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Epidemiological and social research findings reported at the 12th World AIDS Conference
Geneva, Switzerland, 28 June – 3 July 1998

At the 12th World AIDS Conference, held in Geneva, Switzerland, on 28 June – 3 July 1998, differences in the extent of HIV infection among people living in developing and developed countries were highlighted. By the end of 1997, an estimated 30.6 million people were living with HIV/AIDS worldwide: 12.2 million women, 17.3 million men and 1.1 million children under the age of 15 years (Joint United Nations Programme on HIV/AIDS (UNAIDS) 1998). Not only were more than 90% of people with HIV infection living in developing countries but increasing numbers of deaths following AIDS were reported from developing countries. In 1997, 83% of the world's AIDS deaths were reported from sub-Saharan Africa whereas in developed countries, the number of deaths following AIDS had dropped, attributable to the use of combination antiretroviral therapy. For these reasons, "Bridging the gap" was the theme of the 12th World AIDS Conference.

While progress with development of an HIV vaccine was limited and there was little promotion of condom use for prevention of HIV infection, a short and relatively inexpensive course of treatment with zidovudine was shown to substantially reduce the risk of HIV transmission from mother to child in Thailand. Other studies carried out in developing countries showed that relatively

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ANNOUNCEMENTS

National meetings

Communicable Diseases Network Australia New Zealand conference "Control of Communicable Diseases in Australia" will be held in Canberra, ACT on 10 November 1998. Telephone: 02 6289 9245. Facsimile: 02 6289 7791. E-mail: ccd.conf@health.gov.au

The 10th Annual Conference of the Australasian Society for HIV Medicine will be held in Newcastle, New South Wales, on 18 – 21 November 1998. Telephone: 61 2 9241 1478. Facsimile: 61 2 9251 3552. E-mail: ashm@icmsaust.com.au

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inexpensive prophylactic treatments were effective in reducing HIV-related morbidity and mortality.

Newly emerging epidemics and epidemics in decline

The prevalence of HIV infection was reported to have declined in several populations whereas in others, there were ongoing or increasing epidemics of HIV infection.

In Abidjan, Côte d'Ivoire, HIV prevalence declined significantly from 33% in 1992 to 13% in 1997 among female sex workers seen for the first time at a clinic offering free HIV counselling and testing, and diagnosis and treatment of sexually transmissible diseases. A significant decline was also observed in the prevalence of other sexually transmissible diseases including gonorrhoea, syphilis and genital ulcers. While the characteristics of the female sex worker population had changed over time to a younger and more educated population who reported a shorter duration of sex work, educational activities were considered to have contributed to the significant increase in condom use which in turn contributed to the reduced prevalence of sexually transmissible infections.

A significant drop in HIV prevalence was also reported in the Bukoba urban area of Kagera, Tanzania. HIV prevalence measured in random population based samples dropped from 24% in 1987 to 13% in 1996. The decline in HIV prevalence was most pronounced among men and women in the 15 – 24 year age group. It was not clear, however, if the decline in HIV prevalence was due to changed patterns of behaviour or depletion of the susceptible population by death or migration.

Monitoring HIV prevalence among pregnant women provides a useful indicator of HIV prevalence in the young sexually active population. In northern Thailand, HIV prevalence among pregnant women seen at Chiang Rai Hospital initially increased and then declined. Among more than 40,000 deliveries at the hospital in 1990 – 1997, HIV prevalence increased from 1.6% in 1990 to 6.4% in 1994 and then declined to 4.6% in 1997. HIV prevalence was highest (6.8%) among women aged less than 19 years at delivery.

Recent epidemics of HIV infection among injecting drug users were reported in the Russian Federation and in the Ukraine. In the Russian Federation, no cases of HIV infection among injecting drug users were reported prior to 1994 but the number with HIV infection increased rapidly, from 2 in 1994, to 5 in 1995, to 1,018 in 1996 and to 2,220 in 1997. In the Ukraine, two waves of HIV infection were reported. The first wave was characterised by low levels of sexual transmission in 1987 – 1994 with 398 reports of HIV infection. In the second wave, rapid HIV transmission occurred among injecting drug users. In 1995 – 1997, 30,000 cases of

HIV infection were reported, with 80% of cases among injecting drug users in the age group 15 – 29 years.

The impact of treatable sexually transmissible infections on HIV incidence

In the Rakai District in Uganda, a randomised, controlled community trial was carried out to measure the effect of treatment of other sexually transmissible infections on HIV incidence. In the intervention arm, all consenting residents in the age group 15 – 59 years were given treatment for sexually transmissible infections whereas residents in the control arm were given vitamin supplements. At the start of the trial, HIV prevalence was 16.1%. After 20 months of follow-up, prevalence of specific sexually transmissible infections (syphilis, trichomonas, gonorrhoea and chlamydia) was significantly lower among people in the intervention arm but HIV incidence was the same as that among people in the control arm of the study (1.5 per 100 person years). It was suggested that control of treatable sexually transmissible infections in a mature HIV epidemic resulted in only a modest decline in HIV transmission and that other common sexually transmissible conditions such as herpetic ulcers, which were more difficult to treat, played a role in HIV transmission.

The impact of the new treatments for HIV disease

It is now clear that treatment with one antiretroviral agent has had limited impact on HIV disease progression. In contrast, combination antiretroviral therapy, introduced in 1996, has had a substantial effect on the course of HIV disease. Use of highly active antiretroviral therapy (HAART), that is HIV treatment regimes with three or more antiretroviral agents including a protease inhibitor, has resulted in substantial reductions in the rate of progression to AIDS in people with HIV infection.

The natural history of HIV-related opportunistic infections following the introduction of highly active antiretroviral therapy (HAART) was reported, based on data from large cohort studies of people with HIV infection in Europe. Information from the EuroSIDA cohort showed that the incidence of AIDS-defining illness had declined dramatically from 22/100 person years in 1992 to 5/100 person years in 1998. The relative risk of an AIDS-defining opportunistic infection in 1998 was 0.14 compared to 1992, a decline of 86%. However, no significant decline was observed in the occurrence of non-Hodgkin's lymphoma. The decline in opportunistic infection incidence began in the first three months following treatment with HAART, except for *Mycobacterium-avium* complex (MAC) infection and cytomegalovirus (CMV) disease, which declined after three to nine months of treatment. CD4+ cell count persistently below 200/mm^3 was a risk factor for opportunistic infections.

People living with HIV infection reported a range of personal responses to HAART. Some people reported little impact on everyday life while others were uncertain of the outcome of therapy and expressed concern about treatment failure.

Reasons suggested for lack of adherence to antiretroviral therapy differed between doctors and people living with HIV infection. People living with HIV infection reported that their reasons for lack of adherence were that they had forgotten to take the medication, they were away from home or some other change in daily routine had occurred, or that they were asleep or were too busy. Doctors reported that people did not adhere to antiretroviral therapy due to the large number of pills and their side effects.

Opportunistic infection prophylaxis

Improvement in immune function among people treated with HAART has led to the question of whether it is safe to stop opportunistic infection prophylaxis. Although no incident cases of MAC or *Pneumocystis carinii* pneumonia (PCP) were seen among people who ceased primary prophylaxis against these infections, longer follow-up is needed to adequately address the question. Among people treated with HAART, long-lasting remission of CMV retinitis was reported in the absence of CMV maintenance therapy.

In countries where HAART is not an economic possibility for most people, prophylaxis issues are very different. In Abidjan, Côte d'Ivoire, treatment of HIV infected tuberculosis patients with cotrimoxazole resulted in a drop in mortality. HIV-infected tuberculosis patients were randomly assigned to receive one tablet of cotrimoxazole daily or placebo, and 48% lower mortality was observed in the cotrimoxazole group (11.3/100 person years vs 21.6/100 person years). In another study from Abidjan, the same cotrimoxazole regime produced a 45% reduction in severe clinical events compared with the group receiving placebo.

Isoniazid prophylaxis was shown, in an analysis of randomised controlled trials comparing isoniazid prophylaxis with placebo or no prophylaxis, to reduce tuberculosis incidence by 60% among HIV-infected people with a positive tuberculin skin test. However, no difference in tuberculosis incidence was observed in another randomised trial of tuberculosis prophylaxis, a comparison of 2 months treatment with rifampicin/ pyrazinamide with 12 months treatment with isoniazid. The conclusion of equivalent prophylactic efficacy in the two arms was somewhat tempered by the low overall incidence of tuberculosis (1.2/100 person years), the high median CD4+ cell count at baseline (436/mm^3) and the relatively short duration of follow-up (36 months).

Perinatal HIV transmission

A 70% reduction in the perinatal HIV transmission rate was reported among women with HIV infection who delivered by elective caesarean section. Use of both antiretroviral therapy in pregnancy and elective caesarean section was shown, in a meta-analysis of 10,729 mother-child pairs included in 15 European and North American cohort studies, to reduce the perinatal HIV transmission rate to 2%. In Bangkok, use of a short course of zidovudine (300 mg of zidovudine taken orally twice daily by pregnant women from 36 weeks gestation, and every 3 hours during labour, with no treatment of the newborn or breastfeeding) was shown to reduce the perinatal HIV transmission rate from 18.9% among untreated women to 9.4% among treated women. The halving of the transmission rate appeared to be due to the small reduction (<0.5 log) in the woman's viral load, an effect which lasted for only a month or two. Zidovudine treatment apparently reduced the rate of intrapartum transmission, with a higher proportion of *in utero* infections observed in the treated group. Adverse events were associated with use of protease inhibitors during pregnancy. An increased frequency of prematurity, intracerebral bleeds, anaemia, hyperbilirubinaemia, hepatitis and extrahepatic biliary atresia was reported among children born to women using combination antiretroviral therapy.

HIV and hepatitis C coinfection

Studies were reported which addressed the interaction between the natural histories of HIV infection and hepatitis C virus (HCV) infection, and the effect of HAART on HCV viral load and HCV disease progression. No decline in HCV viral load was observed among HIV and HCV coinfected patients treated with HAART. In fact, a transient increase in both HCV viral load and markers for liver inflammation (transaminases) was frequently reported. Furthermore, rapid progression of liver disease was observed in some HIV and HCV coinfected patients treated with HAART. Of 120 HIV and HCV coinfected patients commenced on HAART, 10 (8.3%) developed symptomatic liver failure.

Interferon is the current standard therapy for people with chronic HCV infection. Efficacy of interferon therapy was similar among people with both HIV and HCV infection and those with HCV infection only (approximately 15-20% long term response). Interferon therapy may have lower efficacy in HIV and HCV coinfected patients with CD4+ cell counts less than 500/mm^3.

Sexual behaviour reported by homosexually active men

Among gay men, young age was reported not, of itself, to be a risk factor for unsafe sexual practices. The inverse association between age and HIV seroconversion, unprotected receptive anal intercourse and unprotected insertive anal intercourse, observed in North America but not in Australia or Europe, was mediated by perceived norms of unsafe sex and sexual mixing in bar settings.

While the impact of HAART on HIV prevention was complex, no clear evidence was available for a direct relationship between use of HAART and an increased prevalence of unprotected anal intercourse. Risk behaviour among gay men was related to pre-existing difficulties with safer sex rather than the availability of new treatments.

Attitudes and beliefs about the new antiretroviral treatments, and sexual risk appraisal and behaviour, was reported among 61 discordant male couples participating in a cohort study in New York City. The men reported a median duration of the relationship of 22 months and 90% of men with HIV infection were receiving HAART. Men without HIV infection who agreed with the statement "reducing viral load also reduces the risk for HIV transmission" were more likely than men with HIV infection to engage in unprotected receptive anal sex. Only 14% of men agreed with the statement "the new treatments have made me more willing to take risks in my sexual behaviour with my partner".

Role of host factors in HIV infection and disease progression

In recent years there has been great interest in how HIV enters target cells. Although it has long been recognised that HIV requires expression of the CD4+ molecule on the cell surface, it was suspected that HIV used other receptors for cell entry. In 1996, the chemokine receptor CCR5 was identified as the principal coreceptor for mediating entry of macrophage-tropic strains of HIV.

In Geneva, four new chemokine receptors were reported (CCR1, CCR4, CCR8, CX3CR1), increasing the number of known chemokine receptors to 11. The majority of HIV strains involved in cell entry were reported to utilise the chemokine receptor CCR5, especially in perinatal HIV transmission, with ability to use other chemokine receptors increasing over time as the virus mutates. Use of more than one receptor was correlated with disease progression while long-term non-progressors remained infected with CCR5-utilising virus. The apparent restriction of transmitted strains of HIV to CCR5 was thought to be due to selective infection of cells such as dendritic cells at mucosal surfaces. However, dendritic cells were reported to have high levels of expression of the chemokine receptor CXCR4, with virtually no CCR5 on their surface.

Host genotype was reported to be associated with delayed HIV disease progression in a study of long term non-progressors carried out in France (the study included people who had HIV infection for at least 8 years, with a stable CD4+ cell count above 600/mm^3 and who had received no antiretroviral therapy). The 32 base-pair mutation in the chemokine receptor gene CCR5 (CCR5Δ32) had the strongest protective effect against progression whereas mutations in the chemokine receptor genes CCR2b and SDF-1 were not associated with delayed progression. Specific alleles of human leukocyte antigens (HLA) were also reported to have a strong

protective effect against HIV disease progression. Selected HLA alleles, the chemokine receptor gene SDF-1 and the chemokine receptor mutation CCR5Δ32 were genotypes highly protective against HIV disease progression.

Children born to women with HIV infection provided evidence for an association between specific HLA alleles and protection from infection. In Nairobi, Kenya, the perinatal HIV transmission rate was 2% among children with the HLA allele A2/A6802, whereas 17% of children without the allele acquired HIV infection perinatally. The effect of the child's HLA allele was independent of the strong association between mother and child HLA concordance and perinatal HIV infection, and was observed only in perinatal transmissions, not in late breast-feeding transmissions.

New evidence was available suggesting that repeatedly exposed but uninfected people were immune to HIV infection. As well as the strong cytotoxic and proliferative responses previously documented, Kenyan female sex workers were shown to have HIV-specific IgA responses, both at mucosal surfaces and in their serum, suggesting a role for mucosal virus-specific humoral responses, independent of host cellular responses.

Vaccine development

The development of cytotoxic T cell responses in people exposed to HIV infection who remain HIV antibody negative, and the coincidence of a cytotoxic T cell response with falling levels of virus in cases of acute HIV infection, provide evidence that cytotoxic T lymphocyte responses rather than neutralising antibodies are essential components in an effective vaccine strategy. In animal studies, the most promising vectors for eliciting HIV-specific cytotoxic T lymphocyte responses were live avipox and recombinant DNA vectors. The recombinant avipox viruses were shown to be efficient in priming cellular immune responses in HIV negative individuals, with up to 80% of people developing durable HIV-specific cytotoxic T lymphocyte responses. In a macaque model, consecutive immunisations with recombinant DNA and fowlpox viruses expressing HIV genes were reported to elicit cellular immunity and to provide protection against continued HIV replication.

Post exposure prophylaxis

Experience with post-exposure prophylaxis was reported in cases of occupational exposure to HIV in health care workers and for a limited number of cases of sexual exposure. Among occupationally exposed health care workers in the United States, half did not take post-exposure prophylaxis while more than half of those who commenced treatment ceased early due to adverse events. In London, only 36% of people exposed to HIV in an occupational setting and 14% of those exposed sexually

completed follow-up. However, high rates of adherence to post exposure prophylaxis following sexual exposure to HIV were reported in San Francisco among people who were required to return to the clinic for further treatment.

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Reference

Joint United Nations Programme on HIV/AIDS (UNAIDS) 1998. Report on the global HIV/AIDS epidemic June 1998.

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 31 March 1998, and for two previous yearly intervals.

Cases

STATE/ TERRITORY	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
ACT	7	1	0	0	80	7	87	1.1
NSW	257	16	114	2	4333	157	4501	58.0
NT	3	0	2	0	31	0	31	0.4
QLD	65	6	40	9	759	45	806	10.4
SA	30	1	15	0	320	19	339	4.3
TAS	6	0	1	0	41	2	43	0.5
VIC	108	7	49	5	1526	64	1597	20.6
WA	27	3	11	2	337	23	362	4.7
TOTAL†	**503**	**34**	**232**	**18**	**7427**	**317**	**7766**	**100.0**

Deaths

ACT	2	0	0	0	62	2	64	1.2
NSW	211	5	68	3	3040	112	3159	56.7
NT	3	0	0	0	23	0	23	0.4
QLD	57	3	17	1	527	28	557	10.0
SA	18	1	7	0	216	14	230	4.1
TAS	4	0	1	0	27	2	29	0.5
VIC	96	2	47	6	1204	45	1255	22.5
WA	20	2	8	2	241	16	258	4.6
TOTAL†	**411**	**13**	**148**	**12**	**5340**	**219**	**5575**	**100.0**

† Total columns in Tables 1.1 – 1.5 and 4.1 include 22 AIDS cases and 16 deaths following AIDS in people whose sex was reported as transgender.

Table 1.2
Incidence of AIDS per million current population[1] by sex and State/Territory of diagnosis for the two most recent yearly intervals.

STATE/ TERRITORY	1 Apr 96 – 31 Mar 97			1 Apr 97 – 31 Mar 98		
	Male	Female	Total	Male	Female	Total
ACT	45.7	6.4	25.9	0.0	0.0	0.0
NSW	83.2	5.1	43.9	36.5	0.6	18.4
NT	30.9	0.0	16.3	20.0	0.0	10.6
QLD	38.7	3.6	21.2	23.4	5.3	14.3
SA	41.1	1.3	21.0	20.5	0.0	10.1
TAS	25.6	0.0	12.6	4.3	0.0	2.1
VIC	47.8	3.0	25.2	21.5	2.1	11.7
WA	30.3	3.4	16.9	12.1	2.2	7.2
TOTAL	**55.1**	**3.7**	**29.2**	**25.1**	**1.9**	**13.4**

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 31 March 1998, and for two previous yearly intervals.

Cases[1]

AGE GROUP (years)	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	*0*	*1*	*0*	*0*	*8*	*7*	*15*	*0.2*
3 – 12	*0*	*0*	*0*	*0*	*19*	*9*	*28*	*0.4*
0 – 12	0	1	0	0	27	16	43	0.6
13 – 19	2	0	0	0	25	4	29	0.4
20 – 29	65	9	28	6	1264	84	1361	17.5
30 – 39	227	12	89	7	3133	108	3247	41.8
40 – 49	131	6	68	4	2082	50	2134	27.5
50 – 59	59	4	32	1	680	26	707	9.1
60 +	19	2	15	0	216	29	245	3.1
TOTAL[†]	**503**	**34**	**232**	**18**	**7427**	**317**	**7766**	**100.0**

Deaths[2]

AGE GROUP (years)	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	*0*	*0*	*0*	*0*	*5*	*5*	*10*	*0.2*
3 – 12	*0*	*0*	*0*	*1*	*16*	*5*	*21*	*0.4*
0 – 12	0	0	0	1	21	10	31	0.6
13 – 19	0	0	0	0	13	3	16	0.3
20 – 29	34	3	13	1	637	41	688	12.3
30 – 39	183	8	61	6	2162	77	2243	40.2
40 – 49	126	1	43	4	1691	39	1732	31.1
50 – 59	54	0	23	0	622	22	644	11.5
60 +	14	1	8	0	194	27	221	4.0
TOTAL[†]	**411**	**13**	**148**	**12**	**5340**	**219**	**5575**	**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 31 March 1998, and for two previous yearly intervals.

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

EXPOSURE CATEGORY	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	405	–	167	–	6283	–	6283	83.7
Male homosexual/bisexual contact and injecting drug use	30	–	10	–	37	–	337	4.5
Injecting drug use	11	6	6	3	135	72	207	2.7
Heterosexual	*4*	*2*	*1*	*2*	*94*	*57*	*151*	
Not further specified	*7*	*4*	*5*	*1*	*41*	*15*	*56*	
Heterosexual contact:	26	21	29	14	232	155	387	5.1
Sex with injecting drug user	*2*	*5*	*0*	*0*	*7*	*15*	*22*	
Sex with bisexual male	*–*	*4*	*–*	*3*	*–*	*35*	*35*	
From high prevalence country	*4*	*4*	*9*	*3*	*34*	*22*	*56*	
Sex with person from high prevalence country	*6*	*1*	*6*	*1*	*33*	*13*	*46*	
Sex with person with medically acquired HIV	*0*	*0*	*0*	*1*	*2*	*9*	*11*	
Sex with HIV–infected person, exposure not specified	*1*	*1*	*2*	*3*	*27*	*20*	*47*	
Not further specified	*13*	*6*	*12*	*3*	*129*	*41*	*170*	
Haemophilia/coagulation disorder	3	0	4	0	108	3	111	1.5
Receipt of blood /tissue	3	4	0	1	77	58	135	1.8
Health care setting	0	0	0	0	1	3	4	0.1
Total Adults/Adolescents†	**478**	**31**	**216**	**18**	**7173**	**291**	**7464**	**99.4**

Children (under 13 years at diagnosis of AIDS)

Mother with/at risk for HIV infection	0	1	0	0	11	13	24	0.3
Haemophilia/coagulation disorder	0	0	0	0	5	0	5	0.1
Receipt of blood /tissue	0	0	0	0	11	3	14	0.2
Total Children	**0**	**1**	**0**	**0**	**27**	**16**	**43**	**0.6**
Sub-total	**478**	**32**	**216**	**18**	**7200**	**307**	**7507**	**100.0**
Other/undetermined	25	2	16	0	227	10	259	
TOTAL†	**503**	**34**	**232**	**18**	**7427**	**317**	**7766**	

Table 1.5
Deaths following AIDS by sex and exposure category, cumulative to 31 March 1998, and for two previous yearly intervals.

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

EXPOSURE CATEGORY	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
Male homosexual/bisexual contact	322	–	119	–	4575	–	4575	84.6
Male homosexual/bisexual contact and injecting drug use	27	–	11	–	239	–	239	4.4
Injecting drug use	16	3	2	3	83	49	132	2.4
Heterosexual	*9*	*2*	*1*	*2*	*67*	*42*	*109*	
Not further specified	*7*	*1*	*1*	*1*	*16*	*7*	*23*	
Heterosexual contact:	22	7	4	8	126	100	226	4.2
Sex with injecting drug user	*0*	*1*	*1*	*1*	*2*	*8*	*10*	
Sex with bisexual male	*–*	*1*	*–*	*2*	*–*	*25*	*25*	
From high prevalence country	*1*	*0*	*0*	*1*	*9*	*11*	*20*	
Sex with person from high prevalence country	*2*	*1*	*1*	*1*	*12*	*10*	*22*	
Sex with person with medically acquired HIV	*1*	*1*	*0*	*0*	*2*	*6*	*8*	
Sex with HIV–infected person, exposure not specified	*2*	*2*	*1*	*1*	*22*	*15*	*37*	
Not further specified	*16*	*1*	*1*	*2*	*79*	*25*	*104*	
Haemophilia/coagulation disorder	7	0	4	0	84	3	87	1.6
Receipt of blood /tissue	3	1	0	0	67	49	116	2.1
Health care setting	0	0	0	0	1	2	3	0.1
Total Adults/Adolescents†	**397**	**11**	**140**	**11**	**5175**	**203**	**5378**	**99.4**

Children (under 13 years at diagnosis of AIDS)

Mother with/at risk for HIV infection	0	0	0	1	7	8	15	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**	**0**	**0**	**0**	**21**	**10**	**31**	**0.6**
Sub-total	**397**	**11**	**140**	**12**	**5196**	**213**	**5409**	**100.0**
Other/undetermined	14	2	8	0	144	6	166	
TOTAL†	**411**	**13**	**148**	**12**	**5340**	**219**	**5575**	

Table 2.1
Number of new diagnoses of HIV infection by sex[1] and State/Territory, cumulative to 31 March 1998, and for two previous yearly intervals.

STATE/ TERRITORY	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	Rate[2]
ACT	9	4	4	0	180	20	200	64.7
NSW[3]	413	27	366	26	10262	545	11088	176.2
NT	9	0	2	4	93	7	100	53.0
QLD	141	15	91	14	1789	123	1918	56.1
SA	38	5	30	5	627	52	679	45.8
TAS	3	0	2	0	77	4	81	17.1
VIC[4]	173	11	155	12	3709	193	3941	85.4
WA[5]	35	4	33	9	849	86	939	52.0
TOTAL[6]	**821**	**66**	**683**	**70**	**17586**	**1030**	**18946[7]**	**101.9**

1. Thirty nine people (20 NSW, 6 QLD, 10 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 261 people whose sex was not reported.
4. Cumulative total for VIC includes 29 people whose sex was not reported.
5. Cumulative total for WA includes 1 person whose sex was not reported.
6. Cumulative total for Australia includes 291 people whose sex was not reported.
7. Estimated number of new diagnoses of HIV infection, adjusted for multiple reports, was 16,240 (range 15,850 to 16,640). 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 1998 and for two previous yearly intervals.

EXPOSURE CATEGORY	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total[1]	%
Male homosexual/bisexual contact	602	–	471	–	12057	–	12057	79.6
Male homosexual/bisexual contact and injecting drug use	27	–	22	–	518	–	518	3.4
Injecting drug use	22	2	13	7	515	164	686	4.5
Heterosexual	*11*	*1*	*10*	*6*	*160*	*110*	*271*	
Not further specified	*11*	*1*	*3*	*1*	*355*	*54*	*415*	
Heterosexual contact:	68	56	68	56	748	572	1323	8.7
Sex with injecting drug user	*1*	*4*	*3*	*7*	*20*	*70*	*90*	
Sex with bisexual male	*–*	*5*	*–*	*1*	*–*	*88*	*88*	
From high prevalence country	*11*	*14*	*12*	*12*	*76*	*84*	*161*	
Sex with person from high prevalence country	*19*	*9*	*22*	*13*	*110*	*61*	*171*	
Sex with person with medically acquired HIV	*1*	*0*	*0*	*0*	*5*	*13*	*18*	
Sex with HIV–infected person, exposure not specified	*3*	*8*	*3*	*13*	*41*	*73*	*115*	
Not further specified	*33*	*16*	*28*	*10*	*496*	*183*	*680*	
Haemophilia/coagulation disorder	0	0	0	0	227	4	231	1.5
Receipt of blood /tissue	1	2	1	1	104	100	204	1.3
Health care setting[2]	0	0	0	0	3	8	11	0.1
Total Adults/Adolescents	**720**	**60**	**575**	**64**	**14172**	**848**	**15030**	**99.1**
Children (under 13 years at diagnosis of AIDS)								
Mother with/at risk for HIV infection	3	4	3	0	32	25	58	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	**3**	**4**	**3**	**0**	**111**	**32**	**144**	**0.9**
Sub-total	**723**	**64**	**578**	**64**	**14283**	**880**	**15174**	**100.0**
Other/undetermined[3]	98	2	105	6	3303	150	3772	
TOTAL	**821**	**66**	**683**	**70**	**17586**	**1030**	**18946**	

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 3755 adults/adolescents and 17 children. Thirty nine 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 31 March 1998, and for two previous yearly intervals.

AGE GROUP (YEARS)	1 Apr 96 – 31 Mar 97		1 Apr 97 – 31 Mar 98		Cumulative to 31 Mar 98			
	Male	Female	Male	Female	Male	Female	Total	%
0 – 2	*3*	*3*	*3*	*0*	*37*	*16*	*55*	*0.3*
3 – 12	*0*	*1*	*0*	*0*	*87*	*19*	*106*	*0.5*
0 – 12	3	4	3	0	124	35	161	0.8
13 – 19	9	3	4	5	393	67	468	2.5
20 – 29	216	22	192	30	6148	426	6700	35.4
30 – 39	339	22	248	21	6443	269	6822	36.0
40 – 49	163	9	148	11	3001	105	3151	16.6
50 – 59	59	5	65	1	965	47	1024	5.4
60 +	23	1	21	2	309	51	362	1.9
Unknown	9	0	2	0	203	30	258	1.4
TOTAL[1]	**821**	**66**	**683**	**70**	**17586**	**1030**	**18946**	**100.0**

1. See footnotes Table 2.1.

Table 2.4
Number of new diagnoses of HIV infection in the year 1 April 1997 to 31 March 1998 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 97 – 30 Sep 97		1 Oct 97 – 31 Mar 98		1 Apr 97 – 31 Mar 98		
	Male	Female	Male	Female	Male	Female	Total[1]
ACT	0	0	2	0	2	0	2
NSW	27	1	30	0	57	1	59
NT	1	1	0	0	1	1	2
QLD	7	0	9	0	16	0	16
SA	4	1	5	0	9	1	10
TAS	0	0	0	0	0	0	0
VIC	19	1	17	1	36	2	38
WA	2	0	6	0	8	0	8
TOTAL	**60**	**4**	**69**	**1**	**129**	**5**	**135**

1. Total column for Tables 2.4 – 2.6 includes 1 person whose sex was reported as transgender.

Table 2.5
Number of new diagnoses of HIV infection in the year 1 April 1997 to 31 March 1998 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 97 – 30 Sep 97		1 Oct 97 – 31 Mar 98		1 Apr 97 – 31 Mar 98		
	Male	Female	Male	Female	Male	Female	Total[1]
Male homosexual/bisexual contact	53	–	56	–	109	–	109
Male homosexual/bisexual contact and injecting drug use	3	–	3	–	6	–	7
Injecting drug use (female and heterosexual male)	0	0	1	0	1	0	1
Heterosexual contact	4	3	3	1	7	4	11
Health care setting	0	0	0	0	0	0	0
Other/undetermined	0	1	6	0	6	1	7
TOTAL	**60**	**4**	**69**	**1**	**129**	**5**	**135**

Table 2.6
Number of new diagnoses of HIV infection in the year 1 April 1997 to 31 March 1998 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 97 – 30 Sep 97		1 Oct 97 – 31 Mar 98		1 Apr 97 – 31 Mar 98		
	Male	Female	Male	Female	Male	Female	Total[1]
13 – 19	1	1	0	0	1	1	2
20 – 29	21	1	37	0	58	1	59
30 – 39	23	0	23	1	46	1	48
40 – 49	10	1	4	0	14	1	15
50 – 59	3	1	4	0	7	1	8
60 +	2	0	1	0	3	0	3
TOTAL	**60**	**4**	**69**	**1**	**129**	**5**	**135**

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 1998 to 31 March 1998.

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	1636	1178	612	452	2	1	3
Clinic 34, Darwin, NT	221	173	110	101	0	0	0
Brisbane Sexual Health Clinic, QLD	924	531	307	145	0	0	0
Gold Coast Sexual Health Clinic, QLD	438	543	214	307	0	0	0
Clinic 275, Adelaide, SA	1148	766	832	510	3	0	3
Melbourne Sexual Health Centre, VIC	2172	1626	1283	1212	6	0	6
TOTAL	**6539**	**4817**	**3358**	**2727**	**11**	**1**	**12**

Table 3.2
Number of people seen[1] 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 1998 to 31 March 1998.

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	817	–	64.9	–	5	–	5	0.9
Homosexual/bisexual contact and injecting drug use	77	–	68.8	–	1	–	1	1.9
Injecting drug use (female and heterosexual male)	244	183	62.7	53.0	0	0	0	0.0
Heterosexual contact	2066	1956	53.4	56.9	1	0	1	0.05
outside Australia[2]	*276*	*221*	*41.7*	*48.0*	*0*	*0*	*0*	*0.0*
within Australia only	*1790*	*1735*	*55.2*	*58.0*	*1*	*0*	*1*	*0.05*
Sex worker	–	324	–	79.9	–	0	0	0.0
Sex worker and injecting drug use	–	26	–	57.7	–	0	0	0.0
Other/undetermined	105	162	74.3	82.7	1	0	1	0.5
TOTAL	**3309**	**2651**	**57.9**	**61.0**	**8**	**0**	**8**	**0.2**

1. At clinics other than Clinic 34, Darwin, NT.
2. Within 3 months for Clinic 275, SA, and one year for other clinics.

Table 3.3
Number of people seen[1] 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 1998 to 31 March 1998.

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	404	–	54.5	–	2	–	2	0.9
Homosexual/bisexual contact and injecting drug use	23	–	69.6	–	0	–	0	0.0
Injecting drug use (female and heterosexual male)	95	66	78.9	98.5	0	0	0	0.0
Heterosexual contact	1679	1472	54.0	53.4	0	1	1	0.06
outside Australia[2]	*144*	*140*	*58.3*	*43.6*	*0*	*0*	*0*	*0.0*
within Australia only	*1535*	*1332*	*52.6*	*54.4*	*0*	*1*	*1*	*0.06*
Sex worker	–	58	–	69.0	–	0	0	0.0
Sex worker and injecting drug use	–	2	–	100.0	–	0	0	0.0
Other/undetermined	523	370	24.7	31.1	1	0	1	0.4
TOTAL	**2724**	**1968**	**48.9**	**51.2**	**3**	**1**	**4**	**0.2**

1. At clinics other than Clinic 34, Darwin, NT.
2. Within 3 months for Clinic 275 and one year for other clinics.

Table 3.4
Number of people seen[1], 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 1998 to 31 March 1998.

AGE GROUP (YEARS)	Seen at Clinic		Tested for HIV antibody		Newly diagnosed with HIV infection		
	Male	Female	Male	Female	Male	Female	Total
13 – 19	213	549	131	261	0	0	0
20 – 29	2719	2592	1563	1499	0	0	0
30 – 39	1976	989	924	559	9	1	10
40 – 49	864	390	392	240	1	0	1
50 – 59	377	97	160	55	1	0	1
60 +	169	25	78	12	0	0	0
Not reported	0	2	0	0	0	0	0
TOTAL	**6318**	**4644**	**3248**	**2626**	**11**	**1**	**12**

1. At clinics other than Clinic 34, Darwin, NT.

Table 3.5
Number of people diagnosed with specific STD[1], other than HIV, by sex, exposure category and whether or not they were tested for HIV antibody[2] during the quarter 1 January 1998 to 31 March 1998.

EXPOSURE CATEGORY	Tested for HIV antibody		Not tested for HIV antibody	
	Male	Female	Male	Female
Homosexual/bisexual contact	27	–	33	–
Homosexual/bisexual contact and injecting drug use	0	–	1	–
Injecting drug use (female and heterosexual male)	9	6	1	5
Heterosexual contact	74	48	56	24
outside Australia[3]	*16*	*8*	*13*	*6*
within Australia only	*58*	*40*	*43*	*18*
Sex worker	–	2	–	4
Sex worker and injecting drug use	–	1	–	0
Other/undetermined	1	3	3	2
TOTAL	**111**	**60**	**94**	**35**

1. Specific STD 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.
3. Within three months for Clinic 275 and one year for other clinics.

REPORT FROM WHO WESTERN PACIFIC REGION

Dr G Poumerol, 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 31 March 1998.

COUNTRY/ AREA	CUMULATIVE AIDS CASES Male	Female	Children <13 Years	Total	AIDS Rate[1]	Cumulative Diagnoses HIV
American Samoa	0	0	0	0	0.0	0
Australia[†]	7427	317	43	7766	42.2	18946
Brunei	9	1	0	10	3.1	422
Cambodia	104	23	122	617	4.2	9051
China[2]	145	10	0	155	0.0	5990
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	36
French Polynesia	7	2	0	54	24.9	164
Guam	43	4	0	47	29.6	106
Hong Kong	249	25	5	274	4.2	855
Japan	700	106	10	1447	1.2	3324
Kiribati	4	0	0	4	2.6	16
Laos	34	24	2	69	0.7	243
Macao	9	2	0	11	2.2	151
Malaysia	1047	63	19	1110	3.0	21561
Marshall Islands	1	1	0	2	3.8	9
Mongolia	0	0	0	0	0.0	1
Nauru	0	0	0	0	0.0	1
New Caledonia	45	10	1	55	26.9	145
New Zealand	620	29	4	649	18.9	1260
Niue	0	0	0	0	0.0	0
N. Mariana Islands	3	1	0	7	10.4	12
Palau	1	0	0	1	5.8	1
Papua New Guinea	73	74	9	306	5.4	784
Philippines	200	110	7	310	0.5	922
Rep. of Korea	74	9	0	83	0.1	679
Samoa	4	2	2	6	3.7	9
Singapore	295	19	1	314	9.2	631
Solomon Islands	0	0	0	0	0.0	1
Tokelau	0	0	0	0	0.0	0
Tonga	1	0	0	7	6.1	11
Tuvalu	0	0	0	0	0.0	1
Vanuatu	0	0	0	0	0.0	0
Vietnam	802	106	4	1020	1.0	6723
Wallis and Futuna	1	0	0	1	7.1	2
TOTAL[†]	**11902**	**939**	**229**	**14335**	**0.8**	**72059**

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

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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.

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 STD stands for sexually transmissible disease. 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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