

Gay Community Periodic Surveys: National Report 2010

Author:

Holt, Martin; Mao, Limin; Prestage, Garrett; Zablotska, Iryna; de Wit, John

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National Report 2010

Martin Holt Limin Mao Garrett Prestage Iryna Zablotska John de Wit



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Martin Holt¹ Limin Mao¹ Garrett Prestage² Iryna Zablotska² John de Wit¹

¹ National Centre in HIV Social Research ² National Centre in HIV Epidemiology and Clinical Research

National Centre in HIV Social Research Faculty of Arts and Social Sciences The University of New South Wales



National Centre in HIV Social Research

Level 2, Robert Webster Building University of New South Wales Sydney NSW 2052 Australia

Telephone: +61 2 9385 6776 Fax: +61 2 9385 6455 Email: nchsr@unsw.edu.au

Website: http://nchsr.arts.unsw.edu.au

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in each state or territory who oversee local recruitment processes

Recruiters

who administer the survey at venues and events

Survey participants

who contribute their time to inform us of their particular circumstances

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National Centre in HIV Social Research

Judi Rainbow, Peter Hull and Evelyn Lee

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ACON AIDS Council of New South Wales

ACSA AIDS Council of South Australia

AIDS acquired immune deficiency syndrome

HIV human immunodeficiency virus

HIV-seroconcordant relationship a relationship in which both partners are of the same HIV status, either HIV-positive or HIV-negative

HIV-serodiscordant relationship a relationship in which both partners are known (as a result of testing) to be of different HIV status, e.g. HIV-positive and HIV-negative

HIV-serononcordant relationship a relationship in which the HIV status of at least one partner in the relationship is not known, e.g. HIV-positive and untested, HIV-negative and untested or both untested

HIV status a person's antibody status established by HIV testing, e.g. HIV-negative, HIV-positive, or unknown (untested)

QAHC Queensland Association for Healthy Communities

STI sexually transmissible infection

UAI unprotected anal intercourse

UAIC unprotected anal intercourse with casual partners

UAIR unprotected anal intercourse with regular partners

VAC/GMHC Victorian AIDS Council/Gay Men's Health Centre

WAAC Western Australian AIDS Council

Executive summary

Most indicators of gay men's sexual practices collected in the Gay Community Periodic Surveys (GCPSs) have remained stable in the last ten years, suggesting many HIV prevention practices are well embedded. However, trends in some key indicators (such as unprotected anal intercourse with casual partners and negotiated safety agreements) give cause for concern and suggest opportunities for targeted education activities.

Sexual practices and agreements

Number of male sex partners Over the last ten years, the proportions of men reporting more than ten male sex partners in the six months prior to survey has fallen across Australia, from 30% in 2000 to 26% in 2009. Canberra and Sydney have bucked the national trend, with a recent increase in the proportions of men reporting more than ten male sex partners prior to survey in both cities.

No unprotected anal intercourse with male partners The proportion of men reporting no unprotected anal intercourse (UAI) with male partners has remained above 50% nationally over the last ten years, stabilising at around 57% in the last three years. The proportion of men avoiding UAI has increased in Adelaide and Queensland in the last three years. This indicator suggests that safe sex remains the norm among the majority of gay men.

Unprotected anal intercourse with regular partners Around 30% of all men in the GCPSs report any unprotected anal intercourse with regular male partners (UAIR). This indicator has been stable nationally for the last ten years, although there have been fluctuations in the six states and territories where surveys are conducted. Going against the national trend, the proportion of men reporting UAIR has significantly increased in Perth from 28% in 2000 to 35% in 2008.

Serodiscordant or serononconcordant UAIR The proportion of all men reporting any UAIR with serodiscordant or serononconcordant regular male partners (partners of a different or unknown HIV status) has been stable nationally at around 15% for the last ten years.

Negotiated safety agreements In 2009, 29% of HIV-negative men with seroconcordant (HIV-negative) regular male partners had an explicit negotiated safety agreement with their partner to allow UAI within the relationship and to avoid UAI with other partners. If consistently practised, these agreements are relatively effective in protecting regular partners from HIV (Jin et al., 2009a). Unfortunately, the proportion of HIV-negative men with such an agreement has been falling across Australia (35% in 2000 to 29% in 2009). The proportion of HIV-negative men reporting these agreements is at its lowest level for ten years in Canberra and Sydney.

Unprotected anal intercourse with casual partners Across Australia in the last ten years, the proportion of men reporting any unprotected anal intercourse with casual male sex partners (UAIC) has increased from 20% to 24%. Rates of UAIC have risen noticeably in Adelaide, Canberra and Melbourne and continue to fluctuate in Sydney.

HIV disclosure to casual male partners HIV disclosure between casual male sex partners has become significantly more common across Australia in the last ten years. Between 2000 and 2009, the proportion of HIV-negative men reporting HIV disclosure to any casual partner rose from 35% to 46% but HIV-positive men remain more likely to disclose to their casual partners (50% in 2000 to 62% in 2009).

Testing for HIV and sexually transmissible infections

HIV testing In the last ten years the proportion of men (excluding those recruited from clinics) reporting having

been tested for HIV has stabilised across Australia at around 87%. Compared with the national average, Sydney has tended to have a slightly higher proportion of men tested for HIV, while Adelaide and Canberra typically find lower lifetime rates of HIV testing among GCPS participants.

Recent HIV testing (within the 12 months prior to the survey) has increased among non-HIV-positive men (excluding men recruited at clinics) in the last ten years across Australia (54% in 2000; 60% in 2009). Testing within the 12 months prior to survey has noticeably increased among men in Canberra, Sydney and Melbourne in the last ten years.

Testing for sexually transmissible infections Around two-thirds of men in the GCPSs report having had any test for sexually transmissible infections (STIs) in the 12 months prior to survey. This proportion has been relatively stable for the last ten years, although there are differences in trends across the states and territories. The proportion of men reporting any STI test in the 12 months prior to survey has significantly declined in Adelaide and Queensland but increased in Sydney in the last ten years.

Living with HIV

Nationally, the proportion of HIV-positive men recruited into the GCPSs has been stable at around 13% between 2000 and 2009. As expected, there is considerable variation in the proportion of HIV-positive men recruited in the individual state and territory surveys. The Sydney survey routinely recruits the highest proportion of HIV-positive men (19% in 2009) and Perth the lowest (4% in 2008).

Uptake of antiretroviral treatment, and viral load

Over half of all HIV-positive men recruited into the GCPSs report the use of antiretroviral treatment. Nationally, the proportion of HIV-positive men reporting treatment uptake was 57% in 2009. This proportion appears to have been relatively stable for the last decade. Treatment uptake has significantly increased in Sydney over the last ten years (52% to 62%), but appears to have declined in

Melbourne (54% to 46%). Adjusting the data set for age and recruitment venue has resulted in the level of treatment uptake appearing to be about 10% lower than has been previously reported in the Annual Report of Trends in Behaviour (de Wit, Treloar & Wilson, 2009). This is likely to be due to substantial variations in the age and venue distribution of HIV-positive men who are on treatment.

The proportion of HIV-positive men reporting a detectable viral load has fallen nationally over the last ten years, from 39% to 34%. There are, however, wide differences between the states and territories on this indicator. In 2009 the proportion of HIV-positive men in Sydney reporting a detectable viral load fell to 16%, while in Melbourne and Queensland 32% reported a detectable viral load.

Drug use

The drug most commonly used by Australian gay and other homosexually active men is the inhalant amyl nitrite ('poppers'). Nationally, the reported use of amyl nitrite has fallen between 2000 and 2009, from 38% to 32% of men in 2009. The use of amyl nitrite remains most common in Sydney, with 41% of men reporting its use in 2009.

The use of Viagra has increased significantly in all states and territories during the reporting period. Nationally, Viagra use increased from 16.3% in 2001 to 22.1% in 2009.

Nationally, the use of (meth)amphetamine (speed or crystal meth) has declined (24.1% in 2000 to 16.1% in 2009). Rates appear to have stabilised in all states and territories in the last three years. Men in Sydney continue to report the highest rate of use of (meth)amphetamine.

Injecting drug use (of any drug) remains rare among gay men, although much more common than among the general population. Nationally, the proportion of men reporting any drug injection in the six months prior to survey has remained stable at around 5–6% in the last ten years. Injecting drug use is most commonly reported by men in Melbourne, Queensland and Sydney but is much less likely to be reported by men in Canberra.

Introduction

This is the first national Gay Community Periodic Survey report. It presents an overview of key behavioural trends among gay and other homosexually active men, focusing on sexual practices related to HIV transmission, HIV and STI testing practices and illicit drug use. The report covers the ten year period from 2000 to 2009.

The data used in this report are collected in the Gay Community Periodic Surveys (GCPS), cross-sectional surveys of gay and other homosexually active men routinely conducted in Adelaide, Canberra, Melbourne, Queensland (Brisbane, Cairns and the Gold Coast), Perth and Sydney. The GCPS are community-based surveys, recruiting men from gay community events, gay venues and sexual health clinics. The surveys are managed by the National Centre in HIV Social Research in collaboration with the National Centre in HIV Epidemiology and Clinical Research. Recruitment for each survey is reliant on the active involvement of the state and territory AIDS Councils and organisations for people living with HIV. The direct costs of the GCPS are funded by state and territory health departments while staff at the National Centres are supported by funding from the Australian Government Department of Health and Ageing.

Up until 2009, the GCPS were conducted twice a year in Sydney, annually in Melbourne and Queensland, and less often in Adelaide, Canberra and Perth. The majority of analyses reported here are also published in the National Centre in HIV Social Research's Annual Report of Trends in Behaviour.

Background to the analyses

The analyses presented in this report use GCPS data that have been age standardised (using annual Australian Bureau of Statistics reference data) and weighted to account for variations in recruitment by venue or event in each state or territory each year. These adjustments correct for some of the variations in the GCPS samples that inevitably occur during recruitment. The adjustments mean, firstly, that we can be much more confident in observing trends over time in each state or territory. Secondly, it is easier to compare states and territories with each other in a given year or over time. Thirdly, it is possible for us to calculate a national trend, based on the data gathered in the six states and territories, for the key indicators reported. The national trend line allows us to see how states and territories fare compared with the national average for each key indicator.

Because of the complexity of conducting new analyses using adjusted GCPS data, we have limited the number of key indicators included in this report. The included indicators will be reviewed periodically and may be expanded in future reports. In this report, we have used a ten year reporting period and, as mentioned above, added national trend lines for each key indicator.

There are, of course, some limitations to the new reporting style and adjustments of the dataset. Adjusting the samples by the proportions recruited from each type of venue becomes less reliable (or impossible) if there are severe imbalances between the numbers of men recruited from different venue types. Over the years and across all six states and territories, there have been declining levels of recruitment from general practices and sexual health clinics and difficulties in sustaining recruitment from saunas and sex venues. Recruitment from social venues (gay bars, clubs and social functions) has been relatively stable, but in many states and territories the

proportion of men recruited from gay community events and festivals (e.g. Pride, Midsumma, Mardi Gras) has increased over time. In states or territories where there is a heavy reliance of men recruited from gay community events and little or no recruitment at clinics (e.g. Western Australia), it is therefore not possible to completely correct for the severe imbalance between the four types of recruitment sites—gay social venues, sexual venues, clinics and community events.

Caution should also be exercised when interpreting trends over time. We have tested for linear trends over a ten-year (2000–2009) and three-year period (2007–2009). When there is a clear and statistically significant change over time, the direction of the change is indicated by an up (\uparrow) or down (\downarrow) symbol. However, many indicators do not show a clear increase or decrease over time despite the statistical test (the chisquare test for linear trend) returning a significant result. In these cases, where there is not a clear change up or down over time, but there is a statistically significant test result, we report the trend as fluctuating, indicated with the symbol \updownarrow . When there is no significant change over time, this is described as non-significant (ns), and when statistical tests have not been performed this is indicated by a dash (–).

Readers should also bear in mind that historically there has been some variation in the phrasing of survey questions in the different states and territories. While most key indicators have been assessed using the same questions, for other indicators there may be some variability in the data due to differences in measurement. From 2010, all questionnaires have been standardised across states and territories, reducing the likelihood that differences between states and territories are due to differences in measurement.

Sample overview

Table 1 shows a summary of the men included in the analyses that follow. The data in Table 1 are unadjusted, raw data. The column totals include all the men recruited in each state or territory between 2000 and 2009. The surveys conducted in Melbourne, Sydney and Queensland typically attract the largest numbers of men and are conducted annually while the surveys conducted in Adelaide, Canberra and Perth usually recruit smaller samples and are not conducted every year. As is typical in GCPS samples, the vast majority of men recruited between 2000 and 2009 identified as gay, the remainder usually identifying as bisexual or queer. During the reporting period over two-thirds of men reported that their ethnic background was Anglo-Australian. The mean age of men recruited into the GCPS was 35 years between 2000 and 2009. Overall, about three-quarters of the participants reported that they were HIV-negative, the remainder being HIV-positive, untested or of unknown status.

The analyses that follow are based on adjusted data from the GCPSs conducted in Adelaide, Canberra, Melbourne, Perth, Queensland and Sydney between 2000 and 2009.

Number of male sex partners

Over the last ten years there has been a significant reduction across Australia in the proportion of men reporting more than ten male sex partners in the six months prior to the survey (see Figure 1 and Table 2). Nationally, this proportion has declined from 30.0% in 2000 to 25.8% in 2009, and has been relatively stable for the last three years. There has been considerable variation between states and territories. As is apparent in Table 2, the number of men in Perth reporting more than ten male sex partners has been consistently below the national average while men in Melbourne have tended to be most likely to report more than ten male partners. In Adelaide, Melbourne and Perth the proportions of men reporting more than ten male sex partners have fallen since 2000, while the same proportion has declined in Queensland in the last three years. Canberra bucks the national trend, with an increase in the proportion of men reporting more than ten male partners from 19.9% in 2000 to 33.4% in 2009. An increase in this indicator has also been observed in Sydney during the last three years.

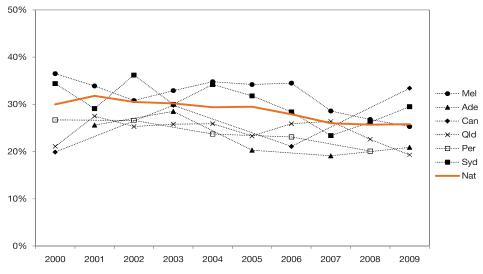


Figure 1: Men who reported more than ten male sex partners in the six months prior to the survey

No unprotected anal intercourse with male sex partners

Figure 2 and Table 3 show the proportions of men reporting no unprotected anal intercourse with a male sex partner in the six months prior to survey. Nationally, looking at the trend for all six states and territories, the proportion of men who avoided UAI has fluctuated between 51.0% and 60.7% between 2000 and 2009. In the last three years, the proportion has been stable nationwide at around 57%. Looking at the states and territories, over the last ten years Canberra has consistently had a lower proportion of men reporting no UAI. Over the last three years, the

proportion of men reporting no UAI has increased in Adelaide and Queensland, has been stable in Sydney and has fluctuated in Melbourne.

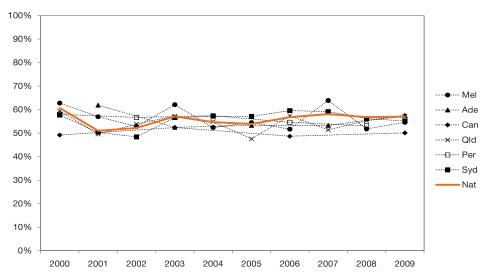


Figure 2: Men who reported no UAI with male sex partners in the six months prior to the survey

Unprotected anal intercourse with regular partners

Unprotected anal intercourse with regular partners (UAIR) is more commonly reported by gay men than unprotected anal intercourse with casual partners (UAIC). Looking at the national trend in Figure 3 and Table 4, we can see that the proportion of Australian men reporting UAIR has been relatively stable for the last ten years at around 30% of all men in the surveys. There is more fluctuation in the rates of UAIR in individual states and territories, with the proportions of men reporting UAIR fluctuating between 24.0% and 36.4% over the last ten years. Only in Perth has the proportion of men reporting UAIR clearly increased from 28.0% in 2000 to 34.9% in 2008.

Table 5 shows the same indicator, UAIR, restricted to men with regular partners (rather than the whole sample). While the proportion of men reporting UAIR appears higher when the analysis is restricted to men with regular partners, the results of the trend analyses are very similar to those found when using the whole sample.

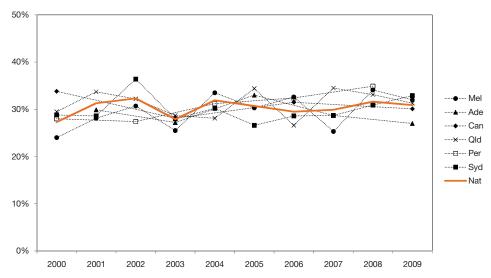


Figure 3: Men who reported any UAIR in the six months prior to the survey

Unprotected anal intercourse with serononconcordant or serodiscordant regular partners

Figure 4 and Table 6 show the proportions of all men reporting UAIR with serononconcordant or serodiscordant regular partners. When partners are serononconcordant or serodiscordant, the likelihood of HIV transmission is increased and over the last ten years, the national trend has been stable for this indicator. Approximately 15% of all men in the GCPS reported any nonconcordant or discordant UAIR. This proportion has fluctuated in most states and territories but has clearly increased in Adelaide (8.2% in 2001 to 14.5% in 2009). In the past 3 years, the proportions of men reporting nonconcordant or discordant UAIR has increased in Melbourne (12.4% to 16.0%), decreased in Queensland (19.4% to 14.6%) and fluctuated in Sydney.

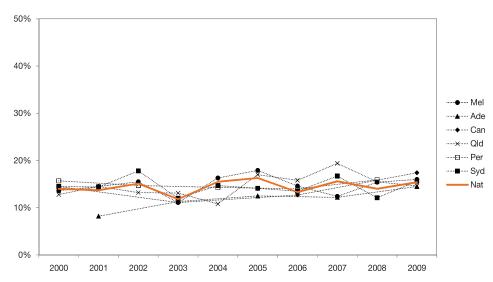


Figure 4: Men who reported any serononconcordant or serodiscordant UAIR in the six months prior to the survey

Table 7 shows the same indicator, nonconcordant or discordant UAIR, restricted to men with regular partners (rather than the whole sample). This analysis shows greater fluctuation than when the analysis includes all men in the GCPSs.

Negotiated safety agreements

A negotiated safety agreement is defined as an explicit agreement between HIV-negative regular partners to allow UAI within the relationship but to avoid UAI with casual partners outside the relationship (Crawford, Rodden, Kippax & Van de Ven, 2001; Kippax et al., 1997).

Negotiated safety agreements, if consistently practised, have been found to be no more risky for HIV infection than avoiding UAI within HIV-negative seroconcordant relationships (Jin et al., 2009). For the analysis presented in Figure 5 and Table 8, HIV-negative men were regarded as having a negotiated safety agreement if they had an HIV-negative regular partner and reported an agreement with that partner to have UAI within their relationship but to have no sex, no anal intercourse, or no anal intercourse without condoms outside the relationship.

For all six states and territories, there has been a significant decrease over the last ten years in the proportion of HIV-negative men with explicit negotiated safety agreements (34.5% in 2000 to 29.3% in 2009) with the most explicit decrease evident in Canberra (45.4% in 2000 to 34.3% in 2009). In the other states and territories the proportions have fluctuated. HIV-negative men in Sydney have generally been more

likely to report negotiated safety agreements than men elsewhere during the last ten years, although the proportion reporting such agreements in 2009 was similar to the national average. In the last three years, the proportion of men with negotiated safety agreements decreased in Adelaide from 34.8% to 30.7%.

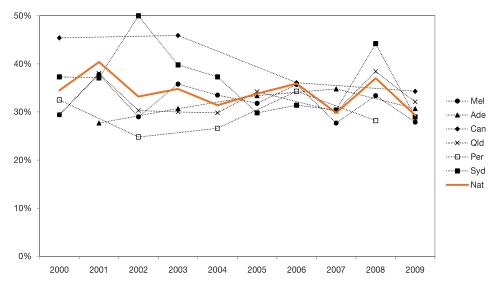


Figure 5: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners

Unprotected anal intercourse with casual partners

For all six states and territories, over the last ten years there has been a significant increase in the proportion of men reporting any unprotected anal intercourse with casual partners (UAIC) (see Figure 6 and Table 9). The proportion reporting UAIC has risen from 19.7% in 2000 to 24.4% in 2009, although this appears to have stabilised in the last three years. Within the ten-year observation period, an increase in UAIC was most evident in Canberra (17.8% to 28.1%), with fluctuations in the rates found in other states and territories. In the past three years, the proportion of men reporting UAIC has been stable in Sydney and Queensland but has risen significantly in Melbourne from 17.4% to 25.0% and Adelaide from 18.6% to 22.8%.

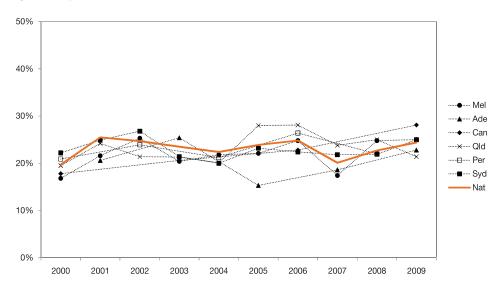


Figure 6: Men who reported any UAIC in the six months prior to the survey

Table 10 shows UAIC among men who had casual partners in the six months prior to survey, rather than the whole sample. The national trend is similar to that found when using the whole sample, showing a significant increase in UAIC from 26.1% in 2000 to 34.2% in 2009.

HIV disclosure to casual partners

The Gay Community Periodic Surveys also collect data on HIV disclosure by men to their casual male partners. HIV disclosure is of interest because historically there have been norms of nondisclosure among gay men, but many contemporary non-condom-based risk reduction strategies are reliant on the disclosure of HIV status (Chambers, 1994; Jin et al., 2009).

Some caution should be exercised in interpreting the data presented in Figures 7 and 8 and Tables 11 and 12 as it is only since 2007 that all six states and territories have consistently used the same questions to assess HIV disclosure to casual partners. Therefore, the trend analysis for the last three years is likely to be more robust than the ten-year trend.

Figure 7 and Table 11 show data on HIV disclosure among HIV-negative men to their casual partners. The national trend indicates a significant increase in the proportion of HIV-negative men disclosing their HIV status to any casual partners in the six months prior to survey. This proportion has risen from 35.3% in 2000 to 46.4% in 2009. This trend has stabilised over the last 3 years. Within the ten-year observation period, the proportion of HIV-negative men reporting any HIV disclosure has increased significantly in all three eastern states and South Australia. It has remained stable in Perth and fluctuated in Canberra. Over the last 3 years, Adelaide has continued to show a significant increase in the proportion of HIV-negative men reporting HIV disclosure from 35.8% in 2007 to 44.3% in 2009. The proportions of HIV-negative men reporting HIV disclosure have fluctuated in Melbourne and Sydney over the last three years and stabilised in Queensland.

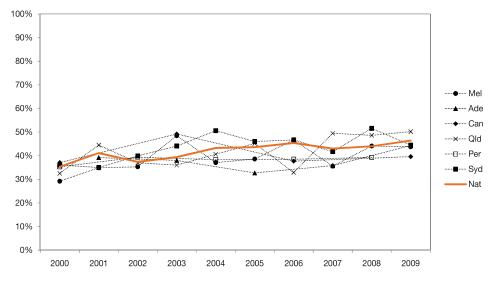


Figure 7: HIV-negative men with casual partners who reported disclosing their HIV status to any casual partner

Figure 8 and Table 12 and show the data on HIV disclosure for HIV-positive men with casual partners. HIV-positive men remain more likely to disclose their HIV status than HIV-negative men. Looking at the national trend, disclosure of HIV status

to any casual partner has significantly increased among HIV-positive men since 2000. The proportion of HIV-positive men reporting HIV disclosure to any casual partner has risen from 49.7% in 2000 to 61.5% in 2009. This upward trend was observed in most states and territories, except in Canberra and Sydney where the proportion of HIV-positive men reporting disclosure has fluctuated. In the last three years, HIV disclosure by HIV-positive men increased markedly in Adelaide and Queensland and has fluctuated in Melbourne and Sydney.

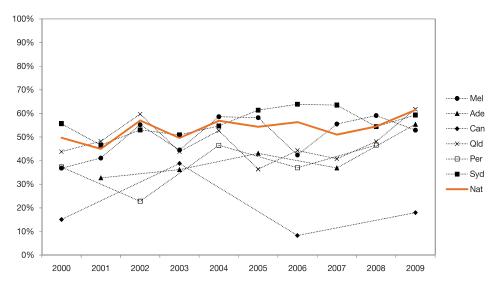


Figure 8: HIV-positive men with casual partners who reported disclosing their HIV status to any casual partner

HIV testing

The lifetime rate of HIV testing among men recruited into the Gay Community Periodic Surveys is very high and has remained stable for the last ten years (see Figure 9 and Table 13). In general, over 85% of GCPS participants have ever had an HIV test. Sydney has observed the highest proportion of men who have ever been tested for HIV and Canberra the lowest. Significant variations can be seen across most states and territories except Canberra where the proportion of men tested for HIV has remained stable during the last decade.

Please note: Men who were recruited from general practices or sexual health clinics were excluded from the analyses in this section as clinic attendees tend to have a higher HIV testing rate than men recruited from elsewhere.

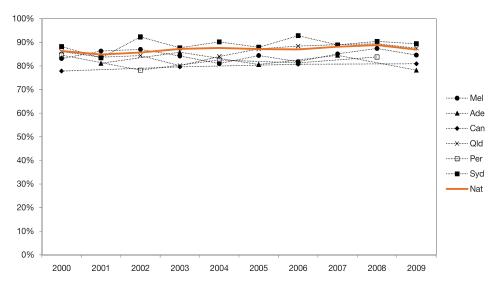


Figure 9: Men who had ever been tested for HIV, excluding men recruited from sexual health clinics

Over the last three years, the proportion of men tested for HIV has been relatively stable in most states and territories, except Adelaide where it dropped from 84.5% to 78.2%. This decrease may be due to a change in recruitment venues and locations. In 2009 a number of new social venues were included as recruitment sites in the survey.

Figure 10 and Table 14 show the proportions of non-HIV-positive men reporting HIV testing in the 12 months prior to the survey. Over the last ten years, the national trend shows a significant increase in the proportion of recently tested men (53.7% in 2000 to 60.2% in 2009). This upward trend appears to have stabilised over the last 3 years. Between 2000 and 2009, increases in recent HIV testing are most apparent in Canberra (46.4% to 53.3%), Melbourne (51.9% to 59.7%) and Sydney (55.5% to 66.6%). The proportion of recently tested men has remained stable in Adelaide and Perth and fluctuated in Queensland over the ten-year period.

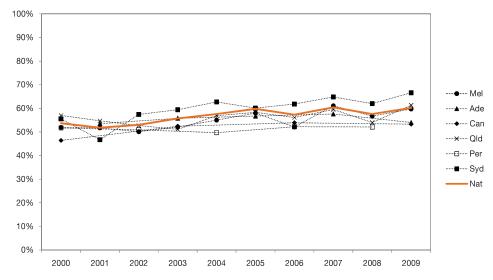


Figure 10: Non-HIV-positive men tested for HIV in the 12 months prior to the survey, excluding men recruited from sexual health clinics

STI testing

Figure 11 and Table 15 show the proportions of men reporting any test for STIs in the 12 months prior to the survey. Data on a range of tests for STIs including anal swabs, throat swabs, penile swabs, urine samples or blood tests other than for HIV have been available since 2003.

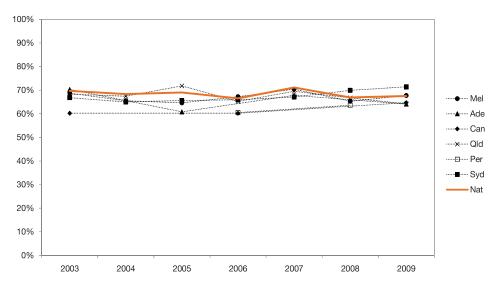


Figure 11: Men who reported any STI test in the 12 months prior to the survey

Nationally, there has been no change in the proportion of men reporting any test for STIs over the last seven years. During this period, generally over two-thirds of men who participated in the Gay Community Periodic Surveys reported any STI testing in the year prior to the survey. Looking at the states and territories, the proportion of men reporting STI testing has also been stable in Canberra, Melbourne and Perth. Men in Canberra are the least likely to report any STI testing. Between 2003 and 2009, the proportion of men reporting STI testing decreased in Adelaide from 70.3% to 64.1% and in Queensland from 68.3% to 64.2%. In contrast, the proportion of men reporting STI testing in Sydney increased from 66.8% in 2003 to 71.4% in 2009. Over the last 3 years, STI testing has been stable in most states and territories except Queensland where it declined. It should be noted that previous Annual Reports of Trends in Behaviour have found that the comprehensiveness of STI tests has increased over time (de Wit, Treloar & Wilson, 2009).

Living with HIV

Nationally, the proportion of HIV-positive men recruited into the GCPSs remains stable; 11.7–14.8% of those surveyed reported being HIV-positive between 2000 and 2009 (see Figure 12 and Table 16). This indicates the stability of recruitment procedures over time and across states and territories. However, it is clear in the surveys that far fewer HIV-positive men were recruited from the less populous states and territories; the highest proportion of HIV-positive men is routinely seen in the Sydney survey. The proportions of HIV-positive men in each state and territory appear to reflect the size of the gay male population in each jurisdiction (Prestage et al., 2008).

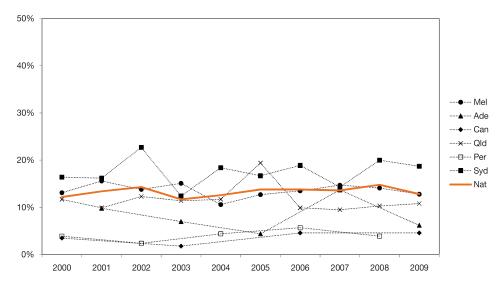


Figure 12: Men who are HIV-positive

Uptake of antiretroviral treatment, and viral load

Use of antiretroviral treatment among HIV-positive men is shown in Figure 13 and Table 17. In smaller cities such as Adelaide, Canberra and Perth, few HIV-positive men are typically recruited into the surveys. This means that caution should be exercised when interpreting the proportions of HIV-positive men on treatment and those with a detectable viral load in these locations.

The national trend indicates that generally over half of HIV-positive men in the Gay Community Periodic Surveys reported being on treatment between 2000 and 2009, although the proportion has fluctuated significantly, stabilising in the last three years. Within the ten-year observation period, the proportions of HIV-positive men on treatment have significantly increased in Adelaide (36.7% to 49.1%) and Sydney (52.4% to 62.4%). In Melbourne, however, the proportion of HIV-positive men on treatment has decreased from 53.8% in 2000 to 45.5% in 2009. A decrease was also observed in Canberra. It is interesting to note that, on average, in this statistically adjusted analysis, treatment uptake among HIV-positive men has been hovering around the 50% mark in the last decade, despite relatively easy access to treatment in Australia. It should be noted that these figures for treatment usage are considerably lower than those found when using unadjusted raw data from the Gay Community Periodic Surveys. In last year's Annual Report of Trends of Behaviour, for example, the proportion of HIV-positive men receiving treatment in 2008 was in the range 65–74% (de Wit, Treloar & Wilson, 2009). Adjusting the raw data for age and recruitment venue, as we have done this year, greatly reduces the proportion of HIV-positive men who appear to be receiving treatment. This suggests there are substantial variations in HIV treatment access and uptake among HIV-positive men recruited from different venue types.

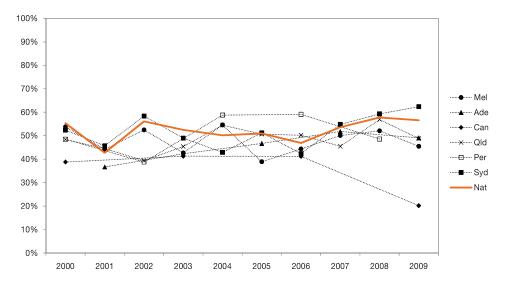


Figure 13: HIV-positive men on antiretroviral treatment

Since 2002, HIV-positive men have been asked to indicate their last HIV viral load test result when completing the surveys. Figure 14 and Table 18 and show the proportions of HIV-positive men reporting a detectable viral load. Looking at the national trend, we can see that in general the proportion of HIV-positive men with a detectable viral load has been falling (38.6% in 2002 to 33.6% in 2009), presumably due to the availability of effective antiretroviral treatment. This long-term trend has been observed in Melbourne, Perth, Queensland and Sydney, although there have been fluctuations in Melbourne and Queensland in the last three years.

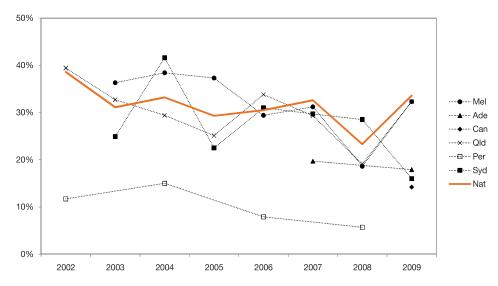


Figure 14: HIV-positive men who reported a detectable viral load

Drug use

The drug most commonly used by Australian gay and other homosexually active men is the inhalant amyl nitrite (colloquially referred to as 'poppers'). Amyl nitrite is used by gay men both as a euphoric and as a muscle relaxant for anal sex. Looking at Figure 15 and Table 19, we can see that amyl nitrite use has fallen nationally during the reporting period, from 37.6% in 2000 to 31.8% in 2009 (although there have been significant fluctuations in the last three years). The proportions of men reporting amyl nitrite use have been stable in Canberra and Sydney during the last ten years, although men in Sydney generally report the highest levels of use of the drug. Amyl nitrite use has markedly decreased in Melbourne and varied in the other states and territories. Over the last three years, amyl nitrite use has been stable in most states and territories except Adelaide where it declined from 21.5% to 17.5%. Men in Adelaide currently report the lowest level of use of amyl nitrite.

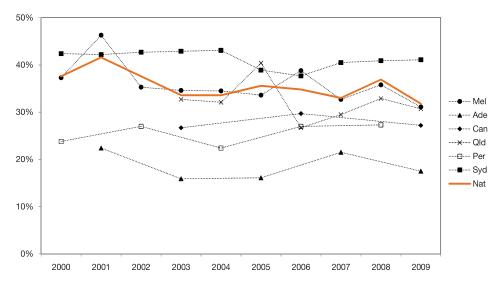


Figure 15: Men who reported using amyl nitrite in the six months prior to the survey

Table 20 shows the use of Viagra by men in the GCPS. Looking at the national trend, we can see that the proportion of men reporting Viagra use has significantly increased (16.3% in 2001 to 22.1% in 2009). Viagra appears to have become significantly more common in all states and territories during the reporting period.

The use of (meth)amphetamine (speed or crystal meth) is shown in Table 21. Overall, (meth)amphetamine use among gay and other homosexually active men has been declining, from 24.1% in 2000 to 16.1% in 2009. The decline in use is most evident in Adelaide. In other locations, notably Melbourne, Queensland and Sydney, rates of (meth)amphetamine use have fluctuated during the reporting period. Rates of speed or crystal use appear to have stabilised in all states and territories in the last three years. Men in Sydney continue to report the highest rate of use of amphetamines.

Injecting drug use (IDU) of any drug remains rare among gay men, although much higher than among the general population (see Figure 16 and Table 22). Nationally, the proportion of men reporting any IDU in the six months prior to the survey has remained stable at around 5–6%. Injecting drug use is most commonly reported by men in Melbourne, Queensland and Sydney, and least commonly in Canberra. Within

the ten-year observation period, the proportions of men reporting any IDU have fluctuated in most states and territories, except in Canberra and Perth. Over the last three years, the proportions of men reporting any IDU have also been stable in most states and territories except Queensland where it has increased.

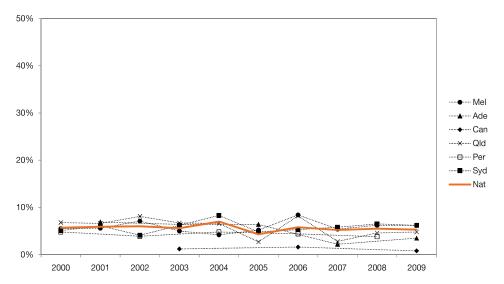


Figure 16: Men who reported any injecting drug use in the six months prior to the survey

Appendix

The findings of the survey are presented numerically in tables $1\ \text{to}\ 22$ on the following pages.

Table 1: Overview of men recruited into the Gay Community Periodic Surveys, 2000-2009

	Adelaide n %	Canberra n %	Melbourne n %	Perth n %	Queensland n %	Sydney n %	All six states/territorie
Gay or homosexual	3806 83.8	1076 89.9	19042 89.8	4576 85.3	14371 84.5	26930 91.2	69801 88.5
Anglo-Australian	3434 75.6	861 71.9	13612 64.2	3553 66.3	12570 73.9	18912 64.1	52942 67.2
Mean age (± SD)	35.0 (±11.5)	36.9 (±10.7)	34.9 (±10.4)	34.9 (±11.5)	33.4 (±11.1)	35.9 (±9.8)	35.0 (±10.5)
Median age in years	35	36	34	34	32	35	34
HIV-negative	3448 76.0	940 78.5	16021 75.5	4086 76.2	13080 76.9	22004 74.5	59579 75.6
Total	4540	1197	21208	5362	17012	29518	78837

Table 2: Men who reported more than ten male sex partners in the six months prior to the survey

	2000	2001 %	2002 %	2003 %	2004 %	2005 %	2006	2007	2008	2009	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		25.6		28.5		20.3		19.1		20.9	4p < 0.001	SU
Canberra	19.9			29.8			21.1			33.4	$\uparrow p < 0.001$	ı
Melbourne	36.5	33.9	30.8	32.9	34.8	34.2	34.5	28.6	26.8	25.3	<i>↓ p</i> < 0.001	SU
Perth	26.7		26.6		23.7		23.1		20.1		$\psi \rho < 0.002$	ı
Queensland	21.1	27.5	25.3	25.8	25.9	23.3	25.9	26.4	22.6	19.3	\$\rightarrow 0.001	<i>↓ p</i> < 0.001
Sydney	34.4	29.1	36.2	30.0	34.2	31.8	28.4	23.4	26.2	29.5	\$\rightarrow 0.001	↑ p < 0.01
All six states/territories	30.0	31.8	30.5	30.2	29.4	29.5	27.9	26.0	25.7	25.8	$\psi \rho < 0.012$	SU

Table 3: Men who reported no unprotected anal intercourse with male sex partners in the six months prior to the survey

	2000	2001 %	2002 %	2003	2004	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend χ^2 test for trend (ρ -value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		61.9		52.5		53.3		53.3		9'.29	$\Phi > 0.001$	$\uparrow p < 0.05$
Canberra	49.2			52.4			48.7			50.1	ns	I
Melbourne	62.8	67.0	52.8	62.1	52.4	54.5	51.7	63.9	51.8	54.6	\$\phi < 0.001	$\Phi < 0.001$
Perth	58.0		26.7		57.4		54.6		53.1		NS	I
Queensland	59.5	49.6	53.9	57.3	54.9	47.6	57.4	51.4	55.3	57.2	(2.5) $\rho < 0.001$	$\uparrow p < 0.03$
Sydney	27.7	50.4	48.4	9.99	57.2	57.1	9.69	59.2	56.2	55.2	$(2) \rho < 0.001$	NS
All six states/territories	60.7	51.0	52.2	57.1	54.7	53.9	56.8	58.1	56.8	57.0	(2) $\rho < 0.001$	ns

Table 4: Men who reported any UAIR in the six months prior to the survey (whole sample)

table 4: Intel with tableted any officer of six morning prior to the salvey (write sample)	ייים שיייים		0011 410 011	200	o ti lo sai v	oy (wildle c	al ipia)					
	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		29.9		27.2		33.0		28.7		27.0	\$ p < 0.02	ns
Canberra	33.8			28.1			31.5			30.1	\$ p < 0.04	1
Melbourne	24.0	28.1	30.7	25.5	33.5	30.3	32.6	25.3	34.1	32.0	\$\$p < 0.001	$\Phi < 0.001$
Perth	28.0		27.4		31.2		32.4		34.9		$\uparrow p < 0.001$	1
Queensland	29.5	33.7	32.2	28.7	28.1	34.4	26.6	34.5	33.1	31.3	(2.5) $p < 0.001$	ns
Sydney	28.8	28.6	36.4	28.0	30.2	26.6	28.6	28.7	30.9	32.9	\$\tag{b} < 0.001	ns
All six states/territories	27.3	31.3	32.3	27.9	31.9	30.7	29.5	29.9	31.6	30.9	ns	ns

Table 5: Men who reported any UAIB in the six months prior to the survey (men with regular partners only)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Overall trend	Trend in last 3 years
	%	%	%	%	%	%	%	%	%	%	χ^2 test for trend (p-value) χ^2 test for trend (p-value	χ^2 test for trend (p-value
Adelaide		40.0		41.6		46.2		44.6		42.4	\$\phi \ \rho < 0.04	SU
Canberra	49.8			40.7			45.0			44.0	$\Phi < 0.001$	ı
Melbourne	33.4	45.0	48.3	40.2	48.6	49.5	48.1	39.8	47.8	46.5	$\Phi < 0.001$	$\uparrow p < 0.001$
Perth	41.6		44.4		47.0		51.3		50.6		$\uparrow p < 0.001$	I
Queensland	48.2	54.0	47.6	44.8	42.1	48.0	41.9	46.6	49.6	47.8	$\Phi < 0.001$	SU
Sydney	42.5	44.2	52.6	43.1	47.6	44.5	42.4	41.8	49.2	48.7	$\Phi < 0.001$	$\uparrow p < 0.001$
All six states/territories	40.8	48.5	49.1	43.9	49.6	47.9	45.8	43.8	46.7	47.3	ns	SU

Table 6: Men who reported any serononconcordant or serodiscordant UAIR in the six months prior to the survey (whole sample)

	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		8.2		11.3		12.5		12.2		14.5	$\uparrow p < 0.001$	ns
Canberra	14.5			11.1			12.7			17.4	$\triangle p < 0.001$	I
Melbourne	13.6	14.5	15.5	11.1	16.3	17.9	14.6	12.4	15.4	16.0	\$\tag{\psi} p < 0.001	+ p < 0.05
Perth	15.7		14.7		14.3		14.0		15.9		ns	I
Queensland	12.8	14.5	13.2	13.1	10.8	17.0	15.8	19.4	15.5	14.6	$\triangle p < 0.001$	\$\psi \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Sydney	14.5	14.4	17.8	12.0	14.7	14.1	13.5	16.7	12.1	15.6	p < 0.004	\$p < 0.01
All six states/territories	14.0	13.7	15.1	11.8	15.5	16.3	13.3	15.6	14.0	15.4	ns	ns

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Table 7: Men who reported any serononconcordant or serodiscordant UAIR in the six months prior to the survey (men with regular partners only)

	2000 %	2001 %	2002 %	2003 %	2004 %	2005	200e %	2007 %	2008 %	200 0 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		25.2		31.2		33.0		39.7		38.5	↑ p < 0.001	SU
Canberra	34.0			25.0			37.2			38.4	\$p < 0.001	I
Melbourne	30.8	36.5	41.5	32.3	41.0	45.5	39.8	34.9	38.1	37.4	\$\tag{\psi} p < 0.001	Su
Perth	37.3		33.7		42.3		45.7		46.7		\$p < 0.001	I
Queensland	35.2	47.2	36.4	39.4	32.6	41.2	37.7	41.5	40.0	43.3	\$p < 0.001	SU
Sydney	33.9	39.4	41.7	36.8	40.9	39.3	34.3	38.7	35.4	41.2	$\Phi < 0.001$	$\Phi < 0.03$
All six states/territories	34.5	37.8	38.7	35.5	41.8	42.2	37.1	38.3	38.0	40.8	\$\rightarrow 0.004	NS

Table 8: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners

							1					
	2000	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) $~\chi^2$ test for trend (p-value)	Trend in last 3 years $\chi^{\rm 2}$ test for trend (p-value)
Adelaide		27.7		30.7		33.4		34.8		30.7	$\triangle p < 0.01$	<i>↓ p</i> < 0.05
Canberra	45.4			45.9			36.1			34.3	<i>↓ p</i> < 0.001	I
Melbourne	29.4	37.8	29.0	35.8	33.5	31.8	35.7	27.7	33.4	27.9	$\Phi < 0.001$	\$p < 0.01
Perth	32.5		24.8		26.6		34.3		28.2		\$p < 0.001	ı
Queensland	29.4	38.0	30.3	30.0	29.8	34.2		30.1	38.4	32.1	$\Phi < 0.001$	$\Phi < 0.001$
Sydney	37.3	37.1	90.09	39.8	37.3	29.8	31.4	30.4	44.2	29.0	\$\$p < 0.001	\$\rightarrow\$ 0.001
All six states/territories	34.5	40.4	33.2	34.8	31.4	33.8	35.9	29.8	37.0	29.3	4 p < 0.001	$\Phi < 0.001$

Table 9: Men who reported any UAIC in the six months prior to the survey (whole sample)

	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		20.6		25.4		15.3		18.6		22.8	$\triangle p < 0.001$	↑ p < 0.02
Canberra	17.8			20.6			22.8			28.1	$\Phi > 0.001$	I
Melbourne	16.8	21.6	25.3	20.4	21.8	22.1	24.8	17.4	24.8	25.0	$\Phi < 0.001$	$\uparrow p < 0.001$
Perth	20.9		23.9		21.2		26.4		22.0		\$\psi \ 0.02	I
Queensland	19.5	24.2	21.4	21.3	20.1	28.0	28.1	23.8	25.0	21.4	\$ p < 0.001	NS
Sydney	22.2	24.9	26.8	21.4	20.0	23.2	22.4	21.8	21.9	25.0	\$\rho < 0.01	ns
All six states/territories	19.7	25.5	24.7	23.5	22.4	23.9	24.8	20.1	22.7	24.4	$\uparrow p < 0.02$	SU

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Table 10: Men who reported any UAIC in the six months prior to the survey (men with casual partners only)

	2000	2001 %	2002 %	2003 %	2004 %	2005 %	2006	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		28.4		30.3		21.8		30.2		32.0	\$\tag{\psi} \ 0.001	SU
Canberra	28.8			26.0			26.9			38.5	$\uparrow p < 0.001$	ı
Melbourne	21.7	27.5	36.0	27.9	28.9	28.5	31.5	23.0	33.4	34.1	$\Phi < 0.001$	$\Phi > 0.001$
Perth	25.7		31.7		29.2		33.8		30.9		$\Phi < 0.002$	1
Queensland	26.0	33.3	31.4	29.7	27.9	34.6	35.4	29.7	33.6	32.7	$\Phi < 0.001$	SU
Sydney	29.4	33.1	37.2	27.5	26.6	31.4	29.3	30.2	30.6	34.4	$\Phi < 0.001$	NS
All six states/territories	26.1	33.1	34.6	30.6	29.8	31.8	32.0	26.6	31.5	34.2	$\uparrow p < 0.03$	ns

Table 11: HIV-negative men with casual partners who reported disclosing their HIV status to any casual partner

	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend χ^2 test for trend (p -value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		39.2		38.0		32.7		35.8		44.3	↑ p < 0.001	$\uparrow p < 0.001$
Canberra	37.1			49.2			37.7			39.6	\$\rho < 0.001	ı
Melbourne	29.2	34.9	35.3	48.5	37.1	38.6	46.7	35.6	44.1	43.8	↑ p < 0.001	\$\$p < 0.001
Perth	35.3		39.4		38.3		38.5		39.3		SU	I
Queensland	32.5	44.5	37.0	36.0	40.6	45.2	32.9	49.5	48.6	50.2	$\uparrow p < 0.001$	NS
Sydney	36.0	35.0	39.9	44.1	9.09	46.0	46.7	41.7	51.6	44.5	↑ p < 0.001	\$\$p < 0.001
All six states/territories	35.3	41.1	37.4	39.4	43.3	43.6	45.4	43.0	44.0	46.4	$\uparrow p < 0.001$	ns

Table 12: HIV-positive men with casual partners who reported disclosing their HIV status to any casual partner

	2000	2001 %	2002 %	2003	2004 %	2005 %	2006 %	2007 %	2008 %	2009	Overall trend Trend in last 3 years χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		32.7		36.2		43.1		36.9		55.4	↑ p < 0.001	$\uparrow p < 0.001$
Canberra¹	15.1			38.8			8.3			18.0	\$\rightarrow 0.001	I
Melbourne	36.8	41.1	55.2	44.5	58.6	58.2	42.4	55.5	59.1	52.9	$\uparrow p < 0.001$	\$\rho < 0.02
Perth	37.3		22.8		46.5		37.0		46.6		$\uparrow p < 0.001$	I
Queensland	43.8	48.2	29.7	43.8	52.7	36.4	44.3	40.8	48.1	61.8	$\uparrow p < 0.001$	$\uparrow p < 0.001$
Sydney	55.6	46.6	53.0	6.03	54.7	61.4	63.9	63.5	54.4	59.3	\$\rho < 0.001	\$p < 0.001
All six states/territories	49.7	45.0	0.73	49.6	6.99	54.3	56.3	51.0	54.5	61.5	$\uparrow p < 0.001$	$\uparrow p < 0.001$

¹ Caution: small numbers of HIV-positive men in the Canberra samples may make data unreliable.

Table 13: Men who had ever been tested for HIV, excluding men recruited from sexual health clinics

	2000 %	2001	2002 %	2003 %	2004	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years $\chi^{\rm 2}$ test for trend (p-value)
Adelaide		81.1		85.8		80.6		84.5		78.2	\$\rightarrow 0.001	• $\rho < 0.001$
Canberra	77.8			9.62			80.7			80.9	ns	ı
Melbourne	83.1	86.3	0.78	84.2	81.0	84.4	81.8	85.1	87.4	84.6	$\Phi < 0.001$	NS
Perth	84.6		78.2		82.5		81.3		83.8		$\Phi < 0.002$	ı
Queensland	86.1	83.7	84.4	80.1	84.0	87.2	88.4	89.0	89.4	87.5	$\Phi < 0.001$	NS
Sydney	88.2	83.4	92.3	87.7	90.2	87.9	92.8	88.9	90.4	89.4	$\Phi < 0.001$	NS
All six states/territories	86.3	84.8	85.7	87.2	9.78	87.1	87.0	88.1	88.8	86.9	NS	SU

Table 14: Non-HIV-positive men tested for HIV in the 12 months prior to the survey, excluding men recruited from sexual health clinics

	_				-							
	2000 %	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		53.5		55.8		56.7		9.79		54.0	SU	SU
Canberra	46.4			52.4			53.9			53.3	$\uparrow p < 0.002$	I
Melbourne	51.9	51.7	50.1	52.1	55.0	58.0	52.1	61.1	2.99	29.7	$\uparrow p < 0.001$	SU
Perth	51.7		6.03		49.7		52.2		52.1		ns	I
Queensland	0.73	54.7	52.7	51.1	56.9	58.3	56.1	59.5	54.0	61.3	$\Phi < 0.001$	\$\rm 0.003
Sydney	55.5	46.7	57.4	59.4	62.7	60.1	61.8	64.8	62.0	9.99	$\uparrow p < 0.001$	ns
All six states/territories	53.7	51.8	53.0	55.7	9.79	59.8	57.3	60.4	9.73	60.2	$\uparrow p < 0.001$	SU

Table 15: Men who reported any STI test in the 12 months prior to the survey

	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide	70.3		8.09		8.79		64.1	\$\ldot \rho < 0.001	SU
Canberra	60.2			60.2			64.7	ns	I
Melbourne	68.7	65.5	64.6	67.2	70.4	65.3	67.7	ns	ns
Perth				60.5		63.6		ns	I
Queensland	68.3	67.4	71.8	65.2	69.5	2.99	64.2	<i>↓ p</i> < 0.01	<i>↓ p</i> < 0.04
Sydney	8.99	0.59	9.59	62.9	67.1	6.69	71.4	$\uparrow p < 0.02$	NS
All six states/territories	2.69	68.3	0.69	66.5	71.1	6.99	67.5	SU	SU

Table 16: Men who are HIV-positive

Appendix

	2000	2001 %	2002 %	2003 %	2004 %	2005 %	200e %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		8.6		7.0		4.4		13.7		6.2	\$p < 0.001	4 p < 0.001
Canberra¹	3.5			4.8			4.6			4.6	\$p < 0.002	I
Melbourne	13.1	15.6	13.8	15.1	10.6	12.7	13.5	14.7	14.1	12.8	ns	ns
Perth	3.9		2.4		4.4		5.7		3.9		\$ p < 0.01	I
Queensland	11.7	6.6	12.3	11.4	11.7	19.4	6.6	9.5	10.3	10.8	$^{(1)}$ $p < 0.001$	NS
Sydney	16.4	16.2	22.7	12.4	18.4	16.7	18.9	14.3	20.0	18.7	\$p < 0.001	\$p < 0.002
All six states/territories	12.2	13.4	14.3	11.7	12.6	13.8	13.8	13.6	14.8	12.8	NS	ns

Table 17: HIV-positive men on antiretroviral treatment

	%	% %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide		36.7		42.3		46.7		51.8		49.1	Φ < 0.001	SU
Canberra¹	38.8			41.3			41.2			20.2	<i>↓ p</i> < 0.001	I
Melbourne	53.8	44.2	52.5	42.7	54.6	38.9	44.4	50.1	52.1	45.5	<i>↓ p</i> < 0.001	4 p < 0.01
Perth	48.5		38.8		58.8		59.1		48.6		\$\rightarrow 0.001	I
Queensland	48.4	44.5	39.4	45.4	54.5	2002	50.2	45.5	56.9	48.8	\$p < 0.001	(2.5) (2.5) (2.5) (2.5)
Sydney	52.4	45.7	58.4	49.0	42.9	51.2	42.4	54.8	59.3	62.4	$\uparrow p < 0.001$	$\uparrow p < 0.002$
All six states/territories	55.3	42.7	56.1	52.5	50.2	51.0	46.9	53.6	57.8	9.99	\$\rho < 0.001	SU

Table 18: HIV-positive men who reported a detectable viral load

	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide						19.7		17.9	NS	I
Canberra¹								14.2	1	I
Melbourne		36.3	38.4	37.3	29.4	31.2	18.6	32.3	4 p < 0.001	\$\$p < 0.001
Perth	11.7		15.0		7.9		2.7		<i>↓ p</i> < 0.001	I
Queensland	39.4	32.7	29.4	25.1	33.8	29.3	19.1	32.3	4 p < 0.001	\$\tag{b} < 0.001
Sydney		24.9	41.6	22.5	31.0	29.7	28.5	16.0	4 p < 0.001	<i>↓ p</i> < 0.001
All six states/territories	38.6	31.1	33.2	29.3	30.5	32.6	23.3	33.6	$\psi > 0.001$	\$\$ \$\$ \$\$ \$\$ 0.001

' Caution: small numbers of HIV-positive men in the Canberra samples may make data unreliable.

Table 19: Men who reported using amyl nitrite in the six months prior to the survey

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Overall trend	Trend in last 3 years
	%	%	%	%	%	%	%	%	%	%	χ^2 test for trend (p-value) χ^2 test for trend (p-value)	χ^2 test for trend (p-value)
Adelaide		22.4		15.9		16.1		21.5		17.5	$\triangle p < 0.001$	$\psi p < 0.02$
Canberra				26.7			29.7			27.2	ns	I
Melbourne	37.3	46.3	35.3	34.6	34.5	33.6	38.8	32.7	35.8	31.1	<i>↓ p</i> < 0.001	SU
Perth	23.8		27.0		22.4		27.0		27.3		\$p < 0.03	ı
Queensland				32.7	32.1	40.4	26.7	29.5	32.9	30.7	(2.5) (2.5) (2.5) (2.5)	SU
Sydney	42.4	42.2	42.7	42.9	43.1	38.9	37.7	40.5	40.9	41.1	ns	SU
All six states/territories	37.6	41.6	37.6	33.6	33.6	35.6	34.8	33.0	36.9	31.8	<i>↓ p</i> < 0.001	\$\rho < 0.04

Table 20: Men who reported using Viagra in the six months prior to the survey

	2000 %	2001 %	2002 %	2003	200 4 %	2005 %	2006 %	2007 %	2008	200 9 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (ρ -value)
Adelaide		18.7		13.4		17.7		13.0		17.5	$^{\circ} p < 0.001$	$\uparrow p < 0.02$
Canberra				12.3			14.0			12.0	$\uparrow p < 0.001$	1
Melbourne		11.7	11.2	10.1	12.1	19.0	17.0	17.4	19.6	20.0	$\uparrow p < 0.001$	ns
Perth	5.9		11.0		13.8		18.2		14.0		$\uparrow p < 0.001$	I
Queensland				9.7	12.0	16.2	17.6	16.8	16.3	19.9	$\uparrow p < 0.001$	NS
Sydney		13.5	17.9	24.9	21.6	21.8	25.4	22.6	20.7	23.9	\$\$p < 0.001	ΠS
All six states/territories		16.3	14.3	15.8	16.9	18.2	20.6	18.3	20.0	22.1	$\uparrow p < 0.001$	NS

Table 21: Men who reported using (meth)amphetamine in the six months prior to the survey

	2000 2001	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years χ^2 test for trend (p-value)
Adelaide			19.5		19.3		9.7		9.1	<i>↓ p</i> < 0.001	ns
Canberra			12.3			14.0			12.0	ns	I
Melbourne	17.8		20.3	19.7	22.3	22.5	19.2	17.4	17.9	\$p < 0.02	NS
Perth				19.1		20.3		15.3		<i>↓ p</i> < 0.01	ı
Queensland			17.5	18.6	14.0	18.9	13.0	13.2	11.9	$\Phi < 0.001$	NS
Sydney	29.2	24.3	25.0	28.2	24.5	29.0	24.9	23.5	21.0	$\Phi < 0.001$	SU
All six states/territories	24.1	24.3	21.4	21.6	20.9	23.7	18.8	18.2	16.1	<i>↓ p</i> < 0.001	NS

Table 22: Men who reported any injecting drug use in the six months prior to the survey

Appendix

	2000 %	2001	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	Overall trend Trend in last 3 years χ^2 test for trend (p-value) χ^2 test for trend (p-value)	Trend in last 3 years $\chi^{\rm 2}$ test for trend (p-value)
Adelaide		6.9		6.4		6.4		2.2		3.5	\$\tag{\psi} < 0.001	ns
Canberra				1.2			1.6			0.8	ns	ı
Melbourne	5.5	5.6	7.1	2.0	4.2	5.2	8.4	5.4	6.2	6.2	$\Phi < 0.01$	ns
Perth	4.8		3.9		4.8		4.4		3.8		ns	I
Queensland	6.8	9.9	8.1	6.7	9.9	2.7	8.2	2.8	4.6	8.4	\$p < 0.001	$\Phi > 0.04$
Sydney	5.1	6.1	4.1	6.2	8.3	4.8	5.3	5.8	6.5	6.2	\$p < 0.01	NS
All six states/territories	2.7	5.9	0.9	5.6	7.0	4.3	5.8	5.2	5.5	5.3	ns	ns