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Annual Report of Trends in Behaviour 2018 HIV and STIs in Australia

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Glossary

ART – antiretroviral treatment, consisting of a combination of antiretroviral drugs to control HIV infection

BBV – blood borne virus

CLAI – condomless anal intercourse

CLAIC – condomless anal intercourse with casual partners

CLAIR – condomless anal intercourse with regular partners

CSRH – Centre for Social Research in Health

GCPS – Gay Community Periodic Survey(s)

HIV – human immunodeficiency virus

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

MSM – men who have sex with men

n – denotes the frequency of responses or classifications

negotiated safety agreement – an agreement between a seroconcordant couple to have condomless sex with each other, but not to have sex (or condomless sex) with other people

ns – non-significant

PEP – post-exposure prophylaxis; for the purpose of this report, it refers to the use of antiretroviral drugs by HIV-negative people to reduce the risk of HIV infection after a potential exposure has occurred

PrEP – pre-exposure prophylaxis; for the purpose of this report, it refers to the use of antiretroviral drugs by HIV-negative people to reduce the risk of HIV infection before a potential exposure has occurred

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

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

serononconcordant – 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)

serosorting – there are multiple definitions of serosorting; for the purpose of this report we define it as selecting sexual partners on the basis of a common or shared HIV serostatus confirmed by HIV testing.

SD – standard deviation

STI – sexually transmissible infection

TasP – treatment as prevention

UDVL – undetectable viral load

Introduction

Introduction

This year's publication of the Annual Report of Trends in Behaviour (ARTB) on HIV and sexually transmissible infections (STIs) occurs while the context of HIV and STIs in Australia continues to shift and change as new testing, prevention and treatment methods are adopted across the country and continue to affect practice.

Throughout the ARTB, we comment not only on the meanings of the data we have generated, but also the methods by which they were obtained, including the need to update questions, measures and approaches. While we seek a stable surveillance system, it must be one that is meaningful to the context and fit for purpose. We have made significant efforts to stay abreast of rapidly changing policy, clinical and technical contexts, as well as the evolving priorities and practices of the communities most affected by blood borne viruses (BBVs) and STIs.

In this report, we have organised the presentation of material to reflect prevention, care and treatment cascades for HIV and STIs. Different audiences will seek different aspects of the information, and we encourage readers to put pieces of data from a range of sources together to get the big picture.

However, a few key elements of this year's report deserve particular mention:

- **Gay, bisexual and other men who have sex with men and HIV prevention**

During the last decade, especially the last three years, gay and bisexual men continue to adopt HIV biomedical prevention strategies, particularly pre-exposure prophylaxis (PrEP) and treatment as prevention (TasP). Our data clearly shows a rapid uptake of PrEP in 2016-17, particularly in the eastern states where large demonstration projects were conducted. As PrEP use has become more common, we have recorded its flow-on impact on gay men's sexual practices at a broader community level. A higher proportion of HIV-negative men nowadays rely on PrEP, a shift away from consistent condom use, as their primary prevention strategy during anal intercourse. This is further accompanied by a marked increase in their annual HIV testing frequencies. Also, we have documented continued increases among HIV-positive men in staying on HIV treatment and maintaining viral suppression, with both rates reaching a new record high. TasP has been more confidently adopted by HIV-positive men as their primary prevention strategy during anal intercourse.

▪ Models of care for HIV and sexually transmissible infections

A significant proportion of the Centre for Social Research in Health (CSRH) research program is focused on understanding the decisions made by people regarding engagement with care, and subsequently, how systems of care could be adapted to better meet their needs.

This report highlights notable increases in HIV and STI testing, particularly among gay men. With an increasing number of HIV-negative men taking prescribed PrEP, ongoing HIV and STI monitoring becomes the standard of care. This is further facilitated by the speedy adoption of a range of innovative HIV testing mechanisms (e.g., peer-led, community-based HIV and STI testing facilities in collaboration with public funded sexual health clinics, the promotion and ongoing trials of Dried Blood Spot home-based testing for HIV) within the health care system across the nation. Also, we continue to observe rising STI diagnosis in gay men, regardless of their HIV status.

For the first time, our data also clearly suggests a consistently high level of annual retention in HIV clinical care among HIV-positive gay men. This signifies the success of collaborative efforts over decades by HIV-positive people, clinicians and community organisations to achieve best treatment and care outcomes.

▪ Stigma

One of the strengths of the CSRH research program, across all areas, has been a sustained spotlight on stigma and discrimination. Stigma is a key focus of this ARTB HIV/STI module and underpins many of the analyses, whether through a direct examination of the impacts of stigma or the lenses through which we interpret findings.

To this end, we have examined the social aspects of HIV and STIs today and the communities most affected by these conditions. We have also examined experiences of prevention, care, treatment and broader wellbeing among a number of priority populations. Our work in this area aims to balance attention between the experiences of the most affected populations (e.g., gay and bisexual men, people with HIV) while not overlooking the particular needs of other marginalised groups (e.g. overseas-born migrants or disadvantaged youth).

The [Stigma Indicators Project](#), in particular, was developed to establish an indicator of stigma amongst priority groups identified by the five national strategies addressing blood borne viruses and sexually transmissible infections, including men who have sex with men, people who inject drugs, people with HIV, people with viral hepatitis, and people who engage in sex work. Also, it aims to develop a related indicator for health care professionals and the general population in order to measure the expression of stigma, such as discriminatory or negative treatment of patients or clients by health care professionals.

Data Summaries

HIV/STI prevention among gay men and other priority populations

Data on sexual practices and risk among gay and bisexual men (gay men in short hereforth) are predominantly collected through the ongoing Gay Community Periodic Surveys (GCPs). Initiated in 1996, the GCPs are conducted in capital cities and other densely populated areas of Australia where gay men continue to congregate: Adelaide, Canberra, Melbourne, Perth, Queensland (Brisbane, Cairns and the Gold Coast), Sydney and Tasmania. The GCPs deliberately target men who are socially and sexually involved with communities of gay-identified men, and recruit participants at gay community venues and events, sexual health clinics and online.

Sexual practices and risk in gay men

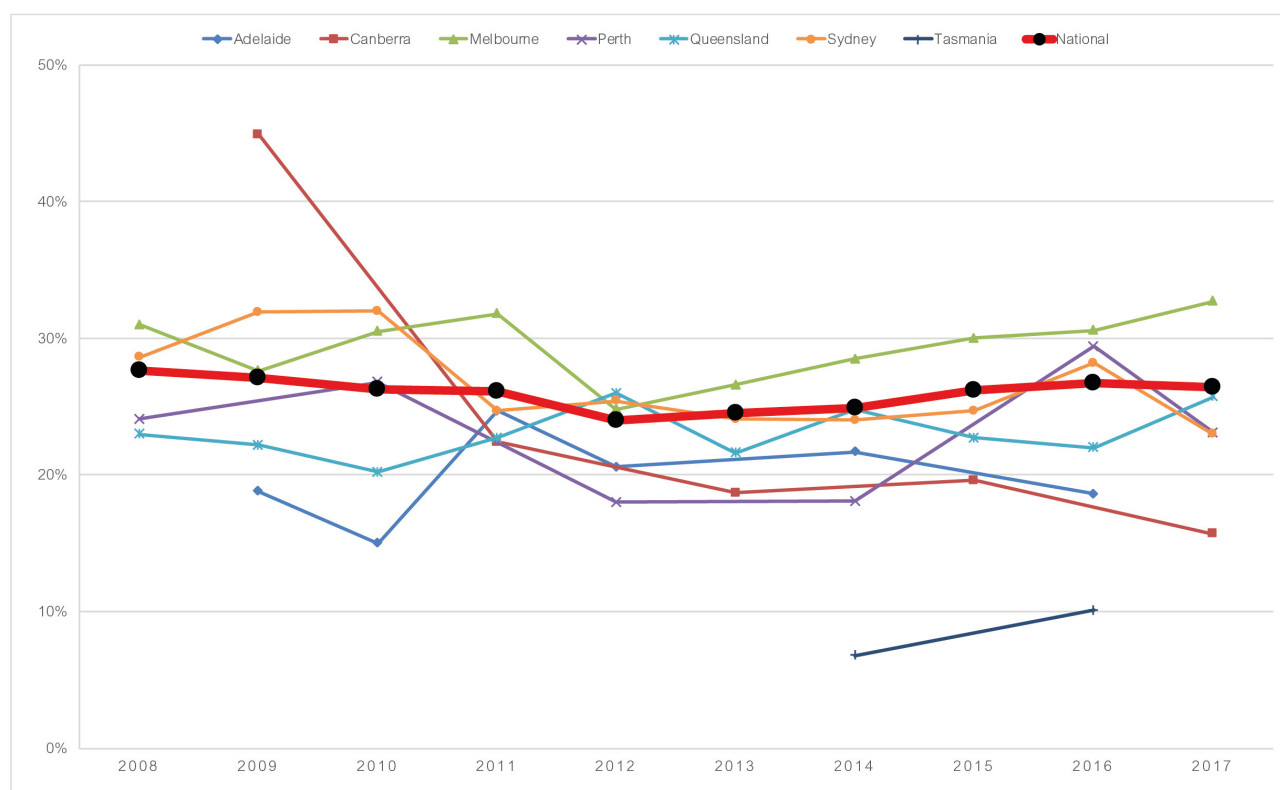
The GCPs show that many HIV-related preventive or potentially risky practices have remained stable among gay men over the last decade. Trends in some indicators, however, suggest that there are ongoing risks of potential HIV transmission and acquisition (e.g., those that have never been tested for HIV or STI, those not fully informed or updated about latest prevention and treatment options), pointing to new directions for strengthening our national HIV responses.

Much of the recent shift away from consistent condom use during anal intercourse has coincided with a rapid uptake of more effective biomedical risk reduction strategies such as the use of HIV treatment to sustain viral suppression (TasP) by HIV-positive men and the use of pre-exposure prophylaxis (PrEP) before risk exposure by HIV-negative men. For example, we have observed substantial increases in the proportions of men engaging in any condomless anal intercourse with regular partners (from 49% in 2008 to 61% in 2017) and casual partners (from 33% in 2008 to 53% in 2017).

Number of male partners in Gay Community Periodic Surveys

Over the last 10 years, the proportion of men reporting more than 10 male sex partners in the six months prior to survey has been stable across Australia at 26%. This stabilisation over the last decade has been consistent across all participating states and territories, except in Canberra and Sydney (where the proportions declined in both jurisdictions).

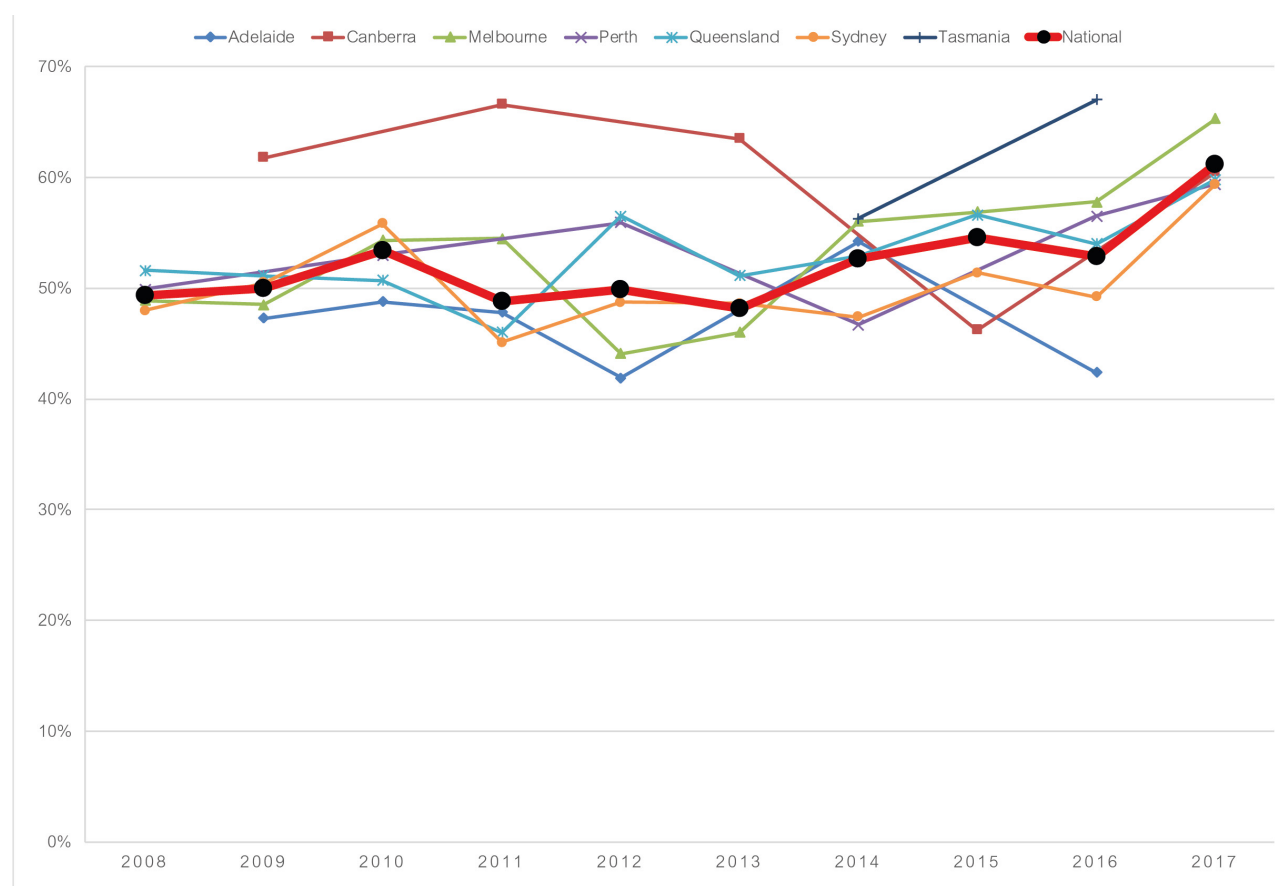
Figure 1: Men who reported more than 10 male sex partners in the six months prior to the survey: GCPS, 2008-2017



Risk and risk reduction with regular male partners by participants in Gay Community Periodic Surveys

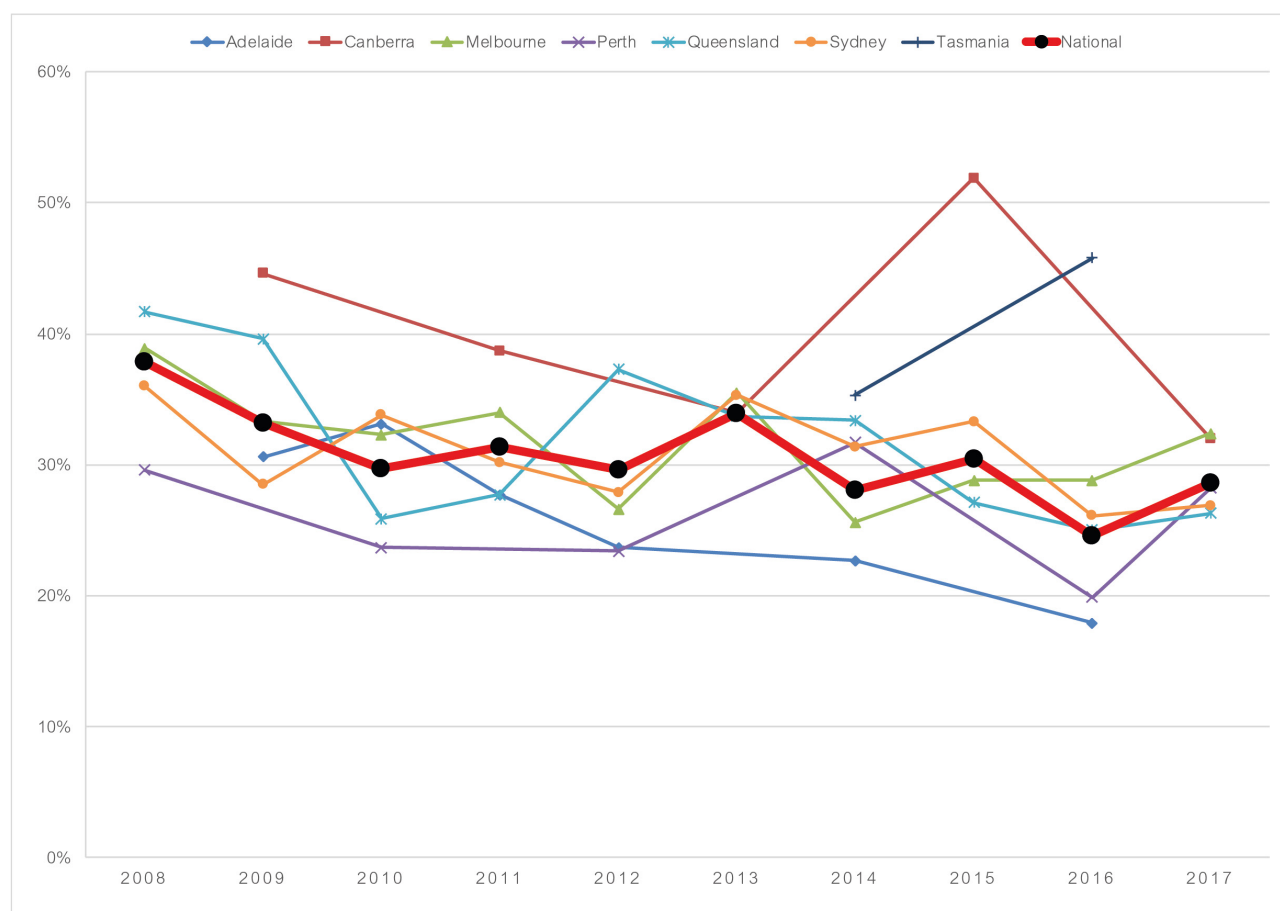
Condomless anal intercourse with regular male partners (CLAIR) has remained more common than condomless anal intercourse with casual male partners (CLAIC). CLAIR most commonly occurs in the context of seroconcordant (same HIV status) relationships. In 2017, just over 60% of men with regular partners reported any CLAIR in the previous six months. Nationally, this proportion has gradually increased over the last decade with the sharpest increase evident from 2015 to 2017. Over the past decade, rates of CLAIR have increased in all participating states and territories except in Adelaide (where it was stable) and Canberra (where it has declined). Rates of CLAIR increased in Sydney and Melbourne in the past three years.

Figure 2: Men with regular partners — Any CLAIR in the six months prior to the survey: GCPS, 2008-2017



In 2017, 29% of men in seroconcordant HIV-negative regular relationships had explicit “negotiated safety agreements” (that is, only permitting CLAIR) and adhered to them in sexual practices in the previous six months, leading to a reduction in HIV transmission between regular partners. This rate has increased slightly from 2016 (25%), similar to the level in 2015 (30%). The 10-year trend, however, has declined in all the participating states and territories, except in Perth (where it was stable). In the quick shifting landscape of a rapid uptake of HIV biomedical prevention replacing consistent condom use as the main risk reduction strategies, it seems that patterns of sexual negotiation between regular male partners are also evolving.

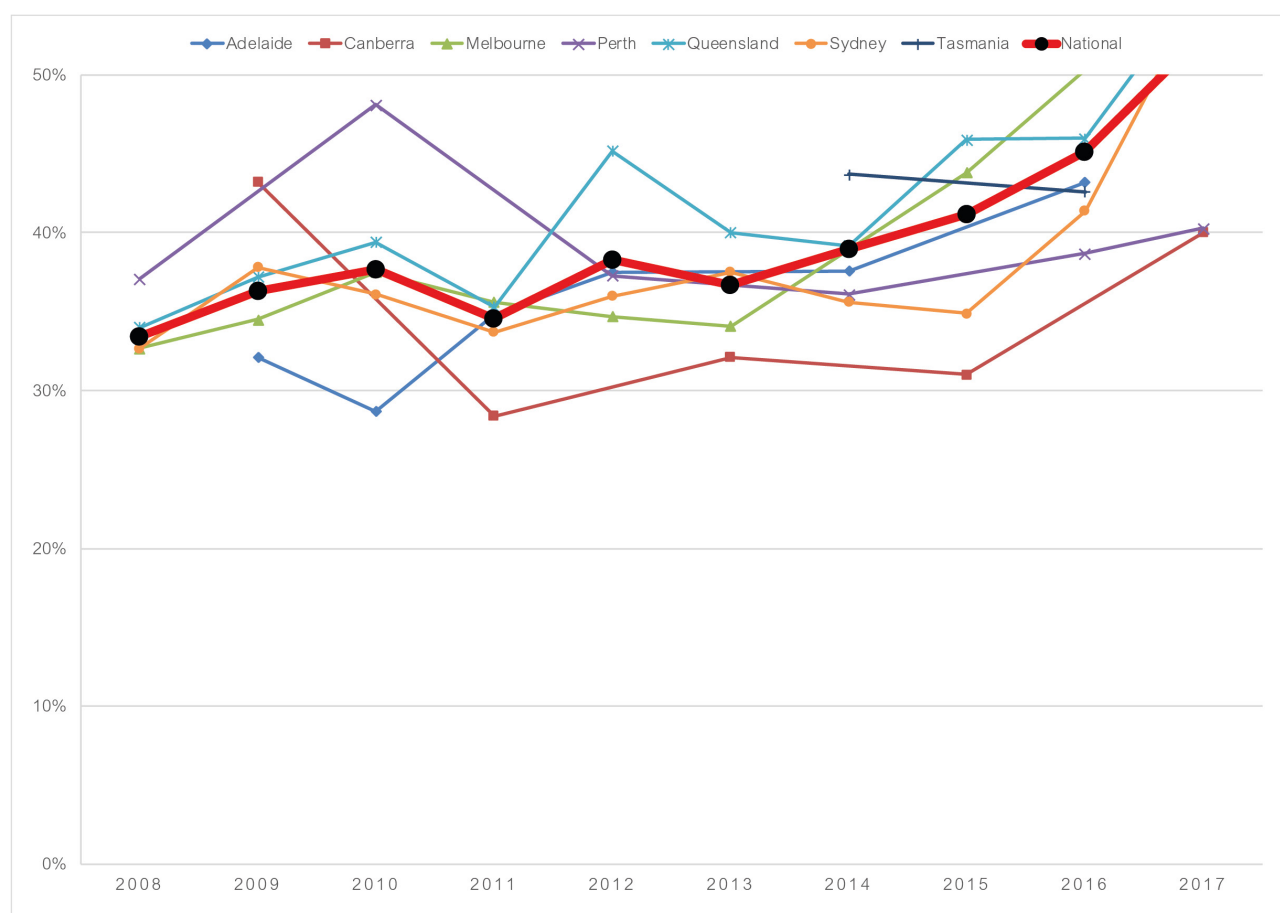
Figure 3: HIV-negative sero-concordant regular couples — Negotiated safety agreements in the six months prior to the survey: GCPS, 2008-2017



Risk and risk reduction with casual male partners by participants in Gay Community Periodic Surveys

Over the last 10 years, CLAIC among men with casual partners has become more common nationally, increasing from 33% in 2008 to 53% in 2017 (the highest level recorded). This increasing trend has occurred across most participating states and territories, except in Canberra and Perth (where it was stable). In the past three years, CLAIC has increased nationally in all participating states and territories. The rising CLAIC rate has coincided with unprecedentedly rapid PrEP uptake in most jurisdictions.

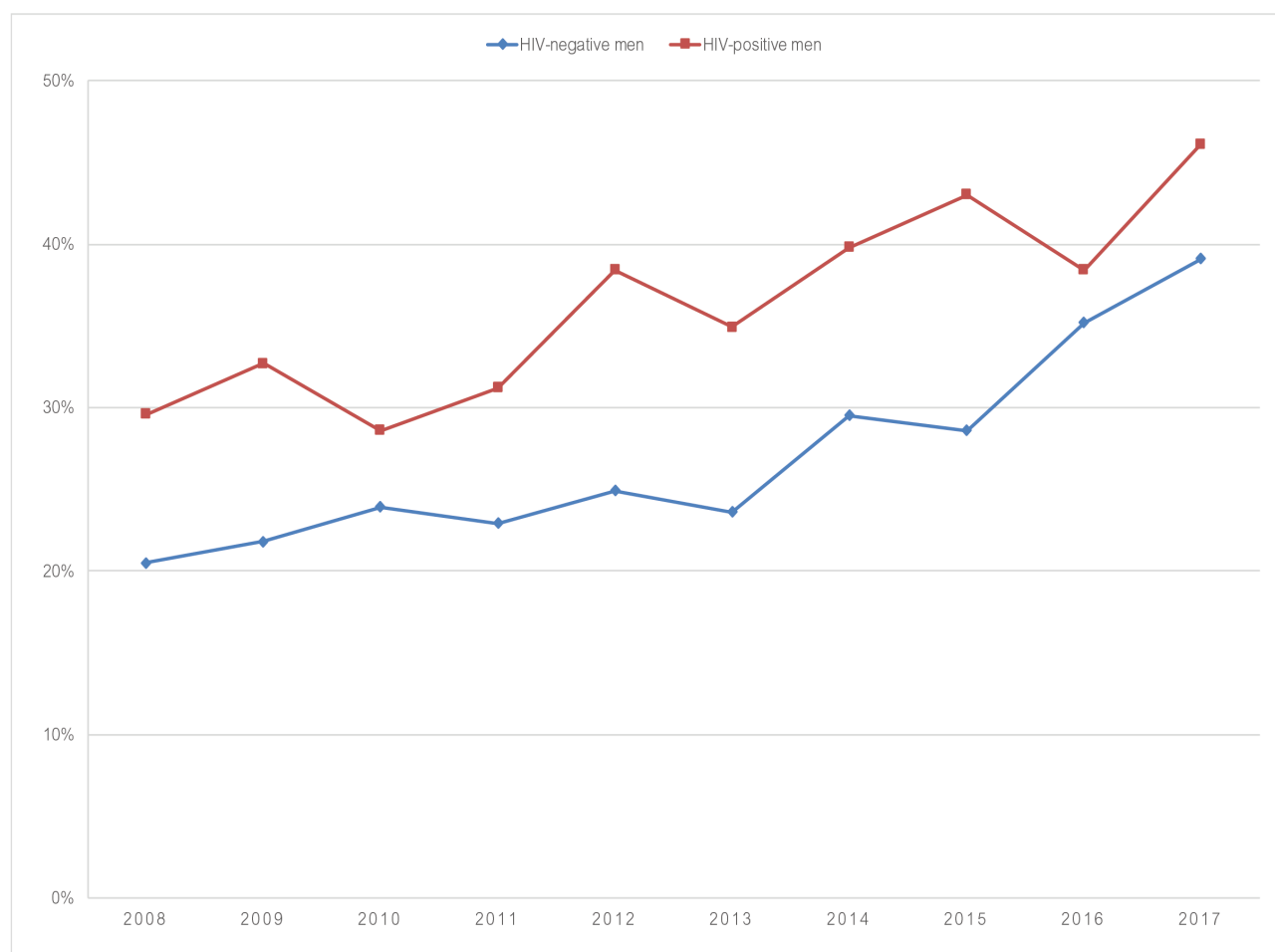
Figure 4: Men with casual partners — Any CLAIC in the six months prior to the survey: GCPS, 2008-2017



Over the past 10 years, both HIV-negative and HIV-positive gay men have become much more likely to disclose their HIV status to all their casual partners (consistent disclosure) before sex in the previous six months. Consistent disclosure is part and parcel of combination prevention along with biomedical (testing, TasP and PrEP) as well as behavioural (condoms, serosorting) risk reduction strategies.

Among HIV-negative men with casual partners, the proportion reporting consistent disclosure to all casual partners increased from 21% in 2008 to 39% in 2017 (almost double over the ten-year period). It is yet to know whether and how they disclose their PrEP uptake or non-use status. In the past three years, the proportion of HIV-negative gay men reporting consistent HIV status disclosure has increased in all participating states and territories. Among HIV-positive men with casual partners, the proportion reporting consistent HIV status disclosure (for the majority, also suggesting their undetectable viral load status, as referred to in "U = U") to all casual partners was 46% in 2017 (the highest level recorded), as compared to 30% in 2008.

Figure 5: Men with casual partners — Disclosing to all casual partners in the six months prior to the survey: GCPS, 2008-2017



Non-condom-based behavioural and biomedical risk reduction strategies by participants in Gay Community Periodic Surveys

A range of non-condom-based risk reduction strategies are measured in the GCPS. Based on unadjusted data, for gay men who report any CLAIC in the previous six months, 'serosorting' (seeking partners of the same HIV status) remains the most commonly used behavioural risk reduction strategy by HIV-negative men (from 45% in 2012 to 50% in 2017) and maintaining viral suppression (TasP) was the most common biomedical risk reduction strategy reported by HIV-positive men (increasing from 58% in 2013 to 82% in 2017).

Among HIV-positive men, there has been an obvious shift from 'poz-poz' serosorting (decreased from 59% in 2012 to 43% in 2017) to their increased reliance on sustained viral suppression (increased from 58% in 2013 to 82% in 2017).

Among HIV-negative gay men, we have observed the rapid adoption of biomedical prevention strategies, such as taking PrEP before sex (from 4% in 2013 to 41% in 2017, almost a 10-fold increase in the past five years) and seeking HIV-positive partners who have an undetectable viral load (from 12% in 2013 to 21% in 2017), based on unadjusted data. From 2017 onwards, a new measure has been introduced to identify the proportion of men, regardless of HIV status, would seek partners on PrEP before CLAIC (i.e., PrEP sorting).

Antiretroviral-based prevention and sexual practices between casual male partners by participants in Gay Community Periodic Surveys

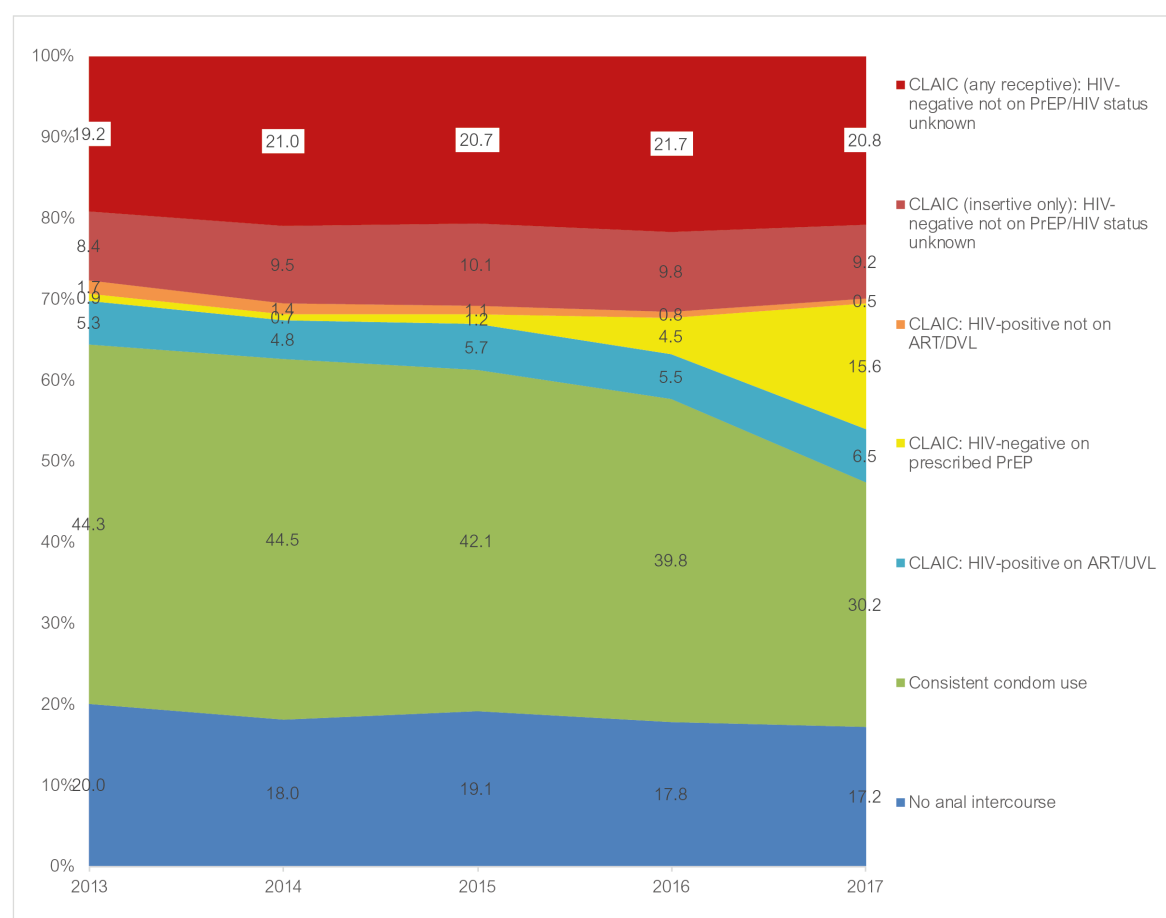
In the last four years, the proportions of men who report no anal intercourse (20% in 2013 to 17% in 2017) or consistent condom use (44% in 2013 to 30% in 2017) with casual partners declined, based on unadjusted data.

Among gay men with casual partners, the proportion who were HIV-positive and engaged in any CLAIC while either being on treatment or had an undetectable viral load has been stable since 2015 (6.5% in 2017). In contrast, the proportion of HIV-positive men who engaged in CLAIC while either not being on treatment or had a detectable viral load continuously declined to 0.5% in 2017 from 1.7% in 2013 (i.e., halved from 2013 to 2017).

Among gay men with casual partners, the proportion who were HIV-negative and engaged in any CLAIC while being on prescribed PrEP has increased substantially between 2015 (1%) and 2017 (16%) nationally.

Among gay men with casual partners, the proportion who were not HIV-positive and engaged in CLAIC while not taking any prescribed PrEP has remained stable at about 30%. This specific sub-group of men could remain at risk of HIV, despite increases in the use of biomedical prevention methods like PrEP and TasP. Given that PrEP is now listed on the Pharmaceutical Benefits Scheme since April 2018, it is hoped that PrEP use will continue to increase, improving the level of protection in the community.

Figure 6: Anal intercourse, condom use and condomless anal intercourse with casual partners by HIV treatment, viral load and prescribed PrEP status, 2013-2017



Commentaries based on publications in 2017

Progress and challenges in ending HIV and AIDS in Australia

Australia has made significant progress in increasing rates of HIV testing and treatment, particularly among gay and bisexual men, but countervailing trends such as increased condomless sex appear to have sustained annual HIV infections (leading to an intense interest in PrEP to maximise prevention). While HIV has been successfully controlled among people who inject drugs and sex workers, tackling HIV among heterosexual people (particularly migrants and people from high prevalence countries) is increasingly pressing

Holt, M. (2017). 'Progress and Challenges in Ending HIV and AIDS in Australia', *AIDS and Behavior*, vol. 21, pp. 331 – 334. <http://dx.doi.org/10.1007/s10461-016-1642-0>

Individual versus community-level risk compensation following pre-exposure prophylaxis of HIV

We reviewed research on risk compensation (decreased perceptions of risk and increased condomless sex) related to HIV pre-exposure prophylaxis and found that most studies focus on behaviour change by PrEP users, and neglect changes at a community or population level. Unrealistic optimism about avoiding HIV could drive community-level risk compensation and should be assessed in monitoring systems.

Holt, M., Murphy, DA. (2017). 'Individual versus community-level risk compensation following preexposure prophylaxis of HIV', *American Journal of Public Health*, vol. 107, pp. 1568 – 1571. <http://dx.doi.org/10.2105/AJPH.2017.303930>

Barriers to HIV prevention and care among gay men in Tasmania: final report

In-depth interviews with 16 gay and bisexual men in Tasmania found men were largely satisfied with care received at public sexual health services. However, some were concerned about anonymity and privacy in small communities, and the potential for stigma and discrimination when accessing HIV and sexual health services in GP settings.

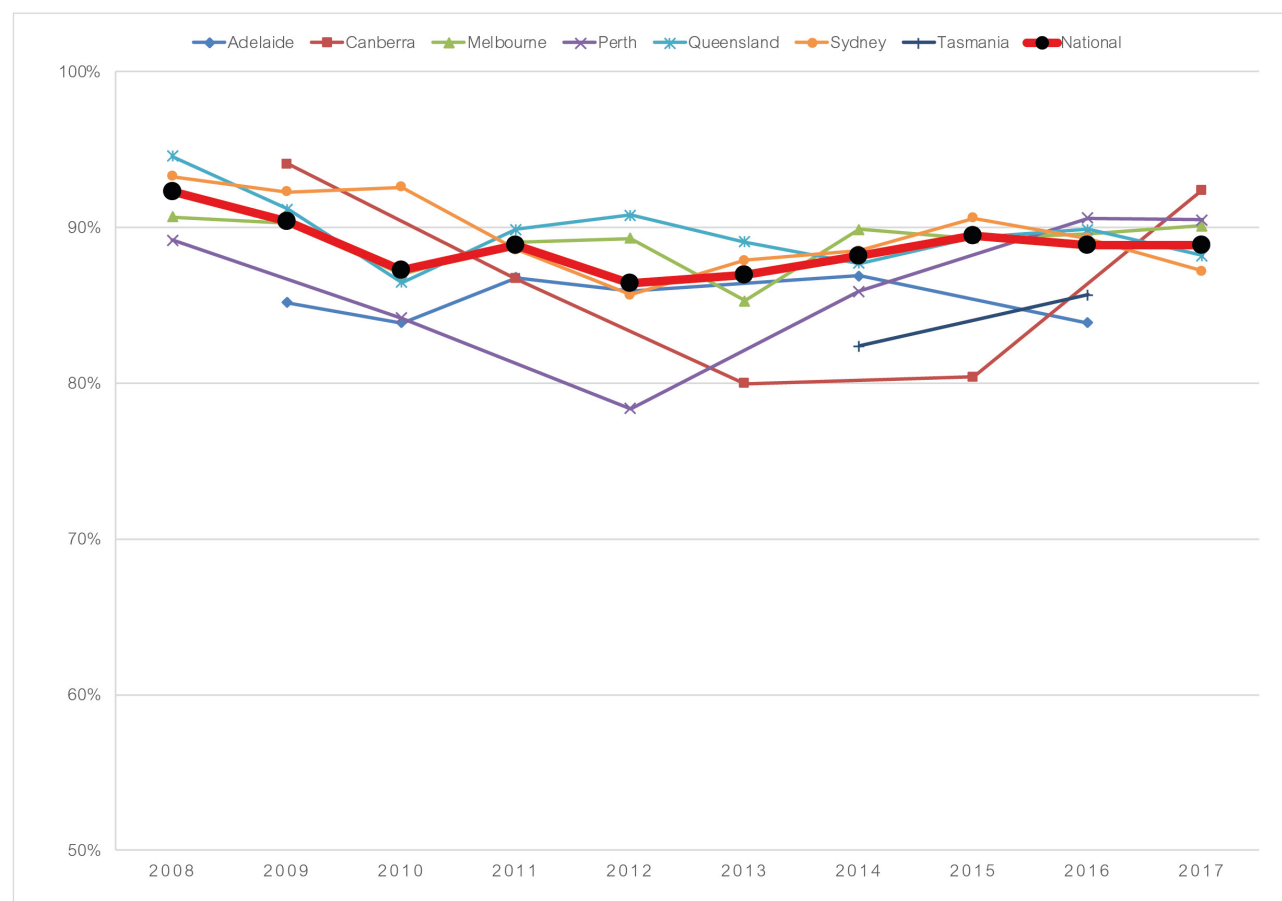
Lea, T., Wagner, S., Anning, M., Holt, M. (2017). *Barriers to HIV prevention and care among gay men in Tasmania: Final report*. Sydney: Centre for Social Research in Health, UNSW Australia. <http://dx.doi.org/10.4225/53/59152b0a27f6e>

HIV and STI testing among gay men

Ever and recent HIV testing by participants in Gay Community Periodic Surveys

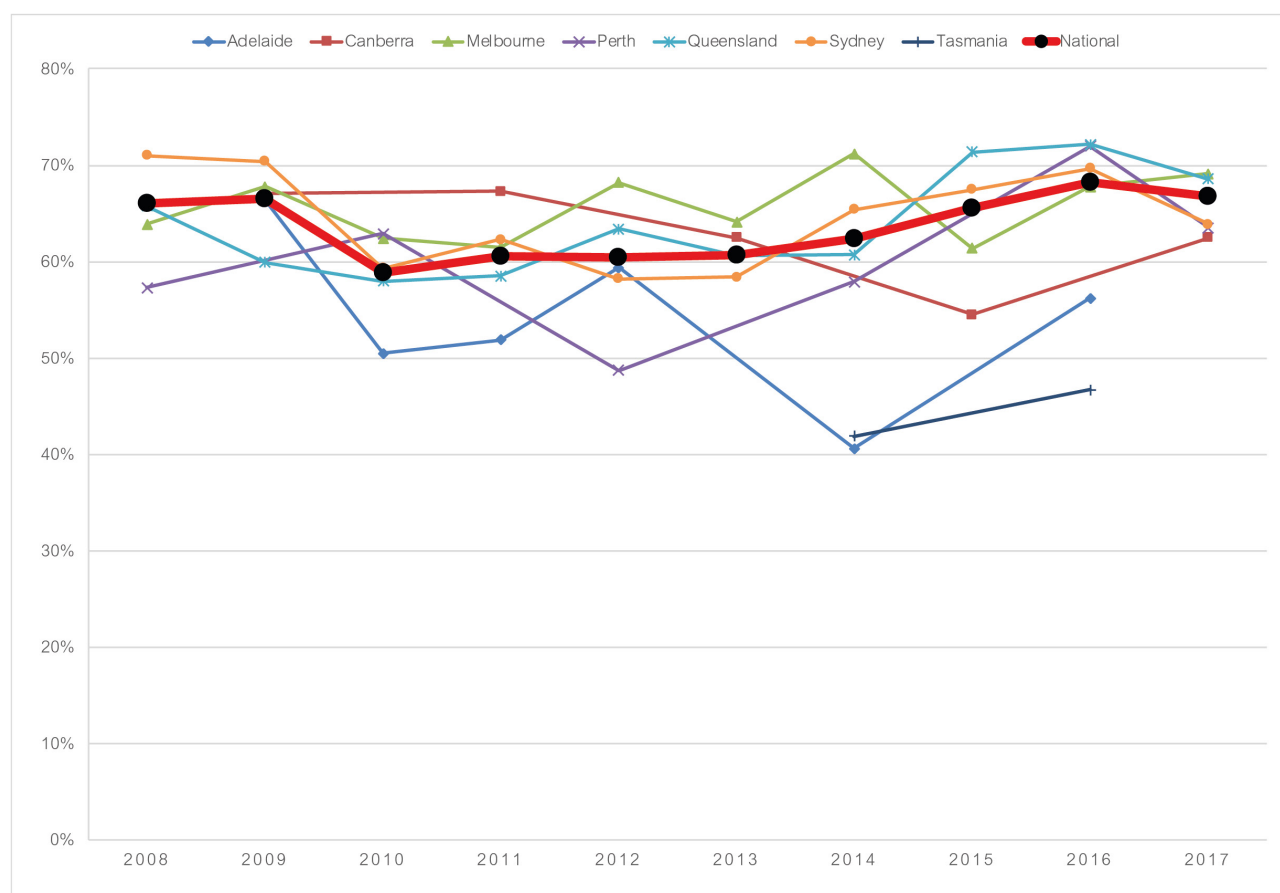
Over the past 10 years, sustained high levels of lifetime HIV testing (being tested at least once for HIV) were recorded nationally among GCPS participants (92% in 2008 and 89% in 2017).

Figure 7: Men who had ever been tested for HIV: GCPS, 2008-2017



Of all non-HIV-positive (based on self-report) GCPS participants (including those who had never tested for HIV), over 60% reported having had at least one HIV test in the previous 12 months. Over the past decade, this proportion has increased nationally in most participating states and territories, except Sydney (stable), Canberra and Adelaide (declined).

Figure 8: Non-HIV-positive men — Tested for HIV in the 12 months prior to the survey: GCPS, 2008-2017

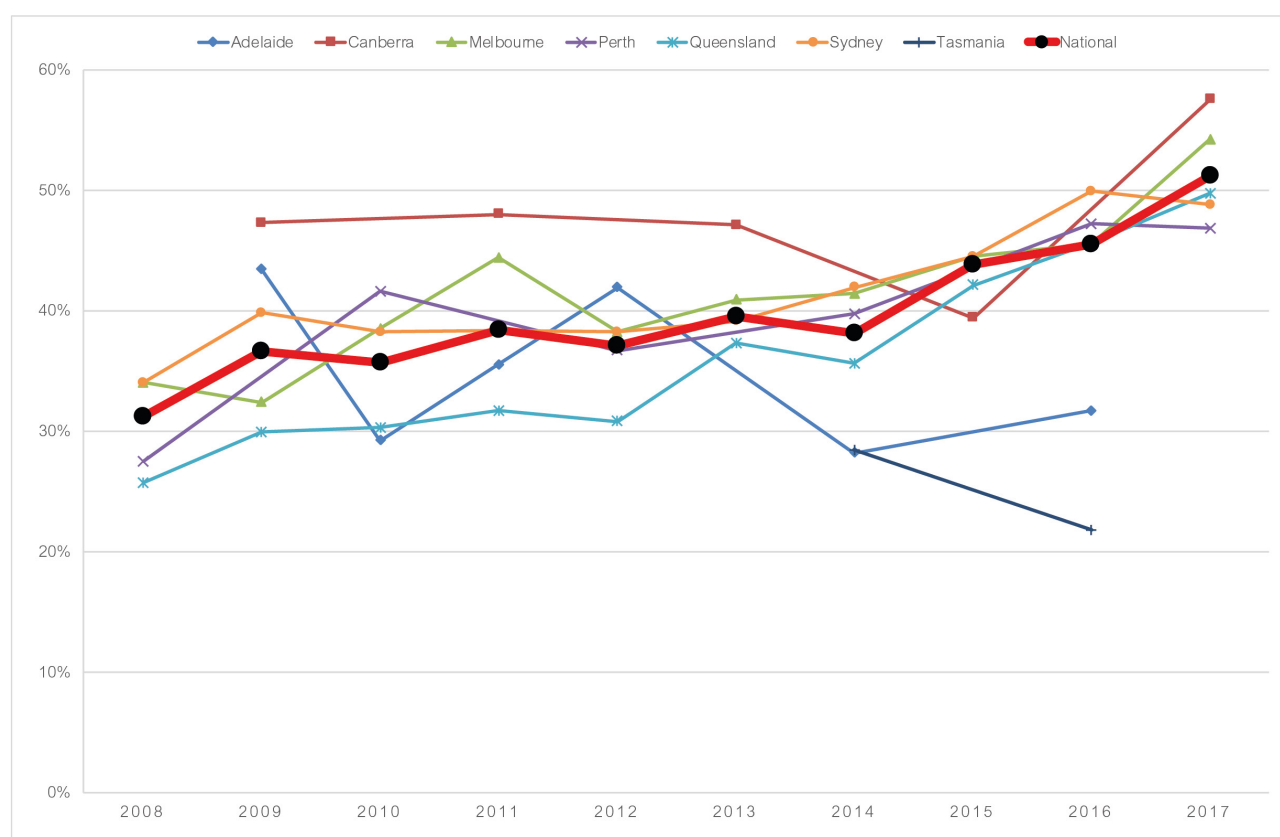


Of non-HIV-positive men who reported any HIV test in the previous 12 months, 43% of the men in 2017 had three or more HIV tests in the 12-month period. This proportion increased significantly from 22% in 2013 (nearly doubled). This clearly shows that frequent (e.g. quarterly) annual HIV testing has become routine among a substantial proportion of non-HIV-positive men. This is consistent with the most up-to-date HIV testing guidelines which encourage more frequent annual testing, particularly for men at increased risk of HIV acquisition. This also suggests promising outcomes resulting from health service system changes, where there is increasing diversification of HIV testing providers/facilities in many jurisdictions across Australia (e.g. peer-led community-based services in collaboration with public funded sexual health clinics, dried blood spot home-based testing). The more recent PrEP uptake, which is usually coupled with quarterly HIV testing, has also contributed to this much improved testing indicator.

Comprehensive STI testing and STI diagnosis by participants in Gay Community Periodic Surveys

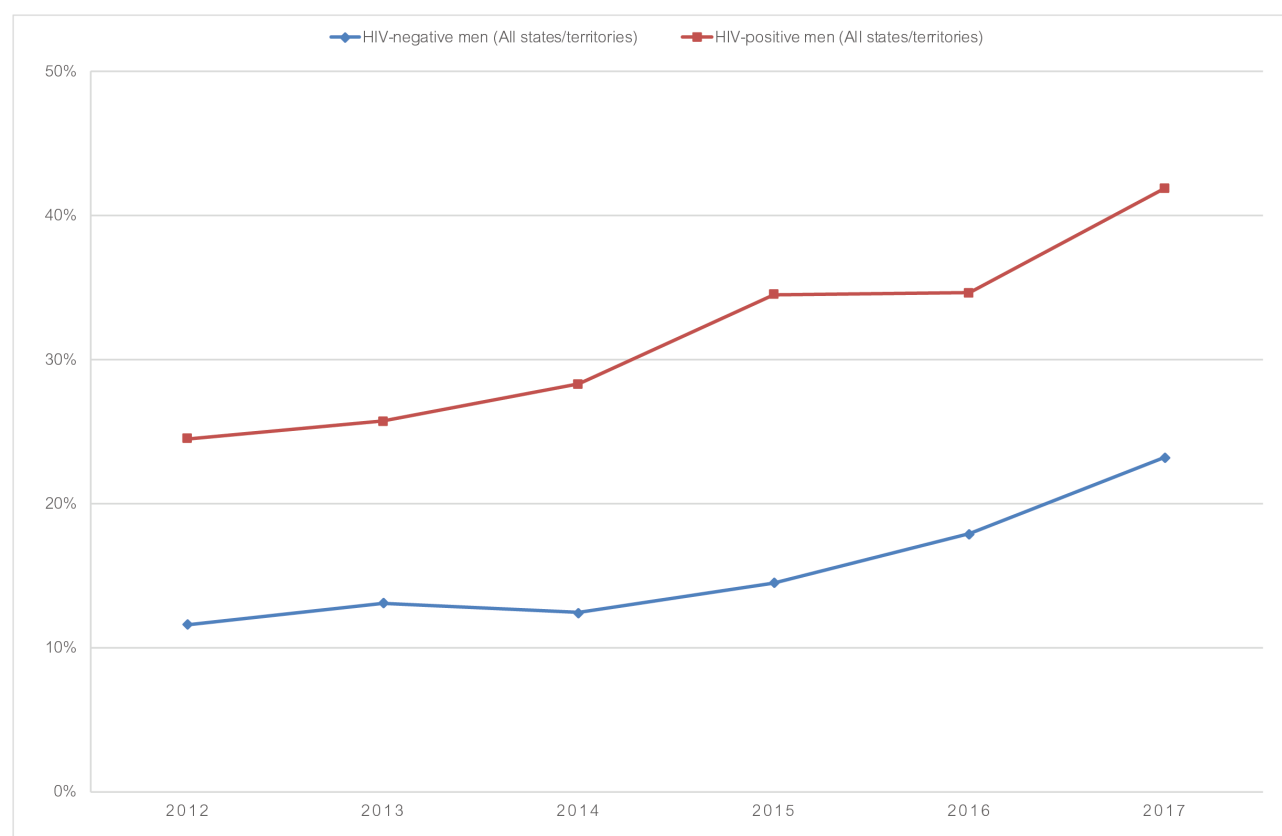
The proportion of participants in the GCPS who reported at least four different tests (on the basis of anatomic sites) for STIs (i.e. throat and anal swabs, urine samples and blood tests) in the 12 months prior to survey increased from 31% in 2008 to 51% in 2017. Comprehensive STI testing becoming more common was observed over the last decade in all participating states and territories, except Adelaide (declined).

Figure 9: Men tested for STIs at more than three different anatomic sites (comprehensive STI testing) in the 12 months prior to the survey: GCPS, 2008-2017



In 2017, over 20% of HIV-negative men and over 40% of HIV-positive men reported any STI diagnosis in the previous 12 months. Increases in STI diagnoses have been observed in both groups since 2012 (i.e., prior to the rapid PrEP rollout) (HIV-positive men: 25% in 2012 to 42% in 2017; HIV-negative men: 12% in 2012 to 23% in 2017).

Figure 10: Any STI diagnosis in the 12 months prior to the survey: GCPS, 2012-2017



Commentaries based on publications in 2017

HIV testing in men who have sex with men: a follow-up review of the qualitative literature since 2010

This synthesis of contemporary qualitative evidence suggests that to better engage gay or other men who have sex with men for HIV testing, increasing attention is paid to modifiable factors beyond individual characteristics. For example, immediate past risk exposure events or establishment of new relationships are often common reasons for men to go for HIV testing. Regular service reminders are also effective in prompting men to undertake testing

Lui, CW., Dean, J., Mutch, A., Mao, L., Debattista, J., Lemoire, J., Howard, C., Whittaker, A., Hollingdrake, O., Fitzgerald, L. (2018). 'HIV Testing in Men who have Sex with Men: A Follow-up Review of the Qualitative Literature since 2010', *AIDS and Behavior*, vol. 22, pp. 593 – 605.

<http://dx.doi.org/10.1007/s10461-017-1752-3>

Using digital storytelling to promote the sexual health and wellbeing of migrant and refugee young people: A scoping review

Innovative methods to engage those who are less well connected with mainstream HIV and STI prevention services are being explored by many organisations in Australia and globally. A review of the literature, and consultation with professionals working in the youth, migrant and sexual health sectors, highlights the value that can be achieved through using digital storytelling as one of these innovations, but more attention needs to be paid to the ethical complexities of using these methods in the sexual health field.

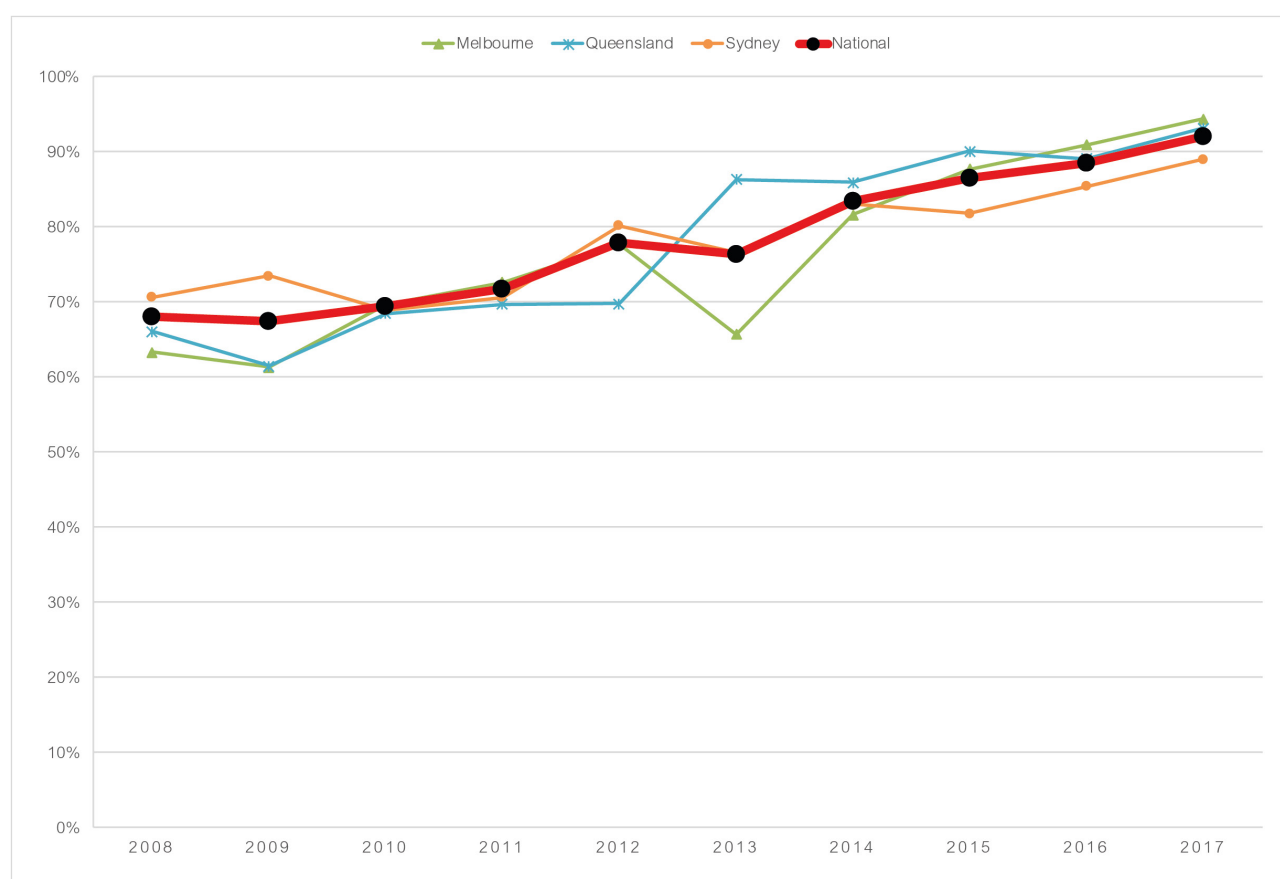
Botfield, JR., Newman, CE., Lenette, C., Albury, K., Zwi, AB. (2017). 'Using digital storytelling to promote the sexual health and well-being of migrant and refugee young people: A scoping review', *Health Education Journal*. <http://dx.doi.org/10.1177/0017896917745568>

Living with HIV

Antiretroviral treatment and viral load among HIV-positive gay men in Gay Community Periodic Surveys

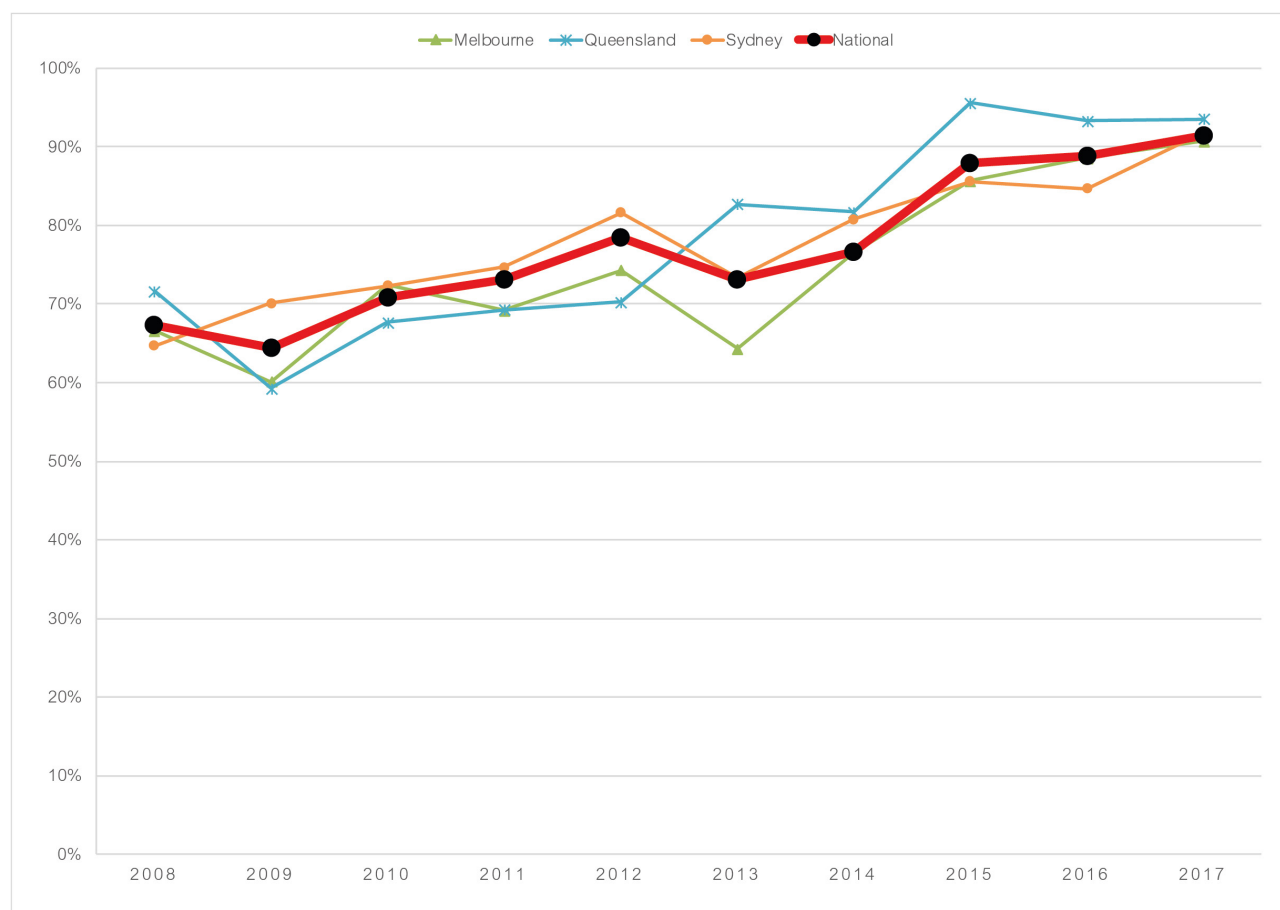
Nationally, the majority (92%) of HIV-positive gay men in the GCPs reported being on antiretroviral treatment (ART) in 2017, which was a record high. ART uptake has increased significantly over the last 10 years, from 68% in 2008.

Figure 11: HIV-positive men — Being on antiretroviral treatment: GCPs, 2008-2017



The proportion of HIV-positive men reporting an undetectable viral load at the time of the survey, regardless of ART use, has increased substantially over the past decade nationally, from 67% in 2008 to 91% in 2017 (a record high).

Figure 12: HIV-positive men — Having an undetectable viral load: GCPS, 2008-2017



The GCPS data, as a whole, suggests that amongst sexually active and community-engaged gay men, the attainment of the UNAIDS 90-90-90 target (that is, to diagnose 90% of all HIV-positive persons, provide antiretroviral therapy for 90% of those diagnosed, and achieve viral suppression for 90% of those treated) by 2020 becomes a reality.

HIV-related clinical visits among HIV-positive gay men in Gay Community Periodic Surveys

Among all HIV-positive participants, regardless of their treatment status, over 90% had at least one HIV-related clinical visit in the previous 12 months (a proxy indicator of self-reported annual retention in HIV clinical care) based on unadjusted data. Since 2014, the proportion of men who had one or two clinical visits has increased whereas at the same time the proportion of men who had three or four visits has decreased. This is partly influenced by the fact that HIV-positive people may have longer intervals between their HIV medication prescriptions than before (i.e., used to be every 3 months).

Commentaries based on publications in 2017

Socioeconomic factors explain suboptimal adherence to antiretroviral therapy among HIV-infected Australian adults with viral suppression

Baseline data from the Predictors of Adherence to Antiretroviral Therapy (PAART) study suggests that of the 522 participants who had already achieved viral suppression three months prior to enrolment, a minority (15%) self-reported suboptimal adherence to HIV antiretroviral therapies (ART). Suboptimal ART adherence is defined as missing at least one

dose per month in the previous three months. Socioeconomic (e.g. not in a relationship, living in subsidised housing), rather than clinical, factors were identified.

Siefried, K.J., Mao, L., Kerr, S., Cysique, L.A., Gates, T.M., McAllister, J., Maynard, A., de Wit, J., Carr, A. (2017). 'Socioeconomic factors explain suboptimal adherence to antiretroviral therapy among HIV-infected Australian adults with viral suppression', *PLoS ONE*, vol. 12. <http://dx.doi.org/10.1371/journal.pone.0174613>

Concomitant medication polypharmacy, interactions and imperfect adherence are common in Australian adults on suppressive antiretroviral therapy

From the baseline data of the PAART study, this paper highlights that the daily pill burden of non-HIV medications (used for co-morbidities or HIV medication side-effects) is six pills on average, much higher than antiretroviral therapies for HIV (average one or two pills per day). It calls for critical assessment of the extent of polypharmacy and its potential positive and negative impacts on health and wellbeing of people with HIV.

Siefried, K.J., Mao, L., Cysique, L.A., Rule, J., Giles, M.L., Smith, D.E., McMahon, J., Read, T.R., Ooi, C., Tee, B.K., Bloch, M., de Wit, J., Carr, A. (2018). 'Concomitant medication polypharmacy, interactions and imperfect adherence are common in Australian adults on suppressive antiretroviral therapy', *AIDS*, vol. 32, pp. 35 – 48. <http://dx.doi.org/10.1097/QAD.0000000000001685>

The relationship between negative responses to HIV status disclosure and psycho-social outcomes among people living with HIV

Among 697 people living with HIV, this study found high rates of HIV status disclosure to family, friends, sexual partners, and health providers. Negative reactions to HIV status disclosure by interpersonal and health care relations was associated with increased HIV-related stigma, psychological distress, and diminished social support and health satisfaction

Cama, E., Brener, L., Slavin, S., de Wit, J. (2017). 'The relationship between negative responses to HIV status disclosure and psychosocial outcomes among people living with HIV', *Journal of Health Psychology*. <http://dx.doi.org/10.1177/1359105317722404>

Psychosocial considerations for children and adolescents with HIV

A review of the literature on mental health and wellbeing among children and adolescents with HIV found considerable challenges were reported in attending to their emotional wellbeing, navigating romantic and sexual relationships and managing the transition to adult care, but these complexities were countered by evidence of incredible strengths and resilience.

Fair, C., Albright, J.A., Newman, C.E. (2017). 'Psychosocial Considerations for Children and Adolescents with HIV', in Chenneville T (ed.), *A Clinical Guide to Pediatric HIV: Bridging the Gaps between Research and Practice*, Springer, Dordrecht, pp. 73 – 94. <http://www.springer.com/gp/book/9783319497020>

Families living with blood-borne viruses: the case for extending the concept of “serodiscordance”

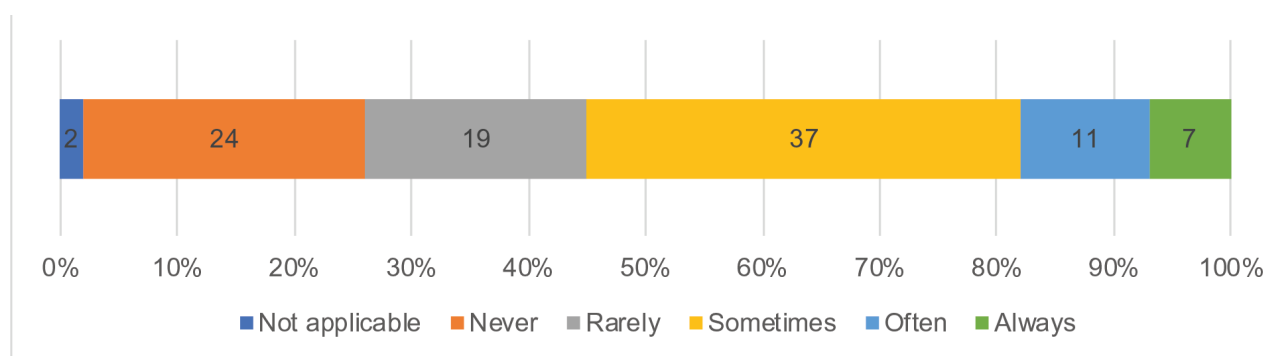
This article makes the case for extending the concept of “serodiscordance” (mixed infection status) beyond intimate couples to include families that live with mixed HIV and viral hepatitis status, to help draw much needed attention to how families are affected by blood-borne viruses in multiple social, emotional, financial and generational ways.

Persson, A., Newman, C.E., Hamilton, M., Bryant, J., Wallace, J., valentine, k. (2017). 'Families living with blood-borne viruses: The case for extending the concept of “serodiscordance”', *Interdisciplinary Perspectives on Infectious Diseases*, vol. 2017. <http://dx.doi.org/10.1155/2017/4352783>

Spotlight: The Stigma Indicators Project

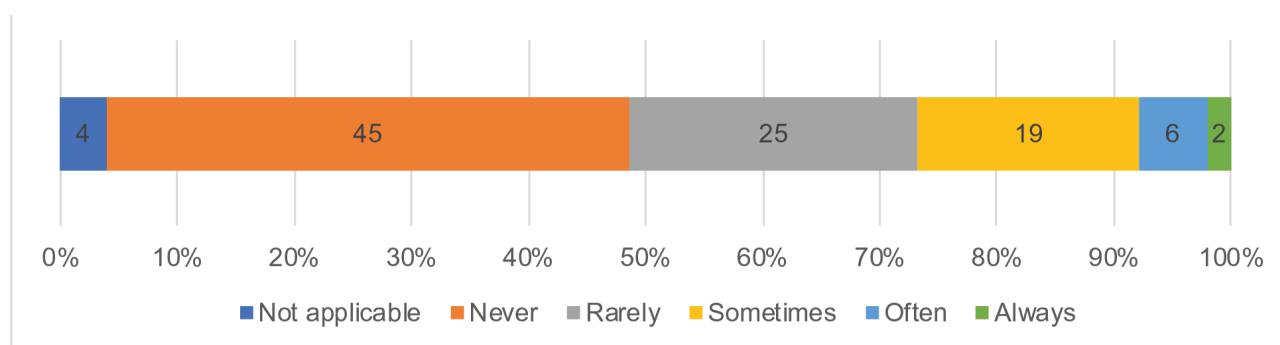
In its first project phase, an online survey was completed by 181 people living with HIV in 2016 to investigate their experiences of stigma using the stigma indicator. Almost three-quarters of participants reported experiencing stigma related to their HIV status within the 12 months prior to the survey (74%), although only 18% reported that this occurred 'often' or 'always'.

Figure 13: In the last 12 months, have you experienced any stigma or discrimination in relation to your HIV status?



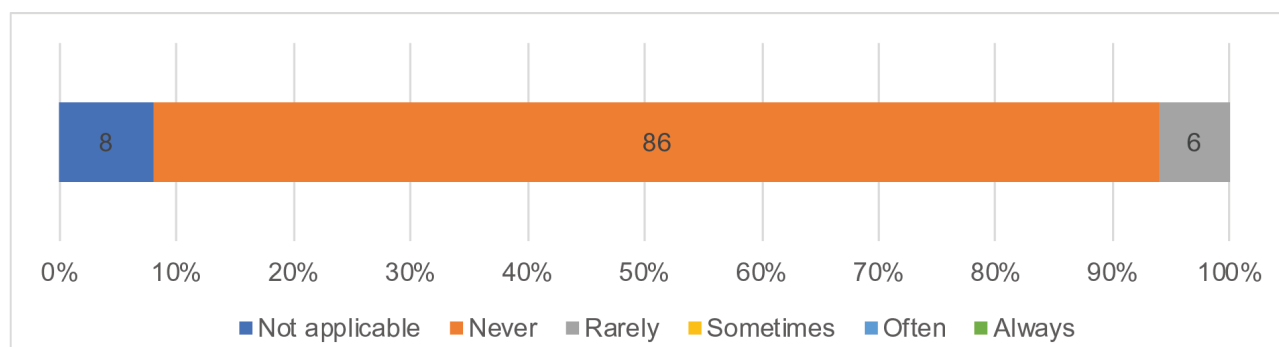
More than half of respondents reported at least some instances of being negatively treated by health workers (52%), including 8% who indicated this 'often' or 'always' happened in the past 12 months.

Figure 14: In the last 12 months, to what extent do you agree that health workers treated you negatively or different to other people?

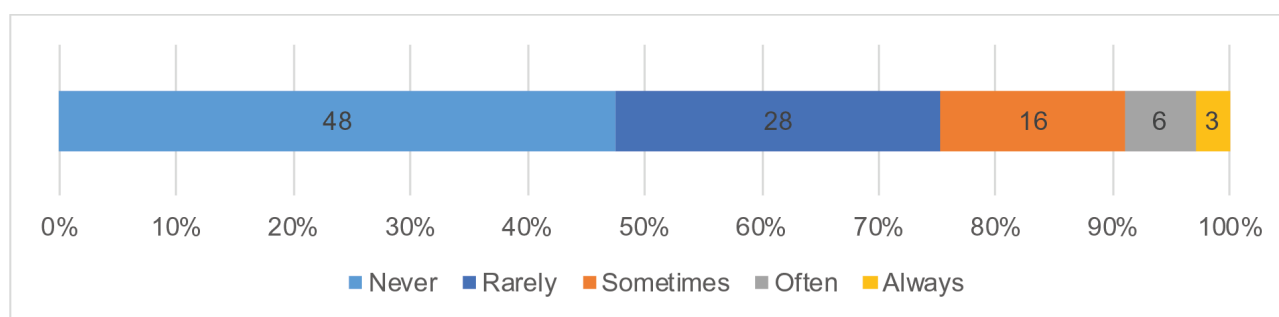


A mirrored indicator was included in a 2016 survey of 353 health workers to monitor the expression of stigma towards people living with HIV in the past 12 months, with 6% reporting that they may have discriminated against clients living with HIV (though this was seen to occur 'rarely').

Figure 15: In the last twelve months, do you feel you may have discriminated against patients/clients because of their HIV?



A mirrored indicator was also administered to a representative sample of the Australian population via the Australian Survey of Social Attitudes in 2017, with 52% of respondents indicating they would behave negatively towards people living with HIV to some extent.



The next phase of this project will expand data collection with the stigma indicator from people living with HIV and health care professionals, with revised surveys being conducted in 2018. Being able to quantify the experience of stigma within this group is an important first step towards introducing evidence-based strategies to eliminate its negative effects.

Cama, E., Broady, T., Brener, L., Hopwood, M., de Wit, J., & Treloar, C. (2018). *Stigma Indicators Monitoring Project: Summary Report*. Sydney: Centre for Social Research in Health, UNSW Sydney. <https://csr.h.arts.unsw.edu.au/research/projects/stigma-indicators/>

Appendix: Data tables

Table 1: Recruitment summary by state or territory: GCPS, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total n
	%	%	%	%	%	%	%	%	%	%	(%)
Adelaide		13.7	11.8	9.1	10.1		12.5		9.4	-	5359 (6.8)
Canberra		4.4		3.5		2.8		3.8		4.3	1458 (1.9)
Melbourne	32.6	30.2	27.8	24.8	26.2	38.0	25.2	37.6	29.6	31.5	23654 (30.2)
Perth	12.0		10.5		10.4		9.2		9.3	6.5	4678 (6.0)
Queensland ¹	19.9	18.5	18.9	21.5	17.0	17.9	20.4	23.0	18.7	22.2	15568 (19.9)
Sydney	35.6	33.2	31.0	41.1	36.3	41.3	29.9	35.6	31.0	35.5	27287 (34.8)
Tasmania							2.8		2.0	-	410 (0.5)
Total n	6251	7067	8771	7774	7841	6161	7426	7997	9743	9383	78,414 (100)

¹Includes men recruited from Brisbane, Cairns and the Gold Coast.

Table 2: Recruitment summary by type of venue or event: GCPS, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Total n
	%	%	%	%	%	%	%	%	%	%	(%)
Gay community events/festivals	57.7	51.8	56.1	50.0	49.3	52.2	43.0	35.4	38.2	38.9	36544 (46.6)
Gay social venues ¹	23.3	29.9	27.9	34.0	32.4	28.5	26.6	29.0	27.1	27.9	22505 (28.7)
Sex-on-premises venues	13.0	12.5	11.2	10.3	13.1	13.1	11.4	10.2	8.6	8.6	8625 (11.0)
Clinics and general practices	5.9	5.9	4.8	5.7	5.2	6.2	4.5	4.8	4.5	6.7	4230 (5.4)
Online							14.4	20.6	21.6	18.0	6510 (8.3)
Total n	6251	7067	8771	7774	7841	6161	7426	7997	9743	9383	78,414 (100)

¹Includes bars, clubs, gyms, small events, HIV-related community organisations and networks.

Table 3: Recruitment summary by participant characteristics: GCPS, 2008–2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Overall trend	Trend in last 3 years
	%	%	%	%	%	%	%	%	%	%		
Gay or homosexual	88.3	86.6	86.8	87.5	87.0	87.8	89.1	89.9	88.6	89.0	↑	ns
Anglo-Australian	67.5	66.6	69.4	67.7	68.5	66.8	69.2	67.5	67.7	66.7	ns	ns
<25 years old	18.5	18.8	20.9	17.2	17.9	15.2	20.2	20.0	19.4	17.5	ns	↓
30–39 years old	31.4	32.1	26.7	28.2	27.7	29.0	26.5	27.6	28.6	30.0	↓	↑
>50 years old	12.2	12.3	13.4	14.0	15.1	15.7	15.5	14.9	14.7	15.8	↑	ns
Mean age (SD)	35.8 (11.4)	35.5 (11.5)	35.5 (12.0)	36.2 (11.9)	36.5 (12.4)	36.9 (12.2)	35.8 (12.5)	35.4 (12.5)	35.5 (12.4)	36.0 (12.6)	ns	↑
HIV-positive	9.2	7.8	8.3	8.9	8.1	9.3	8.9	8.0	7.3	7.9	↓	↓

Table 4: Men who reported more than 10 male sex partners in the six months prior to the survey: GCPS, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		18.8	15.0	24.7	20.6		21.7		18.6	-	ns	-
Canberra		44.9		22.4		18.7		19.6		15.7	↓	-
Melbourne	31.0	27.6	30.5	31.8	24.8	26.6	28.5	30.0	30.6	32.7	ns	ns
Perth	24.1		26.8		18.0		18.1		29.4	23.1	ns	-
Queensland	23.0	22.2	20.2	22.7	26.0	21.6	24.8	22.7	22.0	25.7	ns	ns
Sydney	28.6	31.9	32.0	24.7	25.4	24.1	24.0	24.7	28.2	23.0	↓	ns
Tasmania							6.8		10.1			-
All states/territories	27.6	27.1	26.3	26.1	24.0	24.5	24.9	26.2	26.7	26.4	ns	ns

Table 5: Men with regular partners – Any CLAIR in the six months prior to the survey: GCPS, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		30.6	33.1	27.7	23.7		22.7		17.9	-	↓	-
Canberra		44.6		38.7		34.0		51.9		32.0	↓	-
Melbourne	38.9	33.3	32.3	34.0	26.6	35.5	25.6	28.8	28.8	32.4	↓	ns
Perth	29.6		23.7		23.4		31.7		19.9	28.2	ns	-
Queensland	41.7	39.6	25.9	27.7	37.3	33.7	33.4	27.1	25.0	26.3	↓	ns
Sydney	36.0	28.5	33.8	30.2	27.9	35.3	31.4	33.3	26.1	26.9	↓	↓
Tasmania							35.3		45.8		-	-
All states/territories	37.9	33.2	29.7	31.4	29.6	33.9	28.1	30.4	24.6	28.6	↓	ns

Table 6: HIV-negative sero-concordant regular couples — Negotiated safety agreements in the six months prior to the survey: GCPS, 2008-2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		30.6	33.1	27.7	23.7		22.7		17.9	-	↓	-
Canberra		44.6		38.7		34.0		51.9		32.0	↓	-
Melbourne	38.9	33.3	32.3	34.0	26.6	35.5	25.6	28.8	28.8	32.4	↓	ns
Perth	29.6		23.7		23.4		31.7		19.9	28.2	ns	-
Queensland	41.7	39.6	25.9	27.7	37.3	33.7	33.4	27.1	25.0	26.3	↓	ns
Sydney	36.0	28.5	33.8	30.2	27.9	35.3	31.4	33.3	26.1	26.9	↓	↓
Tasmania							35.3		45.8		-	-
All states/territories	37.9	33.2	29.7	31.4	29.6	33.9	28.1	30.4	24.6	28.6	↓	ns

Table 7: Men with casual partners – Any CLAIC in the six months prior to the survey: GCPS, 2008-2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		32.1	28.7	34.8	37.5		37.6		43.2	-	↑	-
Canberra		43.2		28.4		32.1		31.0		40.0	ns	-
Melbourne	32.7	34.5	37.5	35.6	34.7	34.1	38.9	43.8	50.3	52.4	↑	↑
Perth	37.1		48.1		37.3		36.1		38.7	40.3	ns	-
Queensland	34.0	37.2	39.4	35.3	45.2	40.0	39.2	45.9	46.0	56.0	↑	↑
Sydney	32.7	37.8	36.1	33.7	36.0	37.5	35.6	34.9	41.4	55.5	↑	↑
Tasmania							43.7		42.6		-	-
All states/territories	33.4	36.3	37.7	34.6	38.3	36.7	39.0	41.2	45.1	52.6	↑	↑

Table 8: Men with casual partners – Disclosing to all casual partners in the six months prior to the survey: GCPS, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
HIV-negative men (All states/territories)	20.5	21.8	23.9	22.9	24.9	23.6	29.5	28.6	35.2	39.1	↑	↑
HIV-positive men (All states/territories)	29.6	32.7	28.6	31.2	38.4	34.9	39.8	43.0	38.4	46.1	↑	ns

Table 9: Men engaged in any CLAIC — 'Always/often' used non-condom based risk reduction strategies in the six months prior to the survey: GCPS, 2012-2017 (unadjusted data)

	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
HIV-positive men (all states/territories)								
Ensured partners were seroconcordant before CLAIC (serosorting)	59.0	55.4	61.3	54.9	46.1	42.7	↓	↓
Took receptive position during CLAIC that was not concordant	15.4	21.0	17.2	23.7	23.7	19.0	ns	ns
Withdrew before ejaculation during insertive CLAIC	11.5	14.6	11.7	9.0	11.6	9.0	ns	ns
Participant knew he had an undetectable viral load before sex		58.4	73.7	75.4	74.1	82.2	↑	↑
Knew partner on PrEP before sex						62.9		
Total n (not mutually exclusive)	n=305	n=267	n=274	n=333	n=371	n=410		
HIV-negative men (all states/territories)								
Ensured partners were seroconcordant before CLAIC (serosorting)	44.9	46.9	52.4	54.7	51.8	49.6	↑	↓
Took insertive position during CLAIC that was not concordant	25.0	23.5	22.3	22.5	21.7	20.6	↓	ns
Partner withdrew before ejaculation during receptive CLAIC	17.2	16.8	15.8	12.7	13.9	11.4	↓	ns
Ensured HIV-positive partner had an undetectable viral load before sex		11.5	10.6	13.2	15.7	21.1	↑	↑
Took anti-HIV medication before sex		3.8	2.9	5.0	15.4	40.5	↑	↑
Knew partner on PrEP before sex						61.0		
Total n (not mutually exclusive)	n=1162	n=933	n=1193	n=1390	n=1928	n=2446		

This table only includes data from men who reported having CLAIC in the six months prior to the survey.

Table 10: Men with casual partners — antiretroviral-based prevention in the six months prior to the survey: GCPS 2013-2017 (all states and territories, unadjusted data)

	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
No anal intercourse	20.0	18.0	19.1	17.8	17.2	↓	ns
Consistent condom use	44.3	44.5	42.1	39.8	30.2	↓	↓
Any CLAI by HIV-positive men on ART with an undetectable viral load	5.3	4.8	5.7	5.5	6.5	↑	ns
Any CLAI by HIV-negative men on prescribed PrEP	0.9	0.7	1.2	4.5	15.6	↑	↑
Any CLAI by HIV-positive men not on ART or with a detectable viral load	1.7	1.4	1.1	0.8	0.5	↓	↓
Insertive only CLAI by HIV-negative not on prescribed PrEP or HIV status unknown men	8.4	9.5	10.1	9.8	9.2	ns	ns
Any receptive CLAI by HIV-negative not on prescribed PrEP or HIV status unknown men	19.2	21.0	20.7	21.7	20.8	ns	ns
Total n	n=3,780	n=4,469	n=4,681	n=5,879	n=5,863		

Table 11: Men who had ever tested for HIV: GCPS, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		85.2	83.9	86.8	85.9		86.9		83.9	-	↓	-
Canberra		94.1		86.7		80.0		80.4		92.4	↓	-
Melbourne	90.7	90.3	87.0	89.1	89.3	85.3	89.9	89.3	89.6	90.1	ns	ns
Perth	89.2		84.2		78.4		85.9		90.6	90.5	↑	-
Queensland	94.6	91.2	86.5	89.9	90.8	89.1	87.7	89.4	89.9	88.2	↓	ns
Sydney	93.3	92.3	92.6	88.6	85.7	87.9	88.5	90.6	89.3	87.2	↓	↓
Tasmania							82.4		85.7			
All states/territories	92.3	90.4	87.3	88.9	86.4	87.0	88.2	89.5	88.9	88.9	ns	ns

Table 12: Non-HIV-positive men — Tested for HIV in the 12 months prior to the survey: GCPS, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		66.3	50.5	51.9	59.4		40.6		56.2	-	↓	-
Canberra		67.1		67.3		62.5		54.5		62.5	↓	-
Melbourne	63.9	67.8	62.4	61.5	68.2	64.1	71.2	61.4	67.8	69.1	↑	↑
Perth	57.3		62.9		48.7		57.9		72.0	63.5	↑	-
Queensland	65.8	59.9	58.0	58.5	63.4	60.6	60.7	71.4	72.2	68.6	↑	ns
Sydney	71.0	70.4	59.3	62.3	58.2	58.4	65.4	67.5	69.7	63.9	ns	ns
Tasmania							41.9		46.7		-	-
All states/territories	66.0	66.5	58.9	60.6	60.5	60.7	62.4	65.6	68.2	66.8	↑	ns

This table includes all men whose HIV status was not reported as positive, regardless of being tested for HIV or not in the past 12 months.

Table 13: Non-HIV-positive men tested for HIV in the 12 months prior to the survey – More than two HIV tests: GCPS, 2013–2017

	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		17.5		22.8		-	-
Canberra	22.1		30.4		40.1	↑	-
Melbourne	23.0	23.2	27.6	38.3	44.9	↑	↑
Perth		17.6		30.2	29.5	↑	-
Queensland	25.0	20.2	27.1	31.6	43.0	↑	↑
Sydney	19.8	23.6	28.6	30.9	44.9	↑	↑
Tasmania		14.5		20.5		-	-
All states/territories	21.9	21.8	27.9	32.6	43.2	↑	↑

This table includes men whose HIV status was not reported as positive and who had been tested for HIV in the past 12 months.

Table 14: Men tested for STIs at more than three different anatomic sites (including blood test, comprehensive STI testing) in the 12 months prior to the survey: GCPS, 2008-2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Adelaide		43.4	29.2	35.5	41.9		28.2		31.7		↓	-
Canberra		47.3		48.0		47.1		39.4		57.5	↑	-
Melbourne	34.0	32.4	38.5	44.4	38.2	40.9	41.4	44.5	45.5	54.2	↑	↑
Perth	27.5		41.6		36.7		39.7		47.2	46.8	↑	-
Queensland	25.7	29.9	30.3	31.7	30.8	37.3	35.6	42.1	45.6	49.7	↑	↑
Sydney	34.0	39.8	38.2	38.3	38.2	39.1	41.9	44.5	49.9	48.8	↑	ns
Tasmania							28.4		21.8		-	-
All states/territories	31.2	36.6	35.7	38.4	37.1	39.5	38.1	43.8	45.5	51.2	↑	↑

Table 15: Any STI diagnosis in the 12 months prior to the survey: GCPS, 2002-2017

	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
HIV-negative men (All states/territories)	11.6	13.1	12.4	14.5	17.9	23.2	↑	↑
HIV-positive men (All states/territories)	24.5	25.7	28.3	34.5	34.6	41.9	↑	↑

Table 16: HIV-positive men — Being on antiretroviral treatment: GCPs, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Melbourne	63.3	61.3	69.7	72.6	77.7	65.7	81.6	87.7	90.9	94.4	↑	↑
Queensland	66.1	61.5	68.5	69.7	69.8	86.3	85.9	90.1	89.1	93.2	↑	↑
Sydney	70.6	73.5	68.9	70.6	80.2	76.6	83.0	81.8	85.4	89.0	↑	↑
All states/territories	68.0	67.4	69.5	71.8	77.9	76.4	83.5	86.5	88.5	92.1	↑	↑

Table 17: HIV-positive men — Having an undetectable viral load: GCPs, 2008–2017

	2008 %	2009 %	2010 %	2011 %	2012 %	2013 %	2014 %	2015 %	2016 %	2017 %	Overall trend	Trend in last 3 years
Melbourne	66.6	60.1	72.4	69.2	74.3	64.3	76.6	85.7	88.6	90.7	↑	↑
Queensland	71.6	59.3	67.7	69.3	70.3	82.7	81.7	95.6	93.3	93.5	↑	↓
Sydney	64.7	70.1	72.3	74.7	81.6	73.4	80.8	85.6	84.7	91.8	↑	↑
All states/territories	67.3	64.5	70.9	73.2	78.5	73.1	76.7	87.9	88.8	91.4	↑	↑

This table includes all HIV-positive men, regardless of being on antiretroviral treatment for HIV or not.

Table 18: HIV-positive men — number of HIV-related clinical visits in the previous 12 months: GCPS, 2014-2017 (all states and territories, unadjusted data)

	2014 %	2015 %	2016 %	2017 %	Overall trend
None/DK	9.2	10.1	8.1	8.6	ns
Once/twice	19.0	21.3	22.5	26.4	↑
3-4 times	45.9	42.3	44.2	40.3	↓
5 or more times	25.9	26.3	25.2	24.7	ns
Total n	n=664	n=638	n=711	n=745	

This table includes all HIV-positive men, regardless of being on antiretroviral treatment for HIV or not.

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