTAL	2672	2140	58.4	61.7	8	0	8	0.3

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 April 1999 to 30 June 1999.

EXPOSURE CATEGORY	No previous HIV antibody test		% Tested for HIV antibody		Newly diagnosed with HIV infection			
	Male	Female	Male	Female	Male	Female	Total	%
Homosexual/bisexual contact	406	–	52.2	–	3	–	3	1.4
Homosexual/bisexual contact and injecting drug use	19	–	36.8	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	96	71	67.7	59.2	0	1	1	2.4
Heterosexual contact <i>outside Australia</i>	1476	1458	50.7	44.7	2	0	2	0.1
<i>within Australia only</i>	122	97	60.7	45.4	0	0	0	0.0
Sex worker	1354	1361	44.9	44.7	2	0	2	0.2
Sex worker and injecting drug use	–	77	–	73.6	–	0	0	0.0
Other/undetermined	–	12	–	83.3	–	0	0	0.0
	418	303	23.7	25.7	1	0	1	0.6
TOTAL	2415	1921	46.9	46.1	6	1	7	0.3

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 April 1999 to 30 June 1999.

AGEGROUP (YEARS)	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
	Male	Female	Male	Female	Male	Female	Total
13 - 19	174	437	106	189	0	0	0
20 - 29	2142	2178	1209	1197	4	0	4
30 - 39	1740	985	831	561	6	1	7
40 - 49	795	361	349	198	3	0	3
50 - 59	335	108	131	54	1	0	1
60 +	163	24	66	6	0	0	0
Not reported	1	2	0	0	0	0	0
TOTAL	5350	4095	2692	2205	14	1	15

Table 3.5
Number of people diagnosed with specific STI¹, other than HIV, by sex, exposure category and whether or not they were tested for HIV antibody² during the quarter 1 April 1999 to 30 June 1999.

EXPOSURE CATEGORY	Tested for HIV antibody		Not tested for HIV antibody	
	Male	Female	Male	Female
Homosexual/bisexual contact	35	–	44	–
Homosexual/bisexual contact and injecting drug use	7	–	5	–
Injecting drug use (female and heterosexual male)	3	4	3	1
Heterosexual contact	53	42	50	26
<i>outside Australia</i>	9	7	12	5
<i>within Australia only</i>	44	35	38	21
Sex worker	–	1	–	7
Sex worker and injecting drug use	–	0	–	0
Other/undetermined	5	5	8	5
TOTAL	103	52	110	39

1. Specific STI are gonorrhoea, syphilis and chlamydia.
2. Includes people who may have been previously tested for HIV antibody and excludes people previously known to have HIV infection.

REPORT FROM WHO WESTERN PACIFIC REGION

Dr G Pomerol, Regional Advisor, WHO Regional Office, Manila.

Table 4.1

AIDS and HIV in the WHO Western Pacific Region by country; based on reports available at 30 June 1999.

COUNTRY/ AREA	CUMULATIVE AIDS CASES				AIDS Rate ¹	Cumulative Diagnoses HIV
	Male	Female	Children <13 Years	Total		
American Samoa	0	0	0	0	0.0	0
Australia [†]	7773	344	45	8140	43.2	19738
Brunei	11	1	0	12	3.1	475
Cambodia	108	23	333	1379	4.2	14670
China ²	269	18	1	301	0.0	10676
Cook Islands	0	0	0	0	0.0	0
Fed. S. Micronesia	2	0	0	2	1.8	2
Fiji	2	1	0	8	1.0	43
French Polynesia	4	0	0	54	24.9	174
Guam	45	4	0	49	29.6	108
Hong Kong	314	35	5	349	4.2	1066
Japan	1007	162	12	1266	1.2	3954
Kiribati	3	1	0	4	2.6	20
Laos	42	29	2	91	0.7	288
Macao	11	2	0	13	2.2	173
Malaysia	1696	108	34	1804	3.0	26549
Marshall Islands	1	1	0	2	3.8	9
Mongolia	0	0	0	0	0.0	3
Nauru	0	0	0	0	0.0	1
New Caledonia	52	14	2	66	26.9	169
New Zealand	647	34	5	681	18.9	1371
Niue	0	0	0	0	0.0	0
N. Mariana Islands	4	1	0	7	10.4	15
Palau	1	0	0	1	5.8	1
Papua New Guinea	215	196	21	417	5.4	1213
Philippines	219	123	7	343	0.5	1099
Rep. of Korea	104	11	0	115	0.1	811
Samoa	4	2	2	6	3.7	9
Singapore	389	30	4	419	9.2	831
Solomon Islands	0	0	0	0	0.0	1
Tokelau	0	0	0	0	0.0	0
Tonga	10	2	0	14	6.1	19
Tuvalu	0	0	0	0	0.0	1
Vanuatu	0	0	0	0	0.0	0
Vietnam	1008	157	8	1819	1.0	10118
Wallis and Futuna	1	0	0	1	7.1	2
TOTAL[†]	13942	1299	481	17363	0.8	93609

1. AIDS cases per 100,000 total current population.

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Australian HIV Surveillance Report

National Centre in HIV Epidemiology and Clinical Research

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ISSN 1035-221X

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.

HIV antibody testing is carried out at Public Health Laboratories and Blood Transfusion Services, and summary information on testing is sent on a four-weekly basis to the National Serology Reference Laboratory Australia, which produces quarterly tabulations for publication in the Australian HIV Surveillance Report.

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.

The Australian HIV Surveillance Report is produced by the National Centre in HIV Epidemiology and Clinical Research on a quarterly basis, issued in January, April, July and October. Subscription is free, and can be obtained by writing to the Editor or by calling the Epidemiology Section of the NCHECR:

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