HIV/AIDS, Hepatitis and Sexually Transmissible Infections in Australia Annual Report of Trends in Behaviour 2005

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Annual report of behaviour 2005

HIV/AIDS, hepatitis and sexually transmissible infections in Australia

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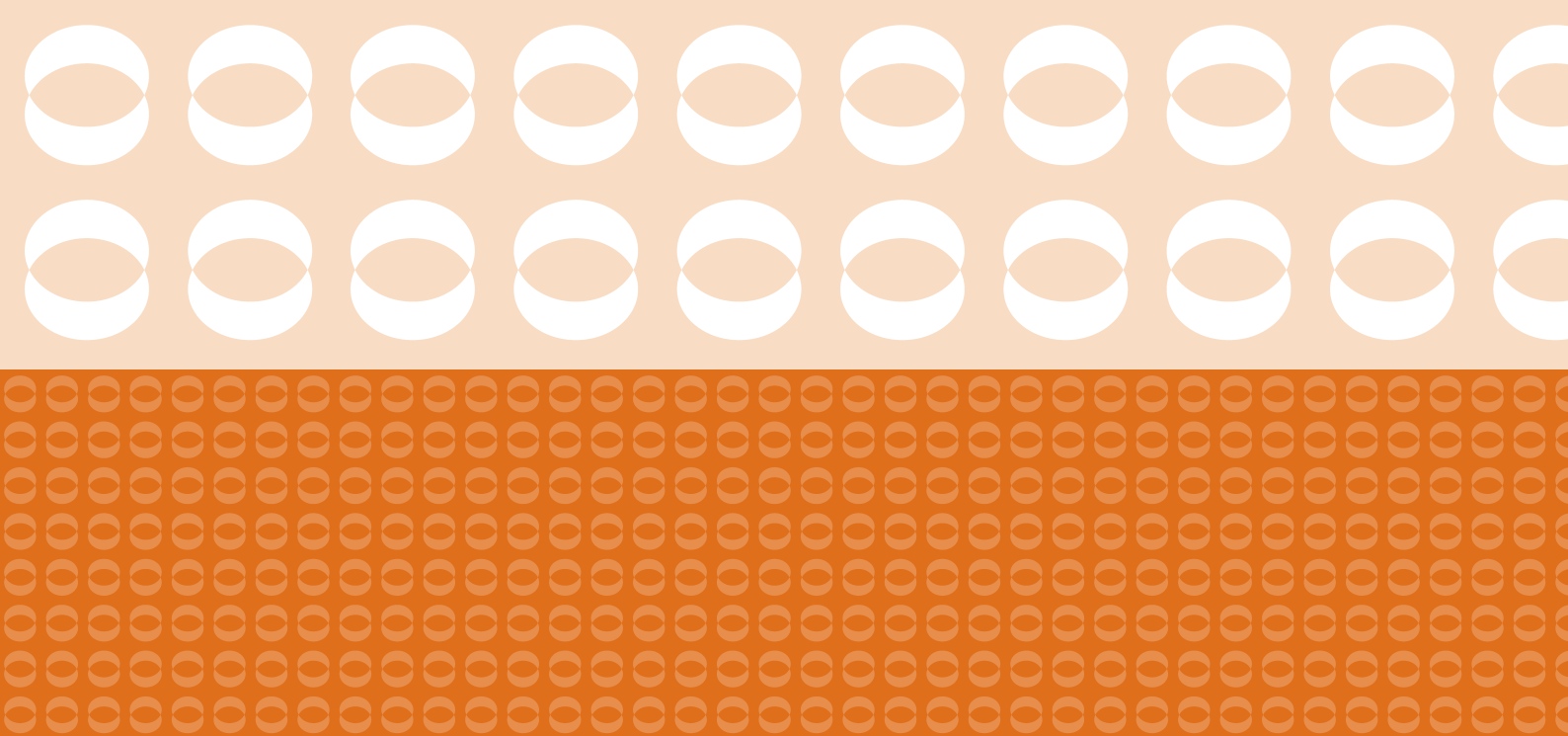**Carla Treloar**
Juliet Richters

NCHSR

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HIV/AIDS, hepatitis and sexually transmissible infections in Australia

Edited by
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in collaboration with
Australian Research Centre in Sex, Health and Society
National Centre in HIV Epidemiology and Clinical Research

NCHSR

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Western Australian AIDS Council

Youthquest!

We also thank the management and staff of venues and sexual health and medical centres across the country, and the many thousands who participated in the research projects.

Preface

This report is the seventh in the annual series to review behavioural data relevant to the transmission of human immuno-deficiency virus (HIV), viral hepatitis and sexually transmissible infections (STIs) in Australia. It also examines behavioural data relevant to the social aspects of treatment and care of those who have been infected, including those who are living with acquired immune deficiency syndrome (AIDS).

Unless stated otherwise, all data in this report are from the five-year period 2000 to 2004 inclusive. This annual report builds on the previous reports by comparing data from the past year with data from the previous four. Data pertaining to trends over time in behaviour relevant to the risk of HIV transmission over a period extending from 1984 to 1995 can be found in *Valuing the past … investing in the future: Evaluation of the National HIV/AIDS Strategy 1993–94 to 1995–96* (Feachem, 1995) and its Technical Appendices 3 (Crawford et al., 1995), 4 (Crofts et al., 1995) and 5 (Smith et al., 1995). Data from periods after the Feachem evaluation were presented in the six earlier reports in this series, commencing with *HIV/AIDS and related diseases in Australia: Annual report of behaviour* (National Centre in HIV Social Research, 1999).

Relatively little behavioural data exist on viral hepatitis and related issues of illicit and injecting drug use. Indeed, opportun-ities for initiating behavioural monitoring in these areas need to be explored, as do ways of contributing to efforts to reduce transmission of hepatitis C and improve the experience of living with hepatitis C. Reported in this annual report of behaviour are the results from a pilot study conducted at music festivals which surveyed young people on their drug use. This study is planned to continue as an annual surveillance project. Other data presented are drawn from quantitative and qualitative studies.

As in previous years, this report is published as a companion to *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2005* (National Centre in HIV Epidemiology and Clinical Research [NCHECR], 2005). A small number of the tables in this report provide data that overlap with or duplicate those in the NCHECR report.

We thank a large number of organisations and people involved in health throughout Australia for their help and support. Their contributions to this report are very gratefully acknowledged. In particular, we acknowledge the contribution of the National Centre in HIV Epidemiology and Clinical Research at the University of New South Wales and the Australian Research Centre in Sex, Health and Society (ARCSHS) at La Trobe University in Victoria.

Note: Throughout this report the letter '*N*' denotes the denominator in each specific analysis while '*n*' denotes the frequency corresponding with the percentage.

Summary

Data in this report are organised around a number of themes or topics:

1 Sexual practice

2 Living with HIV

3 Illicit drug use

4 Hepatitis C

5 The current climate.

Sexual practice

The most detailed information in this section of the report comes from studies of homosexually active men, the population most affected by HIV in Australia. Some data were also available regarding other populations, namely people living with HIV, first-year university students and women in contact with gay and lesbian communities. The data from other populations have been greatly augmented by the Australian Study of Health and Relationships, from which a summary of key findings, from a representative sample of the Australian population, is included in Section 1.2.1. As this report covers the period 2000 to 2004, it would be useful to briefly recap on trends that occurred prior to 2000 in practices that risk the transmission of HIV.

From the mid-1980s there was a decrease in the practices that risk transmission of HIV and an increase in protective behaviour, particularly condom use, among homosexually active men and other populations. These changes happened quite early (that is, by the middle to late 1980s) and were mostly sustained through to the mid-1990s. There was little evidence of anything other than stability in these practices from the early 1990s to around 1995 (Feachem, 1995).

Significant increases in any unprotected anal intercourse were reported in annual reports of behaviour in recent years (e.g. Van de Ven et al., 2003). The current report shows that no such trends are evident from 2000 to 2004 in the proportion of homosexually active men who reported any unprotected anal intercourse with a casual or regular partner (see Table 1.1.3). Indeed, over the past five years, overall rates of unprotected anal intercourse appear to have plateaued.

However, when rates of unprotected anal intercourse with casual and regular partners are analysed separately, upward and downward trends are evident across the various regions. Data from the Gay Community Periodic Surveys conducted in Melbourne and Brisbane provide evidence of significant increases in rates of unprotected anal intercourse with casual partners. Studies in Sydney show that rates of unprotected anal intercourse with casual partners have plateaued in that city (see Tables 1.1.4a and 1.1.4b). In most studies, HIV-positive men were more likely to have engaged in unprotected anal intercourse than HIV-negative men, although some of this unprotected anal intercourse was safe with regard to HIV transmission as it occurred between HIV-positive partners (see Table 1.1.10).

Sydney was the only region to show an increase in the proportion of men in regular relationships who reported any unprotected anal intercourse. These increases were evident in both the Gay Community Periodic Survey and Health in Men studies. It is important to point out that much of the unprotected anal intercourse within regular relationships was safe with regard to HIV transmission as it occurred within seroconcordant relationships (see Table 1.1.11).

Data based on a range of surveys indicated that the overwhelming majority of homosexually active men (in excess of 80% in all studies) had had a test for HIV. There were no trends (either declining or rising) in the proportion of men ever tested for HIV (see Table 1.1.7).

Between 40% and 50% of HIV-negative gay men reported 'recent' HIV testing ('in the previous six months') across the various regions (see Table 1.1.8). There were no trends (either declining or rising) in recent

testing except in two Sydney-based studies that showed conflicting results: in the Health in Men cohort there was a declining trend in recent HIV testing among new participants, while in the Sydney Gay Community Periodic Survey there was a rising trend in recent HIV testing.

There were no significant trends in the proportion of younger gay men (under 25 years of age) 'ever tested for HIV' (see Table 1.1.9). This suggests that rates of testing among men in this age group have been steady for a number of years. As evidenced in Figure 4, the current plateau in HIV testing among younger gay men follows a period of significant decline in testing prior to 2000.

The Health in Men cohort of HIV-negative gay men in Sydney allows estimates of HIV incidence in the population from which the participants are drawn, namely the Sydney gay community. Based on the first three years of data collection (2001 to 2003), HIV incidence was recorded at approximately 1% overall (see Table 1.1.13).

Studies in various regions generally showed increases from 2003 to 2004 in testing rates for STIs. Such increases were seen in terms of the proportion of men who reported having anal, throat and penile swabs as well as having urine samples taken.

Backpackers have recently been recognised by NSW Health as a population 'at risk' for STIs and this group has been targeted for short-term health promotion interventions. A study that explored the sexual risk practices of backpackers in Australia found that backpacking had a disinhibiting effect on sexual practice. A high proportion of backpackers reported having engaged in unsafe sexual practices that they would not ordinarily have engaged in before their trip. As backpackers from other countries are not eligible to receive free sexual health screening unless they already have symptoms of an STI, current health service provisions appear inadequate.

Living with HIV

HIV-positive homosexually active men in Australia took up combination antiretroviral therapy very quickly after it became available in 1996. However, over time, there has been a significant decline in the proportion of people currently taking combination therapy, notably among Positive Health participants in Sydney and among Gay Community Periodic Survey participants in Sydney and Melbourne (see Figure 5 and Table 2.3.1). Whereas around 70% to 75% of HIV-positive men were using combination antiretroviral therapy in 2000, by 2004 this had declined to around 60% to 65%. The only study to have shown a significant increase in the use of

combination therapy was the clinic-based Australian HIV Observational Database (AHOD).

The available data indicate a high level of commitment to adherence to antiretroviral therapy (see Section 2.5) despite the adverse side effects experienced by many recipients. The experience of side effects such as diarrhoea/ nausea, anxiety/depression/fear, and lipodystrophy would appear to be the norm among participants on antiretroviral therapy (see Table 2.4).

Despite the experience of side effects, the overwhelming majority of people living with HIV/AIDS in the HIV Futures study, and in the Sydney and Melbourne arms of the Positive Health cohort, rated their health as 'excellent' or 'good' (see Table 2.2). These ratings were particularly high among Positive Health participants in Sydney. Over time there has been no change in these ratings in either study.

HIV-positive men in most regions had continuing high levels of contact with the epidemic as measured by two questions—'knows anyone with HIV' and 'ever knew anyone who died following AIDS' (see Table 2.8). In terms of knowing anyone who died following AIDS, HIV-negative men in the Health in Men cohort had fairly high levels of contact with the epidemic but over time there was a downward trend.

A qualitative study investigated the lived experience of HIV-positive people from culturally and linguistically diverse backgrounds (see Section 2.6). The majority were diagnosed either through mandatory testing as a government health requirement for permanent residency, or when they presented with symptomatic infection. Most did not expect a positive result. The meaning of an HIV-positive diagnosis was grounded in participants' knowledge and experience from their country of birth: they regarded AIDS as a terminal illness. Most expected prejudice and stigma from their ethnic communities. Those who were not eligible for Medicare had problems getting medical care and treatment. The English language barrier and a lack of familiarity with the health care system made it difficult to get appropriate care even for those who were eligible.

Recreational drug use

The data indicate high levels of recreational drug use, particularly among homosexually active men who are attached to gay community (see Table 3.1.1). From recent data collection, approximately 50% to 90% of gay men (depending on location) reported the use of at least one non-prescription illicit drug in the previous six months. Based on Periodic Survey data, use of at least one drug

increased significantly in Brisbane (from a relatively low base) and use of more than one drug also increased significantly in Brisbane and decreased in Sydney (the latter from a relatively high base).

While drug use among homosexually active men is common, injecting drugs is very much a minority practice (see Table 3.1.2). The available data suggest stability in injecting drug use on the whole, although findings from the Periodic Survey in Brisbane indicate a decline between 2000 and 2004.

The Youth, Drugs and Rock 'n' Roll project surveyed young people attending the Big Day Out and Splendour in the Grass music festivals about their drug use (see Section 3.2). The findings showed that drug use was prevalent among young people attending these festivals; 82% reported having used any illicit drug at least once, while 46% reported 'recent' use. Almost all participants reported having friends who used illicit drugs and about a third reported illicit drug use among family members.

Hepatitis C

A qualitative study of people with hepatitis C living in NSW explored participants' experiences of interferon-based treatments (see Section 4.2). Participants reported a range of unpleasant physical and psychiatric side effects of treatment, which included depression, anxiety, migraine, aching muscles, headaches, insomnia and fatigue. These side effects had a detrimental impact on participants' quality of life. Discontinuation of treatment was most commonly attributed to depression. The findings highlight the importance of counselling and related interventions in order to maximise adherence to treatment and improve patients' quality of life while on treatment.

The 3D Project explored participants' experiences of hepatitis C diagnosis, disclosure and discrimination (see Section 4.3). An important issue that arose from these interviews was participants' concern that infection control procedures in health care settings sometimes applied in ways that contravened universal infection control guidelines and were sometimes used to discriminate against those with hepatitis C. These factors had some influence on participants' future decisions about whether or not to disclose their hepatitis C status. To avoid discrimination, participants believed that infection control procedures should be applied in all situations irrespective of disclosure.

People with hepatitis C living in NSW, Victoria and Western Australia were interviewed about their online information practices with regard to hepatitis C in everyday and clinical settings (see Section 4.4). Participants tended to favour the websites of Australian hepatitis C councils as being the most accurate, trustworthy and relevant. Participants changed their online practices over time. Soon after diagnosis, many participants would search comprehensively for any information about hepatitis C and how it would affect their health. Later on, searching became more targeted and focused, most often to find information about treatments and possible side effects. Information obtained online was also integrated with information from other sources such as magazines and literature from health services.

Substantial proportions of HIV-positive people and gay-community-attached men have ever been tested for hepatitis C (see Table 4.1). HIV-positive gay men are generally more likely than their HIV-negative counterparts to have been diagnosed with hepatitis C infection. Among HIV-positive people who are co-infected with hepatitis C, few have taken medical treatments specifically for hepatitis C.

Given the numbers of people affected by hepatitis C, substantial effort is required to ensure a research infrastructure that adequately responds to this public health challenge. Research capacity is required to contribute to efforts to reduce the transmission of hepatitis C by studying, among other things, understandings of drug use in society, perceptions of risk, and risk in behaviour related to injecting drug use. Reasearch capacity is also needed to study the experience of living with hepatitis C; results presented here show that stigma and discrimination remain key concerns.

The current climate

Many years have elapsed since Australia first responded to HIV, and the current climate is very different from that at the advent of the epidemic. In general, the majority of homosexually active men have sustained a 'safe sex' culture even though sustaining safe sex over such a long period is difficult. Many have become accustomed to living with the epidemic; they no longer live with a constant sense of crisis. Antiretroviral therapies have lessened the burden on most people living with HIV and AIDS; there are fewer deaths and, despite often serious side effects, less debilitating illness among them.

In recent years combination antiretroviral therapies have become available as post-exposure prophylaxis (PEP) in most Australian states. Based on data from Gay Community

Periodic Surveys, there has been a significant increase in awareness among gay men of the availability of PEP (see Table 5.1). Relatively few gay men indicated that they had received PEP themselves, though larger proportions knew others who had done so.

The qualitative arm of the PEP study explored discursive understandings of risk. Unsafe sex that led to a request for PEP often happened *in spite of* participants' knowledge about safe sex and *in spite of* their usual safe sex practices or their intentions to practise safe sex. Participants requested PEP when one of the social aspects of a sexual encounter was in some way different from usual practices, when something was temporarily out of their control. Five themes relating to context were identified in the narrative accounts of gay men seeking PEP after unsafe sex: relation-ship issues, recreational drugs (including alcohol), social space, stress and adventure.

Currently there are debates about the relative merits of using antiretroviral monotherapy, specifically tenofovir, as pre-exposure prophylaxis (PREP) (see Section 5.2). While there are international trials under way to test the safety and efficacy of PREP, it is important that such research also concern itself with exploring the implications of PREP for public health and the potential consequences of its introduction for behavioural prevention. In particular, research needs to address whether the introduction of PREP would undermine current behavioural prevention and fall short of providing a safe and effective prevention for populations and communities at risk of HIV.

1
Sexual practice

During the period covered by this report (2000 to 2004) much of the research into sexual practice conducted by the National Centre in HIV Social Research (NCHSR) was concerned with documenting sexual practice among homosexually active men, the population most affected by HIV in Australia. The Centre has also concerned itself with research into sexual practice among other populations at comparatively lower risk of HIV, including young people and the general population. In this report a distinction is made between regular and casual sexual partners. This distinction is important because the meanings of sexual behaviour change depending on whether such behaviour occurs within a regular or committed relationship or in a casual encounter. Moreover, strategies for safe sex take into account the context (regular partner or casual encounter) of sexual practice. Among homosexually active men, many of whom have both regular and casual partners, the distinction is especially relevant.

1.1 Safe sex behaviour among homosexually active men

With respect to homosexually active men, information in this report comes from both national data (the 2000 Male Out survey) and state-based data. In the 2000 Male Out survey (Van de Ven et al., 2001)—as in the earlier studies, Male Call 96 (Crawford et al., 1998) and Project Male Call in 1992 (Kippax et al., 1994)—two groups of men could be identified. One group included men who were attached to gay community, and are referred to as 'gay-community-attached' (GCA). The other group consisted of men who were not attached to gay community, many of whom did not identify as gay but instead as bisexual or heterosexual, and many of whom, unlike most of their gay-identified counterparts, had sex with women as well as men. This group is designated 'non-gay-community-attached' (NGCA). Men in the Male Out study were classified as gay-community-attached or not on the basis of their responses to a set of questions relating to their social life. In the 2000 Male Out survey, two questions relating to social life—'number of gay friends' and 'amount of free time spent with gay men'—were used to classify men into the two groups. As the gay-community-attached men differed significantly from those who were not attached to gay community with respect to many of the indicators included in this report, 2000 Male Out survey data are given for each group separately.

In general, data from state-based studies such as the Gay Community Periodic Surveys, the Health in Men cohort of HIV-negative men and the Positive Health cohort of HIV-positive people are based mainly on men recruited from gay communities.

Sexual practice data in the Positive Health study were first collected in 2001 in Sydney and in 2003 in Melbourne. Therefore, no sexual practice data are reported in the Melbourne arm of the Positive Health study prior to 2003. In the tables and figures in this annual report of behaviour, Positive Health data for NSW and Victoria are referred to as 'Sydney' and 'Melbourne' respectively. While most of the data were collected from participants living in the two capital cities, data from participants living in rural and regional areas of both states are also included.

The most complete state-based data are from Sydney, where data from Health in Men (Mao et al., 2002) and sexual practice data from Positive Health have been available as sources of information from 2001. The Sydney Gay Community Periodic Surveys, funded by the New South Wales Health Department, have been carried out in Sydney every six months since February 1996. Results from these surveys have been reported in the form of six-monthly updates as well as published summary reports (Prestage et al., 1999; Hull et al., 2003). For the purpose of this report, Sydney Gay Community Periodic Survey data have been aggregated in order to report on an annual basis. Data were also available from the Asian Gay Community Periodic Survey (Gay Asian Men) conducted in Sydney in 2002 (Mao et al., 2003).

Surveys based on the Periodic Survey questionnaire were also carried out in Melbourne (Hull et al., 2004c) and Queensland (Hull et al., 2005) annually, and in Adelaide (Hull et al., 2004b) and Perth (Hull et al., in press) every two years. The Canberra survey was carried out in 2000 and 2003 (Hull et al., 2004a). Queensland Gay Community Periodic Surveys covered Brisbane and the Sunshine and Gold coasts from 1998 to 2004. Cairns was included from 1999. (In the tables and figures, Queensland Periodic Survey data are referred to as 'Brisbane'. Most of the participants were recruited in Brisbane but data from the Sunshine and Gold coasts and Cairns are included.)

Data for gay-community-attached men and non-gay-community-attached men in the 2000 Male Out survey (August–September 2000) (Van de Ven et al., 2001) are provided for both the whole of Australia and for selected cities in order to compare them with results gathered from other parts of Australia. Nationwide information relating to people living with HIV comes from HIV Futures 3 of 2001 (Grierson et al., 2002) and HIV Futures 4 of 2003 (Grierson et al., 2004).

In each of the surveys from which data are included in this chapter, men were asked about sexual practice in the six months prior to the survey. Key indicators in this area were:

- the percentage of men who had had regular and/or casual partners
- the percentage of men who had engaged in unprotected anal intercourse (with either regular and/or casual partners)
- the percentage of men who had engaged in unprotected anal intercourse with casual partners
- the percentage of men who had engaged in unprotected anal intercourse with regular partner(s)
- mean scores on a scale of esoteric practices for men who had engaged in (a) any unprotected anal intercourse, (b) unprotected anal intercourse with regular partner/s and (c) unprotected anal intercourse with casual partners.

A sizeable proportion of homosexually active men reported having had sex with both regular and casual partners.

Tables 1.1.1 to 1.1.6 show the percentages of men who had engaged in the above practices over the period 2000 to 2004. Information that enables an assessment of change in behaviour over the whole of this period is available for studies in which there are more than two data points.

1.1.1 Percentage reporting regular, casual, and both regular and casual, partners

As mentioned above, sexual behaviour often depends on the context, in particular the relationship between the people involved in the behaviour. Table 1.1.1 shows the percentage of men who reported having had regular or casual partners, and who reported having had both regular

and casual partners, in the six months prior to the survey. These percentages are derived from responses about sexual behaviour with regular and/or casual partners. These are not mutually exclusive categories, since those who had had sex with both regular and casual partners were also counted as having had sex with each category of partner.

In the percentages reported in Table 1.1.1 of those who reported having had regular partners, the samples of gay-community-attached and non-gay-community-attached men showed a high degree of consistency. Around 60% to 70% of gay men reported having had sex with a regular partner in the six months prior to each survey; a slightly lower proportion of men from the Positive Health study in Sydney and Melbourne, and from the Asian Gay Community Periodic Survey in Sydney in 2002, reported this. Over time, there were no significant trends in the proportion who had had regular partners, except in the Periodic Survey data from Sydney, which indicated a decline in the proportion of men with regular partners.

The picture for those who had had casual partners was one of fairly consistent percentages (around 65% to 75%); a slightly higher proportion of participants in the Health in Men study reported this. Over time, there were no significant trends in the proportion who had had casual partners, except in the Periodic Survey data from Sydney

and Perth, which indicated a decrease in the proportion of men who had had casual partners.

Around 40% to 50% of men reported having had sex with both regular and casual partners in the six months preceding data collection in 2004; a slightly lower proportion of participants in the Perth and Canberra Periodic Surveys and in the Melbourne arm of the Positive Health study reported this. These percentages are fairly consistent with previous years for both gay-community-attached and non-gay-community-attached men. However, Sydney Periodic Survey data show that the proportions have decreased in Sydney.

Sexual practice data became available from Sydney HIV-positive men in the Positive Health cohort study in 2001. Consistent with past findings, smaller proportions of HIV-positive men in 2002 reported having had regular partners than, say, their HIV-negative counterparts in Health in Men. Therefore, in drawing conclusions throughout this report, it is important to differentiate between studies that had samples comprised of HIV-negative participants only (Health in Men), HIV-positive participants only (Positive Health), and HIV-negative and HIV-positive men as well as men who did not know their serostatus (e.g. Periodic Surveys). (Note: See Table 1.1.10 for a breakdown of some sexual practice data by serostatus.)

Table 1.1.1: Percentage of men who reported (a) regular, (b) casual and (c) both regular and casual partners[1]

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(a) Men with regular partner/s										
Australia										
Male Out: GCA	1181	76.0								
Male Out: NGCA	651	63.6								
Sydney										
Health in Men			450	68.2	845	75.0	1175	71.8	1103	70.4
Positive Health			265	49.4			282	60.3	254	55.9
Periodic	2916	64.0	2862	64.2	2884	63.0	2541	59.6	2821	61.6
Male Out: GCA	223	74.4								
Male Out: NGCA	78	65.4								
Gay Asian Men					457	56.5				
Melbourne										
Positive Health							61	57.4	53	43.4
Periodic	1578	63.8	1830	65.5	1877	63.6	2064	62.9	1962	65.0
Male Out: GCA	258	74.4								
Male Out: NGCA	103	67.0								
Brisbane										
Periodic	1285	62.5	1570	61.7	1787	59.3	1510	59.4	1667	61.8
Male Out: GCA	99	80.8								
Male Out: NGCA	62	61.3								
Perth										
Periodic	1035	65.6			790	63.3			1014	65.3
Male Out: GCA	93	77.4								
Male Out: NGCA	49	53.1								
Adelaide										
Periodic			565	65.7			834	61.3		
Male Out: GCA	78	74.4								
Male Out: NGCA	42	66.7								
Canberra										
Periodic	350	61.4					255	62.7		

.../ continued

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(b) Men with casual partner/s										
Australia										
Male Out: GCA	1181	71.7								
Male Out: NGCA	651	66.1								
Sydney										
Health in Men			450	80.0	845	77.6	1175	78.9	1103	78.0
Positive Health			265	57.0			282	75.9	254	76.8
Periodic	2916	72.8	2862	73.3	2884	71.5	2541	70.0	2821	69.7
Male Out: GCA	223	75.3								
Male Out: NGCA	78	74.4								
Gay Asian Men					457	76.8				
Melbourne										
Positive Health							61	62.3	53	73.6
Periodic	1578	71.2	1830	66.1	1877	67.6	2064	69.2	1962	68.2
Male Out: GCA	258	69.8								
Male Out: NGCA	103	66.0								
Brisbane										
Periodic	1285	70.8	1570	71.6	1787	69.8	1510	69.9	1667	69.3
Male Out: GCA	99	70.7								
Male Out: NGCA	62	67.7								
Perth										
Periodic	1035	66.0			790	62.5			1014	61.2
Male Out: GCA	93	71.0								
Male Out: NGCA	49	65.3								
Adelaide										
Periodic			565	66.4			834	72.4		
Male Out: GCA	78	74.4								
Male Out: NGCA	42	71.4								
Canberra										
Periodic	350	64.3					255	70.6		
(c) Men with both regular and casual partners										
Australia										
Male Out: GCA	1181	52.5								
Male Out: NGCA	651	39.2								
Sydney										
Health in Men			450	49.6	845	54.9	1175	52.7	1103	50.7
Positive Health			265	29.4			282	44.0	254	41.7
Periodic	2916	42.4	2862	42.7	2884	40.9	2541	37.5	2821	38.9
Male Out: GCA	223	52.0								
Male Out: NGCA	78	42.3								
Gay Asian Men					457	43.8				
Melbourne										
Positive Health							61	41.0	53	30.2
Periodic	1578	42.6	1830	39.0	1877	39.4	2064	40.1	1962	42.0
Male Out: GCA	258	49.6								
Male Out: NGCA	103	39.8								
Brisbane										
Periodic	1285	41.6	1570	40.9	1787	38.4	1510	39.9	1667	40.3
Male Out: GCA	99	55.6								
Male Out: NGCA	62	38.7								
Perth										
Periodic	1035	39.5			790	35.6			1014	37.1
Male Out: GCA	93	52.7								
Male Out: NGCA	49	30.6								
Adelaide										
Periodic			565	40.2			834	40.6		
Male Out: GCA	78	50.0								
Male Out: NGCA	42	47.6								
Canberra										
Periodic	350	34.3					255	38.8		

[1] Based on responses to questions about sexual behaviour with regular and/or casual partners.
GCA = gay-community-attached   NGCA = non-gay-community-attached

1.1.2 Percentage engaging in any anal intercourse

Table 1.1.2 shows the percentage of men who reported having engaged in any anal intercourse with either regular or casual sex partners, including anal intercourse without ejaculation ('withdrawal'), during the six months prior to data collection.

Generally, around 75% to 85% of gay men had engaged in any anal intercourse during the six months prior to interview, a slightly higher proportion among Health in Men participants. The proportions in each survey have been quite stable over time, with no significant trends.

1.1.3 Percentage engaging in any unprotected anal intercourse

Table 1.1.3 shows the number and percentage of men who reported having engaged in unprotected anal intercourse at least once in the six months prior to data collection, including anal intercourse without ejaculation ('withdrawal'), with any male partner(s), regular or casual, for the years 2000 to 2004. This indicator varied considerably from sample to sample, reflecting differences between samples with respect to sex with regular and/or casual partners as shown in Table 1.1.1. After having reported significant upward trends in the rates of unprotected anal intercourse across most regions in the equivalent report in 2003 (Van de Ven, et al., 2003), no such trends are evident from 2000 to 2004. These data confirm that over the past five years overall rates of unprotected anal intercourse have plateaued.

1.1.4 Percentage engaging in unprotected anal intercourse with casual partners

Tables 1.1.4a (based on total samples) and 1.1.4b (reduced base of those who had casual partners) show the number and percentage of men who reported having engaged in any unprotected anal intercourse, including anal intercourse without ejaculation ('withdrawal'), with casual partners during the six months prior to the survey, for the years 2000 to 2004.

For this period, data from the Gay Community Periodic Surveys conducted in Melbourne and Brisbane provide evidence of significant increases in rates of unprotected anal intercourse with casual partners (Table 1.1.4a). Data from studies in Sydney show that rates of unprotected anal intercourse with casual partners have plateaued in that city.

Key data from Table 1.1.4a, based on total samples, are also presented graphically in Figure 1. Where available, relevant data from surveys conducted during the four years up to 2000 are also included. For the purposes of comparison with the Periodic Surveys, only data for gay-community-attached men are presented from the Male Call and Male Out surveys. (Note that for legibility the *y*-axis has been drawn from 0% to 50% rather than from the complete 0% to 100%.) Figure 1 shows that, across many studies, rates of unprotected anal intercourse with casual partners rose from the mid- to late 1990s to 2001, after which they levelled off. Men in the Positive Health study reported the highest rates of unprotected anal inter-

Table 1.1.2: Men engaging in any anal intercourse

Source	2000		2001		2002		2003		2004	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%
Australia										
Male Out: GCA	1181	85.3								
Male Out: NGCA	651	76.2								
Sydney										
Health in Men			450	92.9	845	90.4	1175	90.6	1103	90.8
Positive Health			232	81.9			282	83.7	254	80.7
Periodic	2916	84.0	2862	85.5	2884	84.4	2541	82.3	2821	83.5
Male Out: GCA	223	87.0								
Male Out: NGCA	78	83.3								
Gay Asian Men					457	74.6				
Melbourne										
Positive Health							61	63.9	53	81.1
Periodic	1578	80.1	1830	78.9	1877	78.8	2064	79.8	1962	79.4
Male Out: GCA	258	84.1								
Male Out: NGCA	103	73.8								
Brisbane										
Periodic	1285	79.8	1570	81.1	1787	78.8	1510	80.3	1667	80.6
Male Out: GCA	99	85.9								
Male Out: NGCA	62	66.1								
Perth										
Periodic	1035	77.4			790	75.2			1014	77.6
Male Out: GCA	93	86.0								
Male Out: NGCA	49	77.6								
Adelaide										
Periodic			565	77.3			834	78.7		
Male Out: GCA	78	87.2								
Male Out: NGCA	42	78.6								
Canberra										
Periodic	350	77.7					255	83.5		

GCA = gay-community-attached   NGCA = non-gay-community-attached

Table 1.1.3: Men engaging in any unprotected anal intercourse

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	1181	56.5								
Male Out: NGCA	651	50.5								
Sydney										
Health in Men			450	63.1	845	64.6	1175	65.4	1103	64.0
Positive Health			232	50.0			282	58.2	254	52.0
Periodic	2916	48.3	2862	51.2	2884	51.3	2541	47.4	2821	49.3
Male Out: GCA	223	54.3								
Male Out: NGCA	78	48.7								
Gay Asian Men					457	31.9				
Melbourne										
Positive Health							61	34.3	53	52.8
Periodic	1578	42.6	1830	46.8	1877	46.2	2064	43.7	1962	45.3
Male Out: GCA	258	51.6								
Male Out: NGCA	103	46.6								
Brisbane										
Periodic	1285	44.0	1570	44.0	1787	45.1	1510	46.0	1667	46.3
Male Out: GCA	99	60.6								
Male Out: NGCA	62	50.0								
Perth										
Periodic	1035	45.7			790	45.4			1014	45.8
Male Out: GCA	93	57.0								
Male Out: NGCA	49	44.9								
Adelaide										
Periodic			565	41.9			834	42.1		
Male Out: GCA	78	50.0								
Male Out: NGCA	42	50.0								
Canberra										
Periodic	350	42.9					255	42.4		

GCA = gay-community-attached   NGCA = non-gay-community-attached

Table 1.1.4a: Men engaging in unprotected anal intercourse with casual partners (based on all men who participated)

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	1181	25.7								
Male Out: NGCA	651	25.3								
Sydney										
Health in Men			450	30.0	845	29.1	1175	29.1	1103	27.2
Positive Health			232	34.1			282	45.0	254	38.2
Periodic	2916	23.0	2862	25.7	2884	24.5	2541	22.9	2821	22.4
Male Out: GCA	223	26.9								
Male Out: NGCA	78	20.5								
Gay Asian Men					457	14.4				
Melbourne										
Positive Health							61	24.6	53	37.7
Periodic	1578	16.6	1830	17.0	1877	19.1	2064	20.5	1962	17.9
Male Out: GCA	258	19.8								
Male Out: NGCA	103	21.4								
Brisbane										
Periodic	1285	18.4	1570	19.2	1787	22.1	1510	21.1	1667	21.7
Male Out: GCA	99	26.3								
Male Out: NGCA	62	21.0								
Perth										
Periodic	1035	18.1			790	18.5			1014	17.4
Male Out: GCA	93	18.3								
Male Out: NGCA	49	24.5								
Adelaide										
Periodic			565	15.9			834	18.0		
Male Out: GCA	78	19.2								
Male Out: NGCA	42	28.6								
Canberra										
Periodic	350	14.3					255	16.1		

GCA = gay-community-attached   NGCA = non-gay-community-attached
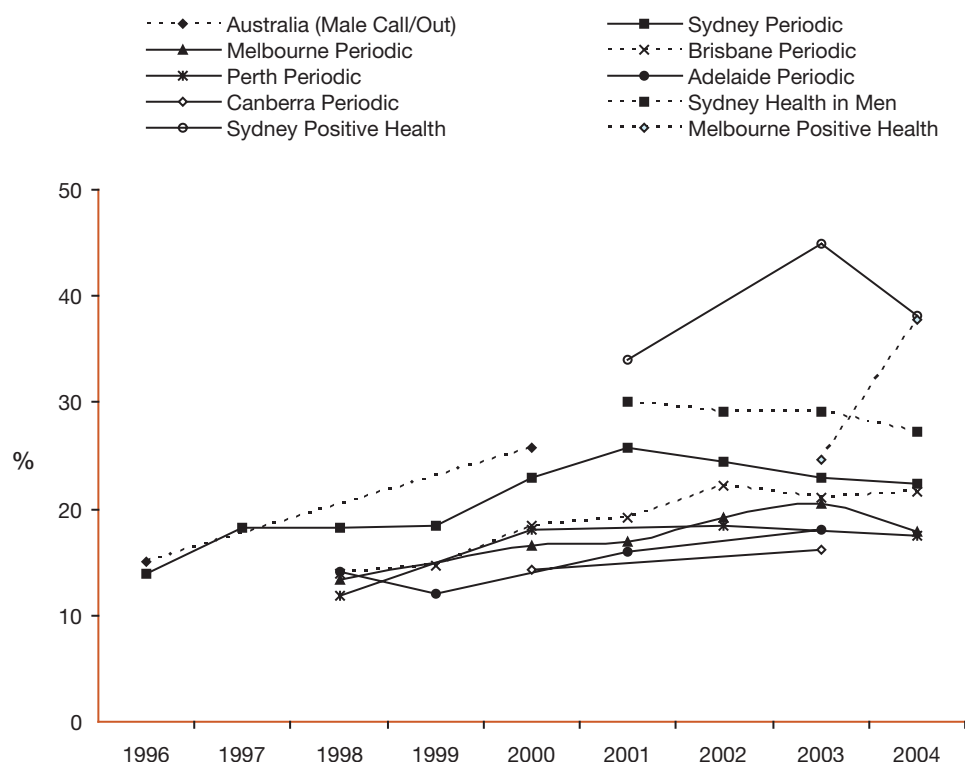
Figure 1: Percentage of men engaging in unprotected anal intercourse with casual partners

Table 1.1.4b: Men engaging in unprotected anal intercourse with casual partners (based on the men who had casual partners)

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	847	35.8								
Male Out: NGCA	430	38.4								
Sydney										
Health in Men			360	37.5	656	37.5	927	36.9	860	34.9
Positive Health			151	52.3			214	59.3	195	49.7
Periodic	2122	31.6	2098	35.0	2062	34.2	1779	32.8	1966	32.2
Male Out: GCA	168	35.7								
Male Out: NGCA	58	27.6								
Gay Asian Men					351	18.8				
Melbourne										
Positive Health							38	39.5	39	51.3
Periodic	1123	23.3	1209	25.7	1268	28.3	1429	29.7	1338	26.2
Male Out: GCA	180	28.3								
Male Out: NGCA	68	32.4								
Brisbane										
Periodic	910	25.9	1124	26.9	1248	31.7	1056	30.2	1156	31.2
Male Out: GCA	70	37.1								
Male Out: NGCA	42	31.0								
Perth										
Periodic	683	27.4			494	29.6			621	28.3
Male Out: GCA	66	25.8								
Male Out: NGCA	32	37.5								
Adelaide										
Periodic			375	24.0			604	24.8		
Male Out: GCA	58	25.9								
Male Out: NGCA	30	40.0								
Canberra										
Periodic	225	22.2					180	22.8		

GCA = gay-community-attached   NGCA = non-gay-community-attached

course with casual partners. This higher rate was partly attributable to the relatively large proportion of HIV-positive men who had engaged in unprotected anal intercourse with other HIV-positive casual partners (Rawstorne et al., under review), posing no risk of infection to an HIV-negative person.

Table 1.1.4b, based on those men who had casual partners, shows the number and percentage of men who reported having engaged in any unprotected anal intercourse, including anal intercourse without ejaculation ('withdrawal'), with casual partners during the six months prior to the survey, for the years 2000 to 2004. Data from two studies, the Melbourne and Brisbane Periodic Surveys, showed a significant increase in the proportion of men who had engaged in unprotected anal intercourse with their casual partners. In all other cities since 2000, there has been no trend increase or decrease in rates of unprotected anal intercourse with casual partners.

1.1.5 Percentage engaging in unprotected anal intercourse with regular partners

Tables 1.1.5a (based on total samples) and 1.1.5b (reduced base of those who had regular partners) show the number and percentage of men who reported having engaged in any unprotected anal intercourse, including anal intercourse without ejaculation ('withdrawal'), with regular partners during the six months prior to the survey, for the years 2000 to 2004. Values for this indicator were steady across all data sets. Slightly higher proportions of men had

engaged in unprotected anal intercourse with their regular partner than with casual partners.

Key data from Table 1.1.5a, based on total samples, are presented graphically in Figure 2. Again, where available, relevant data from surveys conducted during the three years prior to 2000 are also included. For the purposes of comparison with the Periodic Surveys, only data for gay-community-attached men are presented from the Male Call and Male Out surveys. (Note that for legibility the *y*-axis has been drawn from 0% to 70% rather than from 0% to 100%.)

Table 1.1.5b, based on those men who had regular partners, shows the number and percentage of men who reported having engaged in unprotected anal intercourse, including anal intercourse without ejaculation ('withdrawal'), with regular partners during the six months prior to the respective survey, for the years 2000 to 2004. The only region to show a significant increase in the proportion of men who had engaged in unprotected anal intercourse with regular partners was Sydney, in both the Periodic Survey and Health in Men study.

1.1.6 Range of esoteric practices

Research at NCHSR (Kippax et al., 1998) has indicated that there is a significant relationship between sero-conversion and engaging in a range of esoteric practices, although most of these specific practices are not in themselves likely to lead to transmission of HIV. These practices include fisting (inserting the hand or forearm in

Table 1.1.5a: Men engaging in unprotected anal intercourse with regular partners (based on all men who participated)

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	1181	49.7								
Male Out: NGCA	651	40.4								
Sydney										
Health in Men			450	43.1	845	49.5	1175	49.7	1103	48.6
Positive Health			232	29.3			282	31.6	254	28.0
Periodic	2916	35.0	2862	35.8	2884	36.9	2541	33.4	2821	36.1
Male Out: GCA	223	45.3								
Male Out: NGCA	78	38.5								
Gay Asian Men					457	24.3				
Melbourne										
Positive Health							61	24.6	53	28.3
Periodic	1578	33.2	1830	37.5	1877	34.9	2064	33.4	1962	36.5
Male Out: GCA	258	43.8								
Male Out: NGCA	103	36.9								
Brisbane										
Periodic	1285	34.2	1570	33.4	1787	33.1	1510	34.6	1667	34.9
Male Out: GCA	99	54.5								
Male Out: NGCA	62	38.7								
Perth										
Periodic	1035	36.3			790	34.7			1014	36.6
Male Out: GCA	93	52.7								
Male Out: NGCA	49	30.6								
Adelaide										
Periodic			565	34.7			834	31.8		
Male Out: GCA	78	42.3								
Male Out: NGCA	42	40.5								
Canberra										
Periodic	350	34.0					255	32.9		

GCA = gay-community-attached   NGCA = non-gay-community-attached

Table 1.1.5b: Men engaging in unprotected anal intercourse with regular partners (based on the men who had regular partners)

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	898	65.4								
Male Out: NGCA	414	63.5								
Sydney										
Health in Men			307	63.2	634	65.9	844	69.2	777	69.0
Positive Health			132	51.5			170	52.4	142	50.0
Periodic	1867	54.6	1836	55.8	1816	58.6	1514	56.0	1738	58.6
Male Out: GCA	166	60.8								
Male Out: NGCA	51	58.8								
Gay Asian Men					258	43.0				
Melbourne										
Positive Health							35	42.9	23	65.2
Periodic	1007	52.0	1199	57.2	1193	54.9	1298	53.2	1276	56.2
Male Out: GCA	192	58.9								
Male Out: NGCA	69	55.1								
Brisbane										
Periodic	803	54.8	968	54.2	1059	55.8	897	58.3	1031	56.4
Male Out: GCA	80	67.5								
Male Out: NGCA	38	63.2								
Perth										
Periodic	679	55.4			500	54.8			662	56.0
Male Out: GCA	72	68.1								
Male Out: NGCA	26	57.7								
Adelaide										
Periodic			371	52.8			511	51.9		
Male Out: GCA	58	56.9								
Male Out: NGCA	28	60.7								
Canberra										
Periodic	215	55.3					160	52.5		

GCA = gay-community-attached   NGCA = non-gay-community-attached

- Australia (Male Call/Out)
- Melbourne Periodic
- Perth Periodic
- Canberra Periodic
- Sydney Positive Health
- Sydney Periodic
- Brisbane Periodic
- Adelaide Periodic
- Sydney Health in Men
- Melbourne Positive Health
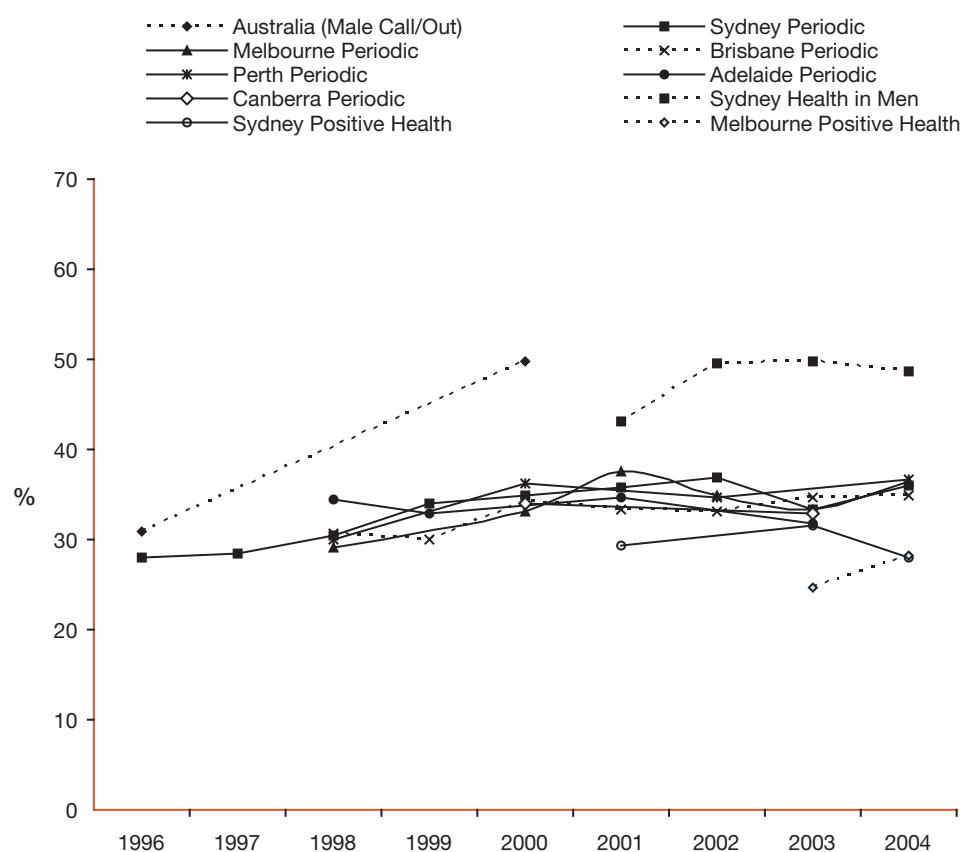
Figure 2: Percentage of men engaging in unprotected anal intercourse with regular partners

the rectum), urolagnia (water sports), use of sex toys, use of cock rings, engaging in sadomasochistic and bondage or dominance practices, and dressing up as part of fantasy.

Table 1.1.6 gives the mean score on a scale of esoteric practices for men who reported any unprotected anal intercourse (UAI) and those who did not report any unprotected anal intercourse (no UAI). 'N' is the number of men from which the mean was calculated. Although data in Table 1.1.6 confirm that there is a significant relationship between engaging in esoteric practices and engaging in unprotected anal intercourse, there is no evidence for change over time in the level of engagement in these practices.

1.1.7 Testing for HIV among homosexually active men

Table 1.1.7 shows that, among homosexually active men who were socially attached to gay community, over 80% of those in each sample had ever been tested for HIV. From 2000 to 2004, values for this indicator were steady for all of the data sets.

Among homosexually active men not socially attached to gay community, Male Out data from 2000 indicated less HIV testing than among their gay-community-attached counterparts. The most recent data (2002) from the Asian Gay Community Periodic Survey (Gay Asian Men) in Sydney also indicated less HIV testing overall in this group.

Key data from Table 1.1.7 are presented graphically in Figure 3. Again, where available, relevant data from surveys conducted during the four years prior to 2000 are also included. For the purposes of comparison with the Periodic Surveys, only data for gay-community-attached men are presented from the Male Call and Male Out surveys. (Note that for legibility the *y*-axis has been drawn from 50% to 100% rather than from 0% to 100%.)

Table 1.1.6: Mean scores of esoteric practices by unprotected anal intercourse (UAI)[1]

Source	2000 N	2000 Mean	2001 N	2001 Mean	2002 N	2002 Mean	2003 N	2003 Mean	2004 N	2004 Mean
Sydney										
Health in Men										
Any UAI			284	2.08	546	1.87	768	2.02	706	1.82
No UAI			166	1.14	299	1.24	407	1.22	397	1.15
Positive Health										
Any UAI			116	3.38			164	3.41	132	3.51
No UAI			116	1.39			118	1.42	122	1.49

[1]The difference between the means for those who did and those who did not report unprotected anal intercourse was statistically significant for both studies.

Table 1.1.7: Percentage of men who had ever been tested for HIV

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	1181	85.5								
Male Out: NGCA	651	67.0								
Sydney										
Health in Men[1]			450	94.4	453	94.5	430	95.8	94	90.4
Periodic	2916	89.2	2862	89.7	2884	87.3	2541	88.7	2821	88.7
Male Out: GCA	223	85.7								
Male Out: NGCA	78	76.9								
Gay Asian Men					457	75.7				
Melbourne										
Periodic	1578	85.6	1830	84.2	1877	80.7	2064	86.7	1962	86.7
Male Out: GCA	258	88.8								
Male Out: NGCA	103	64.1								
Brisbane										
Periodic	1285	82.4	1570	82.5	1787	83.0	1510	83.2	1667	82.1
Male Out: GCA	99	90.9								
Male Out: NGCA	62	69.4								
Perth										
Periodic	1035	80.5			790	80.6			1014	76.7
Male Out: GCA	93	86.0								
Male Out: NGCA	49	73.5								
Adelaide										
Periodic			565	83.2			834	87.2		
Male Out: GCA	78	88.5								
Male Out: NGCA	42	64.3								
Canberra										
Periodic	350	83.7					255	85.1		

[1]Based on new participants in Health in Men as annual HIV testing is a criterion for participation in the cohort.
GCA = gay-community-attached   NGCA = non-gay-community-attached

1.1.8 Recent HIV testing among HIV-negative men

One of the ways in which some homosexually active men have responded to the HIV/AIDS epidemic is to monitor their own HIV antibody status by a series of HIV antibody tests. Table 1.1.8 gives information from a number of studies regarding recent testing for HIV. The question asked was, 'How long is it since you had a test for HIV?', and the percentages were derived by counting those whose responses indicated that they had been tested within the six months prior to the respective surveys. Among the gay-community-attached samples, around 40% to 50% of the men reported having had an HIV antibody test in the six months preceding the survey. Less than 40% of the non-gay-community-attached samples reported frequent testing. No trends were evident, except in the Sydney Periodic Survey (2000 to 2004) which indicated an increase in recent HIV testing.
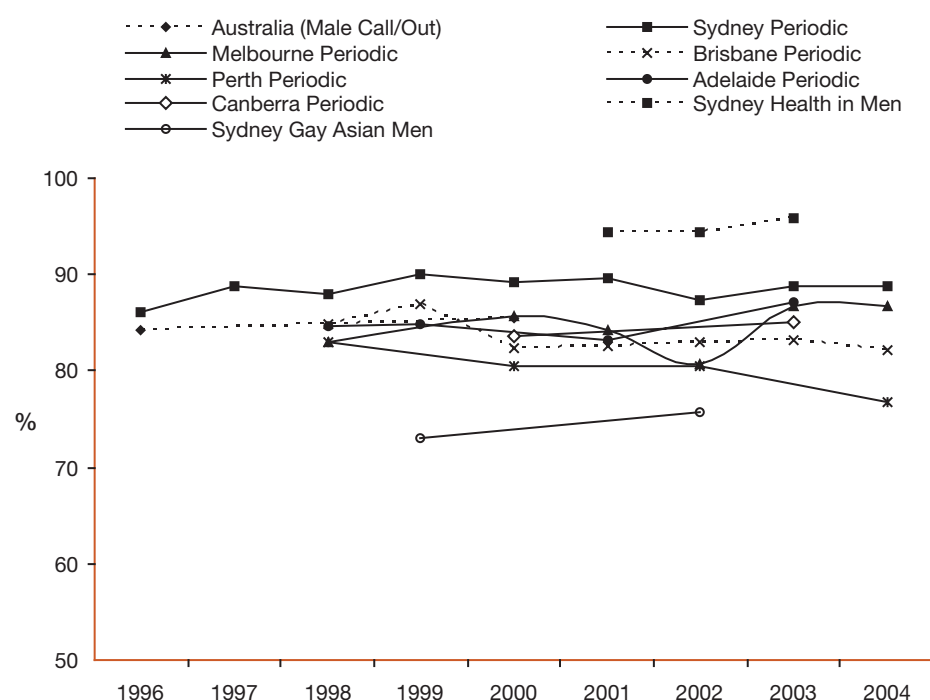
Figure 3: Percentage of men who had ever been tested for HIV

Table 1.1.8: Men who are HIV-negative and were tested for HIV within the six months prior to the survey

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out: GCA	924	40.5								
Male Out: NGCA	419	33.4								
Sydney										
Health in Men[1]			425	59.3	428	51.6	412	51.5	85	50.6
Periodic	2099	47.0	2095	44.4	2144	50.3	1911	50.1	2116	54.2
Male Out: GCA	169	43.8								
Male Out: NGCA	59	27.1								
Gay Asian Men	223	48.0			330	39.4				
Melbourne										
Periodic	1201	41.5	1373	40.3	1412	39.4	1565	42.1	1513	46.9
Male Out: GCA	215	36.3								
Male Out: NGCA	57	29.8								
Brisbane										
Periodic	981	50.2	1217	51.0	1381	50.5	1171	48.9	1271	48.8
Male Out: GCA	82	39.0								
Male Out: NGCA	41	26.8								
Perth										
Periodic	792	40.9			596	42.8			780	41.2
Male Out: GCA	77	41.6								
Male Out: NGCA	35	48.6								
Adelaide										
Periodic			431	45.5			683	49.6		
Male Out: GCA	66	37.9								
Male Out: NGCA	27	29.6								
Canberra										
Periodic	270	33.7					202	39.6		

[1]Based on new participants in Health in Men as annual HIV testing is a criterion for participation in the cohort.
GCA = gay-community-attached   NGCA = non-gay-community-attached

1.1.9 HIV testing among men under the age of 25

The data in Table 1.1.9 show that around 65% to 75% of men under the age of 25 who were sampled had ever been tested for HIV. There were no significant trends in any of the studies, suggesting that rates of testing among men in this age group have been steady for a number of years.

Key data from Table 1.1.9 are presented graphically in Figure 4. Where available, relevant data from surveys conducted during the four years prior to 2000 are also included. For the purposes of comparison with the Gay Community Periodic Surveys, only data for gay-community-attached men are presented from the Male Call and Male Out surveys. (Note that for legibility the *y*-axis has been drawn from 40% to 100% rather than 0% to 100%.) Figure 4 shows the significant downturn in testing rates across a number of studies that occurred prior to 2000.

Table 1.1.9: Men under the age of 25 ever tested for HIV

Source	2000		2001		2002		2003		2004	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%
Australia										
Male Out: GCA	71	67.6								
Male Out: NGCA	65	52.3								
Sydney										
Health in Men[1]			46	76.1	53	77.4	37	78.4	18	72.2
Periodic	260	67.7	281	73.3	291	71.5	254	73.2	295	74.2
Male Out: GCA	11	–								
Gay Asian men					62	62.9				
Melbourne										
Periodic	223	72.6	267	65.9	307	60.3	297	72.7	342	75.4
Male Out: GCA	10	–								
Brisbane										
Periodic	291	70.1	439	69.7	409	70.4	396	68.2	434	67.1
Male Out: GCA	12	–								
Perth										
Periodic	198	64.6			175	64.0			218	60.1
Male Out: GCA	8	–								
Adelaide										
Periodic			115	70.4			157	73.9		
Male Out: GCA	5	–								
Canberra										
Periodic	52	67.3					22	77.3		

[1]Based on new participants in Health in Men as annual HIV testing is a criterion for participation in the cohort.
GCA = gay-community-attached   NGCA = non-gay-community-attached
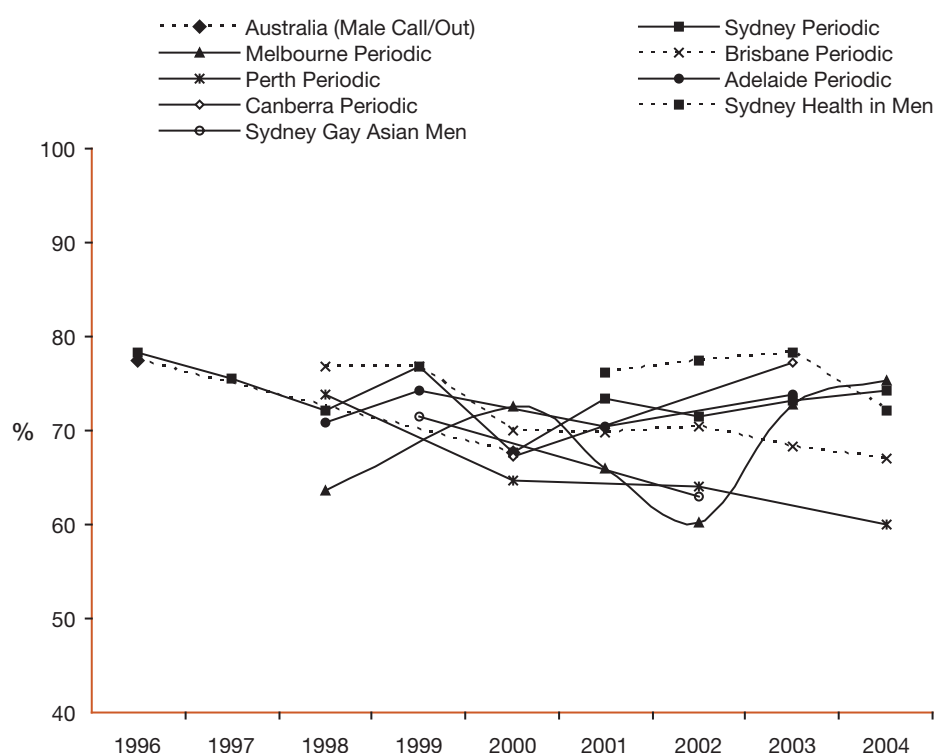
Figure 4: Percentage of men under the age of 25 ever tested for HIV

1.1.10 Percentage engaging in unprotected anal intercourse with casual partners, by serostatus

Table 1.1.10 shows, by serostatus, the number and percentage of men who had engaged in any unprotected anal intercourse with casual partners during the six months prior to the survey, for the years 2000 to 2004. It confirms that HIV-positive men were more likely to engage in unprotected anal intercourse with casual partners than men who were HIV-negative. Some unprotected anal intercourse reported by people living with HIV is with partners who are also HIV-antibody-positive (Rawstorne et al., under review). Note, however, that information from the Sydney Men and Sexual Health (SMASH) survey (Grulich et al., 1998) showed that even if HIV-positive men who engaged in unprotected anal intercourse only with other positive men were removed from the analysis, the remainder of the positive men reported more unprotected anal intercourse with casual partners than did negative men.

For the years 2000 to 2004, data from the Periodic Surveys provided evidence of increasing engagement in unprotected anal intercourse with casual partners among HIV-negative men in Brisbane and HIV-positive men in Perth. The percentage for HIV-positive men in Perth should be treated with caution as it is based on a small number of men. There were no trends in the data in other cities and samples.

1.1.11 Agreements among homosexually active men with regular partners regarding unprotected anal intercourse

Agreements with regular partners to have only protected anal intercourse (or no anal intercourse) both within the relationship and with casual partners outside the relationship are regarded as 'safe sex' agreements, regardless of the serostatus of the partners. Agreements with regular partners to have some unprotected anal

Table 1.1.10: Men engaging in unprotected anal intercourse with casual partners, by serostatus[1] (based on the men who had casual partners)

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
HIV Futures										
Positive[2]			725	29.1			834	34.4		
Male Out										
Positive	69	62.3								
Negative	936	34.3								
Sydney										
Health in Men										
Negative			360	37.5	656	37.5	927	36.9	860	34.9
Positive Health										
Positive			151	52.3			214	59.3	195	49.7
Periodic										
Positive	404	51.5	375	61.3	337	59.9	275	58.9	325	55.7
Negative	1519	27.3	1521	28.8	1521	29.3	1312	27.8	1469	27.8
Gay Asian Men										
Positive					16	—[3]				
Negative					255	15.7				
Melbourne										
Positive Health										
Positive							38	39.5	39	51.3
Periodic										
Positive	110	36.4	115	49.6	122	57.4	158	57.0	125	47.2
Negative	864	22.2	909	23.0	972	24.6	1083	26.5	1050	23.8
Brisbane										
Periodic										
Positive	68	42.6	74	48.6	96	47.9	84	56.0	98	48.0
Negative	696	24.9	869	25.1	963	30.1	810	28.1	896	29.0
Perth										
Periodic										
Positive	42	26.2			18	33.3			29	58.6
Negative	530	27.9			381	28.9			484	26.7
Adelaide										
Periodic										
Positive			24	41.7			35	42.9		
Negative			293	23.9			497	24.5		
Canberra										
Periodic										
Positive	10	—[3]					11	—[3]		
Negative	175	21.7					138	21.0		

[1]This table excludes men whose serostatus was unknown, either because they reported that they had not been tested or because they did not provide information regarding serostatus. The difference between positive and negative men in the percentage who reported unprotected anal intercourse with casual partners is statistically significant throughout, except in the Perth 2000 Periodic Survey data.

[2]HIV Futures figures are an underestimation as they are based on all homosexual/bisexual participants and not just on those who had casual male partners; such a reduced base could not be determined because of the way the questions were asked.

[3]Number of men was too small to give a reliable percentage.

intercourse within the relationship can be assessed for safety only if both partners have been tested and each knows the serostatus of the other. That is, unless the seroconcordance (or otherwise) of men in regular relationships can be assessed reliably by such men, any agreement to have unprotected anal intercourse within the relationship is not a safe sex agreement. Table 1.1.11 shows the percentage of men with regular partners, both in seroconcordant relationships and in relationships which were not known to be seroconcordant, who had agree-

ments to engage only in 'safe' sex. An agreement to have unprotected anal intercourse was classified as a safe sex agreement only when partners (a) were seroconcordant (both either HIV-positive or HIV-negative), (b) had a clear spoken agreement regarding anal intercourse within the relationship and (c) had a clear spoken agreement that there would be no unprotected anal intercourse with casual partners outside the relationship. Research at NCHSR has highlighted the importance of agreements in a series of published papers relating to 'negotiated safety'

Table 1.1.11: Men with regular partners who had 'safe sex agreements', by seroconcordance

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
Male Out										
Seroconcordant	605	70.6								
Nonconcordant	246	27.2								
Sydney										
Health in Men										
Seroconcordant			209	72.7	437	69.6	530	70.8	275	74.9
Nonconcordant			67	22.4	176	20.5	170	17.1	114	25.4
Positive Health										
Seroconcordant							57	42.1	55	52.7
Nonconcordant							113	27.4	68	36.8
Periodic										
Seroconcordant	865	70.9	857	71.8	885	72.9	717	73.6	833	73.0
Nonconcordant	460	38.7	483	36.0	424	29.7	360	33.9	342	33.9
Male Out										
Seroconcordant	98	77.6								
Nonconcordant	38	34.2								
Gay Asian Men										
Seroconcordant					102	52.0				
Nonconcordant					94	21.3				
Melbourne										
Positive Health										
Seroconcordant									11	–
Nonconcordant									10	–
Periodic										
Seroconcordant	423	68.8	571	73.2	515	71.7	578	69.4	592	69.9
Nonconcordant	232	28.0	320	26.6	318	25.8	320	35.0	288	31.9
Male Out										
Seroconcordant	123	78.9								
Nonconcordant	52	21.2								
Brisbane										
Periodic										
Seroconcordant	365	71.0	431	72.4	514	63.6	425	72.9	479	67.8
Nonconcordant	231	28.1	256	26.2	247	30.4	225	31.6	261	28.0
Male Out										
Seroconcordant	54	74.1								
Nonconcordant	25	40.0								
Perth										
Periodic										
Seroconcordant	278	74.8			204	67.6			332	74.1
Nonconcordant	200	25.0			136	25.0			158	31.0
Male Out										
Seroconcordant	54	72.2								
Nonconcordant	21	33.3								
Adelaide										
Periodic										
Seroconcordant			183	61.2			237	68.8		
Nonconcordant			83	26.5			121	25.6		
Male Out										
Seroconcordant	38	76.3								
Nonconcordant	13	30.8								
Canberra										
Periodic										
Seroconcordant	102	72.5					78	75.6		
Nonconcordant	49	32.7					31	38.7		

(Crawford et al., 2001; Kippax et al., 1993; Kippax et al., 1997; Van de Ven et al., 1999). Findings from this research show that a high proportion of men have agreements and stick to them.

Only men with regular partners were included in Table 1.1.11. In this table, 'nonconcordant' refers to relationships with regular partners in which the HIV serostatus of both partners was known and was discordant, or the serostatus of one or both partners was stated as 'unknown'. In every study, very few respondents reported being in a serodiscordant relationship (that is, where one partner was known to be positive and the other negative), and this is why data from such respondents have been included in the nonconcordant category rather than being reported separately. Men with regular partners who did not respond to questions regarding their own or their partner's serostatus were excluded from the table.

The data are consistent across a number of studies in suggesting that around 70% of men in seroconcordant relationships have an agreement to have 'safe' sex only (that is, to have no unprotected anal intercourse outside the seroconcordant relationship). Two exceptions are among HIV-positive men in the Positive Health study and the Gay Asian Men in Sydney study, where approximately 50% of those in seroconcordant relationships have safe sex agreements. There is no evidence from the various Periodic Surveys that this percentage is changing.

Among nonconcordant couples, around 25% to 35% in most samples had an agreement to have only 'safe' sex (that is, no unprotected anal intercourse at all, either within the relationship or with casual partners). This indicator showed a downward trend overall for the period 2000 to 2004 in the Melbourne Periodic Survey data.

Of those without safe sex agreements, both seroconcordant and nonconcordant, some had agreements that allowed the possibility of unsafe sex, some had no agreements and some did not answer the relevant questions. Lack of a safe sex agreement does not necessarily imply unsafe practice.

1.1.12 Negotiated safety and unprotected anal intercourse with casual partners

Table 1.1.12 shows the proportion of HIV-negative men practising negotiated safety who broke their agreement and engaged in unprotected anal intercourse with casual partners. Data are reported from the Sydney, Melbourne and Brisbane Periodic Surveys which provided sufficient sample sizes for reliable calculations. Table 1.1.12 shows the number of men practising negotiated safety (*N*) and the percentage of these men who engaged in any unprotected anal intercourse with casual partners in the six months prior to survey. ('*N*' is the number of men in a seroconcordant HIV-negative regular relationship for at least six months who engaged in unprotected anal intercourse within the relationship and who had an agreement not to have unprotected anal intercourse with casual partners.)

In each city, small proportions of men engaged in unprotected anal intercourse with casual partners. Although the percentages in each of the cities varied slightly from year to year, there were no significant trends.

1.1.13 Incidence of HIV in the Health in Men cohort

Table 1.1.13 shows the number of men recruited into the Health in Men study from 2001 to 2003, as well as the proportion who participated in subsequent interviews. Also presented in Table 1.1.13 is the number of men who were confirmed HIV seroconverters at each follow-up interview and the corresponding incidence rates. Incidence per 100 person-years ranged from 0.29 to 4.61. The latter figure should be treated with caution as it was based on a small sample size.

1.1.14 Prevalence and incidence of hepatitis A and B in the Health in Men cohort

Table 1.1.14 shows that the proportion of participants in the Health in Men cohort who were hepatitis-A-seropositive when tested at baseline interviews remained stable at around 70% for participants recruited in 2001, 2002, 2003 and 2004. Among participants who tested negative to the hepatitis A virus at baseline and who underwent hepatitis A testing again at the time of their first-round follow-up interview, around 25% to 35% (depending on the year of intake) had acquired hepatitis A infection. There were no significant trends.

The percentage of participants who had serological evidence of prior or current hepatitis B virus infection has been around 20% over the four years from 2000 to 2004. There is no evidence of a trend in the data. The percentage of participants with serological evidence of hepatitis B vaccination remained stable from 2000 to 2003 at slightly over 50%. Although in 2004 the rate is lower, at 43%, this figure ought to be treated with caution as it is based on a relatively small number of men at the time of compiling the data for this report.

Among participants who tested negative to hepatitis B at baseline interview, 30.4% of the 2001 intake of participants was found to have serological evidence of hepatitis B vaccination at the time of annual follow-up. This dropped to 23.5% among the 2003 intake. This apparent trend was nonetheless non-significant.

1.1.15 Syphilis in the Health in Men cohort

In the Health in Men cohort, the percentage of participants who tested positive to syphilis was highest among men in the initial intake in 2001 (around 5%) and has since stabilised at around 2% among men recruited in subsequent years (see Table 1.1.15).

1.1.16 Gonorrhoea and chlamydia in the Health in Men cohort

From March 2003 nucleic acid amplification testing for gonorrhoea and chlamydia was incorporated into the STI testing options for the Health in Men cohort. Urine samples, throat swabs and rectal swabs were collected from each consenting participant. In all, 1009 and 1003 participants underwent these tests in 2003 and 2004, respectively. Around 7% and 6% of participants tested positive to pharyngeal (throat) gonorrhoea in 2003 and 2004 respectively. A smaller percentage of men tested positive to penile and anal gonorrhoea in both years.

Table 1.1.12: Percentage of HIV-negative men who engaged in unprotected anal intercourse with casual partners among those who had a negotiated safety agreement

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Sydney										
Periodic	312	8.3	312	10.6	330	8.2	276	9.4	311	9.3
Melbourne										
Periodic	157	7.6	222	5.0	174	6.3	192	11.5	213	4.7
Brisbane										
Periodic	103	5.8	132	3.8	153	9.2	140	7.9	132	3.0

Table 1.1.13: HIV sero-conversion in the Health in Men cohort

	Intake 2001	Intake 2002	Intake 2003
Number recruited	450	453	430
Number who completed first annual follow-up interview	395	389	354
Number of confirmed HIV seroconverters at the first annual follow-up	3	5	3
Incidence rate (per 100PY) at the first annual follow-up	0.72	1.28	0.84
Number who completed the second follow-up interview	361	329	36
Number of confirmed HIV seroconverters at the second annual follow-up	2	1	0
Incidence rate (per 100 PY) at the second annual follow-up	0.57	0.29	0.00
Number who completed the third follow-up interview	324	45	N/A
Number of confirmed HIV seroconverters at the third annual follow-up	3	2	N/A
Incidence rate (per 100 PY) at the third annual follow-up	0.88	4.61[1]	N/A

[1]This figure ought to be treated with caution as it is based on a small number of participants.

PY = person-years

Table 1.1.14: Hepatitis A and B testing and incidence in the Health in Men cohort

	Intake 2001	Intake 2002	Intake 2003	Intake 2004
Hepatitis A				
Number recruited	450	453	430	94
Number tested	434	434	422	94
Number tested seropositive	295 (68.0%)	295 (68.0%)	302 (71.6%)	68 (72.3%)
Number tested seronegative who completed the first annual follow-up interview	101	101	36	N/A
Number seroconverted	26 (25.7%)	30 (29.7%)	13 (36.1%)	N/A
Hepatitis B				
Number recruited	450	453	430	94
Number tested	433	433	427	93
Number with prior infection	89 (20.6%)	79 (18.2%)	69 (16.2%)	21 (22.6%)
Number vaccinated	228 (52.7%)	232 (53.6%)	228 (53.4%)	40 (43.0%)
Number tested seronegative who completed the first annual follow-up interview	80	88	51	N/A
Number infected during the 12-month interval	0	0	0	N/A
Number vaccinated during the 12-month interval	24 (30.4%)	24 (27.3%)	12 (23.5%)	N/A

Table 1.1.15: Syphilis testing and prevalence in the Health in Men cohort

	Intake 2001	Intake 2002	Intake 2003	Intake 2004
Number tested	432	434	426	92
Negative	411	427	415	90
Positive	21	7	11	2
Prevalence (%)	4.86	1.61	2.58	2.17

Around 2% and 4% of participants tested positive to anal chlamydia in 2003 and 2004 respectively, and the prevalence of both penile and pharyngeal chlamydia was around 1% in both years (see Table 1.1.16).

1.1.17 Testing for sexually transmissible infections among homosexually active men

Table 1.1.17 presents data from a number of studies involving gay respondents on the proportion of men who reported having various specimens taken for testing for STIs. The data are for 2003 and 2004 only, not yet a sufficient number of data points to test for trends. In 2003 and 2004 there was considerable variability across cities and in the types of specimens provided. The Periodic Survey data for Sydney, Melbourne and Brisbane show that in 2004 a slightly higher percentage of men than in 2003 reported having had each of the tests in the 12 months preceding the survey.

1.1.18 Sexually adventurous men and sexually transmissible infections

Within gay communities, 'sexually adventurous' men who engage in esoteric sexual practices (such as fisting and sadomasochistic and bondage or dominance practices) and who value sexual intensity and transgression, may be at increased risk of STIs and HIV transmission but may not be effectively addressed in education campaigns (Kippax et al., 1998; Smith et al., 2004).

Following recent rises in syphilis and other STIs among Sydney gay men, a recent report published by NCHSR explored how sexually adventurous men perceived, experienced and managed STIs (Holt et al., 2004). STIs other than HIV were largely seen as an inevitable or acceptable risk of sexual activity and were not considered sufficiently serious for men to change their sexual practices. The apparent acceptance or insignificance of STIs was

Table 1.1.16: Gonorrhoea and chlamydia testing and prevalence in the Health in Men cohort

	2003	2004
Number tested	1009	1003
Gonorrhoea (number tested positive)		
Urine	3 (0.3%)	4 (0.4%)
Throat	72 (7.2%)	57 (5.7%)
Rectum	12 (1.2%)	10 (1.0%)
Chlamydia (number tested positive)		
Urine	9 (0.9%)	11 (1.1%)
Throat	14 (1.4%)	6 (0.6%)
Rectum	43 (4.3%)	20 (2.0%)

Table 1.1.17: Testing for sexually transmissible infections in the previous 12 months

Source	Anal swab N	%	Throat swab N	%	Penile swab N	%	Urine sample N	%
Sydney								
Periodic								
2003	2414	27.0	2406	36.2	2405	27.8	2408	44.3
2004	2584	34.8	2605	42.0	2573	33.7	2609	49.9
Positive Health								
2003	319	25.7	319	35.1	319	23.8	319	37.3
Melbourne								
Periodic								
2003	2007	24.2	2006	28.6	2001	23.7	2001	36.3
2004	1885	26.1	1886	32.4	1889	27.2	1883	42.0
Positive Health								
2003	62	25.8	62	30.6	62	19.4	62	41.9
Brisbane								
Periodic								
2003	1420	17.1	1423	24.8	1420	21.5	1424	38.8
2004	1368	23.0	1398	32.7	1376	27.9	1446	49.2
Perth								
Periodic								
2004	705	23.4	727	30.3	–	–	798	48.5
Adelaide								
Periodic								
2003	794	35.1	794	40.3	794	30.6	794	50.1
Canberra								
Periodic								
2003	238	23.5	238	29.0	238	20.2	238	41.6

explained by the men's belief that most STIs were curable or treatable, that STIs were ubiquitous and difficult to avoid (particularly within some forms of adventurous sexual practice) and that HIV continued to be the primary concern in gay men's sexual health priorities.

However, when discussing conventions around the management of STIs, a more complex picture emerged. Participants suggested that individuals were expected to seek treatment promptly once diagnosed with an STI, to abstain from sex while undergoing treatment and to protect partners from the transmission of any further such infections. These expectations were underpinned by a strong sense of individual responsibility not to pass on STIs, but were undermined by the recognition that it was often difficult to detect or recognise such infections without regular testing. The men's accounts also suggested that regular partners were regarded as more deserving of protection from STIs than casual partners, implying that conventions around protecting others from STIs in casual sexual environments may not be as robust as they are within the context of regular relationships.

Participants discussed a range of strategies they used to reduce the risk of or manage exposure to STIs, some of which appeared more plausible than others (Donovan, 2000a, 2000b). Some men employed evaluations of their sex partners' appearance (such as looking 'clean') to assess whether or not they were likely to have an STI, or tried to avoid sex venues they regarded as 'dirty'. Some men reported washing themselves (particularly their genitals) between episodes with different sex partners if they were attending a sauna. Many participants still used condoms as their primary way of preventing HIV and STIs, but reported difficulties in using condoms and were aware that STIs could not be completely avoided with condom use. Regular testing was therefore seen as a necessary and useful activity to detect STIs.

These findings suggest that STIs are regarded quite differently from HIV, and that the understandable priority given to HIV by gay (and particularly adventurous) men may sometimes undermine efforts to prevent STIs. Conventions about the ways in which STIs should be managed by gay men emphasise individual responsibility, which does not necessarily assist in generating greater awareness of them or providing more effective ways for the risk of STIs to be managed at a social or interpersonal level. Some of the management strategies used to avoid STIs as described by adventurous men, such as assessing the visual appearance of partners, may need to be challenged, while others may need reinforcement and encouragement, e.g. the use of condoms, washing and testing.

1.2 Other studies

In the past few years, the information available on populations other than homosexually active men has been transformed by the publication of the main report of the Australian Study of Health and Relationships, a grant-funded study carried out jointly by the Australian Research Centre in Sex, Health and Society (La Trobe University),

NCHSR, the National Centre in HIV Epidemiology and Clinical Research (University of New South Wales) and the Health Promotion Unit of Central Sydney Area Health Service. The study surveyed 19 307 Australians aged 16 to 59 and is thus the largest representative sample survey on sexual health behaviour, attitudes and knowledge ever carried out in Australia and one of the larger national sex surveys around the world (Smith et al., 2003a). Section 1.2.1 presents data from the study in relation to sexual behaviour, HIV testing and circumcision.

Sections 1.2.2 and 1.2.3 present summary results from convenience-sample surveys of university students and of women in contact with the gay and lesbian community in Sydney.

1.2.1 The Australian Study of Health and Relationships

Telephone interviews were carried out from mid-2001 to mid-2002 with 10 173 men and 9134 women in households (i.e. not in institutions such as hospitals, boarding houses or prisons), with an overall response rate of 73.1%. The response rate was higher in women than men, but men in central Sydney were oversampled to give a large enough sample size to enable accurate comparisons with targeted samples of homosexually active men. The sample was weighted to reflect the location, age and sex distribution of the 2001 Census, and is therefore regarded as being broadly representative of the Australian population. The full report (Volume 27 Number 2 of the *Australian and New Zealand Journal of Public Health*) can be purchased for $30 from the Australian Research Centre in Sex, Health and Society at www.latrobe.edu.au/arcshs. A book based on the survey and written for the general reader by two of the project team, Juliet Richters and Chris Rissel, is now also available. See the NCHSR website under 'Publications' for an order form for *Doing it down under: The sexual lives of Australians.*

In the summary that follows, percentages are presented without standard errors or confidence intervals (CI). The 95% CIs for estimates involving the entire sample will be within one percentage point either side of the estimates. When smaller subsamples are used, the standard error increases. Thus, for a subsample of 331 (1.7% of the total sample), if the observed percentage is 50%, the 95% CI is from 42% to 58%, and if the observed percentage is 5%, the 95% CI is from 0.7% to 9.3%.

Sexual behaviour

Three-quarters of the total sample (73.5% of men and 77.0% of women) were in a regular heterosexual relationship. Of those, 82.7% (62.3% of the total) lived together. People had had sex an average of 1.84 times per week in the four weeks before interview; younger people and people with regular partners had had sex more often than older people and people who had only casual partners. Among people who had had a regular partner for the past 12 months or longer, 4.9% of men and 2.9% of women had had sex with someone else in the past year (Rissel et al., 2003a).

For men, the median age at first vaginal intercourse declined from 18 among men in their 50s to 16 for men aged under 20. For women, the decline in median age was from 19 to 16. Contraceptive use at first intercourse has increased from less than 30% of men and women in the 1950s to over 90% in the 2000s (Rissel et al., 2003b).

Men had had more opposite-sex partners in their lifetime (mean 16.5, median 6) than women (mean 6.8, median 3) and also in the past year (men: mean 1.5, median 1; women: mean 1.0, median 1). Of the total sample, 92% had had experience of vaginal intercourse; 6% of men and women had never had intercourse and 2% did not disclose whether they had. More than half of those without experience of intercourse were under 20. From these figures we can infer that at least 3% of people have never had intercourse in their lifetimes. Only a minority of these people are gay men or lesbians who have not had intercourse with an opposite-sex partner.

In the most recent sexual encounter in the past year with an opposite-sex partner, 95.6% of men and 93.9% of women had engaged in vaginal intercourse. Although 20.9% of men and 15.1% of women had tried anal intercourse, less than 1% had done it at their last heterosexual encounter (de Visser et al., 2003a).

Less than 3% of men and women thought of themselves as anything other than heterosexual (i.e. gay, lesbian, bisexual or other). However, more people (8.6% of men and 15.1% of women) reported some same-sex attraction or experience. Of the men with any lifetime sexual experience with other males, 40% identified as either gay or bisexual. Of women with any lifetime sexual experience with other females, only 24% identified as either lesbian or bisexual (Smith et al., 2003b).

In the most recent sexual encounter between men, 90% had engaged in manual stimulation of the partner and 89% had been stimulated by the partner, 75% had received fellatio and 76% had given it, and 38% had had insertive anal intercourse and 30% had had receptive (n = 185 for these questions). In the most recent sexual encounter between women, 91% had manually stimulated their partner and 95% had been stimulated by the partner, 66% had received cunnilingus and 62% had given it (n = 123; Grulich et al., 2003a).

Although the majority of respondents had used a condom at some time in their lives, fewer than half of the respondents who were sexually active in the past year had used a condom. For vaginal intercourse, only 8% of people always used condoms in the past six months for vaginal intercourse with a regular live-in partner, but 29% did so with a regular non-live-in partner, and 45% with a casual partner. Among men who had had sex together in the past six months, 23% always used a condom for anal intercourse with a regular live-in partner, 38% with a regular non-live-in partner and 87% with a casual partner. In other words, of men with a regular live-in partner, 77% had not always used condoms for anal intercourse (in fact 74% had never done so). This was true of 62% of the even smaller group of men with regular non-live-in partners but of only 13% of the men who had had sex with casual partners (de Visser et al., 2003b).

Testing for HIV

About two in five Australians aged 16 to 59 had been tested for HIV: 40.7% of men and 38.9% of women. Men who identified as gay or bisexual were more likely to have been tested and to have had a test recently. Of those tested, around 0.3% of men and women were HIV-antibody-positive (Grulich et al., 2003b).

Circumcision

More than half (59%) of the men were circumcised. Circumcision was less common among younger men (32% aged under 20) and more common among the Australian-born (69%). After correction for age, circumcision was unrelated to reporting STIs but appeared to protect against penile candidiasis (thrush infection, which is much more common among women). Circumcision was unrelated to most sexual difficulties but circumcised men were less likely to have reported physical pain during intercourse or trouble keeping an erection in their 50s; reasons for this are unknown. There were no significant differences in practices at last sexual encounter with a female partner (for example, circumcised men were no more or less likely to have received fellatio). Circumcision did not make any difference to whether men had masturbated in the previous year.

Neonatal circumcision was routine in Australia until the 1970s. It appears to have minimal protective effects on sexual health. This study provides no evidence about effects on sexual sensitivity (Richters et al., under review).

1.2.2   Sexual behaviour and knowledge about HIV and sexually transmissible infections among first-year university students

A total of 1251 students were surveyed at the University of New South Wales in 2002 and 2003 from a stall during the annual Orientation Week. Students completed a two-page questionnaire and placed it in a ballot box. It was not possible to estimate a response rate since students could easily avoid the stall. About 95% of the students recruited were first-year full-time students. The main results from these samples were published in the *Annual report of behaviour 2004* (Van de Ven et al., 2004).

The number of overseas students studying in Australia has been increasing steadily over recent years. Most of them are from Asian and Pacific countries. We were therefore interested in the levels of knowledge about HIV and other STIs among these students, particularly as some of them come from countries with a higher prevalence of HIV than Australia. Over one-third (36%) of students in our surveys in 2002 and 2003 were born in Asia and nearly half were born locally. Asian-born students had poorer knowledge of HIV and STI transmission than local-born students, and they also had misconceptions about the true scale of the HIV epidemic in their countries of birth in comparison with Australia. Thai students had better knowledge about the HIV epidemic in Thailand than students from other Asian countries, but their HIV/STI knowledge was just as poor. This points to a need for an integrated program at both the local and the international levels to educate young people (many of whom are not yet sexually active

when they come to Australia as students) about safe sex behaviour if a breakthrough is to be achieved to stop the rapid spread of HIV in our region (Song et al., in press).

In the late 1980s and during the 1990s, data were also collected annually, using a similar questionnaire, among first-year students at Macquarie University. The survey was carried out in classrooms with approval from the faculty and the ethics committee. Good response rates were achieved (around 95%). About two-thirds of the students were female. Previous annual reports of behaviour have reported some main results and peer-reviewed journal papers have also been published from the study. One of the most recent publications reveals that, over the 10 years between 1990 and 1999, there was a significant increase in the practice of oral sex with both regular and casual partners among female students, and in vaginal sex with regular partners. No significant changes were detected among male students in the same period (Grunseit et al., in press).

1.2.3 Women in contact with Sydney's gay and lesbian communities

Table 1.2.3 contains data from the biennial Sydney Women and Sexual Health (SWASH) surveys conducted by NCHSR, the National Centre in HIV Epidemiology and Clinical Research and the AIDS Council of NSW (ACON) in 2000, 2002 and 2004 (see also Richters et al., 2001, 2002, 2005). Each year, most of the women (71% to 90%) were recruited at the Sydney Gay and Lesbian Mardi Gras Fair Day. Some respondents were also recruited through other groups, venues and clinics in contact with gay, bisexual and lesbian communities but, to allow for

reliable comparisons over time, the data in the table are based only on the women recruited at Fair Day.

In 2004, ages of respondents ranged from 16 to 64 (median age 31) and 69% had post-school education. Asked how they thought of themselves, 69% identified as lesbian/dyke/homosexual/gay, 10% as bisexual and 16% as heterosexual; 5% chose the 'other' category or did not answer. Sexual identity was correlated with age: younger women were more likely to identify as bisexual and less likely to identify as lesbian. Four respondents were transgender/trannies. Most respondents (403, 83%) had had sex with a woman; 327 women (67%) had done so in the past six months. Nearly a quarter of the women (111; 23%) had had sex with a man they considered to be gay or bisexual; 23 women (5%) had done so in the previous six months. Eight of the lesbians and eight of the bisexual women said they had had sex with a gay or bisexual man in the previous six months, as had four of the heterosexual women. Six women (1%) had had unprotected vaginal or anal intercourse with a gay or bisexual male partner (regular or casual) in the previous six months. Thirteen women (3%) had done sex work in the previous six months.

Of the 310 women who had had oral sex with a woman in the previous six months, only 9% had used a dental dam and most of them had done so only once. Use of gloves (13% of women who had had sex with a woman) and condoms (18%) was more common and they were used more frequently. Only a minority of women had received oral sex during menstruation or given oral sex to a woman who was menstruating but it was far more common to do so with a tampon in place than to use a dental dam.

Table 1.2.3: Women surveyed at Sydney Gay and Lesbian Mardi Gras Fair Day[1]

	2000 (N = 883) n	%	2002 (N = 505) n	%	2004 (N = 485) n	%
Sexual identity						
Lesbian	611	69.2	360	71.3	334	68.9
Bisexual	80	9.1	78	7.5	48	9.9
Heterosexual	177	20.0	36	15.0	78	16.1
Other/missing	15	1.7	31	6.1	25	5.1
Ever tested for HIV	487	55.2	292	57.8	269	55.5
Had an HIV test in past 12 months (% of those ever tested)	146	29.8	106	21.0[2]	85	31.6[2]
HIV status						
Negative	477	55.6	279	59.9	270	55.7
Positive	2	0.2	3	0.6	1	0.2
Unknown	379	44.2	184	39.5	214	44.1
Had sex with a gay or bisexual man in past 6 months	21	2.4	16	1.8	23	4.7
Lesbian	2		4		8	
Bisexual	12		6		8	
Heterosexual	5		6		4	
Other/missing	2		0		3	
Unprotected vaginal or anal intercourse with a gay or bisexual man in past 6 months	17	1.9	10	2.0	6	1.2
Injecting drug use in past 6 months	19	2.2	13	2.6	10	2.1

[1]Sample size varies slightly for individual questions due to non-response.
[2]In 2002 the questionnaire response categories were changed; this figure is for testing up to 11 (not 12) months ago.

2
Living with HIV

On a national basis, only one study, HIV Futures—conducted initially in 1997 (Ezzy et al., 1998) and since repeated every second year (Grierson et al., 2004)—provides reliable information on both sexual practice and treatment uptake among people living with HIV and AIDS, including representation of people from all categories of HIV transmission.

Regional information is available from other surveys, notably the Positive Health cohort study conducted in Sydney by NCHSR and the National Centre in HIV Epidemiology and Clinical Research, with input from the Australian Research Centre in Sex, Health and Society for a smaller Melbourne arm of the study. The first round of face-to-face interviews for the Positive Health study was conducted in 1999, the second round in late 2000 and early 2001, and interviews have been conducted annually since 2003 (Fogarty et al., 2003). Sexual practice questions were not included in the baseline interview schedule but were included in the Sydney follow-up in 2000–2001.

Data reported in this section have also been drawn from the clinic-based Australian HIV Observational Database (AHOD), managed by the National Centre in HIV Epidemiology and Clinical Research, and the Gay Community Periodic Surveys conducted in Sydney, Melbourne, Brisbane, Canberra, Adelaide and Perth.

2.1 Sexual practice

The sexual practices of people with HIV have been surveyed nationally in the HIV Futures study only twice in the period covered by this report, so trends over time cannot be accurately gauged. The number of responses from women in the HIV Futures study to questions regarding unprotected intercourse is relatively small, as are the number of responses from men who had female partners, so these data ought to be interpreted with caution.

Even though an accurate assessment cannot be made, the HIV Futures study indicates little change in the percentages of HIV-positive men who engaged in unprotected intercourse with casual male partners and with regular male partners (see Table 2.1). Men and women participants were more likely to have had unprotected intercourse with a seroconcordant than a serodiscordant regular partner.

The Positive Health data indicate no change in (though relatively high proportions of) unprotected anal intercourse with seroconcordant casual male partners or regular partners. The data, however, do indicate an increase in unprotected anal intercourse with discordant or nonconcordant casual male partners, from 51.4% in 2001 to 65.3% in 2004.

2.2 Self-ratings of health

In various studies, HIV-positive people were asked to rate their health as 'excellent', 'good', 'fair' or 'poor'. Table 2.2 shows the percentage of people who reported 'excellent' or 'good' overall health. It also shows that, over time, HIV-positive people's self-ratings of health varied little in each study. Sydney participants in the Positive Health cohort study tended to report better overall health than the Melbourne participants and the nationwide HIV Futures sample.

Table 2.1: Unprotected intercourse among people living with HIV/AIDS[1]

Partner type	2001 Men		2001 Women		2003 Men		2003 Women		2004 Men		2004 Women	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
HIV Futures	*N* = 818		*N* = 74		*N* = 945		*N* = 81					
Casual male	371	59.0	8	25.0	293	64.3	9	33.3				
Casual female	17	41.2			17	47.1						
Regular male (HIV-positive)	122	91.8	9	100	120	85.0	12	75.0				
Regular male (HIV-negative)	121	41.3	21	42.9	113	35.4	22	59.1				
Regular female (HIV-positive)	8	87.5										
Regular female (HIV-negative)	19	27.3			24	20.8						
Positive Health	*N* = 242				*N* = 408				*N* = 308			
Casual male (HIV-positive only)[2]	79	74.7			142	70.4			118	78.8		
Casual male (HIV-negative/unknown)[2]	146	51.4			142	63.4			118	65.3		
Regular male (HIV-positive)	52	71.2			65	73.8			69	79.7		
Regular male (HIV-negative/unknown)	67	40.3			80	20.0			91	24.2		

[1]Shows the number and percentage of people living with HIV/AIDS who reported unprotected intercourse (vaginal or anal) with casual and regular partners in the six months prior to the survey.

[2]Based only on those who engaged in unprotected anal intercourse with casual partners (and is therefore not comparable with HIV Futures figures above).

Table 2.2: Self-ratings of health as 'excellent' or 'good'[1]

Source	2000 *N*	%	2001 *N*	%	2002 *N*	%	2003 *N*	%	2004 *N*	%
Australia										
HIV Futures			891	69.2			1029	67.8		
Sydney										
Positive Health[2]			292	79.8	323	79.9			274	85.0
Melbourne										
Positive Health[2]			105	68.6	84	69.0			55	72.7

[1]Rather than 'fair' or 'poor'.

[2]Includes 'excellent', 'very good' and 'good'.

2.3 Treatment uptake and viral load

HIV-positive homosexually active men in Sydney, Melbourne and other parts of Australia took up combination antiretroviral therapy very quickly after it became available (see Figure 5). In the national sample from the HIV Futures study, 73.5% of HIV-positive people reported being on combination antiretroviral therapy in 1999, a figure corroborated by data from other studies throughout Australia in the same year. (The different percentages in Table 2.3.1 to some extent reflect different definitions of 'combination antiretroviral therapy', as indicated by the footnotes to the table.)

Recent data from Positive Health participants in Sydney but not Melbourne, and from Sydney and Melbourne participants in the Gay Community Periodic Surveys, indicate a significant decline in the proportion of people living with HIV who use combination therapy. The only study to have shown a significant increase in the use of combination therapy is the clinic-based Australian HIV Observational Database.

Key data from Table 2.3.1 are presented graphically in Figure 5. Where available, relevant data from surveys conducted in 1997 are also included. (Note that for legibility the *y*-axis has been drawn from 40% to 100% rather than from 0% to 100%.)

Table 2.3.2 presents data from various sources on the proportion of people living with HIV/AIDS who have undetectable viral load. Data are presented separately for those using antiretroviral therapy and those not using it at the time of data collection. Clearly, a larger proportion of those using antiretroviral therapy have undetectable viral load (in the region of 70% to 80% depending on the sample) than those not using therapy (around 15% to 25%). Among Sydney participants in Positive Health, there was a significant increase in the proportion of men with undetectable viral load who were using antiretroviral therapy. Among those who were not using antiretroviral therapy in the Australian HIV Observational Database open cohort and the Melbourne arm of the Positive Health study, increasing proportions of people with undetectable viral load were observed.

2.4 Treatment experiences

A significant consideration for people on combination therapy is the prospect or experience of adverse side effects. As indicators of side effects (see Table 2.4), the experiences of (a) diarrhoea or nausea, (b) anxiety or depression or fear, (c) lipodystrophy and (d) 'any side effects' were calculated. Trends in the data were not analysed because there were either too few data points or, in the case of the Positive Health study, questions asked of participants in 2004 were slightly different from questions asked in previous years. However, based on the available data, a smaller proportion of HIV Futures participants reported side effects. (The lower percentages from HIV Futures were attributable to the way the questions were asked, as open-ended questions, so the figure would be an underestimation of participants' experiences of side effects.) The experience of diarrhoea/nausea, anxiety/depression/fear and lipodystrophy would appear to be the norm among participants on antiretroviral therapy.
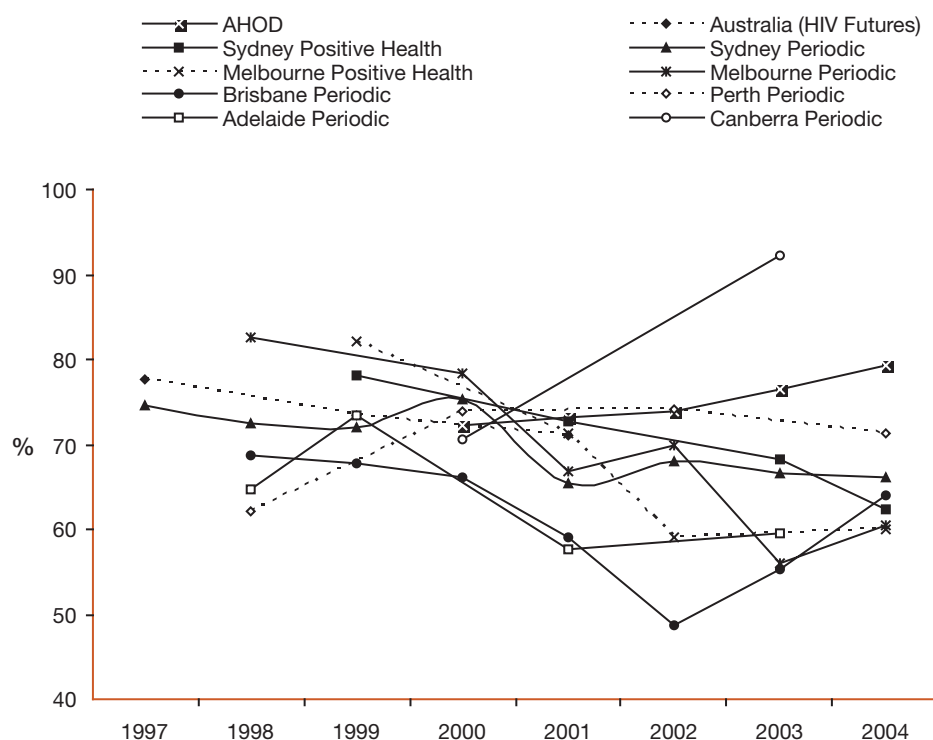

Figure 5: Percentage of people living with HIV/AIDS on combination therapy

Table 2.3.1: People living with HIV/AIDS on combination therapy

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
HIV Futures[1]			884	71.0			1029	67.3		
AHOD[1,2]	2365	72.2	2276	73.1	2164	74.0	2053	76.4	1909	79.2
Sydney										
Periodic[3]	504	75.2	443	65.5	420	68.1	330	66.7	416	66.1
Positive Health[1]			292	72.6			322	68.3	274	62.4
Melbourne										
Periodic[3]	138	78.3	151	66.9	150	70.0	177	55.9	159	60.4
Positive Health[1]			105	71.4			84	70.2	55	60.0
Brisbane										
Periodic[3]	77	66.2	88	59.1	121	48.8	94	55.3	122	63.9
Perth										
Periodic[3]	50	74.0			27	74.1			49	71.4
Adelaide										
Periodic[3]			33	57.6			42	59.5		
Canberra										
Periodic[3]	17	70.6					13	(92.3)[4]		

[1] 'Combination therapy' means two or more antiretrovirals.

[2] AHOD = Australian HIV Observational Database

[3] 'Combination therapy' means 'combination antiretroviral therapy'.

[4] Percentage to be treated with caution as it is based on a small number of participants.

Table 2.3.2: People living with HIV/AIDS who have undetectable viral load

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
Australia										
HIV Futures										
Using ART[1]			568	70.8			619	76.1		
Not using ART			200	17.7			140	21.4		
AHOD[2]										
Using ART[3]	1581	71.0	1520	74.3	1452	74.0	1403	80.0	1479	60.8
Not using ART	389	12.6	391	13.6	401	12.7	433	14.8	430	39.2
Sydney										
Periodic										
Using ART					100	80.0	217	75.1	267	77.5
Not using ART					53	13.2	108	24.1	141	24.8
Positive Health										
Using ART			206	67.0			220	70.0	195	83.1
Not using ART			72	13.9			98	20.4	79	24.1
Melbourne										
Periodic										
Using ART							98	74.5	94	72.3
Not using ART							77	16.9	61	16.4
Positive Health										
Using ART			74	56.8	59	66.1			42	66.7
Not using ART			30	10.0	22	9.1			13	7.7
Brisbane										
Periodic										
Using ART					58	75.9	51	74.5	78	80.8
Not using ART					61	21.3	41	19.5	44	27.3
Perth										
Periodic										
Using ART					18	84.2			35	82.9
Not using ART					8	15.8			12	33.3

[1]ART = antiretroviral therapy

[2]Viral load levels are taken as an average over the respective year.

[3]Using ART for at least two weeks in the year.

2.5 Adherence

Adherence to antiretroviral regimens is an important issue. An indicator of adherence—having not missed any doses 'during the past two days'—was available from the HIV Futures and Positive Health studies. On this indicator, approximately 85% of the 2003 Positive Health participants missed no doses. In the HIV Futures study, missing doses was related both to the belief that medication gave an unwanted reminder of HIV status and to the presence of depressive symptoms. Recent data from both studies show that approximately 50% of those 'currently' taking antiretrovirals experienced any difficulty taking pills on time (see Table 2.5). No data were reported in 2004 from the Positive Health study as questions about adherence were changed after 2003.

2.6 Living with HIV and cultural diversity

People from culturally and linguistically diverse backgrounds intersect with one or more priority groups in the National HIV/AIDS Strategy: gay and homosexually active men, injecting drug users and people living with HIV/AIDS. However, it is also acknowledged that people from such backgrounds have specific needs when it comes to HIV/AIDS-related health promotion.

This study was a collaborative project between NCHSR and the Multicultural HIV/AIDS and Hepatitis C Service. The aim was to investigate the lived experience of HIV-positive people from culturally and linguistically diverse backgrounds; that is, the interrelationship of living with HIV and belonging to an ethnic and cultural group outside the Anglo-Celtic mainstream. The focus was on common issues across cultures or ethnicities. Data were collected through in-depth semi-structured interviews. Twenty-nine men and women participated in the study (Körner et al., in press).

2.6.1 Immigration and HIV diagnosis

Those participants who applied for permanent residency from within Australia rather than from off-shore often found out about their HIV-positive status as a result of the HIV test that is part of the health requirement of the Department of Immigration and Multicultural and Indigenous Affairs. They learned of their HIV status at a time when their lives were already unsettled as a result of the migration or refugee process and when they were uncertain about whether or not their application for residency would be successful. No one who was diagnosed in this way reported pre- or post-test counselling.

Because of Australia's health requirement for all migrants to be HIV-negative, the diagnosis jeopardised participants' prospects of staying in Australia. At the same time it was now difficult for them to return to their country of birth for a variety of reasons: their HIV status, their sexual orientation, war and other forms of social and political turmoil. Some gay men had come to Australia to escape from repressive attitudes towards homosexuality and the stigma associated with HIV/AIDS in their country of birth. For these gay men, their uncertain immigration status meant having to face the prospect of returning to a country where they would be stigmatised and would have to suppress their sexuality. Those who were on antiretroviral treatment had to face the possibility that this treatment could be withdrawn from them at any time if their appeal against the immigration authorities was not successful. Those whose application for permanent residency had been rejected and who were waiting for the outcome of their appeal experienced the uncertainty of their migration status as a bigger problem than their HIV-positive status.

2.6.2 Immigration, health care and support

Access to health care was dependent on participants' immigration status. Those on certain temporary visas who were ineligible for Medicare had problems getting health care after they were diagnosed. Some clinics were generous and provided free care and treatment. Others refused to treat patients without a Medicare card. For some, the only way to get antiretroviral treatment was to take part in clinical trials. Others imported generic drugs from overseas, sometimes with the help of their doctor. The uncertainty of their immigration status and the possibility of deportation affected treatment adherence for some participants. They saved any medication they had in case they were deported because treatment in the country of birth was difficult to get and expensive.

For those whose migration status was uncertain, survival was precarious and access to support was limited. Some had to work in physically demanding jobs to support themselves at a time when they were physically and emotionally very vulnerable. Others who were physically able to work were not allowed to do so under the terms of their bridging visa. This made them dependent on friends for basic survival needs. Being dependent on others when they wanted to be independent undermined their self-reliance and their sense of self-worth. Those on temporary visas who were allowed to work were proud of their independence. They were not only able to support themselves but, as taxpayers, felt that they were contributing to Australian society.

New migrants who had arrived in Australia on their own had no one to turn to. They were also unfamiliar with HIV/AIDS organisations. Some who managed to make contact with organisations were turned away because they were not eligible for assistance.

Those whose migration status entitled them to use health care and support services still faced considerable barriers and experienced difficulties using these services. Two major issues were the language barrier and having to negotiate an unfamiliar system of health care, social services, HIV community organisations and referral from one service to another, often without knowing what various services were for. Participants also had to absorb vast amounts of information and medical terminology. They had to make decisions about their lives and their health in a culture that was still unfamiliar, without close friends to confide in. Some found this quite overwhelming.

Table 2.4: Experience of side effects by people on combination therapy[1]

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(a) Diarrhoea/Nausea										
Australia										
HIV Futures			588	24.5			693	25.3		
Sydney										
Positive Health			194	64.5			155	73.6		
Melbourne										
Positive Health			70	81.4			49	75.5		
(b) Anxiety/Depression/Fear										
Australia										
HIV Futures			886	21.3			693	43.1		
Sydney										
Positive Health			194	60.8			155	69.0	193	88.1
Melbourne										
Positive Health			70	72.9			49	77.6	42	66.6
(c) Lipodystrophy										
Australia										
HIV Futures			836	38.4			693	44.2		
Sydney										
Positive Health			194	71.6			155	72.9	193	65.3
Melbourne										
Positive Health			70	74.3			49	69.4	42	63.3
(d) Any side effects										
Australia										
HIV Futures			588	43.9			693	53.2		
Sydney										
Positive Health			194	81.4			155	94.2	193	84.5
Melbourne										
Positive Health			70	90.0			49	95.9	42	83.3

[1] The side effects may not all be attributable to taking antiretrovirals. From 2004, slightly different questions were asked in Positive Health than in 2001 and 2003.

Table 2.5: Experience of taking pills

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004[1] N	2004[1] %
(a) Missed any doses during past two days										
Australia										
HIV Futures			640	17.2			664	34.5		
Sydney										
Positive Health			194	13.9			178	14.0		
Melbourne										
Positive Health			70	28.6			60	15.0		
(b) Experienced any difficulties taking pills on time										
Australia										
HIV Futures			588	45.0			693	41.7		
Sydney										
Positive Health			194	49.0			178	48.9		
Melbourne										
Positive Health			70	60.0			60	48.3		

[1] In 2004, due to changes in the Positive Health questionnaire, these data were not collected.

2.6.3 Migration, HIV and social relations

For almost all participants the meaning of an HIV-positive diagnosis was grounded in their knowledge about AIDS and their experience of it in their country of birth, no matter how long they had lived in Australia: AIDS was regarded as a terminal illness. Most were familiar with AIDS prevention campaigns in their country of birth. However, they did not know about HIV as the causative agent of AIDS, nor the difference between being infected with HIV and having AIDS. Therefore, the meaning of an HIV-positive diagnosis to them was 'having a terminal illness'; death was thought to be imminent. Also grounded in the culture of the country of birth were participants' perceptions of people infected with HIV as 'immoral' and 'deviant'. As a result of these perceptions, many did not disclose their HIV status to their families and ethnic communities. Some of those who had disclosed to their families were shunned as a result.

In view of the meanings participants associated with HIV/AIDS, for many it was of utmost importance to maintain silence about their HIV-positive status. However, this could lead to considerable tensions. On the one hand, new migrants who were diagnosed as part of the health requirement for permanent residency and who had not yet

established new social networks were socially isolated and alone at a time when they were vulnerable and needed support. On the other, the language barrier and their vulnerability after being diagnosed HIV-positive made it extremely difficult for them to establish new social relations in the English-speaking mainstream.

Because they expected prejudice and stigma from their ethnic communities, some participants completely withdrew from these communities. However, in spite of their reluctance to associate with others from their ethnic communities, and because of the English language barrier, the mother tongue was still important to establish new social relations. This need was met by the bilingual co-workers of the Multicultural HIV/AIDS and Hepatitis C Service. They were from the same linguistic and cultural background but without the prejudice against people with HIV that is common in many ethnic communities. Participants with limited English also had great difficulty negotiating the Australian health care system after they were diagnosed. They had problems understanding medical information and making decisions about anti-retroviral treatments. The bilingual co-workers acted as brokers between clients and the health care system.

A major problem for some new migrants, as well as for some of those who had been in Australia for a long time, was feeling torn between Australia, where they received health care and support and where they were able to maintain their health and be open about their sexuality, and the close emotional ties with families and friends in the now-more-distant country of birth. The tension between living in Australia where their health needs were met and returning to their country of birth to be united with their families was also evident in the narratives of some migrants who had lived in Australia for a long time. Some had partners or children with a different nationality or a different migration status. Some had relatives who wanted to be sponsored for migration to Australia. Some felt guilt because they were unable to care properly for their ageing parents in their country of birth. Women with young children missed the support of their extended families but they also had to consider their children's future when their own health would deteriorate.

2.7 Seroconversion

The Risk Factors for HIV Infection study, which began in 1993, documents understandings of HIV transmission risk given in accounts by gay men of the purported event or events that they believe led to their seroconversion. The ongoing nature of this study allows for understanding of changes in perceptions of risk over time.

Men who have recently seroconverted are interviewed within six months of a documented infection. There was a break in interviewing men between 1998 and 1999. Sixty-five men were interviewed prior to the introduction of highly active antiretroviral treatment late in 1996, and 53 men were interviewed between 1997 and the end of 2003. In 2004, 19 men were interviewed, bringing the total number of participants in the study to 128. Since the beginning of 2003, the majority of participants have been recruited via the PHAEDRA study based at the National

Centre in HIV Epidemiology and Clinical Research. This is a prospective cohort study of individuals identified with primary HIV infection to examine the immunological, virological and therapeutic factors that may influence disease progression. The PHAEDRA study also collects data on behavioural risk factors associated with acquiring HIV infection.

The Risk Factors for HIV Infection study enables explorations of men's perceptions of risk and the meanings they attach to different sexual practices, relationships and contexts. The presumed mode of transmission offered by respondents early in their interview was not always the same as the conclusion reached by the end of the interview and presented in Tables 2.7.1 to 2.7.3 (or indeed the same as the conclusion drawn by the researchers on review of the transcripts). The interviews became a joint process of reconstruction of 'what probably happened' as well as the offering of memories by the participant to the interviewer.

The findings indicate that up until the end of 1996 just over half of seroconversions were believed by the men in the study to have occurred within their regular relationships, some of which they knew to be serodiscordant for HIV. In the interviews since 1997 a significant number of seroconversions continued to be attributed to regular relationships but it appeared that infection was now more frequently being attributed to casual sex. Although there is currently no epidemiological data available in Australia on the proportion of seroconversions that occur in the context of a regular or casual relationship, behavioural surveillance data from the Gay Community Periodic Surveys and other studies has, until recently, shown generally increasing rates of unprotected anal intercourse with casual and regular partners in recent years (see Section 1 of this report).

The accounts of seroconversion offered by participants in this study provide significant insights into the contexts and meanings that surround HIV infections in both regular and casual relationships. Analysis of these interviews suggests that sexual encounters are framed by a number of factors including location, length of relationship, familiarity with the casual partner, incorrect assumptions about sero-status, intimacy, sexual attraction and romance (Kippax et al., 2003). In some cases, prior contact with a casual partner facilitated a degree of trust and intimacy that influenced decisions about unprotected anal sex during the incident(s) purported to have resulted in HIV infection (Ellard et al., 2004).

There is evidence in the interviews held in recent years that some men applied a crude form of negotiated safety with casual partners, in which the decision to have unprotected intercourse was in part mediated by the disclosure of both sexual partners' HIV-negative status prior to anal intercourse. Willingness to rely on these disclosures was, in some cases, influenced by prior contact or familiarity with each other. This suggests that the distinction between casual and regular partners is at times blurred (Ellard et al., 2004; Prestage et al., 2001). Some of the men who attributed their infection to a casual partner cited a recently finished regular relationship as part of the broader context of their infection. After the end of a relationship, a man may have sought new and

Table 2.7.1: Type of sexual relationship at time of seroconversion

	Pre-HAART[1] (1993–1996)	HAART era (1997–2003)	HAART era (2004)
Regular relationship in which neither the participant nor his partner had casual sex	21[2]	4	1
Regular relationship in which the participant and his partner had casual sex	13	19	6
Regular relationship in which the participant had casual sex	4	4	0
Participant had two regular sexual partners	1	1	1[3]
Total regular relationships	39	28	8
Casual sexual partners only	26	25	2
Total	65	53	10

[1]HAART = highly active retroviral therapy

[2]Includes three participants, each of whom engaged in sex with his regular partner in a threesome.

[3]This man was in a regular relationship with a 'couple'.

Table 2.7.2: Assumed HIV status of partner at presumed event of HIV transmission

Assumed HIV status	Pre-HAART[1] (1993–1996)		HAART era (1997–2003)		HAART era (2004)[1]	
	Regular	Casual[2]	Regular	Casual[2]	Regular	Casual[2]
Positive	13	4	7	1	3	2
Negative	14	3	4	9	1	1
Unknown	7	24	0	32	0	3
Total	34	31	11	42	4	6

[1] HAART = highly active retroviral therapy

[2]'Casual' includes participants in open regular relationships who believed they contracted HIV from a casual partner.

Table 2.7.3: Sexual practice purported to have led to seroconversion, by type of partner

Sexual practice	Type of relationship			
	Regular	Casual within open relationship	Casual	Total
Pre-treatment success (1993–1996)				
Anal receptive	16	1[1]	17	34
Anal insertive	8	1	2	11
Anal receptive and insertive	6	2	4	12
Other[2]	4	1	3	8
Total	34	5	26	65
Post-treatment success (1997–2003)				
Anal receptive	4	11	16	31
Anal insertive	4	1	2	7
Anal receptive and insertive	1	2	3	6
Other[2]	2	3[1]	4	9
Total	11	17	25	53
Post-treatment success (2004)				
Anal receptive	0	0	1	1
Anal insertive	0	0	0	0
Anal receptive and insertive	2	1	0	3
Other[2]	2	3	1	6
Total	4	4	2	10

[1]Each of these men had an HIV-positive regular partner but attributed source of infection elsewhere.

[2]These men believed they had become infected via oral–genital sex (11 men), sharing a needle (1), esoteric sexual practice involving sadomasochism (2) and blood contact with skin lesions (3).

diverse sexual partners and experiences after a long period of relative sexual stability with a regular partner. He may also have desired sexual validation in response to feelings of rejection and unhappiness as a consequence of the relationship having ended. At the same time he may have become unaccustomed to using and negotiating the use of condoms after an extended period with a regular HIV-negative partner with whom condoms were not used.

The accounts of men who believed they had seroconverted within their regular relationships were commonly couched in terms of love and intimacy, or seroconversion was attrib-uted to a breakdown in communication or trust. In many of these cases the seroconversion occurred in the early months of the relationship, when the feelings of love and trust were not always matched by open communication and negotiation.

Analysis of the interviews since the introduction of combined antiretroviral therapy in 1996 suggests a complex relationship between treatments, viral load and risk taking. It was common for participants who had been in a serodiscordant relationship to regard therapy as having greatly improved the health outcomes of people with HIV. It

also reduced worry about mortality but did not appear in most cases to have influenced sexual risk taking within relationships. While some of the men who attributed their seroconversion to a known HIV-positive regular partner acknowledged the potential of therapy to reduce viral load, very few explicitly used viral load as a risk-reduction strategy (Murphy et al., 2003). This study will continue to investigate the benefits and complexities of new clinical technologies and their impact on sexual risk behaviour.

The majority of men interviewed since 1993 have attributed their infection to unprotected anal intercourse but, over the years of the study, a small number of men have attributed their seroconversion to lower-risk activities such as oral sex, 'nudging' (brief anal insertion of the penis without a condom) or semen on an open wound. An earlier analysis of the first 75 seroconversion interviews explored the possibility of transmission through oral sex. Although the analysis could not establish how common oral transmission was in any epidemiological way, it appeared that in a few of the cases reported in this study oral transmission was the most likely mode of transmission (Richters et al., 2003a).

This earlier analysis also focused on describing the usual patterns of sexual interaction reported by the men who had seroconverted. It found that oral sex was almost always practised without condoms; 'nudging' was often not regarded as 'anal intercourse'; although ejaculation inside the partner was generally avoided, there was often semen on men's bodies or hands; and fisting was usually done with gloves but anal fingering was not. Thus, even in a community where the practice of safe sex was explicitly accepted, there was room for HIV transmission without men necessarily being aware of risk taking (Richters et al., 2003b). A number of the men who attributed their seroconversion to unprotected anal sex had sought to reduce the risk of HIV infection by being insertive only or by not allowing partners to ejaculate inside them.

Recent analysis of the interviews has focused on the various ways that participants think and act in relation to risk. It found a range of discourses about risk including ones related to the fields of public health and HIV prevention education (Slavin et al., 2004; Kippax et al., 2003). The majority of men in recent years had little or no detailed knowledge of treatments and testing technologies prior to seroconversion (Ellard et al., 2003; Murphy et al., 2003).

As in previous years, many of the men had used drugs at the event(s) at which they became infected. Yet it was rare for drugs and alcohol to be represented as having had a significant influence on their sexual risk behaviour.

2.8 Contact with the epidemic

There is little quantitative information available regarding the impact on behaviour of the changing nature of the HIV/AIDS epidemic. Two indicators of the degree of contact with the HIV epidemic that may be important in monitoring change are 'knowing people with HIV' and 'ever knowing anyone who died following AIDS'. These indicators were included in various studies including the Health in Men and Positive Health cohort studies, 2000 Male Out and the Periodic Surveys in some state capital cities. In Table 2.8, data on these indicators are presented separately for HIV-negative and HIV-positive men.

A large proportion of HIV-positive men in most regions knew anyone with HIV, around 90% of participants or more, except among HIV-positive gay Asian men for whom the figure was closer to 80%. Fewer HIV-negative men knew anyone with HIV, around 50% to 60% in most of the studies, except the Health in Men study in which around 85% in each of the previous four years knew someone with HIV. There were no trends over time in the data.

A higher proportion of HIV-positive men than HIV-negative men had known someone who had died following AIDS. There were proportionally fewer of these men over time in the Health in Men study.

Data from the Positive Health cohort study show that whether or not people with HIV/AIDS felt engaged with an HIV-positive community depended on whether they were diagnosed before or after the advent of antiretroviral treatment in 1996 (Rawstorne et al., 2005). Those diagnosed before the advent of antiretroviral treatment were more likely to feel engaged than their more recently diagnosed counterparts. A significant proportion of those diagnosed since 1996 appeared to become involved in HIV-positive community once they became ill, particularly with an HIV-related illness.

Table 2.8: Indicators of contact with the HIV epidemic

Source	2000		2001		2002		2003		2004	
	N	%	N	%	N	%	N	%	N	%
(a) Knows anyone with HIV										
Australia										
Male Out										
HIV-negative men	1305	66.8								
HIV-positive men	81	93.8								
Sydney										
Male Out										
HIV-negative men	389	67.6								
HIV-positive men	29	96.6								
Gay Asian Men										
HIV-negative men					330	52.1				
HIV-positive men					16	81.3				
Health in Men										
HIV-negative men			450	83.6	844	85.0	1175	84.9	103	85.0
Positive Health										
HIV-positive men			277	97.4			241	95.9	271	96.7

Source	2000		2001		2002		2003		2004	
	N	%	*N*	%	*N*	%	*N*	%	*N*	%
Melbourne										
Male Out										
HIV-negative men	353	70.8								
HIV-positive men	20	95.0								
Positive Health										
HIV-positive men			92	94.6			69	97.1	53	96.2
Brisbane										
Male Out										
HIV-negative men	246	63.4								
HIV-positive men	19	89.5								
Perth										
Periodic										
HIV-negative men					590	68.1				
HIV-positive men					26	96.2				
Male Out										
HIV-negative men	134	68.7								
HIV-positive men	5	–[1]								
Adelaide										
Periodic										
HIV-negative men			423	69.5			668	65.4		
HIV-positive men			34	100			44	95.5		
Male Out										
HIV-negative men	118	59.3								
HIV-positive men	2	–[1]								
Canberra										
Male Out										
HIV-negative men	23	65.2								
HIV-positive men	–	–								
(b) Ever knew anyone who died following AIDS										
Australia										
Male Out										
HIV-negative men	1343	57.8								
HIV-positive men	86	77.9								
Sydney										
Male Out										
HIV-negative men	394	66.0								
HIV-positive men	31	77.4								
Gay Asian Men										
HIV-negative men					330	18.5				
HIV-positive men					16	50.0				
Health in Men[2]										
HIV-negative men			450	67.6	453	58.1	430	57.2	94	47.9
Positive Health										
HIV-positive men			277	50.9[3]			323	37.8[3]	279	39.4[3]
Melbourne										
Male Out										
HIV-negative men	364	58.2								
HIV-positive men	22	81.8								
Positive Health										
HIV-positive men			92	58.7[3]			84	39.3[3]	55	38.2[3]
Brisbane										
Male Out										
HIV-negative men	256	52.3								
HIV-positive men	19	78.9								
Perth										
Periodic										
HIV-negative men										
HIV-positive men										
Male Out										
HIV-negative men	139	54.7								
HIV-positive men	5	–[1]								
Adelaide										
Periodic										
HIV-negative men			426	55.4			668	47.2		
HIV-positive men			34	91.2			44	84.1		
Male Out										
HIV-negative men	119	51.3								
HIV-positive men	2	–[1]								
Canberra										
Male Out										
HIV-negative men	23	43.5								
HIV-positive men	1	–[1]								

Note: To provide larger and more reliable samples, Male Out figures are state-based rather than capital-city-based.

[1]Number of men is too small to give a reliable percentage.

[2]Based on new participants in Health in Men only.

[3]Not comparable with other data as this figure is based on knowing anyone who died following AIDS 'in the past 12 months' rather than 'ever'.

3

Recreational drug use

3.1 Homosexually active men

3.1.1 Homosexually active men and illicit drug use

Use of illicit drugs among homosexually active men is higher than for the national average (Australian Institute of Health and Welfare, 2002), particularly among men attached to gay community. Table 3.1.1 shows the percentages of men who reported using at least one non-prescription illicit drug in the six months prior to the survey. Data in Table 3.1.1 were drawn from several studies including the 2000 Male Out survey, the Health in Men and Positive Health cohort studies, HIV Futures and several Periodic Surveys (where relevant questions were included).

Illicit drug use shows strong regional variation. For example, the Gay Community Periodic Surveys indicate more extensive use of drugs in Sydney than in other cities. As an indication of the regional variation in drug use, approximately 50% to 90% of the men (at the higher end of this range among men in the Health in Men and Positive

Health studies) reported having used at least one non-prescription illicit drug in the six months prior to the survey. Use of more than one such drug was reported by around 55% to 65% of those in the cohort studies and around 30% to 45% of those in other studies.

Generally, the level of use, as measured in the percentages reported here, appears to be fairly stable over the time period observed. An exception was among gay men in Brisbane, where any drug use showed an increasing trend, albeit from a lower base than most other samples. Based on Periodic Survey data, use of more than one drug increased significantly in Brisbane and decreased significantly in Sydney.

3.1.2 Homosexually active men and injecting drug use

A minority of homosexually active men reported using a needle to inject drugs in the six months prior to various surveys from which data are available (see Table 3.1.2). Gay-community-attached men were more likely to have reported such practice. In

Table 3.1.1: Recreational drug use among homosexually active men in the six months prior to the survey

Source	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(a) Any drug use										
Australia										
Male Out: GCA	1181	60.4								
Male Out: NGCA	651	48.1								
HIV Futures[1]			725	70.6			621	71.2		
Sydney										
Health in Men			450	81.1	845	78.6	1175	80.3	1103	79.6
Positive Health			263	89.7			323	94.7	274	93.1
Periodic	2916	73.3	2862	73.2	2884	70.4	2541	72.8	2821	70.8
Male Out: GCA	223	73.1								
Male Out: NGCA	78	53.8								
Gay Asian Men					457	38.1				
Melbourne										
Positive Health			90	67.8			84	96.4	55	92.7
Periodic	1578	60.4	1830	60.7	1877	59.4	2064	62.7	1962	60.6
Male Out: GCA	258	62.8								
Male Out: NGCA	103	47.6								
Brisbane										
Periodic	1285	48.6	1570	52.1	1787	47.8	1510	56.5	1667	60.6
Male Out: GCA	99	60.6								
Male Out: NGCA	62	61.3								
Perth										
Periodic	1035	58.0			790	55.3			1014	56.2
Male Out: GCA	93	57.0								
Male Out: NGCA	49	38.8								
Adelaide										
Periodic			565	54.9			834	56.4		
Male Out: GCA	78	47.4								
Male Out: NGCA	42	40.5								
Canberra										
Periodic							255	49.4		
Male Out: GCA	18	50.0								
Male Out: NGCA	10	–[2]								
(b) Used more than one drug										
Australia (Male Call/Out)										
Male Out: GCA	1181	38.9								
Male Out: NGCA	651	23.3								
HIV Futures[1]			702	49.4			621	46.2		
Sydney										
Health in Men			450	67.8	845	65.1	1175	65.5	1103	64.2
Positive Health			263	69.6			323	64.0	274	63.9
Periodic	2916	58.6	2862	57.1	2884	53.6	2541	56.3	2821	55.1
Male Out: GCA	223	55.2								
Male Out: NGCA	78	19.2								
Gay Asian Men					457	21.9				
Melbourne										
Positive Health			90	51.1			84	45.2	55	54.5
Periodic	1578	39.7	1830	41.8	1877	40.1	2064	44.3	1962	42.7
Male Out: GCA	258	37.2								
Male Out: NGCA	103	23.3								
Brisbane										
Periodic	1285	27.5	1570	32.5	1787	29.3	1510	38.9	1667	41.9
Male Out: GCA	99	39.4								
Male Out: NGCA	62	25.8								
Perth										
Periodic	1035	39.9			790	34.6			1014	37.4
Male Out: GCA	93	33.3								
Male Out: NGCA	49	26.5								
Adelaide										
Periodic			565	30.8			834	37.1		
Male Out: GCA	78	24.4								
Male Out: NGCA	42	31.0								
Canberra										
Periodic							255	32.2		
Male Out: GCA	18	27.8								
Male Out: NGCA	10	–[2]								

[1] Gay and homosexually active men only.

[2] Number of men was too small to yield a reliable percentage.

GCA = gay-community-attached   NGCA = non-gay-community-attached

general, a higher percentage of men in the Positive Health and HIV Futures studies reported injecting, although the latter study asked about injecting 'in the previous 12 months' so this figure is not directly comparable with the others in Table 3.1.2.

The longitudinal data available suggest that the level of injecting drug use has remained relatively stable over the reporting period, albeit higher than rates in the general population based on the National Drug Strategy Household Surveys; for example, any injecting drug use in the past 12 months (compared with six months in the case of most of the data in Table 3.1.2) was reported by 1.1% of metropolitan respondents and 0.7% of regional respondents (Williams, 2001). Data from the Periodic Survey in Brisbane indicated a decline in injecting drug use.

3.2 Pilot study of drug use among young people attending music festivals

Existing surveillance surveys show that drug use, both licit and illicit, is common among young people in Australia. Interventions are needed to minimise harms associated with drug use among youth, including programs aimed at delaying or preventing initiation of drug use or injecting drug use. However, the existing data available on drug use among Australian youth is limited. A fuller understanding of drug use patterns, and changes in these patterns over time, is required in order to respond with evidence-based policy and practice to reduce the harm associated with drug use.

The Youth, Drugs and Rock 'n' Roll project surveyed young people attending music festivals to provide an additional source of information about drug use. The future aim of the project is to conduct repeated surveys at music festivals to provide information about drug use patterns over time. However, this type of survey poses challenges in terms of sampling (it is neither possible nor practical to take a random sample of music festival patrons), which makes it difficult to generalise findings to the 'population' of young people attending music festivals. In this pilot study, we focused on the process of conducting a survey at music festivals with the aim of determining the procedure for future surveys. There were two main aims of the pilot: (a) to investigate patterns of response to the request to participate and (b) to examine patterns of drug use reported by participants and compare these patterns with those reported in other surveys.

Cross-sectional surveys were conducted at two youth-oriented music festivals in 2004. Big Day Out is a one-day festival, which was held in Sydney on two occasions in January 2004. Splendour in the Grass is a two-day festival held in Byron Bay in July, at which patrons could camp on site. Approximately 30 000 were estimated to have attended Big Day Out on each occasion, while approximately 15 000 people were estimated to have attended the two days of Splendour in the Grass.

Table 3.1.2: Injecting drug use among homosexually active men in the six months prior to the survey

Source	2000		2001		2002		2003		2004	
	N	%	N	%	N	%	N	%	N	%
Australia										
Male Out: GCA	1181	11.3								
Male Out: NGCA	651	9.2								
HIV Futures[1]			720	14.6			601	14.6		
Sydney										
Health in Men			450	3.3	845	3.1	1175	3.6	1103	2.8
Positive Health			263	13.3			323	8.1	274	11.7
Periodic	2916	7.2	2862	7.0	2884	5.4	2541	6.5	2821	6.8
Male Out: GCA	223	14.3								
Male Out: NGCA	78	6.4								
Gay Asian Men					457	0.2				
Melbourne										
Positive Health			90	13.3			84	10.8	55	12.7
Periodic	1578	5.0	1830	4.0	1877	4.8	2064	4.7	1962	5.0
Male Out: GCA	258	6.2								
Male Out: NGCA	103	2.9								
Brisbane										
Periodic	1285	8.6	1570	9.6	1787	10.1	1510	6.6	1667	5.7
Male Out: GCA	99	11.1								
Male Out: NGCA	62	11.3								
Perth										
Periodic	1035	5.1			790	4.1			1014	4.2
Male Out: GCA	93	15.1								
Male Out: NGCA	49	6.1								
Adelaide										
Periodic			565	4.1			834	4.6		
Male Out: GCA	78	7.7								
Male Out: NGCA	42	11.9								
Canberra										
Periodic							255	1.6		
Male Out: GCA	18	0								
Male Out: NGCA	10	0								

[1]Gay and homosexually active men only. Data are for past 12 months.

GCA = gay-community-attached   NGCA = non-gay-community-attached

NCHSR hired a stall at each music festival and participants were recruited from amongst the patrons. Festival patrons 16 years of age and older who passed the stall were approached by researchers or volunteered to participate by completing a questionnaire at the stall.

The Music Festival Survey questionnaire was comparable with other Australian studies and designed to be completed in five to ten minutes by participants themselves. The questionnaire included questions about demographics, drug use history and networks, knowledge of the transmission of blood-borne viruses, health status and the perceived ease of obtaining illicit drugs.

At the Big Day Out, 1935 people were approached by researchers or volunteered to participate during the recruitment period. At Splendour in the Grass, 1197 people were approached or volunteered to take part. The final response rate was 35% (674 out of 1935) for Big Day Out and 67% (804 out of 1197) for Splendour in the Grass. Analyses were carried out using 1478 questionnaires.

Participants (56% female) had a mean age of 22 years (range 16 to 69) and most (88%) identified as heterosexual. Nearly all (95%) spoke English at home and 87% reported Australia as their country of birth. Twenty-nine participants (2%) identified as Aboriginal or Torres Strait Islander. More than half of the participants (56%) reported having attained a level of education above Year 12 and 79% were employed at least part-time.

Most participants reported having used alcohol (93%) and tobacco (74%) at least once. The proportion who had used alcohol in the six months prior to the survey was 45% among Big Day Out participants, and the proportion who had used alcohol in the month prior to the survey was 86% among Splendour in the Grass participants. The proportion of Big Day Out participants who had used tobacco in the six months prior to the survey was 28% and the proportion of Splendour in the Grass participants who had used tobacco in the month prior to the survey was 43%.

Most Music Festival Survey participants (82%) reported having *ever* used any illicit drug. Marijuana/cannabis (78%) was the most commonly used illicit drug. The next most commonly used drugs were ecstasy (50%), amphetamines (46%), trips/acid/LSD (26%), cocaine (21%), methamphetamines (18%), heroin (5%) and GHB (5%). The proportions of Big Day Out and Splendour in the Grass participants reporting illicit drug use are presented in Table 3.2.1.

Initially, the Music Festival Survey questionnaire used at the Big Day Out included measures of 'recent' illicit drug use 'in the previous six months'. In the Splendour in the Grass survey, the section of the questionnaire concerned with recent illicit drug use was changed to refer to a time period of the 'last month', which was considered to elicit responses of greater accuracy. In the section pertaining to 'injecting' drug use, however, respondents were still asked to consider use 'in the last six months'.

The proportion of *recent* illicit drug use reported across both surveys was 46%. Marijuana/cannabis (38%) was the most common illicit drug used recently among the participants. The next most commonly used illicit drugs were ecstasy (25%), amphetamines (20%), methamphetamines (7%), trips/acid/LSD (6%), GHB (3%) and heroin (2%). The proportion of Big Day Out and Splendour in the Grass participants reporting recent illicit drug use is presented in Table 3.2.2.

Although recent illicit drug use was measured in the month prior to the survey at Splendour in the Grass and in the six months prior to the survey at Big Day Out, Splendour in the Grass participants reported significantly higher marijuana and ecstasy use.

Thirty people from Big Day Out (4.5%) and 34 from Splendour in the Grass (4.2%) reported that they had ever injected drugs. Seven people from Big Day Out and 10 from Splendour in the Grass reported having injected in the previous six months. Speed was the most common drug injected by both groups. The mean age of initiation

Table 3.2.1: Illicit drug use by music festival patrons: *ever* used

	Big Day Out N = 674		Splendour in the Grass N = 804	
	n	%	*n*	%
Marijuana	506	75.0	643	80.5
Ecstasy	337	50.0	402	50.0
Amphetamines	324	48.0	362	45.0
LSD	195	29.0	193	24.0
Cocaine	148	22.0	165	20.5
Methamphetamine	135	20.0	129	16.0
Heroin	40	6.0	28	3.5
GHB	47	7.0	32	4.0

Table 3.2.2: Illicit drug use by music festival patrons: *recently* used

	Big Day Out (in past six months) N = 674		Splendour in the Grass (in past month) N = 804	
	n	%	*n*	%
Marijuana	189	28.0	367	46.0
Ecstasy	135	20.0	225	28.0
Amphetamines	121	18.0	169	21.0
LSD	54	8.0	32	4.0
Cocaine	44	6.5	40	5.0
Methamphetamine	54	8.0	48	6.0
Heroin	18	2.7	5	0.6
GHB	27	4.0	16	2.0

to injecting was 18 years among Big Day Out participants and 19 years among Splendour in the Grass participants.

Of the 17 recent injectors, four reported having reused a needle and syringe after someone else had used it, two reported having reused a tourniquet and two reported having reused a swab, spoon and filter after someone else had used them, in the previous six months.

More than half the participants reported having used illicit drugs with friends (55%), followed by having used with schoolmates/workmates (35%), current sexual partner (25%) and dance or club buddies (25%). Nearly a third of participants reported that family members (36%), people they lived with (31%) and sexual partners (30%) used illicit drugs. Most participants (95%) reported that their friends used illicit drugs, and 91% of participants reported having spent time with people who used illicit drugs. The proportion of Big Day Out and Splendour in the Grass participants who reported the use of illicit drugs with people within their social and family networks is presented in Table 3.2.3.

These findings support the large body of data showing that drug use is prevalent among young people and common in their social and family networks. Besides reporting their own levels of drug use, almost all participants reported that their friends used illicit drugs and that they spent time with people who used illicit drugs. In addition, over a third of participants reported that family members used illicit drugs.

Reports of recent illicit drug use were higher among Splendour in the Grass participants than among Big Day Out participants. This finding points to the need to understand the context in which drug use occurs. The finding may have been because a different audience was attracted to the different music festivals (i.e. a two-day event versus a one-day event, types of music played, etc.), because of differing availability of drugs in each area or because of the effect of local policing initiatives (such as the presence of sniffer dogs at the Big Day Out in Sydney in 2004).

Periodic surveys conducted at music festivals will provide important information on drug use among young people. The Music Festival Survey sample differs from others involved in surveillance surveys in being recruited not because of its drug-using status but as part of a population who attends specific events.

Table 3.2.3: People with whom illicit drugs were used

	Big Day Out N = 674		Splendour in the Grass N = 804	
	n	%	*n*	%
Current partner	121	18.0	241	30.0
Family member	54	8.0	161	20.0
School/workmate	155	23.0	354	44.0
Dance/club buddy	121	18.0	249	31.0
Friend	310	46.0	507	63.0
Dealer	67	10.0	113	14.0
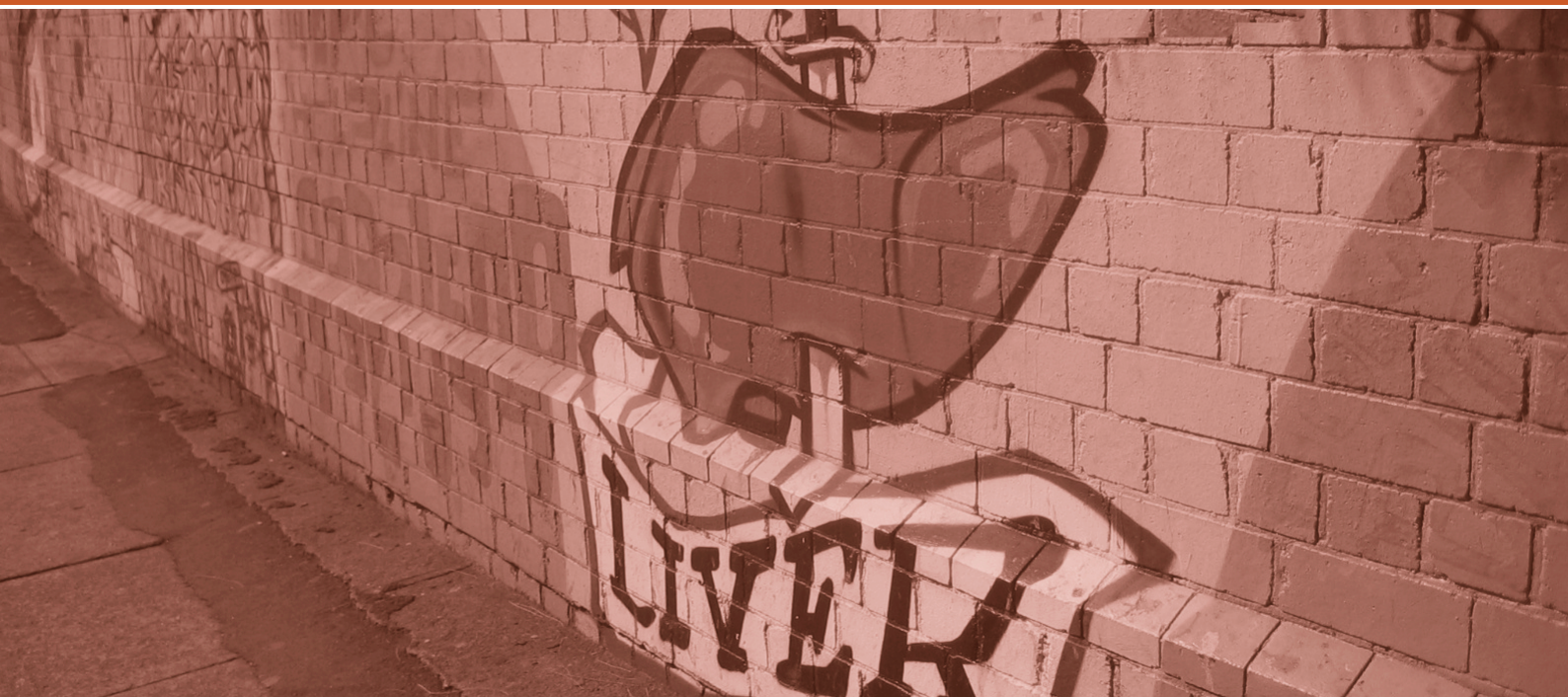
4.1 Hepatitis C testing, diagnosis and treatments among homosexually active men and people living with HIV/AIDS

Data on hepatitis C testing, diagnosis and treatments are available from a number of studies including HIV Futures, the Australian HIV Observational Database, the Health in Men cohort of HIV-negative gay men in Sydney and the Positive Health cohort of people living with HIV/AIDS in Sydney and Melbourne.

Substantial proportions of people living with HIV/AIDS and gay-community-attached men have ever been tested for hepatitis C or were tested for hepatitis C in the 12 months prior to interview or survey (see Table 4.1). People living with HIV/AIDS are generally more likely than HIV-negative gay men to have been

diagnosed with hepatitis C. Among all participants of these studies involving people living with HIV/AIDS, HIV and hepatitis C co-infection is generally higher than 10%. Among those living with HIV/AIDS who are co-infected with hepatitis C, around 10% have taken medical treatments specifically for hepatitis C.

4.2 Side effects of hepatitis C treatment

Since the 1990s, studies of patients receiving interferon-based treatments for hepatitis C infection have consistently shown significant decrements in health-related quality of life when measured with instruments such as the SF36 Health Survey. These studies indicate that interferon-based treatments produce severe physical and psychiatric side effects including fatigue, aching muscles,

major depression and anxiety. Although these instruments measure substantial decreases in individuals' physical and mental functioning during treatment, they do not give information about the significance of such side effects to overall quality of life. Similarly, how people come to make the decision to seek treatment, their experiences of treatment and the strategies they use to cope with the side effects of treatment are not elucidated by these quantitative measures. Currently, there are no published findings of studies that investigate the experience of hepatitis C treatment and its impact on, for example, personal relationships, work and domestic life. Patients, and health care workers, might use such information to improve their capacity to manage side effects and adhere to treatment. In response to this gap in the research literature, NCHSR researchers (Hopwood & Treloar, 2005) explored people's experiences of interferon-based treatments. Specifically, the aim was to report findings from a study of people in NSW with hepatitis C ($N = 504$) regarding their experiences of treatment side effects.

Six participants had received interferon-based treatment for hepatitis C infection, four of whom had nearly finished treatment at the time of interview. One participant reported that she had terminated treatment several years earlier because of side effects, and another had completed an interferon and ribavirin trial three years before the interview. Participants reported that the decision to begin treatment usually followed a clinical evaluation of their suitability. Before entering treatment, all participants said that they were aware (from a range of sources including doctors, a magazine and support groups) that treatment with interferon was associated with significant side effects.

Participants reported a range of significant physical and psychiatric adverse events including depression, anxiety, impacts on heart function, migraine, aching muscles, headache, insomnia and fatigue. At times these were severe enough to affect patients' physical health, emotional stability and capacity to function normally. Psychiatric impacts from treatment included anxiety and depression and these were particularly disruptive to participants' quality of life.

The occurrence of mood disorders during treatment, particularly endogenous depression, was the most common reason given for discontinuation of interferon-based treatment. Given that the psychiatric side effects of treatment are routinely reported, patients need access to ongoing professional support, e.g. counselling, to manage these side effects, maximise adherence to treatment and improve their quality of life.

The latest regimen, pegylated interferon and ribivirin, may be the means by which health systems can prevent large numbers of people from living and dying with chronic liver diseases. The improved cure rate of the new treatment and recent changes to the criteria for inclusion in treatment programs have paved the way for more people in Australia to have access to treatment for hepatitis C. Given these

Table 4.1: Hepatitis C testing, diagnosis and treatments

	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(a) Tested for hepatitis C[1]										
Australia										
HIV Futures			894	65.4			1029	72.9		
AHOD	2282	10.8	2190	10.4	2057	10.8	1992	8.9	1909	6.9
Sydney										
Health in Men[2]			450	64.0	453	61.4	430	64.0	94	60.6
Positive Health			292	33.6			323	38.5	274	36.9
Melbourne										
Positive Health			105	27.6			83	34.9	55	30.9
(b) Tested positive for hepatitis C										
Australia										
HIV Futures			894	13.9			1029	15.9		
AHOD[3]	234	9.8	204	10.9	204	7.6	192	10.9	131	9.2
Sydney										
Health in Men[2]			450	5.8	453	3.1	430	2.6	94	4.3
Positive Health			292	13.7			323	11.1	274	10.9
Melbourne										
Positive Health			105	17.2			83	10.8	55	7.3
(c) Ever taken treatments specifically for hepatitis C[4,5]										
Australia										
HIV Futures			125	10.7			163	5.4		
Sydney										
Positive Health									30	10.0
Melbourne										
Positive Health									4	–[6]

[1]Questions about testing for hepatitis C were framed differently in the various studies reported here. In the HIV Futures and Health in Men studies, questions were framed in the context of 'ever tested' for hepatitis C whereas, in the AHOD and Positive Health studies, questions referred to testing for hepatitis C in the previous 12 months.

[2]Based on new recruits into Health in Men each year.

[3]Percentages calculated on AHOD participants who had been tested for hepatitis C during each year.

[4]These treatments included interferon monotherapy or combination therapy of interferon and ribavirin.

[5]'N' is based on men who had tested positive for hepatitis C.

[6]Number of men is too small to give a reliable percentage.

developments, more people will be exposed to side effects, which, if not managed properly, will lead them to reduce doses and discontinue treatment. There is now, more than ever, an imperative to understand and ameliorate patients' experience of treatment.

A qualitative study that grew out of this data is currently ongoing and aims to uncover how people cope with treatment-related side effects and what impacts these have on quality of life and treatment adherence. We know from previous research that narratives of chronic illness have assisted many people, including clinicians, to come to terms with disease, its treatment and the associated upheaval to people's everyday lives. A focus on hepatitis C patients' narratives could significantly improve our understanding of the impact of side effects and help those both administering and undergoing future interferon-based treatments.

4.3 Health care workers' infection control practices in relation to people with hepatitis C

The 3D Project was a quantitative and qualitative study that explored the lives of 504 people with hepatitis C infection in NSW. This study focused on participants' reported experiences of hepatitis C diagnosis, disclosure and discrimination. The inclusion of a qualitative component enabled an examination of issues that were not investigated in the quantitative questionnaire. One such issue was the implementation of infection control procedures in hospitals and dental surgeries (Treloar & Hopwood, 2004).

During interviews, participants raised their concerns about infection control procedures and how they were being implemented in some health settings. Specifically, participants reported that infection control procedures they had observed were (a) not implemented in accordance with universal infection control guidelines and (b) often used as a means of discriminating against patients who had disclosed their hepatitis C infection or who were assumed to be infected with hepatitis C.

Participants reported their observations of breakdowns in infection control procedures in medical settings. They reported that some health care workers were mostly concerned with protecting themselves from infection while leaving patients vulnerable to cross-infection from other patients; one example involved nurses who did not change protective gloves when moving between patients. Participants disparagingly described workers as 'stupid to themselves', 'compromising the level of care' and exhibiting a lack of care for patients. Typically, participants did not directly challenge the behaviour of health care workers whom they saw not complying with infection control guidelines.

Participants reported their belief that disclosing their infection to health care workers was the 'right thing to do' to protect nurses, dentists, doctors and other patients from the risk of acquiring hepatitis C from medical procedures. Participants reported that infection control procedures were not implemented unless patients disclosed their

hepatitis C infection. A commonly observed and reported pattern was for patients who had disclosed their infection to be placed at the end of the day's surgery list. This resulted in delays to surgery and meant that patients were made to wait for long periods in hospital without food. The impact of selective use of infection control practices, such as being placed last on the list for surgery, was reported to be extremely distressing.

The implementation of infection control procedures by health care workers *following* participants' disclosure of infection influenced subsequent decisions to disclose. Some participants had decided against future disclosure because of previous negative reactions and outcomes. While many participants 'always believed in notifying people', some were sufficiently distressed to decide 'never [to] tell another medical professional as long as I live'. This cause and effect relationship, between disclosure, discriminatory use of infection control practices and participants' decisions to withhold future disclosure, is a concern. Typically, participants felt that health care workers assumed that affected patients would disclose their infection and that patients who did not disclose were therefore uninfected. Given that there will probably always be people with hepatitis C who are unaware of their infection, non-compliance with infection control guidelines has significant implications for the spread of the epidemic. Participants felt that infection control procedures should be applied in all situations regardless of disclosure.

These findings provide direction for future programs to address health care workers' attitudes to stigmatised groups. Such programs might encourage practitioners to avoid making moral judgments and to recognise that their own values and beliefs may have an impact on decision making when they treat people with hepatitis C, both from the clinical and personal perspectives. Techniques such as role modelling and exposure to and contact with stigmatised groups might be useful in achieving this.

4.4 Information practices of people with hepatitis C

Traditional modes of providing health information have been altered by public access via the internet to resources and information that were previously accessed almost exclusively by health professionals. While medical literature raises concerns among health professionals about the quality of online health information, little research addresses the practices and perspectives of people with chronic illness. Data collected in 2001 for NSW-based research on issues surrounding diagnosis, disclosure and discrimination, as they relate to people with hepatitis C, indicated that 25.8% of participants ($N = 504$) used the internet for illness-related information (Hopwood & Treloar, 2003).

During 2004, people with hepatitis C who responded to a national online survey about their use of the internet to access information about hepatitis C were asked to volunteer for a follow-up, face-to-face, semi-structured interview. Twenty people from NSW, Victoria and Western Australia were interviewed about how they sought and

used information about hepatitis C in everyday and clinical settings. The following is a brief summary of preliminary findings from the data.

Many participants reported that their internet use for hepatitis-related information, advice and support changed over time. During the time immediately following diagnosis they generally carried out intensive and comprehensive searches for information about hepatitis C and how it would affect their health, but their later use of the internet was more targeted and focused. Most participants reported that they quickly developed strategies for making qualitative assessments of the vast amounts of health-related inform-ation available online. Almost all participants expressed a preference for Australian websites, in particular those of hepatitis councils, whose information was considered to be the most accurate, trustworthy and relevant.

Information from the internet was generally integrated with other sources, including magazines and literature from health services such as hepatitis councils, needle and syringe programs and hospital clinics. Most participants reported having used the internet to clarify, or to gain a more comprehensive understanding of, information received from health professionals or laboratory test results. In general, information from the internet supple-mented rather than replaced information from health services and other print-based sources.

One of the most frequently reported uses of the internet was to find information about treatments for hepatitis C, including possible side effects and chances of treatment success with particular genotypes of the virus. Internet-based resources were an integral component of decision-making processes of many study participants. People considering treatments were particularly interested in reading about treatment-related experiences of other people with hepatitis C.

The degree to which information from the internet was discussed in clinical settings varied greatly from one participant to another. Many participants assumed that medical practitioners would be dismissive of patient-generated information from the internet and did not discuss their knowledge and understandings with the doctor. The time constraints of medical consultations were suggested by many as a continuing structural obstacle to information sharing. A small number of participants, most of whom had completed a course of treatment, had developed a more dialogic relationship with their doctor and did not feel discouraged from discussing information from the internet in a clinical setting.

A small number of participants interacted with peer-based chat and discussion groups, which, particularly during the actual treatment phase, were considered a major source of informational and emotional support. While fewer than half the participants regularly communicated online with peers, either through email or web-based forums, most drew on others' experiences to develop strategies for dealing with their own challenges. Many participants talked about needing to find ways to integrate their experiences of chronic illness with everyday life experiences and plans. The internet provided access to life stories of others in similar situations.

Analysis of data from the interviews and the online survey is continuing in 2005.

The current climate

The aim of this report was to review behavioural data relevant to HIV/AIDS, viral hepatitis and STIs in Australia. Most of the report focused on behavioural risk of transmission of HIV rather than on transmission of hepatitis and STIs. This reflects both historical and, to a lesser extent, current research priorities as well as differences in the existing research infrastructures.

This final brief chapter reports on some important topical issues relevant to the transmission of HIV. During more than two decades of responding to HIV, many changes have occurred in the HIV land-scape. One of the more significant changes was the advent in 1996 of combination antiretroviral therapies, which lessened the burden for most people living with HIV and AIDS; there were fewer deaths and, despite often serious side effects, less debilitating illness among them. In recent years, combination antiretroviral therapies have also been available as post-exposure prophylaxis in most Australian states. Currently, there are debates about the relative merits of using antiretroviral mono-therapy, specifically tenofovir, as pre-exposure prophylaxis. International trials are under way to test the safety and efficacy of doing so.

In this section we present data on the awareness of post-exposure prophylaxis (PEP), its uptake and the experiences of those using it. We also critique the concept and trialling of pre-exposure prophylaxis. In addition, key findings from a study of backpackers in Australia are presented.

5.1 Post-exposure prophylaxis (PEP)

Data on non-occupational post-exposure prophylaxis (PEP) were first collected in the Sydney and Melbourne Periodic Surveys in 2001 and since then have been collected in other cities. In the short period since PEP has been available in New South Wales and become available in many other states, there has been a significant increase in awareness of its availability (see Table 5.1). Awareness of PEP shows strong regional variation. Gay-community-attached men in Sydney are significantly more aware of the availability of PEP than their counterparts in Melbourne, Brisbane, Canberra and Perth. Relatively few people have received PEP to date. Awareness of another person having received PEP was higher in Sydney than in Melbourne, though no new data were collected on this subject in 2004.

5.1.1 The qualitative arm of the PEP study

The qualitative arm of the PEP study explored how men and women who thought they had been exposed to HIV, and who took prophylactic treatment, thought about risk. Research participants were recruited from among those who requested PEP from medical prescribers of s100 medications.

At the time of their initial visit to a doctor to request PEP, patients were asked if they would like to participate in the interview arm of the study. From March 1999 to July 2001, 88 (27%) of the 328 patients who were enrolled in the study participated in the interview arm.

Social contexts of unsafe sex among gay men

In general, people who have unprotected sex do not necessarily request PEP afterwards. Among the participants in this study, unsafe sex that led to a request for PEP often happened *in spite of* participants' knowledge about safe sex and *in spite of* their usual safe sex practices or their intentions to practise safe sex. Participants requested PEP when one of the social aspects of a sexual encounter was in some way different from usual practices, when the social equilibrium in a particular encounter had been disrupted and needed to be restored. PEP was the means to do this (Körner et al., 2005).

Five themes relating to context can be identified in the narrative accounts of gay men seeking PEP after unsafe sex: relationship issues, recreational drugs (including alcohol), social space, stress and adventure.

Relationships

Conflict between regular partners, vulnerability after a break-up and the uncertainty of new relationships all contributed to unsafe sex. Some participants adopted different sexual positioning (insertive/receptive) with new partners to distinguish sex with the new partner—and the emotional involvement—from sex with a former regular partner.

In current relationships, too, the quality of a relationship could be a factor affecting safe sex practices with casual partners outside the relationship. Ongoing problems and tensions with a regular partner contributed to unsafe sex in

Table 5.1: Awareness and use of non-occupational post-exposure prophylaxis (PEP)

	2000 N	2000 %	2001 N	2001 %	2002 N	2002 %	2003 N	2003 %	2004 N	2004 %
(a) Know that PEP is readily available now										
Sydney										
Periodic			2760	39.0	2670	55.2	651	65.7	2699	65.6
Melbourne										
Periodic			1651	19.2	1767	26.8	1916	44.8	1803	52.7
Brisbane										
Periodic					1606	23.8	1439	37.0	1611	45.6
Perth										
Periodic					735	18.5			911	26.0
Canberra										
Periodic							239	57.3		
(b) Received PEP[1]										
Sydney										
Periodic			2721	2.9	2634	3.3				
Health in Men			450	6.4	453	5.3	430	8.4	94	4.3
Melbourne										
Periodic			1683	2.0	1727	2.1	1934	2.7		
(c) Know anyone who has received PEP										
Sydney										
Periodic			2710	10.6	2594	14.6				
Melbourne										
Periodic			1652	6.7	1716	6.9	1906	11.0		
Adelaide										
Periodic			525	17.0						

[1]With the exception of Periodic Survey results from 2002 onwards, which report PEP use in the previous six months, all other percentages are based on whether participants had *ever* received PEP.

casual encounters, which was sometimes unpremeditated and accidental, sometimes deliberate.

Unsafe sex also happened in the context of happy and loving relationships with a positive partner. In these cases, the partner's happiness and the relationship were more important than the fear of HIV. Several factors were balanced against each other in serodiscordant relationships. On the one hand, risk minimisation strategies such as viral load testing, 'strategic positioning' and withdrawal prior to ejaculation were balanced against the likely risk of transmission. At the same time, risk of transmission was balanced against a partner's sexual desire. In the end, emotional involvement had more weight than knowledge and rational decision making. Sexual risk as an expression of love was compensated for with PEP.

Unsafe sex also occurred in contexts where a casual relationship had the potential to turn into a regular relationship. If there were some divergence between one man's desire to form a relationship and the other man's desire to have unprotected anal sex, emotional involvement sometimes carried more weight and overrode usual safe sex practices.

Drugs and alcohol

Participants reported a broad range of drug and alcohol consumption in connection with the unsafe sex episode that led to their seeking PEP. In addition to alcohol, many participants used drugs generally associated with the gay scene—amphetamines, methamphetamines, crystal meth, ecstasy, special K and amyl. The kinds of reactions they described were feeling 'hornier', more confident and more relaxed than usual. Some drugs also affected sexual practices, including sexual positioning: for example, taking speed caused erection problems for some and meant that they took the receptive rather than insertive role in anal intercourse. Some men engaged in anonymous sex only when under the influence of alcohol.

The amounts of drugs and alcohol involved ranged from none at all, to small amounts without adverse effects, to large amounts and being seriously affected. Some participants also mentioned that it was their partners who had consumed drugs, not they themselves. One major theme was being in control despite being seriously affected by alcohol. Some participants emphasised that using condoms was a matter of routine, irrespective of drugs and alcohol, with the exception of this particular episode that had caused them to seek PEP.

Where unprotected sex occurred in conjunction with drugs and alcohol, drugs and alcohol were not seen as an excuse. Rather, some participants emphasised their own role in allowing unsafe sex to happen and insisted that they should have been in control. Taking PEP was a means to restore control.

Location and social space

More risks happened at home with known partners than at sex venues with unknown partners. Of the 79 sexual risk exposures, six (8%) happened at beats, 21 (26%) at sex venues and 46 (58%) at home either in serodiscordant

regular relationships, with known casual partners and friends, or with unknown partners from sex venues. About twice as many exposures that led to PEP happened at a partner's home than at a participant's home. It seems that what facilitates unsafe sexual practices is not a place *per se* but one person's emotional response to being with another person in that other person's social space at a certain time.

One issue related to taking sexual risks was being unfamiliar with someone else's place, not being able to find condoms and feeling awkward asking for them. Another issue related to condom 'etiquette': who was expected to provide condoms in casual sexual encounters at home? Some participants also spoke about their emotional response to a casual partner's home, saying that they felt relaxed and comfortable there.

Sex with known partners at home was not necessarily safer than sex with unknown partners at sex-on-premises venues. The personal space of the home was more than merely a place for sex. It also situated a person socially and emotionally for those who were invited into this space. For some, this emotional response facilitated unsafe sex and ultimately led to a request for PEP.

Stress

Two minor themes in the narratives were 'stress' and 'adventure'. Among some participants, stress led to sexual practices that were different from their usual safe sex behaviour and that ultimately caused them to seek PEP. However, the reverse was also the case. 'Time out' from the usual stress they experienced produced positive feelings such as excitement and relaxation and this, in turn, led to a change in sexual practices and to their forgetting to use condoms.

Adventure

Some participants mentioned 'bravado', 'tempting fate', 'rebellion' and 'adventure' as factors that contributed to unsafe sex and their requests for PEP after the event. However, they also pointed out that these decisions were not taken lightly. There was sometimes considerable tension between following safe sex rules on the one hand and taking control and making one's own decisions on the other, leaving some men with feelings of guilt.

5.2 Pre-exposure prophylaxis (PREP)

Research into biomedical methods of HIV prevention—vaccines, microbicides and other prophylactic measures—is essential, and current biomedical research is welcomed. It is important, however, that such research concerns itself not only with issues of safety and efficacy but also explores the implications of biomedical means of HIV prevention for public health and their consequences for behavioural prevention. These latter concerns are of particular importance in the context of pre-exposure prophylaxis (PREP). PREP, in the form of a daily dose of tenofovir, may well undermine current behavioural prevention while at the same time fail to provide a safe and effective means of prevention for populations and communities at risk of HIV.

Condoms and clean needles and syringes provide for safe, non-toxic and effective prevention for most people most of the time. While needle and syringe programs are not politically acceptable in all countries, both needle and syringe programs and condoms are cheap and easily accessible, and personally acceptable and sustainable means of controlling HIV.

The same cannot be said for PREP. Not only are there concerns about its safety, but there are a number of serious questions about its effectiveness, not only at the individual level but, more importantly, its effectiveness in reducing the prevalence of HIV in populations or communities at risk.

In most populations, people at risk of HIV infection would need to take PREP, currently tenofovir, daily for a very long period of time—for the period of their active sexual lives. Although current biomedical advice is that tenofovir is comparatively non-toxic (at least when compared with other HIV treatments), there are no data about its long-term side effects. Furthermore, the impact of the treatment on pregnancy is not known and there may well be serious problems with drug resistance. The results of current animal studies suggest that tenofovir has middling to low efficacy and certainly does not have the 90% efficacy that modelling indicates would be necessary to appreciably reduce HIV transmission rates. Furthermore, even in the event of a PREP product achieving 90% efficacy, a very high coverage level of around 90% would be needed to achieve the desired impact on the prevalence of HIV.

The picture is further complicated. Not only is it likely that the cost of PREP would put it out of the reach of most people in the developing world but, because of the possibility of viral resistance, people on PREP would need to be monitored, a costly exercise. While taking PREP might be personally acceptable to many individuals, it would be highly likely that, in heterosexual populations, women but not men would be the ones expected to ingest it and take the risks associated with its long-term use. If PREP were introduced as a general requirement, human rights might also be under threat in countries or in populations where 90% coverage would be needed to reduce the prevalence of HIV. How would 90% coverage be achieved in countries with generalised epidemics?

The general introduction of PREP would be highly likely to undermine behavioural prevention: those on PREP would be unlikely also to use condoms. As a consequence, the incidence of STIs would be likely to increase and, if PREP were not as efficacious as condoms, the incidence of HIV would also be likely to increase, at least among populations where condoms were not widely used. In particular, if PREP were intended to be used in marginalised populations such as sex workers, this could undermine condom use. Pressure could be exerted on women by brothel owners and clients to stop using condoms (which are also a reliable contraceptive).

At a broader level, the public discussion of sex and drugs would be likely to be sidelined and prevention relegated to clinical settings, further undermining the opportunity for social transformations so sorely needed in the fight against this very 'social' disease.

5.3 Backpackers in Australia

Backpackers have recently been recognised by NSW Health as a population that should be considered 'at risk' for STIs and have been targeted for short-term health promotion intervention (NSW Department of Health, 2003). Statistics generated by the Sydney Sexual Health Centre from its client database indicate that backpackers are significantly more likely to have a history and current diagnosis of chlamydia than locals of the same age who attend the clinic (Egan et al., 2005). Previous research on backpackers visiting Canada revealed that some backpackers engaged in more sexual risk-taking behaviour while travelling than in their home environment (Egan, 2001). A study is currently being conducted with backpackers in Australia to find out whether they take more sexual risks while travelling than they do at home, and whether sexual risk taking (i.e. sex without condoms) is restricted to the backpacking environment (Egan, 2004).

Australia is a very popular destination for many international backpackers. In 2002, 464 000 international and 386 000 domestic backpackers travelled in Australia. In 2002 in NSW alone there were 527 160 international and domestic backpackers (Heaney, 2003).

Methods of data collection included fieldwork observation, interviews with key informants and self-administered questionnaires. Backpackers were recruited from 37 hostels in Sydney and Cairns. English speakers aged 18 to 35 years (mean age 23 years) from 23 countries completed 559 questionnaires on sexual behaviour and condom use before and during their trip. Seventy-five per cent of the sample had post-school education and 45% were on their first extended trip away from home. Table 5.3 indicates that less than 3% of the sample identified as anything other than heterosexual (i.e. bisexual, lesbian, gay or other).

Sexual behaviour

Over half (53%) of the sample reported having had sex (vaginal or anal intercourse) with someone whom they had met on their trip and 40% (49% of men, 27% of women) had had casual sex with one or more partners (i.e. sex with someone whom they had met on the same day or evening). Over a quarter of the backpackers had had sex with a resident of the country that they were visiting. Predictors of casual sex while travelling were a history of casual sex at home, longer travel time, drug use, the expectation of having sex with someone new, and being male.

The backpacking environment appears to have a disinhibiting effect on sexual behaviour. Twenty-five per cent of those who had had no expectations of having casual sex

on their trip and 22% of those who reported having had no casual sexual experience before backpacking did have casual sex on their trip. Over half of those who had had sex with a new partner on their trip did so in a dormitory room while other people were present.

While most backpackers carried condoms and reported having intended to use them with new partners, unprotected sex remained common. Negotiating condom use was not always predictive of their actual use; 24% of backpackers who had negotiated condom use did not use a condom the last time they had had casual sex. Half of the sample used a condom inconsistently during sex with someone new. Twenty-five per cent reported not having used a condom on one or more occasions with their most recent partner, and 37% had not used a condom the last time that they had had sex. For 53% of the sample, drinking alcohol, often to excess, was central to the backpacking setting and was both a reason and post-facto justification for having had unprotected sex. Other reasons for not having used condoms included 'caught up

in the heat of the moment' (64%), 'partner/I was on the pill' (35%), 'thought partner was safe' (30%), 'no condom accessible during sex' (19%), 'couldn't be bothered' (3%), 'partner does not like condoms' (3%) and 'could not find any to buy' (3%).

Of the total sample, 1.1% reported being HIV-antibody-positive and half of this group (3 backpackers) had contracted HIV during their current trip. Backpackers appeared to be unaware of the risks of unprotected sex. Seventy-eight per cent of those who had not used a condom the last time they had had casual sex on the trip perceived their risk of getting HIV to be 'low' to 'nil'.

Currently, backpackers are not eligible to receive free sexual health screening or counselling unless they already have symptoms of an STI when attending a clinic. Given that the sexual behaviours of backpackers are putting both themselves and local populations at risk, the health service provision for this young travelling population is currently inadequate.

Table 5.3: Sexual behaviour and practice among backpackers aged 18–35 travelling in Sydney and Cairns in 2003/2004 (N = 559)

	n	%
Male	243	43.5
Female	316	56.5
Sexual identity		
Heterosexual	542	97
Bisexual	10	1.8
Gay/Lesbian	3	0.5
Number of partners before trip[1]		
0	29	5.2
1	46	8.2
2–5	183	32.7
6–10	119	21.3
>10	173	31.0
Number of partners during trip[1]		
0	241	43.1
1	86	15.4
2	66	11.8
3–5	108	19.3
6–10	24	4.3
>10	23	4.2
Casual sex[2]	216	39.5
Description of sex partner[3]		
Traveller of own country	156	27.9
Traveller of different country	218	39.0
Local of country visited	144	25.8
Carrying condoms	444	79.4
Condom used with last new partner[4]		
Never	77	24.8
Rarely	11	3.5
Sometimes	19	6.1
Frequently	36	11.6
Always	167	53.9
Condom use on last occasion	193	64.3
Contracted HIV during trip	3	0.5

[1]Sex defined as vaginal or anal intercourse.

[2]Casual sex defined as sex with someone met that day or evening.

[3]Responses of those who had sex on trip (*n* = 310).

[4]Condom use among those who had sex with someone new on trip.

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