

HIV/AIDS, hepatitis and sexually transmissible infections in Australia: annual report of trends in behaviour 2011

Author:

de Wit, John; Holt, Martin; Hopwood, Maxwell; Treloar, Carla

Publication details:

Report No. Monograph 3/2011

Publication Date:

2011

DOI:

<https://doi.org/10.26190/unsworks/10>

License:

<https://creativecommons.org/licenses/by-nc-nd/3.0/au/>

Link to license to see what you are allowed to do with this resource.

Downloaded from <http://hdl.handle.net/1959.4/51742> in <https://unsworks.unsw.edu.au> on 2024-03-29

National Centre in HIV Social Research



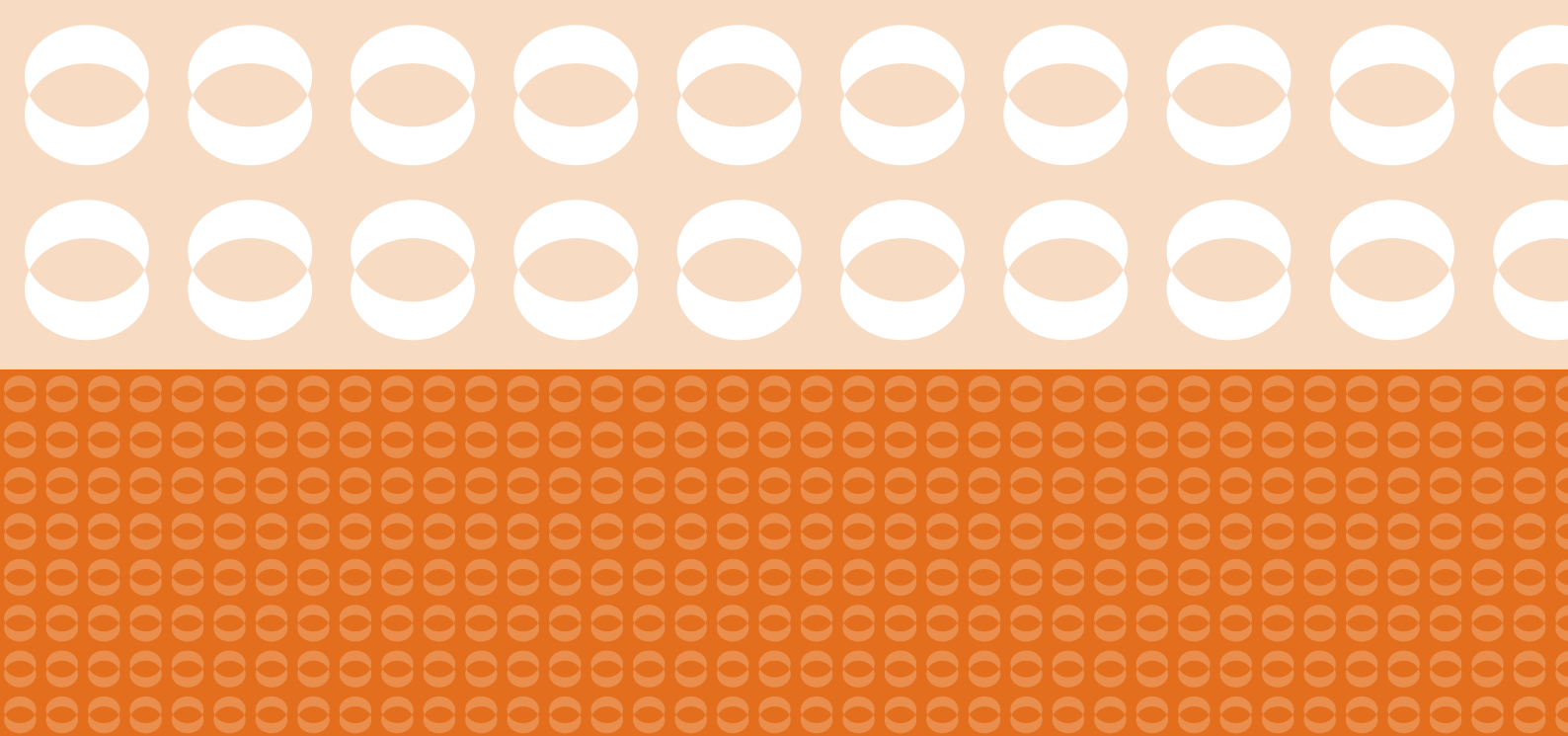
HIV/AIDS, hepatitis and sexually transmissible infections in Australia Annual report of trends in behaviour 2011

Never Stand Still

Faculty of Arts and Social Sciences

National Centre in HIV Social Research

Edited by
John de Wit
Martin Holt
Max Hopwood
Carla Treloar



HIV/AIDS, hepatitis and sexually transmissible infections in Australia

Annual report of trends in behaviour 2011

Edited by
John de Wit
Martin Holt
Max Hopwood
Carla Treloar

National Centre in HIV Social Research

Copies of this monograph or any other publications from the Centre may be obtained by contacting:

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>

© National Centre in HIV Social Research 2011
ISSN 1445-7881
Monograph 3/2011

Photograph on page 5 © Shutterstock.com/Zdorov Kirill Vladimirovich
Photograph on page 15 © Shutterstock.com/Jarrod Erbe
Photograph on page 20 © iStockphoto.com/Jill Chen
Photograph on page 27 © iStockphoto.com/Ericksphotography
Photograph on page 33 © fotolia.com/Kheng Guan Toh
Photograph on page 39 © iStockphoto.com/fotoman_65

The National Centre in HIV Social Research is part of the Faculty of Arts and Social Sciences at the University of New South Wales. NCHSR research projects are partly or fully funded by the Australian Government Department of Health and Ageing.

The production of the Annual Report of Trends in Behaviour is funded by the Australian Government Department of Health and Ageing and the New South Wales Department of Health.

Copyedited by Judi Rainbow
Layout by Judi Rainbow

Suggested citation:
de Wit, J., Holt, M., Hopwood, M., & Treloar, C. (Eds.) (2011). *HIV/AIDS, hepatitis and sexually transmissible infections in Australia: Annual report of trends in behaviour 2011* (Monograph 3/2011). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Contents

Preface	iii
List of figures	iv
List of tables	v
Acknowledgments	vi
Glossary	viii
Executive summary	1
1 Sexual practice and partnerships	5
1.1 Background to new analyses of Gay Community Periodic Surveys	5
1.2 Sample overview	6
1.3 Male partners and safe sex	8
Number of male partners	8
No unprotected anal intercourse with male partners	8
1.4 Risk and risk reduction with regular male partners	9
Unprotected anal intercourse with regular partners	9
Unprotected anal intercourse with serononconcordant or serodiscordant regular partners	10
Negotiated safety agreements	11
1.5 Risk and risk reduction with casual male partners	12
Unprotected anal intercourse with casual partners	12
HIV disclosure to casual partners	12
1.6 Future developments	13
Understanding the contribution of online dating to sexual risk-taking among men who have sex with men: 'The Cybersex Project'	13
Spotlight Thai gay men and HIV risk in Sydney	14
2 Testing for HIV and other STIs	15
2.1 Trends in HIV testing among gay and other homosexually active men	15
2.2 Trends in testing for STIs among gay and other homosexually active men	17
2.3 Understanding individual and social barriers to STI testing among young people in New South Wales: Online survey 'Getting Down To It'	17
2.4 Future developments	18
GOANNA: younG Aboriginal and TOrrer StrAit IslaNder National sexual heAlth survey	18
Spotlight How much do you care?: Online survey of barriers to testing for STIs and HIV among men who have sex with men	19

3 Living with HIV	20
3.1 HIV-positive men in the Gay Community Periodic Surveys	20
3.2 Uptake of antiretroviral treatment among HIV-positive gay men	21
3.3 Experience and expression of HIV-related stigma	23
3.4 Heterosexual men, HIV and masculinity	23
3.5 The HIV General Practice Workforce Project: Interviews with 'key informants' from government, non-government and professional organisations	25
3.6 Future developments	25
HIV-positive people from culturally and linguistically diverse backgrounds: Negotiating the intersections of migration, gender and sexuality	25
Spotlight Impact of alcohol and drug use on the diagnosis and management of depression in gay men: A sub-study of the Primary Health Care Project on HIV and Depression	26
4 Drug use and drug treatment	27
4.1 Drug use by gay and other homosexually active men	27
4.2 Drug injection by gay and other homosexually active men	28
4.3 Syringe coverage among people who obtain injecting equipment from pharmacies in NSW	29
4.4 The role of respondent-driven sampling in the behavioural surveillance of people who inject drugs	29
4.5 National Treatment Service Users Project: Phase 2	30
4.6 Future developments	31
The exposure and transition study: exposure to injecting and hepatitis C among young people at risk	31
Spotlight Perceptions of discriminatory treatment by staff as predictors of drug treatment completion	32
5 Prevention and treatment of viral hepatitis	33
5.1 Technical review of hepatitis C health promotion resources	33
5.2 Hepatitis C health promotion for couples who inject	34
5.3 MHAHS Egyptian community viral hepatitis project	35
5.4 Disclosing hepatitis C infection	35
5.5 Future developments	37
Evaluation of the New South Wales health program to increase capacity in the delivery of hepatitis C care and treatment for Aboriginal people	37
Spotlight Uptake and delivery of hepatitis C treatment in Opiate Substitution Treatment: Perceptions of clients and health professionals	38
6 Current climate	39
6.1 Preparing for biomedical HIV prevention	39
References	41

Preface

This report is the 13th in our annual series reviewing behavioural data that inform responses to human immunodeficiency virus (HIV), viral hepatitis and other sexually transmissible infections (STIs) in Australia. It aims to further the development and evaluation of prevention strategies, the understanding of individuals' experiences of treatment and the social processes that shape the practice and experiences of individuals and communities.

This report does not include all research conducted by the National Centre in HIV Social Research (NCHSR). It concentrates in particular on measures of trends over time, other repeated measures, and key emerging issues. Findings from other studies that are of relevance to understanding behavioural trends and the evolving needs and responses of affected communities are included. The report also highlights new or planned research that will guide the Australian responses to blood-borne viruses and sexually transmissible infections.

As in previous years, much of the report is concerned with behavioural trends related to the transmission and prevention of HIV in gay and other men who have sex with men. In 2010, no new behavioural surveillance data were collected regarding drug use in young people in New South Wales and Western Australia nor regarding drug use and equipment sharing among people obtaining needles and syringes from pharmacies in New South Wales. As such data become available from repeated and new surveys, they will be included in future reports.

For their contributions to and support of the surveillance and research presented in this report, we acknowledge and thank a large number of organisations involved in health services, community education and research. These partner organisations are listed on the following pages.

List of figures

Figure 1: Men who are extensively socially engaged with gay men: GCPS, 2001–2010	7
Figure 2: Men who reported more than ten male sex partners in the six months prior to the survey: GCPS, 2001–2010	8
Figure 3: Men who reported no UAI with male sex partners in the six months prior to the survey: GCPS, 2001–2010	9
Figure 4: Men with regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010	10
Figure 5: Men with serononconcordant or serodiscordant regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010	10
Figure 6: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners: GCPS, 2001–2010	11
Figure 7: Men with casual partners who reported any UAIC in the six months prior to the survey: GCPS, 2001–2010	12
Figure 8: Men with casual partners who reported disclosing their HIV status to all casual partners, by HIV status of participant: GCPS, 2001–2010	13
Figure 9: Men who have ever been tested for HIV: GCPS, 2001–2010	16
Figure 10: Non-HIV-positive men tested for HIV in the 12 months prior to the survey: GCPS, 2001–2010	16
Figure 11: Men who reported any STI test in the 12 months prior to the survey: GCPS, 2003–2010	17
Figure 12: Men who are HIV-positive: GCPS, 2001–2010	21
Figure 13: HIV-positive men on antiretroviral treatment: GCPS, 2001–2010	22
Figure 14: HIV-positive men who reported a detectable viral load: GCPS, 2002–2010	22
Figure 15: Men who reported using amyl nitrite, Viagra and (meth)amphetamine in the six months prior to the survey: GCPS, 2004–2010	28
Figure 16: Men who reported any injecting drug use in the six months prior to the survey: GCPS, 2001–2010	28

List of tables

Table 1: Recruitment summary by state and territory: GCPS, 2001–2010	6
Table 2: Recruitment summary by type of venue or event: GCPS, 2001–2010	6
Table 3: Overview of men recruited into the GCPS, 2001–2010	6
Table 4: Men who are extensively socially engaged with gay men: GCPS, 2001–2010	7
Table 5: Men who reported more than ten male sex partners in the six months prior to the survey: GCPS, 2001–2010	8
Table 6: Men who reported no UAI with male sex partners in the six months prior to the survey: GCPS, 2001–2010	9
Table 7: Men with regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010	9
Table 8: Men with serononconcordant or serodiscordant regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010	10
Table 9: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners: GCPS, 2001–2010	11
Table 10: Men with casual partners who reported any UAIC in the six months prior to the survey: GCPS, 2001–2010	12
Table 11: Men with casual partners who reported disclosing their HIV status to all casual partners, by HIV status of participant: GCPS, 2001–2010	13
Table 12: Men who have ever been tested for HIV: GCPS, 2001–2010	15
Table 13: Non-HIV-positive men tested for HIV in the 12 months prior to the survey: GCPS, 2001–2010	16
Table 14: Men who reported any STI test in the 12 months prior to the survey: GCPS, 2003–2010	17
Table 15: Men who are HIV-positive: GCPS, 2001–2010	21
Table 16: HIV-positive men on antiretroviral treatment, GCPS 2001–2010	21
Table 17: HIV-positive men who reported a detectable viral load: GCPS, 2002–2010	22
Table 18: Men who reported any injecting drug use in the six months prior to the survey: GCPS, 2001–2010	28
Table 19: Characteristics of sample from The 3D Project	36
Table 20: Disclosure of hepatitis C infection and subsequent ‘bad’ reactions	36
Table 21: Reduced model for disclosure of hepatitis C infection	37

Acknowledgments

The behavioural data reported in this annual summary are the collective effort of researchers, funding organisations, collaborators and participants. Our thanks go to:

Aboriginal Health and Medical Research Council of NSW

ACON

Aftercare

AIDS Action Council of the ACT

AIDS Council of South Australia

Australasian Society for HIV Medicine Inc. (ASHM)

Australian Capital Territory Department of Health

Australian Federation of AIDS Organisations (AFAO) and its member organisations

Australian Government Department of Health and Ageing

Australian Injecting and Illicit Drug Users League (AIVL) and its member organisations

Australian Research Centre in Sex, Health and Society (ARCSHS), La Trobe University

Beyondblue: the national depression initiative

Centre for Research in Criminal Justice, Justice Health

Centre for Women's Studies and Gender Research, Monash University

Coffs Harbour HIV, Hepatitis C and Sexual Health Clinic—Needle Syringe Program

East Sydney Doctors

Faculty of Health Sciences Flinders University

Flinders University

FYRST Parramatta

General Practice Victoria

NSW Gender Centre, Sydney

Hepatitis Australia

Hepatitis C Clinic, Christchurch New Zealand

Hepatitis NSW

Heterosexual HIV/AIDS Service (Pozhet), Sydney

HIV/AIDS and Related Programs (HARP) unit, NSW Health Service Health Reform

Transitional Organisation-Southern

Hunter New England Area Health Service

Kirby Institute (previously the National Centre in HIV Epidemiology and Clinical Research), The University of New South Wales

Lismore Needle and Syringe Program

Macquarie University

Multicultural HIV/AIDS and Hepatitis C Service NSW

National Aboriginal Community Controlled Health Organisation

National Association of People Living with HIV/AIDS (NAPWA)

National Drug and Alcohol Research Centre, The University of New South Wales

National Health and Medical Research Council (NHMRC)

New South Wales Department of Health
 Newcastle Methadone Clinic
 New Zealand Needle Exchange Programme
 NSW STI Programs Unit
 NSW Users and AIDS Association (NUAA)
 Oasis Youth Support Network
 Paediatric HIV Service, Sydney Children's Hospital
 People Living with HIV/ADS (South Australia) Inc.
 People Living with HIV/AIDS Victoria
 Pharmacy Guild of Australia, NSW Branch
 Positive Life NSW
 Queensland Association for Healthy Communities
 Queensland Department of Health
 Queensland Positive People
 Rankin Court Treatment Centre
 St Vincent's Hospital, Sydney
 Royal Australian College of General Practitioners
 School of Public Health and Community Medicine, The University of New South Wales
 Sex Workers Outreach Project, Sydney
 Silk Massage
 School of Social Sciences and International Studies, The University of New South Wales
 Social Policy Research Centre, The University of New South Wales
 South Australian Department of Health
 South Court Primary Care Centre (Nepean Hospital)
 Sydney West Area Health Service
 South Eastern Sydney and Illawarra Area Health Service
 The Pharmaceutical Society of Australia
 The Salvation Army
 The Western Suburbs Haven
 Tree of Hope, Sydney
 UNSW Hepatitis C Vaccine Initiative
 Victorian AIDS Council/Gay Men's Health Centre
 Victorian Department of Health
 Western Australia Department of Health
 Western Australian AIDS Council
 Western Australian Centre for Health Promotion Research
 Youth Off the Streets
 YFoundations

Glossary

HCV hepatitis C virus

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 seroconversion the process of becoming HIV-positive (confirmed by antibody testing); the appearance of HIV antibodies in the blood serum. Seroconversion is often accompanied by a flu-like illness

HIV seroconverter someone who is in the process of seroconverting to HIV, i.e. becoming antibody-positive to HIV

HIV-serodiscordant relationship a 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

HIV-serononconcordant 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 (sero)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.

N denotes the denominator in each quantitative analysis of proportions.

ns non-significant

negotiated safety agreement a definite spoken agreement between a **seroconcordant** couple to have unprotected sex with each other, but not to have sex (or unprotected sex) with other people

post-exposure prophylaxis a drug or procedure used to reduce the risk of infection after exposure has occurred, e.g. antiretrovirals administered to reduce the risk of HIV transmission after a condom has broken during sex

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

SD standard deviation

STI sexually transmissible infection

UAI unprotected anal intercourse

UAIC unprotected anal intercourse with casual partners

UAIR unprotected anal intercourse with regular partners

Executive summary

Sexual practice and partnerships among gay men

Many indicators of gay men's sexual practices collected in the Gay Community Periodic Surveys (GCPS) have remained stable in the last ten years, confirming that most HIV prevention practices are well embedded. Gay men have become less likely to report high numbers of male sex partners over time and over half of gay men avoid any unprotected anal intercourse with their partners, indicating that safe sex remains the norm for the majority of gay men.

Nevertheless, other trends may increase the risk of HIV transmission. In particular, the gradual increase in unprotected anal intercourse between casual male partners over time continues and may facilitate HIV transmission, including in situations where partners believe they have the same HIV status. There is also a continuing decline in the proportion of HIV-negative men in relationships who have an explicit negotiated safety agreement with their regular partner that allows unprotected sex within the relationship but excludes unprotected sex with other partners. Negotiated safety agreements have been shown to be relatively effective in preventing HIV transmission and there appears to be a need to re-educate gay men about them.

The social and behavioural profile of gay men recruited into the GCPS has been gradually changing over time. Gay men's social networks are becoming more diverse, and it is becoming less likely for gay men to socialise exclusively with other gay men. The Internet and mobile phone applications play a major role in the social and sexual lives of many gay men. An investigation is underway in New South Wales to explore how online interactions shape sexual risk-taking with partners met online and to develop novel strategies for online HIV prevention with gay men. Research has also been initiated to explore how ethnic minority gay men, in particular Thai gay men, perceive, experience and manage HIV-related risk.

Number of male sex partners Over the last ten years, the proportion of men reporting more than ten male sex partners in the six months prior to survey has fallen across Australia, from 32.6% in 2001 to 26.3% in 2010.

No unprotected anal intercourse with male partners The proportion of men who avoid unprotected anal intercourse (UAI) with male partners has remained

above 50% nationally in the last ten years, stabilising at around 54% in the last three years.

Unprotected anal intercourse with regular partners Unprotected anal intercourse with regular partners (UAIR) is more common than UAI with casual partners (UAIC). Around half of men with regular partners report any UAIR. This indicator has been stable for the last decade.

Serononconcordant or serodiscordant UAIR Among men with a serononconcordant or serodiscordant regular partner, the proportion reporting any UAIR has been stable at around 40–45% for the last ten years.

Negotiated safety agreements The proportion of HIV-negative men in seroconcordant relationships who have an explicit negotiated safety agreement has been falling over the last decade, from 43.7% in 2001 to 29.7% in 2010.

Unprotected anal intercourse with casual partners In the last ten years, the proportion of men with casual partners reporting UAIC has been slowly but steadily increasing, from 33.1% in 2001 to 37.7% in 2010.

HIV disclosure to casual male partners HIV-negative and HIV-positive gay men have become more likely to disclose their HIV status to casual partners over the last ten years. Consistent disclosure of HIV status to all casual partners was reported by 18.0% of HIV-negative men with casual partners in 2001, increasing to 23.9% in 2010. Among HIV-positive men with casual partners, the proportion reporting consistent disclosure of their HIV status to casual partners increased from 18.6% in 2001 to 28.6% in 2010.

Testing for HIV and sexually transmissible infections

There have been recent declines in the proportions of participants in the Gay Community Periodic Surveys who ever tested for HIV and who tested recently (within the last 12 months). Given the increased emphasis on accurate knowledge of HIV status, particularly in the context of increasing rates of unprotected anal intercourse between casual partners, these reductions in HIV testing rates among gay men are a cause for concern. An online study has been initiated to assess barriers and facilitators of HIV and STI testing in gay men in New South Wales, which will provide guidance to efforts to increase the frequency of HIV testing in gay men.

HIV testing among gay and other homosexually active men

In the last ten years the proportion of gay men nationally who ever tested for HIV has declined slightly, from 90.7% in 2001 to 87.3% in 2010. Among ever-tested men, the proportion who report recent testing (a test within the previous 12 months) has declined in the last three years, to 58.9% in 2010.

Testing for STIs among gay and other homosexually active men

Over two-thirds of men in the Gay Community Periodic Surveys report having had any test for STIs in the 12 months prior to survey. This proportion has been stable for the last ten years.

Barriers to STI testing among young people

Half of the 1,100 sexually active participants in the online study, Getting Down To It, had ever tested for STIs and/or HIV. STI testing in young people is shaped by a wide range of psychosocial factors, including the perceived negative aspects of STI testing, fears and worries regarding testing for STIs and subjective norms relating to STI testing.

A new project will provide the first national profile of the sexual health of young Indigenous Australians and examine risk behaviours, levels of knowledge and types of health services used for sexual health and blood-borne viruses.

Living with HIV

Antiretroviral treatment and viral load

Over two-thirds of HIV-positive gay men in the GCPS reported being on combination antiretroviral treatment in 2010. The proportion of HIV-positive men on treatment has increased slightly during the last ten years. In contrast to the small increase in treatment uptake, the proportion of HIV-positive men reporting a detectable viral load has halved, from 41.5% in 2002 to 18.5% in 2010.

Nationally, the proportion of HIV-positive men recruited into the Gay Community Periodic Surveys has been stable at around 14–18% between 2001 and 2010. It is possible the GCPS under-recruit HIV-positive gay men.

Experiences of living with HIV

HIV-positive gay men experience related HIV-stigma from HIV-negative gay men, in particular through sexual exclusion that may be compounded by reliance on serosorting for risk reduction. For men living heterosexually with HIV in Australia, their perceived sexual orientation and sexual identity can be a major concern because of the historical and cultural association between HIV and homosexuality in Australia. The experience of living with HIV is also shaped by individuals' ethnic backgrounds. A study has been initiated to explore experiences of being HIV-positive among gay men, heterosexual men and heterosexual women in culturally and linguistically diverse communities.

Drug use and drug treatment

Drug use and injection among gay men and other homosexually active men

Analyses of drug use among participants in the Gay Community Periodic Surveys focus on the use of amyl nitrite, Viagra (or similar drugs) and (meth)amphetamine. Use of all three drugs may be indicative of drugs use for extended sexual play, and men using all three drugs may be a particular target group for health promotion and HIV prevention.

The proportion of participants in the Gay Community Periodic Surveys reporting the use of amyl nitrite, Viagra (or similar) and (meth)amphetamine in the six months prior to survey has remained stable during the last seven years at around 5–7%.

Injecting of any drug is more commonly reported by gay men than in the general population. Nationally, the proportion of gay men reporting any injecting drug use in the six months prior to survey has declined, from 8.1% in 2001 to 5.4% in 2010.

Syringe coverage among pharmacy equipment users

Data collected in 2009 from people who obtain sterile needles and syringes from pharmacies in NSW found that two-thirds of respondents obtained at least as many syringes as their number of self-reported injections. Respondents with inadequate coverage were more likely to report receptive syringe sharing.

Respondent-driven sampling of people who inject drugs

A recently completed study described the role of respondent-driven sampling in behavioural surveillance among people who inject drugs in Sydney. While the study did not live up to claims that RDS can provide unbiased population estimates and was not able to capture a more broad or more at-risk sample of PWID when compared to service-based sampling, it did provide useful information on potential network barriers or facilitators of peer interventions.

Consumer participation in drug treatment services

NCHSR completed the second phase of a partnership project with AIVL, evaluating five demonstration projects aiming to recruit into one or more consumer representative roles. A number of service and system level issues influenced the progress of the projects and their ability to achieve planned outcomes.

Perceived discrimination and drug treatment completion

Perceived discrimination by drug treatment staff predicts treatment completion by clients. Clients who feel staff do not treat them well are less likely to complete treatment. This points to the significance of non-client-related variables in understanding treatment outcomes and underscores that drug treatment staff need to be aware of the potential health consequences of perceived discrimination.

Prevention and treatment of viral hepatitis

Hepatitis C health promotion resources

One of the pillars of hepatitis C prevention in Australia has been the provision of information and education to people who inject drugs. A review of Australian hepatitis C prevention resources was undertaken to document gaps in the existing range of prevention messages and to make recommendations for messages and targeting of these for particular priority groups. The review produced a range of recommendations including acknowledging the shared responsibility for HCV prevention and the need to repackage messages for specific target groups.

In addition, a review of over 150 printed hepatitis C resources was undertaken to examine whether couples are addressed. Only two resources specifically addressed couples in the context of injecting transmission of HCV. This highlights that, despite a considerable body of research demonstrating the social embeddedness of injecting, these materials continue to primarily address and represent an individual injector.

A study on hepatitis C among the Egyptian community in NSW illustrates that knowledge around routes of transmission is inconsistent and highlights the importance of increasing awareness of transmission routes of hepatitis C. There is a need for culturally appropriate health promotion materials in Arabic, developed in consultation with the communities themselves.

Community hepatitis C care and treatment

Appropriate and high quality care and treatment continues to be a priority for all people living with hepatitis C. NSW Health has made a significant investment in services for Aboriginal people. NCHSR has been contracted to undertake an evaluation of this investment over the next two years. In this we will implement a model of working with Aboriginal staff and community guided by a cultural mentor/advisor.

Worldwide there is a growing interest in the provision of care and treatment for hepatitis C virus (HCV) infection in opiate substitution treatment programs (OST). A qualitative study was conducted to explore OST clients' and health professionals' reports of the barriers and incentives to the delivery and uptake of HCV treatment in OST. There was agreement between clients and health professionals that offering HCV treatment in OST clinics would be convenient and could lead to increases in treatment uptake and adherence. However, combining very different models and cultures of care is not without challenge.

Disclosing hepatitis C infection

It is not uncommon for people who disclose their hepatitis C status to receive a bad reaction, including from their doctor or other healthcare workers. Healthcare workers were also reported to have spread personal health information without participants' permission and to have pressured participants into disclosing their hepatitis C infection, as did government departments. These findings highlight a need for people to be better informed of their rights regarding disclosure of personal health information.

Sexual practice and partnerships



1.1 Background to new analyses of Gay Community Periodic Surveys

Martin Holt and Limin Mao

Many of the analyses contained in this report focus on trends in behaviour among gay and other homosexually active men, based on data collected in the Australian Gay Community Periodic Surveys (GCPS). In last year's report we introduced age standardisation (with reference to population data published by the Australian Bureau of Statistics) and weighting of the data by recruitment source to allow for variations in recruitment and sampling (Hopwood et al., 2010). These adjustments allow us to be more confident in analysing trends over time and in comparing trends between states and territories. We have also calculated a national trend for the key indicators presented below, so each state and territory can be compared to the 'national average'.

In this year's report, we report on trends across a ten-year period (2001–2010). We have tested for linear trends over the full ten-year period and the most recent three-year period (2008–2010), where data are available. When there is a clear and statistically significant change over time (at the $p < 0.05$ level of significance), the direction of the change is indicated by an up (↑) or down (↓) symbol. When there is no significant change over time, this is described as nonsignificant (ns), and when statistical tests have not been performed this is indicated by a dash (–).

Readers should bear in mind that historically there has been some variation between states and territories in the phrasing of survey questions. 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. Since 2010, the same questionnaires have been used in each participating state and territory, reducing the likelihood that any observed differences between states and territories are due to differences in measurement.

1.2 Sample overview

Martin Holt and Limin Mao

The Gay Community Periodic Surveys are conducted in the most densely populated metropolitan areas of Australia where gay men congregate: Adelaide, Canberra, Melbourne, Perth, Queensland (Brisbane, Cairns and the Gold Coast) and Sydney. Using unadjusted data from the GCPS, Table 1 shows the total number of men who participated each year between 2001 and 2010, the proportion recruited from each state or territory each year and the total number of men recruited from each state or territory over the ten year period. These data show that the Sydney survey typically attracts the largest number of participants, and Canberra the smallest.

The GCPS deliberately target men who are socially and sexually involved with gay men by recruiting participants at gay venues and events when large gay festivals are being held (such as Adelaide's Feast Festival, Melbourne's Midsumma Festival and Sydney's Gay and Lesbian

Mardi Gras). Using unadjusted data, Table 2 shows the proportions of men recruited from different venues and events during the 2001–2010 reporting period. The majority of men (over half) are recruited from gay community festivals and just over a quarter from social venues such as gay bars, clubs and gyms. Smaller proportions of men are recruited from sex-on-premises venues (gay saunas and sex clubs), sexual health clinics and general practices that have gay clientele.

In 2010, the majority of men recruited into the GCPS were very likely to identify as gay (over 85%) and have an Anglo-Australian background (over 65%); see the unadjusted data presented in Table 3. However, over the last ten years, the proportions of gay-identified and Anglo-Australian men have significantly declined. The age profile of the GCPS has also changed over the last decade, with a gradual increase in the proportion of men aged under 25 and over 50 and a decline in the proportion of men in their thirties. The mean age of men recruited into the surveys has, however, remained relatively steady at around 35 years during the reporting period.

Table 1: Recruitment summary by state and territory: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Total n (%)
Adelaide	9.3		12.8		10.4		8.3		13.7	11.8	4,561 (6.8)
Canberra			3.9			4.0			4.4		847 (1.3)
Melbourne	30.0	28.9	31.7	30.0	29.8	28.1	32.3	32.6	30.2	27.8	20,181 (30.0)
Perth		12.2		15.5		13.1		12.0		10.5	4,398 (6.5)
Queensland ¹	25.8	27.5	23.2	25.5	22.9	18.1	22.4	19.9	18.5	18.9	14,817 (22.1)
Sydney ²	35.0	31.5	28.4	29.1	36.9	36.7	37.0	35.6	33.2	31.0	22,399 (33.3)
Total n	6100	6504	6518	6551	6045	7067	6329	6251	7067	8771	67,203 (100)

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

² Only includes the February round of recruitment.

Table 2: Recruitment summary by type of venue or event: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Total n (%)
Gay community events/festivals	54.2	54.2	49.1	57.8	51.1	57.3	55.8	57.7	51.8	56.1	36,674 (54.6)
Gay social venues ¹	26.0	24.9	29.2	23.6	29.1	25.4	27.0	23.3	29.9	27.9	17,928 (26.7)
Sex-on-premises venues	12.9	15.6	16.2	13.2	14.7	12.4	10.6	13.0	12.5	11.2	8,835 (13.2)
Clinics and general practices	7.0	5.3	5.4	5.4	5.2	4.9	6.6	5.9	5.9	4.8	3,766 (5.6)
Total n	6100	6504	6518	6551	605	7067	6329	6251	7067	8771	67,203 (100)

¹ Includes bars, cafes, gyms and small events.

Table 3: Overview of men recruited into the GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Gay or homosexual	89.7	88.3	88.4	88.0	88.0	89.3	88.8	88.3	86.6	86.8	↓	↓
Anglo-Australian	70.0	68.2	68.1	66.4	65.9	65.4	68.2	67.5	66.6	69.4	↓	↑
<25 years	16.9	16.9	16.1	18.3	17.7	18.7	17.9	18.5	18.8	20.9	↑	↑
30–39 years	39.7	39.0	40.6	37.5	36.6	34.3	32.1	31.4	32.1	26.7	↓	↓
>50 years	9.0	9.7	9.4	9.1	9.2	10.4	11.7	12.2	12.3	13.4	↑	↑
Mean age (+ SD)	34.6 (10.8)	34.9 (10.4)	35.0 (10.2)	34.7 (10.5)	34.8 (10.4)	35.0 (10.9)	35.6 (11.2)	35.8 (11.4)	35.5 (11.5)	35.5 (12.0)	–	–

Men recruited into the GCPS are often referred to as 'gay-community-attached'. However, involvement in and attachment to gay communities is not measured in the GCPS questionnaires. Instead, a shorthand measure is used, looking at the amount of time participants say they spend with gay men and the proportion of their friends they say are gay. This shorthand measure more accurately refers to social engagement with gay men, rather than gay community attachment (see Holt, 2011; Kippax et al., 1993; Rawstorne et al., 2009).

From this point on in the report, all data presented from the GCPS have been adjusted for age and recruitment source. Table 4 and Figure 1 show trends in social engagement with gay men during the last ten years, focussing on men who are extensively engaged with gay men. Extensive social engagement is defined as reporting that most or all of your friends are gay or spending a lot of your free time with gay men. Men in Sydney are consistently more likely (while men in Adelaide and Perth are less likely) to be extensively socially engaged with gay men. This difference in social engagement probably reflects the relative sizes of the gay populations in each state (Prestage et al., 2008). The proportion of men who would be regarded as extensively socially engaged with gay men has significantly declined in each state and territory during the reporting period. In 2010, just under half of

all men in the GCPS would be regarded as highly socially engaged with gay men, a decline of over 10% over ten years.

The idea that gay men are spending less time with each other and are less reliant on predominantly gay social networks has been observed and discussed elsewhere e.g. Holt, 2011; Rawstorne et al., 2009; Reynolds, 2007; Rowe & Dowsett, 2008; Zablotska, Holt & Prestage, 2011. The primary reasons for this change appear to be a greater societal acceptance of homosexuality, particularly in metropolitan areas, and an increased likelihood that gay men will have social networks that are socially and sexually mixed.

As gay men become less likely to socialise exclusively with each other there is a perception that they are becoming a less cohesive group, and that they are becoming more difficult to reach in education and health promotion activities. This is seen by some as a threat to HIV prevention (Coates, 2008; Rowe & Dowsett, 2008; Wohlfeiler, 2002). However, while participation in some gay venues (such as bars and sex venues) has significantly declined over time, the use of alternative outlets, most notably gay websites, has increased markedly in the last decade (Zablotska, Holt & Prestage, 2011). This suggests that gay men remain accessible for education and health promotion activities, even if the places where they seek sex partners and socialise with each other have changed (Holt, 2011).

Table 4: Men who are extensively socially engaged with gay men: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	58.3		49.2		41.8		35.8		38.5	42.8	↓	ns
Canberra			53.4			50.4			42.2		↓	–
Melbourne	57.0	52.9	59.7	58.2	53.8	53.9	44.3	48.5	48.7	49.4	↓	ns
Perth		51.0		43.9		44.1		45.2		40.6	↓	↓
Queensland	54.5	51.1	55.5	58.8	52.7					42.8	↓	–
Sydney	65.1	64.1	63.9	64.6	61.7	59.3	60.7	60.0	59.8	53.8	↓	↓
All six states/ territories	59.4	55.9	58.2	57.5	54.7	55.5	50.8	53.4	51.0	48.3	↓	↓

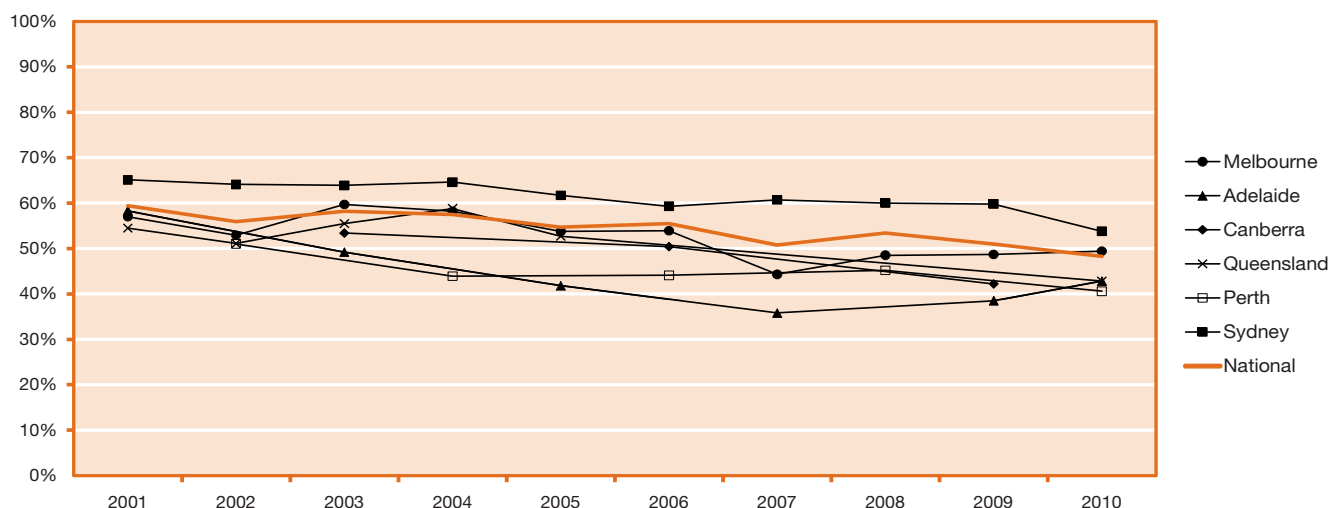


Figure 1: Men who are extensively socially engaged with gay men: GCPS, 2001–2010

1.3 Male partners and safe sex

Martin Holt and Limin Mao

Number of male 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 Table 5 and Figure 2). Nationally, this proportion has significantly declined from 32.6% in 2001 to 26.3% in 2010, but has been relatively stable in the last three years. There has been considerable variation in this indicator between states and territories.

Men in Adelaide have been consistently the least likely (while men in Melbourne and Sydney have been the most likely) to report more than ten male sex partners. In the last three years, men in Adelaide have become significantly less likely to report more than ten male sex partners, while this indicator has remained relatively stable in the other states and territories.

Table 5: Men who reported more than ten male sex partners in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	27.9		24.4		25.4		18.8		18.8	15.0	↓	↓
Canberra			27.9			23.6			44.9		↑	–
Melbourne	32.7	33.9	32.9	33.9	35.1	31.4	29.4	31.0	27.6	30.5	↓	ns
Perth		27.7		25.1		24.2		24.1		26.8	ns	ns
Queensland	28.9	27.3	27.2	27.6	25.0	26.4	25.1	23.0	22.2	20.2	↓	ns
Sydney	35.9	34.6	31.9	37.7	34.9	28.9	27.6	28.6	31.9	32.0	↓	ns
All six states/ territories	32.6	31.8	29.5	31.5	31.8	28.3	26.8	27.6	27.1	26.3	↓	ns

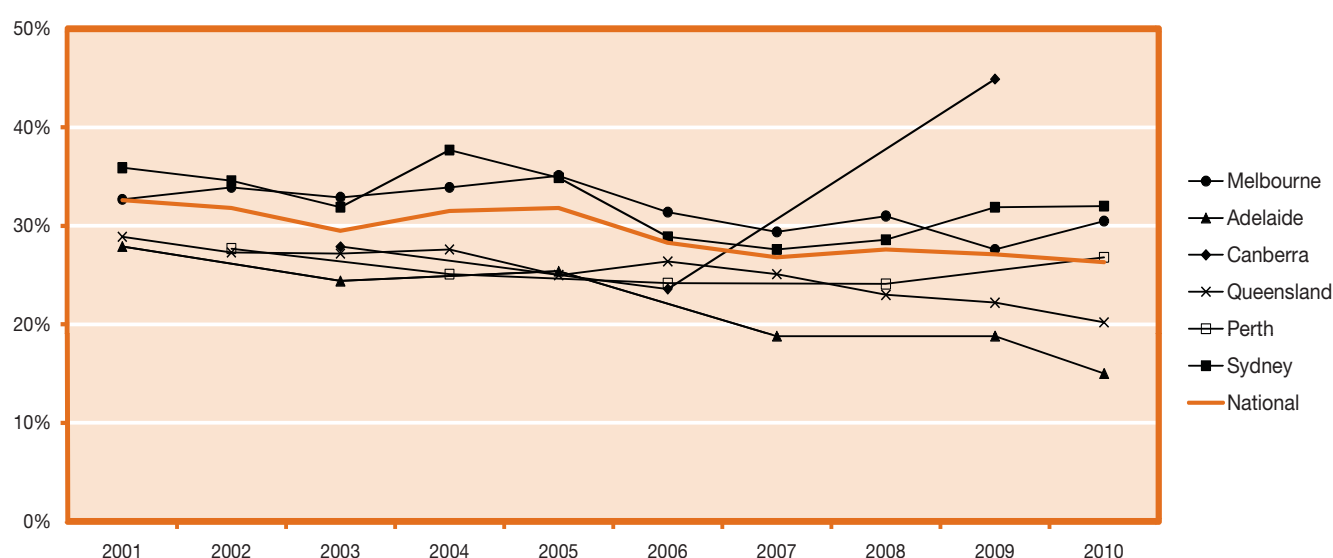


Figure 2: Men who reported more than ten male sex partners in the six months prior to the survey: GCPS, 2001–2010

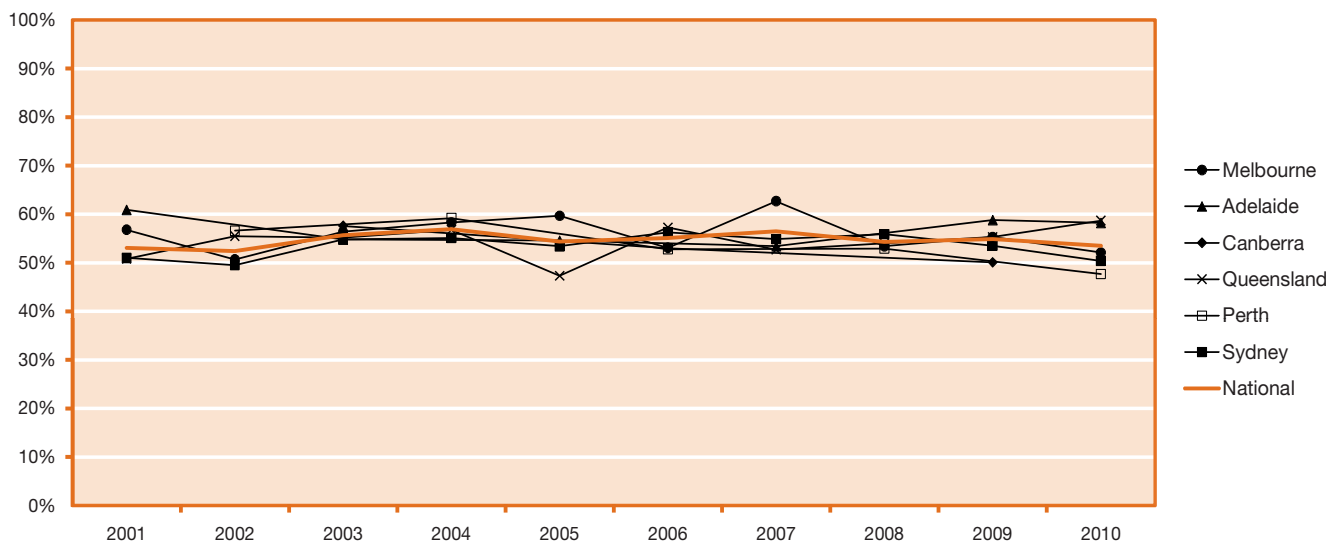
No unprotected anal intercourse with male partners

Table 6 and Figure 3 show the proportions of men reporting no unprotected anal intercourse (UAI) with a male sex partner in the six months prior to the survey. Nationally, the proportion of men who have avoided UAI has been relatively stable during the last ten years, at over half of all GCPS participants. The proportion of men

reporting no UAI has increased in Queensland over the last decade, but declined in Adelaide, Canberra and Perth. In the last three years, the proportion of men avoiding UAI has increased in Queensland but has declined in Melbourne and Sydney.

Table 6: Men who reported no UAI with male sex partners in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	60.9		54.8		54.6		53.4		58.8	58.2	↓	ns
Canberra			57.6			53.0			50.1		↓	-
Melbourne	56.8	50.7	56.4	58.3	59.7	53.1	62.7	53.4	55.3	52.1	ns	ns
Perth		56.6		59.2		52.8		52.9		47.7	↓	↓
Queensland	50.8	55.5	55.2	56.8	47.3	57.3	52.7	54.0	55.3	58.7	↑	↑
Sydney	51.0	49.5	54.8	55.1	53.4	56.3	54.9	55.9	53.5	50.4	ns	↓
All six states/ territories	53.1	52.4	55.7	56.9	54.4	55.1	56.5	54.3	54.9	53.5	ns	ns

**Figure 3: Men who reported no UAI with male sex partners in the six months prior to the survey: GCPS, 2001–2010**

1.4 Risk and risk reduction with regular male partners

Martin Holt and Limin Mao

Unprotected anal intercourse with regular partners

Unprotected anal intercourse is more likely to occur with regular partners (UAIR) than with casual partners (UAIC). Approximately 55–60% of gay men who

participate in the GCPS have a regular male partner. Looking at the national trend in Table 7 and Figure 4, we can see that the proportion of participants reporting any UAIR has been stable for the last ten years at around half of those men with regular partners. Looking at the states and territories separately, we see some variability: over the last ten years the rate of UAIR has risen in Canberra and Perth, has fallen in Queensland and been stable in the other states. Men in Canberra are currently the most likely to report UAIR.

Table 7: Men with regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	44.2		47.3		47.9		47.0		47.3	48.8	ns	ns
Canberra			45.3			47.4			61.8		↑	-
Melbourne	50.3	51.7	45.3	50.3	48.9	47.6	41.5	48.9	48.5	54.3	ns	↑
Perth		45.0		45.7		53.4		49.9		53.0	↑	ns
Queensland	57.8	48.9	48.2	44.8	48.4	38.9	46.9	51.6	51.1	50.7	↓	ns
Sydney	49.9	51.5	45.2	51.5	48.0	46.4	47.7	48.0	50.5	55.8	ns	↑
All six states/ territories	51.5	50.0	45.9	48.3	48.1	45.6	46.1	49.3	50.0	53.4	ns	ns

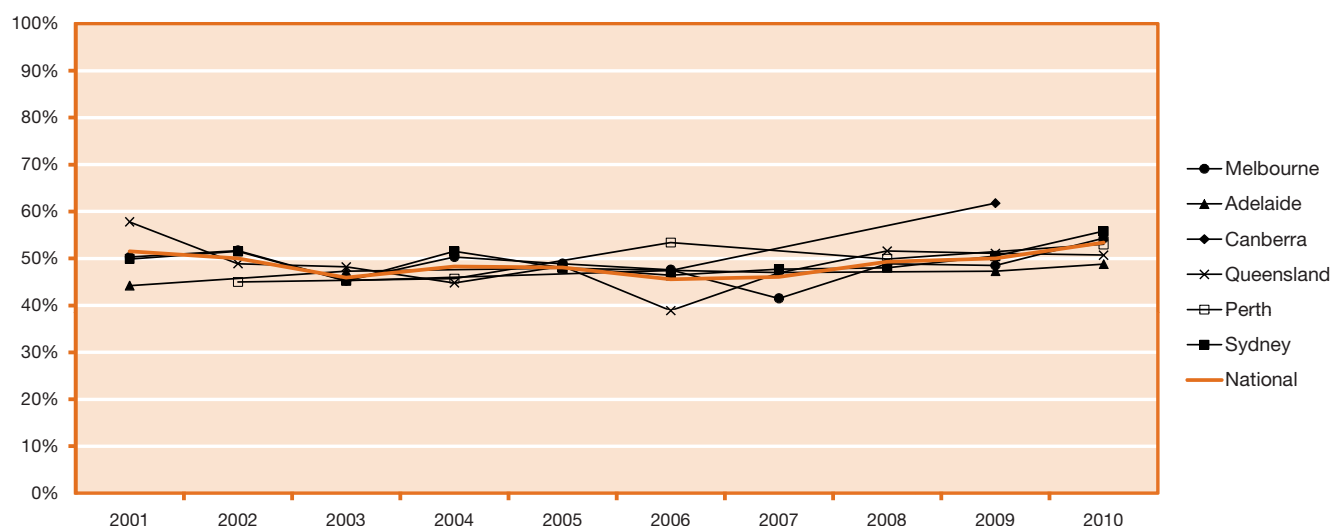


Figure 4: Men with regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010

Unprotected anal intercourse with sero-nonconcordant or serodiscordant regular partners

UAIR presents a risk of HIV transmission to regular partners when the partners have different HIV statuses (serodiscordance) or where either or both partners have an unknown HIV status (serononconcordance). Around

25–30% of gay men in the GCPS who have a regular partner report that their partner is serononconcordant or serodiscordant. Table 8 and figure 5 show the rates of UAIR reported by men in serononconcordant or serodiscordant relationships during the reporting period. Please note that the smaller surveys (Adelaide, Canberra and Perth) have been omitted from this section, as the

Table 8: Men with serononconcordant or serodiscordant regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Melbourne	39.8	46.1	36.2	46.1	49.2	33.2	30.8	38.7	37.6	47.1	ns	↑
Queensland	49.7	38.4	40.4	34.1	41.6	35.1	41.0	40.9	45.8	37.3	ns	ns
Sydney	42.0	39.0	39.0	40.8	45.9	36.2	42.1	37.9	43.7	45.2	ns	↑
Six states/territories	41.6	40.3	37.1	40.8	44.2	36.0	38.2	39.7	42.0	45.3	ns	ns

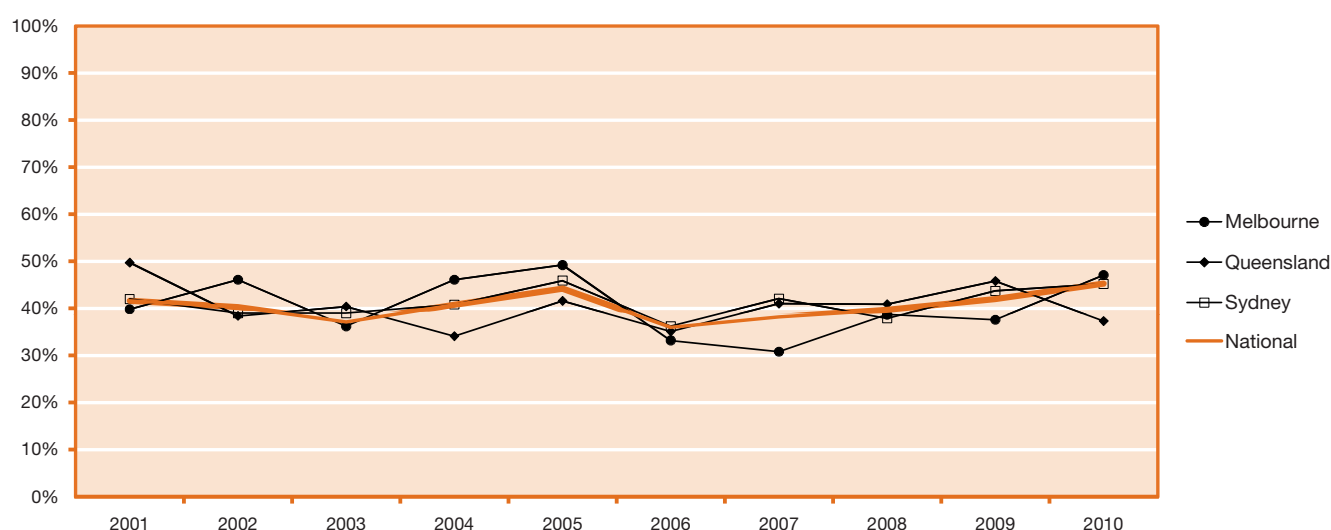


Figure 5: Men with serononconcordant or serodiscordant regular partners who reported any UAIR in the six months prior to the survey: GCPS, 2001–2010

relatively small numbers of men in seroconcordant or serodiscordant relationships in these locations may make the analysis unreliable. Data from these locations is, however, included in the national rate. The rate of UAIR reported by men in seroconcordant or serodiscordant relationships has remained relatively stable during the last ten years, at around 40% of men in those relationships. The rate of seroconcordant or serodiscordant UAIR has increased in Melbourne and Sydney in the last three years, but has remained stable in Queensland.

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 et al., 2001). Negotiated safety agreements, if consistently practised by men in seroconcordant HIV-negative relationships, have been found to be no more risky for HIV infection than avoiding UAI (Jin et al., 2009). For the analysis presented in Table 9 and Figure 6, HIV-negative men were regarded as having a negotiated safety agreement if they had a HIV-negative regular partner and reported an agreement with that partner to allow UAI with each other

but to have no UAI with partners outside the relationship (this included men who had an agreement to have no sex outside their relationship or no anal intercourse outside their relationship).

Nationally, the proportion of HIV-negative men with a negotiated safety agreement has been declining for the last decade, and fell below 30% of HIV-negative men in seroconcordant relationships in 2010 (see Table 9 and Figure 6). This trend appears to be consistent across most participating states and territories, except Perth and Queensland. HIV-negative men in Adelaide, Canberra, Melbourne and Sydney appear slightly more likely than those from other states to practise negotiated safety, with around one in three HIV-negative men in seroconcordant relationships in those locations reporting such an agreement. The proportion of HIV-negative men with a negotiated safety agreement has fallen to a particularly low level in Perth in the last three years (23.7% in 2010).

The decline in negotiated safety agreements among HIV-negative men suggests a need to support gay men in negotiating effective agreements with their regular partners, given that negotiated safety is one of the few non-condom-based risk reduction strategies that appears to be relatively effective in preventing HIV transmission.

Table 9: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	43.4		32.1		41.9		35.4		30.6	33.1	↓	ns
Canberra			62.6			41.6			44.6		↓	-
Melbourne	43.6	32.7	33.8	37.7	38.4	37.5	28.7	38.9	33.3	32.3	↓	↓
Perth		28.6		22.2		35.5		29.6		23.7	ns	↓
Queensland	42.1	33.0	32.3	32.4	36.2		37.8	41.7	39.6	25.9	ns	↓
Sydney	43.8	49.9	37.8	48.3	31.8	33.1	30.5	36.0	28.5	33.8	↓	ns
All six states/ territories	43.7	37.7	35.6	35.6	36.6	35.3	32.4	37.9	33.2	29.7	↓	↓

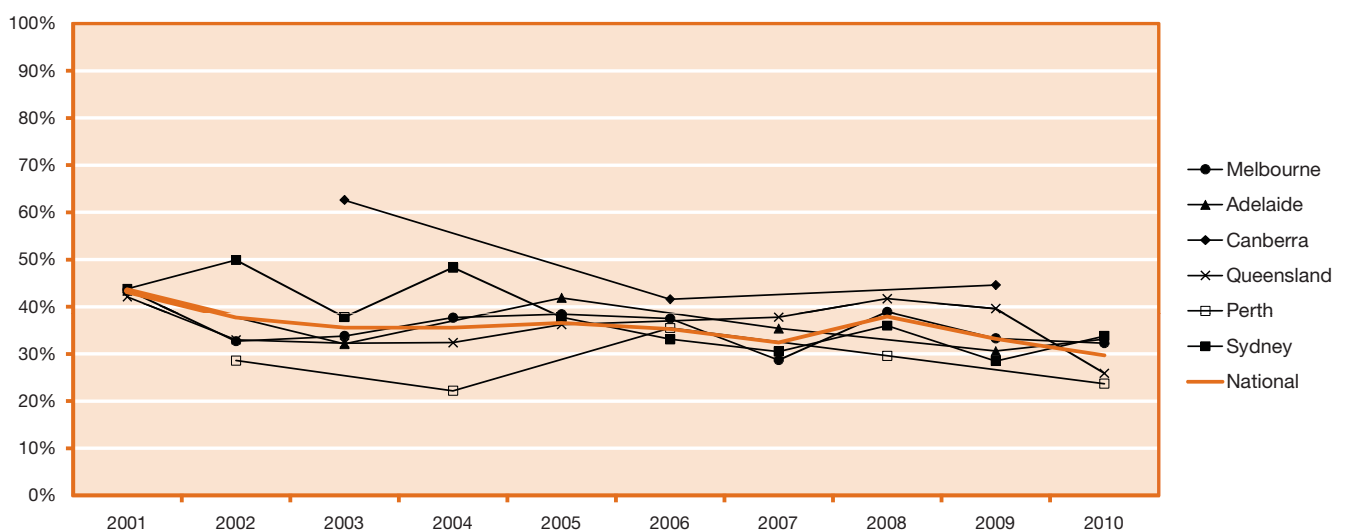


Figure 6: Negotiated safety agreements among HIV-negative men with HIV-negative regular partners: GCPS, 2001–2010

1.5 Risk and risk reduction with casual male partners

Martin Holt and Limin Mao

Unprotected anal intercourse with casual partners

Unprotected anal intercourse with casual partners remains one of the key drivers of HIV transmission between gay men. About 70% of men had casual partners in the six months

before a survey (note: this estimate has been adjusted for age and venue type). Table 10 and Figure 7 show the rates of UAIC reported by men with casual partners in the GCPS. The national rate of UAIC has been gradually and unevenly increasing over the last ten years, reaching 37.7% in 2010 among gay men with casual partners. The rate of UAIC has increased in the last three years in most states and territories, except Adelaide and Sydney. The UAIC rate appears particularly high in Canberra in 2009 and Perth in 2010.

Table 10: Men with casual partners who reported any UAIC in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	30.9		26.3		23.6		30.7		32.1	28.7	ns	ns
Canberra			25.1			28.9			43.2		↑	–
Melbourne	28.7	38.2	32.6	27.6	27.8	33.2	22.9	32.7	34.5	37.5	ns	↑
Perth		32.5		29.3		35.2		37.1		48.1	↑	↑
Queensland	33.6	32.3	33.2	29.4	38.1	34.5	29.0	34.0	37.2	39.4	↑	↑
Sydney	36.3	36.0	32.0	32.2	35.3	30.9	32.1	32.7	37.8	36.1	ns	ns
All six states/ territories	33.1	35.1	31.6	29.7	33.0	33.0	28.0	33.4	36.3	37.7	↑	↑

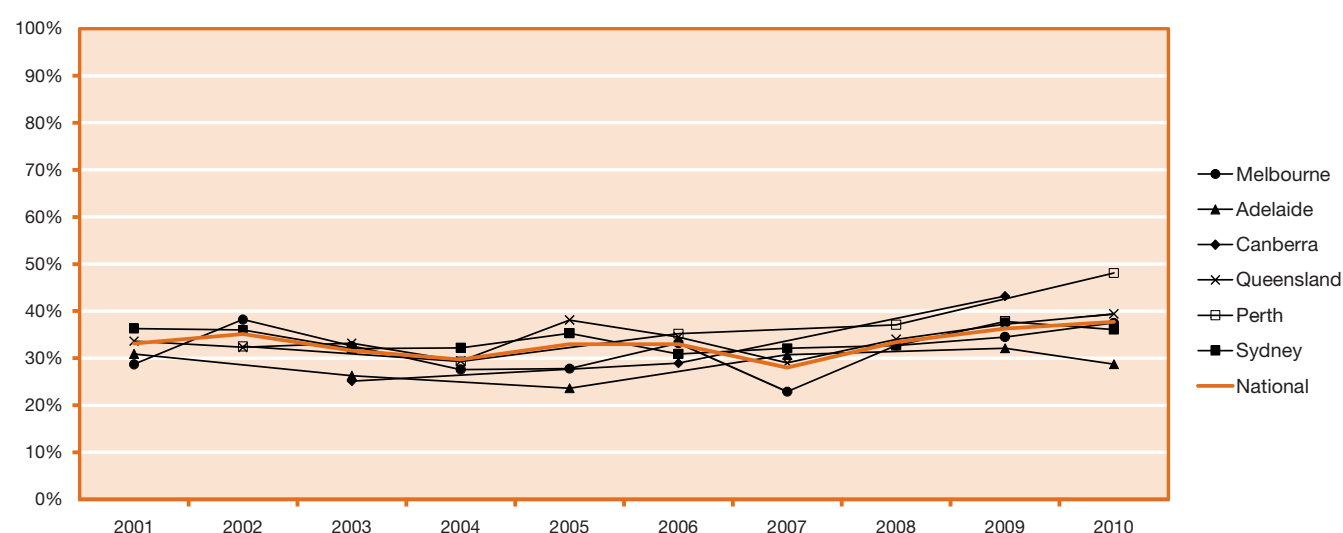


Figure 7: Men with casual partners who reported any UAIC in the six months prior to the survey: GCPS, 2001–2010

HIV disclosure to casual partners

The Gay Community Periodic Surveys collect data on the disclosure of HIV status by men to their casual male partners. HIV disclosure is increasingly of interest because non-condom-based risk reduction strategies, if practised, are reliant on accurate knowledge of HIV status (Holt & Ellard, 2011; Jin et al., 2009). However, it has also been found that HIV disclosure appears to be associated with increased rates of unprotected anal intercourse, regardless of the result of the HIV test disclosed (Holt et al., 2011).

Table 11 and Figure 8 show the proportions of HIV-negative and HIV-positive men who consistently disclosed their HIV status to all casual male partners. Some caution should be exercised in interpreting these data as it is only since 2007 that all six states and territories used the same

questions to measure HIV disclosure to casual partners. For this reason, the trend analysis for the last three years is likely to be more robust than the ten-year trend. In addition, we have only presented the national trend in HIV-positive disclosure in Table 11, as the numbers of HIV-positive men reporting consistent HIV disclosure in each state and territory survey are relatively small.

Looking at the national trends shown in Table 11 and Figure 8, it appears that the likelihood of consistent HIV disclosure to casual partners has increased significantly among HIV-negative and HIV-positive men over the last decade. In 2001, fewer than one in five HIV-negative and HIV-positive men disclosed to all their casual partners. That proportion has increased to around one in four men who consistently disclose to all casual partners, with HIV-positive men being slightly more likely than HIV-negative

men to consistently disclose. Looking at the states and territories, it is interesting to note that consistent HIV disclosure by HIV-negative men has generally been less likely in Melbourne and Sydney than in the other states.

This probably reflects historical norms of nondisclosure in larger gay cities, particularly those with a greater availability of places that allow men to meet for anonymous sex, such as sex-on-premises venues and beats.

Table 11: Men with casual partners who reported disclosing their HIV status to all casual partners, by HIV status of participant: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
HIV-negative men												
Adelaide	24.9		17.2		16.6		10.7		17.6	27.5	ns	↑
Canberra			21.4			25.2			21.4		ns	–
Melbourne	13.8	14.4	22.0	12.9	17.1	18.9	13.9	22.0	20.9	20.9	↑	ns
Perth		17.8		16.7		20.9		22.3		29.1	↑	↑
Queensland	18.3	15.4	18.0	19.9	17.4	14.6	19.9	20.2	26.9	26.6	↑	↑
Sydney	14.3	12.0	16.8	16.8	21.1	19.4	20.6	19.2	20.4	21.0	↑	ns
All six states/ territories	18.0	14.3	18.3	16.9	18.0	18.4	17.5	20.5	21.8	23.9	↑	ns
HIV-positive men												
All six states/ territories	18.6	17.1	16.1	18.4	21.4	27.9	20.1	29.6	32.7	28.6	↑	ns

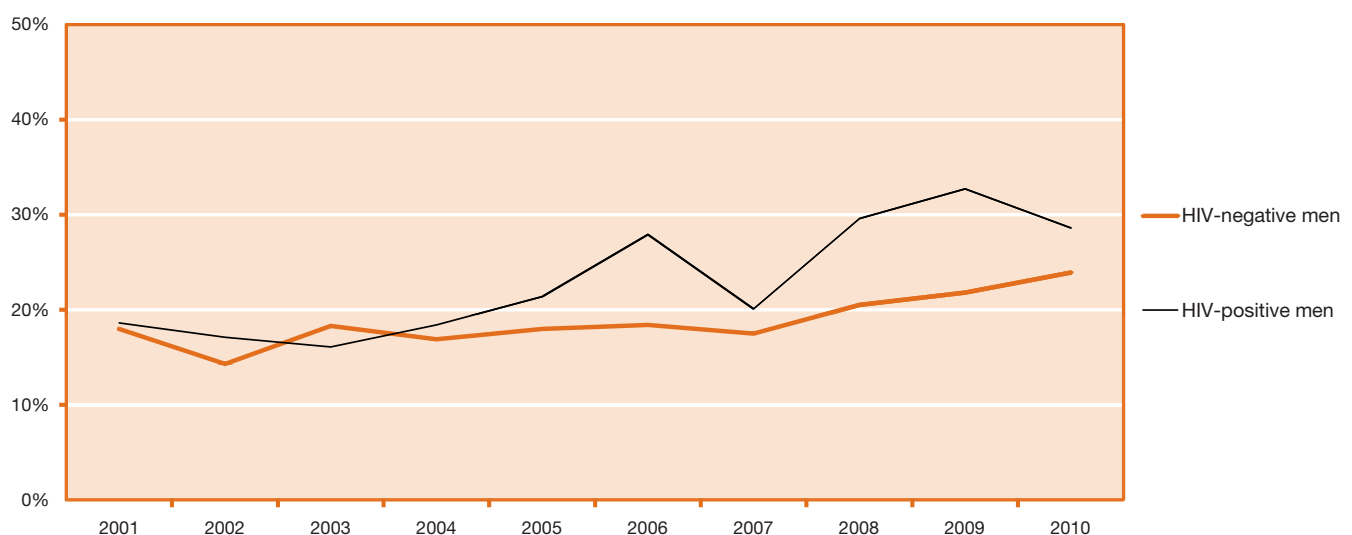


Figure 8: Men with casual partners who reported disclosing their HIV status to all casual partners, by HIV status of participant: GCPS, 2001–2010

1.6 Future developments

Understanding the contribution of online dating to sexual risk-taking among men who have sex with men: 'The Cybersex Project'

Philippe Adam, John de Wit and Dean Murphy

Over the last decade, the increasing popularity of the Internet as a way to meet sex partners has coincided with an increase in sexual risk-taking and HIV incidence in men who have sex with men (MSM). A three wave online prospective study is being conducted to obtain a comprehensive understanding of the dynamics of online chatting among MSM in New South Wales. Some men engage only in sexual fantasising online; others use the

internet to negotiate the type of sex they want to have with potential partners. This study will produce important and novel understandings regarding the ways in which online chatting and fantasising shapes sexual encounters, as well as the HIV risk and risk reduction strategies that men enact with partners they have met online. Findings will be used to develop recommendations and strategies for novel online HIV prevention that increases awareness among MSM of the dynamics of online chatting and interventions that support men to better self-regulate their online chatting to prevent unplanned sexual risk-taking. These understandings will enable the collaborating community organisations, AFAO and ACON, to develop online prevention strategies to address sexual risk-taking among MSM and to contribute to a decrease in new HIV infections

Spotlight Thai gay men and HIV risk in Sydney

Henrike Körner

This study explored how Thai gay men who live in Sydney perceive and experience HIV and risk, and how they manage HIV-related risk as ethnic minority gay men within the predominantly Anglo-Australian gay community. More specifically, this study investigated (1) how Thai gay men in Sydney engage with the gay communities in Thailand and in Sydney; (2) what their perceptions of and attitudes towards HIV risk in Thailand and in Sydney are; (3) how perceptions of risk are prioritised in relation to other aspects of Thai gay men's social and sexual lives; and (4) how Thai gay men negotiate and manage risk in sexual encounters with other men.

HIV infections have remained relatively stable among homosexual men in New South Wales in recent years. The proportion of new HIV infections among homosexual men from culturally and linguistically diverse backgrounds is relatively proportionate to their distribution in the general population. Nonetheless, among those from such backgrounds, men of Thai background have comprised a relatively large number of recent HIV infections. Also, in Thailand itself, HIV prevalence and incidence have recently been identified as being very high among local populations of men who have sex with men, particularly in the larger urban centres in Bangkok and Chiang Mai (Li et al., 2009).

Qualitative data from studies with gay men from ethnic minority backgrounds in Sydney have shown that the relationship between Asian gay men and gay community is not always unproblematic. Asian gay men may face problems in dealing with both gay and ethnic identities, having to manage their gay identity within their ethnic identity and, because of differing values, Asian gay men may feel alienated in mainstream gay communities (Mao, McCormick, & Van de Ven, 2002). Survey data from the Asian Gay Community Periodic Survey indicated that, while Asian gay men in general are less inclined to be tested for HIV, express a greater degree of concern about confidentiality and the implications of HIV infection and are generally less likely to report engaging in sexual or drug-using risk behaviour, this was less true of Thai gay men (Mao et al., 2003). These survey data suggested that Thai gay men were more like Anglo-Australian gay men in these respects and this may indicate that Thai gay men's behaviour and beliefs put them at somewhat greater risk than is the case for other gay men of Asian background. Qualitative data from the Three or More Study (TOMS) (Prestage et al., 2007) and from the Sexually Adventurous Men study (Smith, Worth, & Kippax, 2004) indicated that, among more sexually adventurous men, there is a tension between concerns for sexual health and the desire for sexual pleasure, regardless of how well-informed these men may be about potential risk.

As this was an exploratory study, qualitative research methods were used. We started data collection with focus groups to explore socially and culturally shared knowledge and attitudes towards HIV and gay communities. The focus group interactions also generated ideas for in-depth exploration in one-on-one interviews. In individual interviews we explored individuals' perceptions of HIV-related risk, how men negotiated risk reduction strategies in sexual encounters with other men; how they balanced risk reduction in relation to other aspects of their sexual and social lives, such as their sexual needs, the need for intimacy; and social connectedness. Discussing these issues in a one-to-one situation afforded participants the privacy and confidentiality to provide personal information which they did not want to disclose in a group setting. Participants were recruited from several sex-on-premises venues, the gay print media, Thai print media, the ACON website, two Thai social networking websites, and word of mouth. Written consent was required for participation.

Preliminary thematic analysis of focus groups and individual interviews shows that discovering gay life in Sydney was for the men an experience of freedom, openness and equality. They were able to show affection in public; they felt they could express themselves freely and lead their own lives; and they felt safe and protected by anti-discrimination laws. This was often in direct contrast to their experiences in Thailand, where being open about their sexuality was often not possible, especially for older men and for men who lived in the provinces. Some had come out to their families and their sexuality was accepted by their parents. Some felt they could not disclose their sexuality as this would damage the family's reputation and some mentioned that their parents knew that they were gay even though the subject had never been discussed.

The men were generally well informed about HIV and risk reduction. They appreciated posters advertising safe sex at gay venues as a reminder, and they appreciated the fact that sex-on-premises venues provided free condoms and lubricant. The men generally agreed that knowing one's HIV status and HIV testing were important. However, there was considerable variation in their actual HIV testing practices and experiences. Some had regular HIV and STI tests at their GP or sexual health clinics in Sydney. Some also reported having had regular HIV tests in Thailand, usually as part of blood donations or health checks at work. Some had an HIV test at the beginning of a new relationship and then never tested again. For some, the only HIV test they had ever had was part of the health requirement for their visa when coming to Australia. One theme running through many interviews was fear: the fear of having done something that was 'unsafe', and the fear that the test result could be positive. This fear actually prevented some from having an HIV test. Some men also had inaccurate information about testing, and some did not know where they could get tested and if they had to pay for a test.

Further analysis will explore additional topics and themes arising from focus groups and individual interviews.

Testing for HIV and other STIs



2.1 Trends in HIV testing among gay and other homosexually active men

Martin Holt and Limin Mao

The proportion of men in the GCPS that has ever been tested for HIV is very high with around nine out of ten men nationally reporting that they have had at least one HIV test (see Table 12 and Figure 9). Up until recently, the

proportion of men who had ever been tested for HIV in the GCPS was very stable, having remained unchanged between 2000 and 2009 at around 90% nationally (Holt & Mao, 2010). However, in the last three years the proportion of ever tested men has dropped significantly in the GCPS, although it remains at 87% nationally. The fall in the proportion of ever tested men has been observed in the Melbourne, Perth and Queensland surveys in the last three years. Conversely,

Table 12: Men who have ever been tested for HIV: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	89.1		92.7		89.4		91.2		85.2	83.9	↓	ns
Canberra			83.5			83.1			94.1		↑	–
Melbourne	90.5	93.5	89.6	89.2	92.6	89.2	90.6	90.7	90.3	87.0	↓	↓
Perth		82.7		81.9		83.0		89.2		84.2	↑	↓
Queensland	89.8	91.1	90.6	91.2	92.1	90.9	90.2	94.6	91.2	86.5	ns	↓
Sydney	91.6	95.6	92.7	93.6	93.5	94.8	92.6	93.3	92.3	92.6	ns	ns
All six states/ territories	90.7	92.2	90.8	89.9	92.4	90.6	91.2	92.3	90.4	87.3	↓	↓

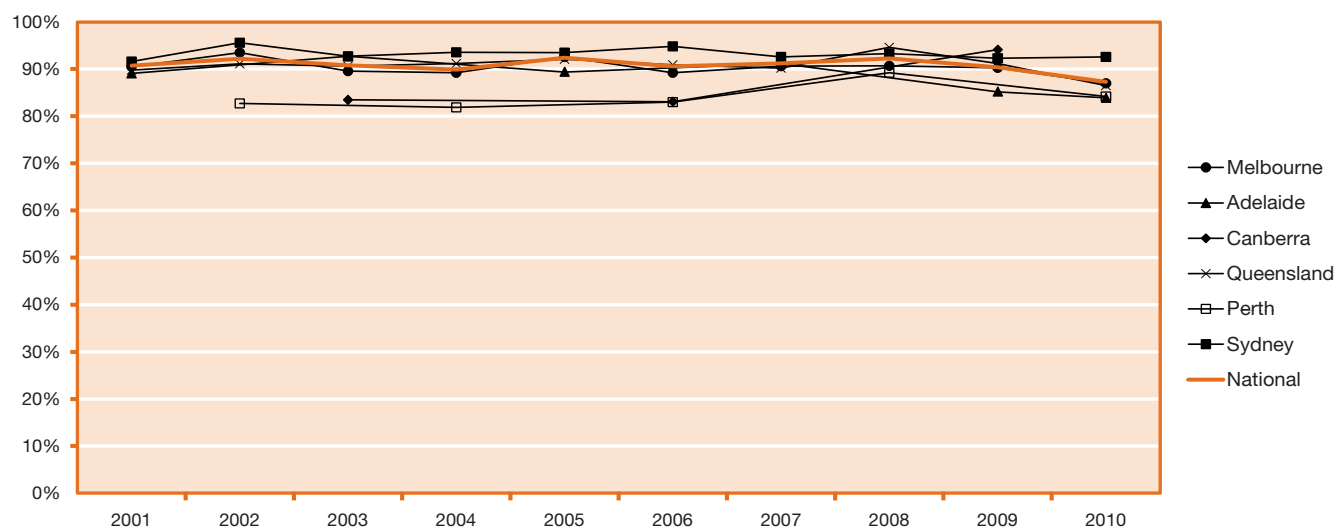


Figure 9: Men who have ever been tested for HIV: GCPS, 2001–2010

the proportions of men tested for HIV have traditionally been lower in Canberra and Perth, but appear to have increased during the reporting period.

Table 13 and Figure 10 show the proportions of non-HIV-positive men in the GCPS reporting HIV testing in the 12 months prior to the survey (testing in the last 12 months is usually referred to as recent HIV testing). Up until 2009, there was a gradual increase nationally in the proportion of

men reporting recent HIV testing, climbing to two-thirds of non-HIV-positive men in 2009. Gradual increases in recent HIV testing rates were observed in Canberra, Melbourne, Perth and Sydney during the last ten years. However, in the last three years, the national proportion of non-HIV-positive men reporting recent HIV testing has fallen to 58.9%, and declines in recent HIV testing have been observed in Adelaide, Queensland and Sydney. Only Perth appears to be maintaining an increase in its recent HIV testing rate.

Table 13: Non-HIV-positive men tested for HIV in the 12 months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	61.7		63.7		64.7		64.3		66.3	50.5	↓	↓
Canberra			50.1			56.1			67.1		↑	–
Melbourne	59.3	56.6	59.4	59.8	64.9	62.0	62.4	63.9	67.8	62.4	↑	ns
Perth		54.4		49.8		52.8		57.3		62.9	↑	↑
Queensland	64.2	61.7	57.5	65.4	60.1	59.9	62.1	65.8	59.9	58.0	ns	↓
Sydney	55.3	60.6	65.7	64.7	67.8	68.1	71.3	71.0	70.4	59.3	↑	↓
All six states/ territories	61.4	59.5	60.5	61.4	65.5	62.5	65.6	66.0	66.5	58.9	↑	↓

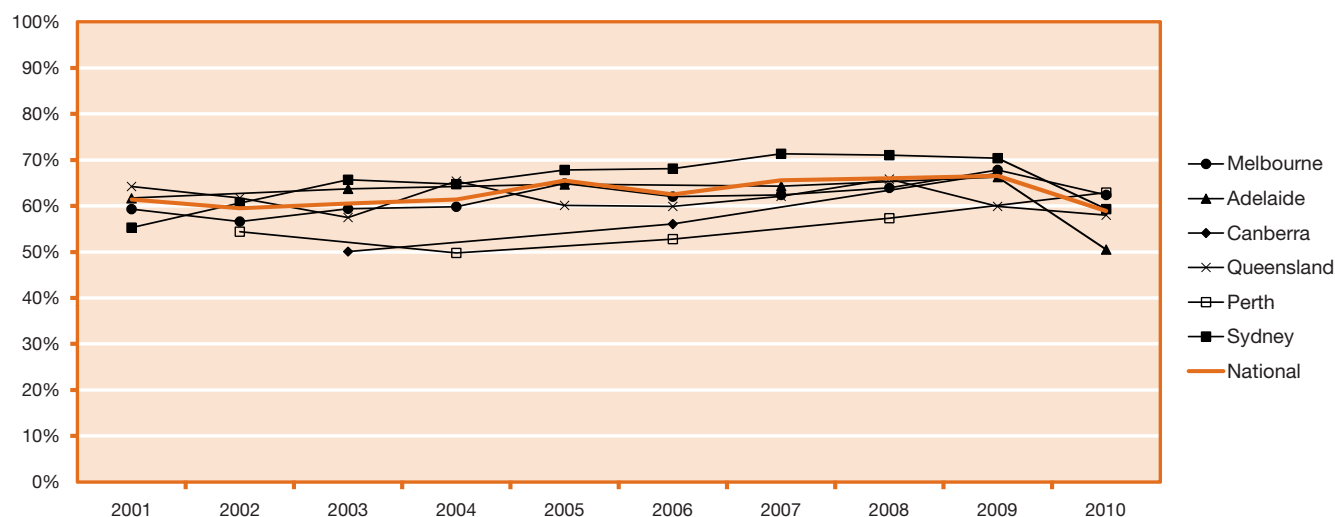


Figure 10: Non-HIV-positive men tested for HIV in the 12 months prior to the survey: GCPS, 2001–2010

2.2 Trends in testing for STIs among gay and other homosexually active men

Martin Holt and Limin Mao

Since 2003 the GCPS have asked participants to specify which STI tests they have had in the 12 months prior to the survey. Table 14 and Figure 11 show the proportions of men reporting any test for STIs in the previous 12 months (this includes any blood test apart from an HIV test and any swab or urine sample). Nationally, there has been no change in the proportion of men reporting any test for STIs over the last eight years. During this period, over two-thirds of men who participated in the GCPS reported any STI testing in the year prior to the survey. Looking at the states and territories, we can see that the proportions of men reporting any STI testing have been stable in Melbourne and Sydney, risen in Canberra and Perth and declined in Adelaide and Queensland. Over the last three years, STI testing has been stable in most states and territories, apart from in Adelaide where it declined.

It should be noted that previous Annual Reports of Trends in Behaviour have found that the comprehensiveness of STI testing (the range of tests done when men present for testing) has increased over time (de Wit, Treloar & Wilson, 2009).

2.3 Understanding individual and social barriers to STI testing among young people in New South Wales: Online survey 'Getting Down To It'

Philippe Adam, John de Wit, Jorliijn Hermans, Liz Story, Barry Edwards, Carolyn Murray and Christopher Bourne

While young people are at high risk of contracting STIs, rates of STI testing remain low in this population. This may reflect that approaches used to promote STI testing in young people have mainly focussed on raising awareness and increasing knowledge of STIs and have not comprehensively addressed the many complex individual and social factors that may influence young people's decision to test for STIs. To address the current gaps in research regarding STI testing and its determinants, the NSW STI Programs Unit commissioned NCHSR to conduct 'Getting down to it', a study among young people in NSW, Australia, to strengthen the evidence base regarding barriers to and facilitators of STI testing.

This cross-sectional, quantitative online study was conducted between May and October 2010 through the Internet-based research platform www.gettingdowntoit.net.

Table 14: Men who reported any STI test in the 12 months prior to the survey: GCPS, 2003–2010

	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Adelaide	74.6		68.2		72.4		72.2	66.7	↓	↓
Canberra	64.0			61.9			71.7		↑	–
Melbourne	69.2	68.3	70.9	69.5	71.6	72.0	70.7	71.3	ns	ns
Perth		58.3		60.6		68.0		67.0	↑	ns
Queensland	68.0	74.6	75.4	68.2	69.7	68.0	68.6	67.4	↓	ns
Sydney	71.4	69.0	69.0	70.1	72.0	72.8	73.9	72.5	ns	ns
All six states/territories	69.9	69.2	71.3	68.3	71.3	71.0	71.7	69.6	ns	ns

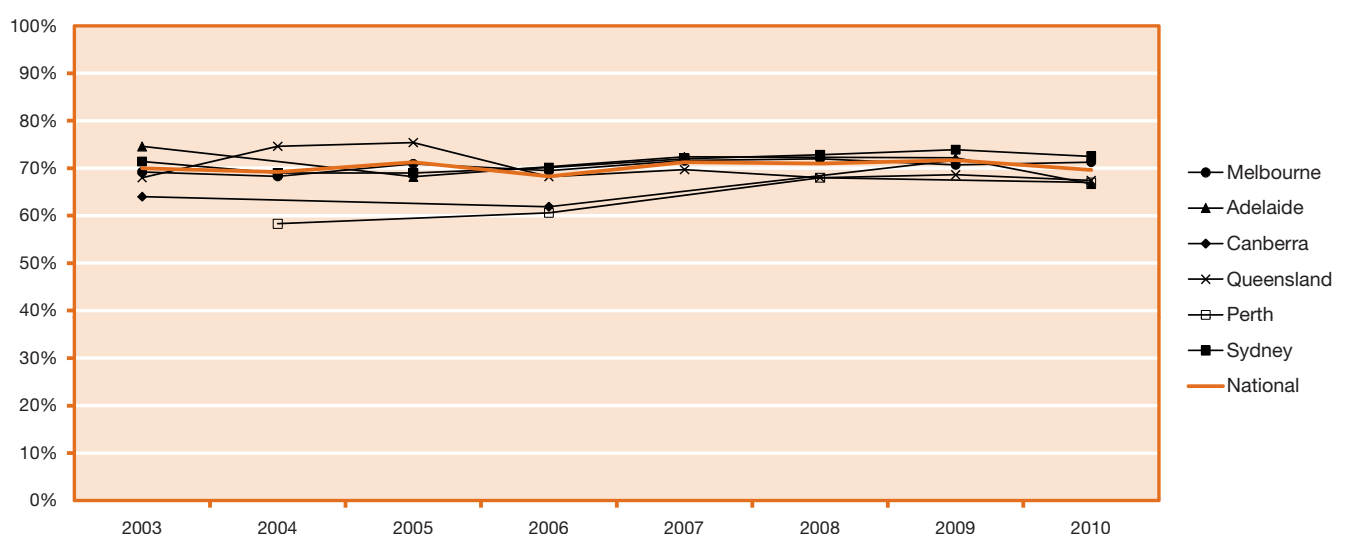


Figure 11: Men who reported any STI test in the 12 months prior to the survey: GCPS, 2003–2010

A comprehensive questionnaire was developed to assess the situation and needs of young people in terms of STI testing and the prevalence and contribution of a wide range of sociodemographic, behavioural and psychosocial factors potentially influencing young people's STI testing. The survey recruited 1,658 eligible, sexually active young respondents living in NSW of whom 1,100 provided complete data. Participants were on average 20.6 years (range 16–26). Participants were female (60%) and male (40%); 71% reported being heterosexual and 29% non-heterosexual.

Half of the 1,100 sexually active participants had ever tested for STIs and/or HIV. Most of these participants (67%) had tested for both STIs and HIV and had tested in the last year (74%). Testing for STIs was more likely in older, female and non-heterosexual participants. STI testing was also related to having experienced STI-related symptoms and having had unprotected intercourse, reported by 41.5% and 66% of the participants, respectively. Participants' STI-related knowledge was moderate. While participants perceived STIs as severe, their perceived vulnerability to STIs was low. Participants perceived substantial positive aspects (pros) of STI testing. Beyond benefits of treatment, pros of STI testing that were important from their perspective included taking responsibility for their health and starting a new relationship safely. Participants also perceived a range of negative aspects (cons) of STI testing, in particular that STI testing costs money and that STI testing facilities are not easy to locate. Various fears and worries related to STI testing were found, including fear of medical procedures, fear of negative staff attitudes and fear of parents' reactions. Furthermore, while a substantial proportion of participants reported that they would feel ashamed if they had an STI, many thought that the important people in their lives would support their decision to test for STIs.

Results indicate that key psychosocial determinants of STI testing in young people include perceived cons of STI testing, fears and worries regarding testing for STIs and subjective norms relating to STI testing. Perceived vulnerability to STIs, attitudes to STI testing, perceived pros of STI testing, STI-related shame and STI-related knowledge were found to be less associated with the decision to seek STI testing. These findings underline that there is no single magic bullet that can be used in social marketing campaigns or other interventions to promote STI testing in young people. Each of the assessed individual and social factors only explains a fraction of the variance in STI testing, which means that no real understanding of the reasons why young people test for STIs can be expected from research that focuses only on one or few factors.

Both research and sexual health programs need to rely on more comprehensive appraisals of barriers to and facilitators of STI testing. The current challenge for sexual health promotion is to effectively address these complex individual and social barriers that limit the uptake of testing for STIs among young people. Suggestions include using lay arguments to address young people's perceived cons of STI testings, addressing fears and worries that prevent some young people testing for STIs and strengthening norms relating to STI testing. Building on empirical evidence and appropriate theories of behaviour, sexual health promotion programs are needed that use innovative social marketing campaigns and behavioural change interventions tailored at individual, social and structural levels. Strengthening approaches that reflect contemporary theory, research and practice would considerably increase the impact and efficiency of programs to promote STI testing in young people as well as in other populations.

2.4 Future developments

GOANNA: young Aboriginal and Torres Strait Islander National sexual health survey

Joanne Bryant

This project provides the first national profile of the sexual health of young Indigenous Australians. It examines risk behaviours, levels of knowledge and types of health services used for sexual health and blood-borne viruses. The project is funded by an Australian Research Council Linkage grant and is being led by the Kirby Institute's Aboriginal and Torres Strait Islander Health Program in partnership with co-investigators from the National Aboriginal Community Controlled Health Organisation, National Centre in HIV Social Research, and the Australian Research Centre in Sex Health and Society. The fieldwork for the project is coordinated and carried out by Aboriginal researchers located at the Aboriginal Community Controlled Health Organisations in each State and Territory. The project encompasses an important research capacity building component for these researchers to ensure that the project is guided by the Aboriginal community and can be carried forward beyond 2013. To date over 700 participants have taken part in the research, with a goal of reaching a target sample of 4,000 by 2013. The findings will set the foundation for an ongoing data collection system to ensure trends and behaviours can be identified among young Indigenous Australians and to ensure necessary interventions can be implemented.

Spotlight How much do you care?: Online survey of barriers to testing for STIs and HIV among men who have sex with men

Philippe Adam, John de Wit, Chris Bourne, Yves Calmette and Julia Purchas

Increased notifications of STIs have been observed among MSM in NSW and other Australian jurisdictions, which may contribute to increases in HIV notifications. Promoting STI testing as well as delivering adequate sexual health services to MSM is important to reduce STI notification rates and to contribute to HIV prevention among MSM. In recent years, several initiatives have been put in place to promote STI testing among MSM and to develop and promote educational materials for clinical professionals and GPs, which include STI testing guidelines for MSM. As a result, STI testing among gay men has improved somewhat, but remaining barriers may prevent MSM from visiting sexual health service providers and benefiting from timely STI testing and treatment. A better understanding of the reasons why the promotion and delivery of STI testing remains a challenge among MSM is needed. Currently little information is available on determinants of testing for HIV and STIs among gay men from national or international research.

The 'How much do you care?' survey has been developed to assess the situations and needs of MSM in NSW in terms of testing for STIs including HIV, and to offer a new, comprehensive understanding of the influence of a range of individual and social factors on the decision to test for HIV and other STIs. These complex determinants of testing have been largely understudied and no research was identified that systematically assessed differences and similarities between factors influencing the decision to test for HIV and factors influencing the decision to test for STIs. The current study aims to address these gaps in research around testing for HIV and STIs among MSM and their individual and social determinants. The recruitment started mid April 2011 and is ongoing. Facebook advertisements are used to recruit MSM from NSW. Until mid-August 2011, 922 men responded to the online survey questionnaire. Participants answered questions on their sexuality, sexual risk-taking, testing for HIV and other STIs and a wide range of individual and social barriers and facilitators of testing for HIV and testing for STIs. Participants in the study are randomised into one of two arms and invited to answer questions on either testing for HIV or testing for other STIs. Using this design, the study will be able to assess and compare the experience and contribution of an array of factors which may deter some MSM from seeking HIV or STI testing.

Preliminary analyses indicate that MSM's intention to use condoms in the near future as a protection against HIV or STIs is very high in this sample. Similarly, most participants intend to test for HIV and other STIs in the near future. Participants also have a very high perception of the severity of HIV and a high perception of the severity of other STIs, but participants have a low perception of their vulnerability (or risk) of contracting HIV or another STI. Participants hold very positive attitudes to both testing for HIV and testing for STIs. Fears and worries regarding testing and its consequences are moderate and similar for testing for HIV and testing for other STIs. For both HIV and other STIs, participants have a high perception of benefits associated with testing and a relatively low perception of drawbacks of testing. Most participants' perceive supportive norms regarding testing for HIV and testing for STIs. Preliminary analyses were also conducted to assess which of the potential individual and social barriers or facilitators play a role in MSM's decision to test for HIV or STIs, over and above having previously tested and reporting unprotected anal sex with casual partners. Intention to test for HIV and intention to test for STIs are both strongly influenced by MSM's perceived vulnerability, by their attitudes towards testing and their perception of the norms around testing. In addition, intention to test for STIs is limited by various fears and worries regarding testing for STIs and by perceiving more drawbacks of testing for STIs.

Health promotion can capitalise on the fact that most MSM intend to use condoms and test for both HIV and STIs in the near future. Social marketing campaigns and innovative behavioural interventions can support MSM to more consistently act on their intention to use condoms and test for both HIV and STIs. Many similarities were found in the prevalence of key factors influencing the decision to test for HIV and to test for STIs. Similarities and differences were found in the way individual and social barriers contribute to the decision to test for HIV or for STIs. This research will inform activities aimed at promoting STI testing in NSW through an increased understanding of those factors that deter people from seeking HIV and STI testing in a timely manner and that need to be addressed by social marketing campaigns and behavioural interventions.

3

Living with HIV



3.1 HIV-positive men in the Gay Community Periodic Surveys

Martin Holt and Limin Mao

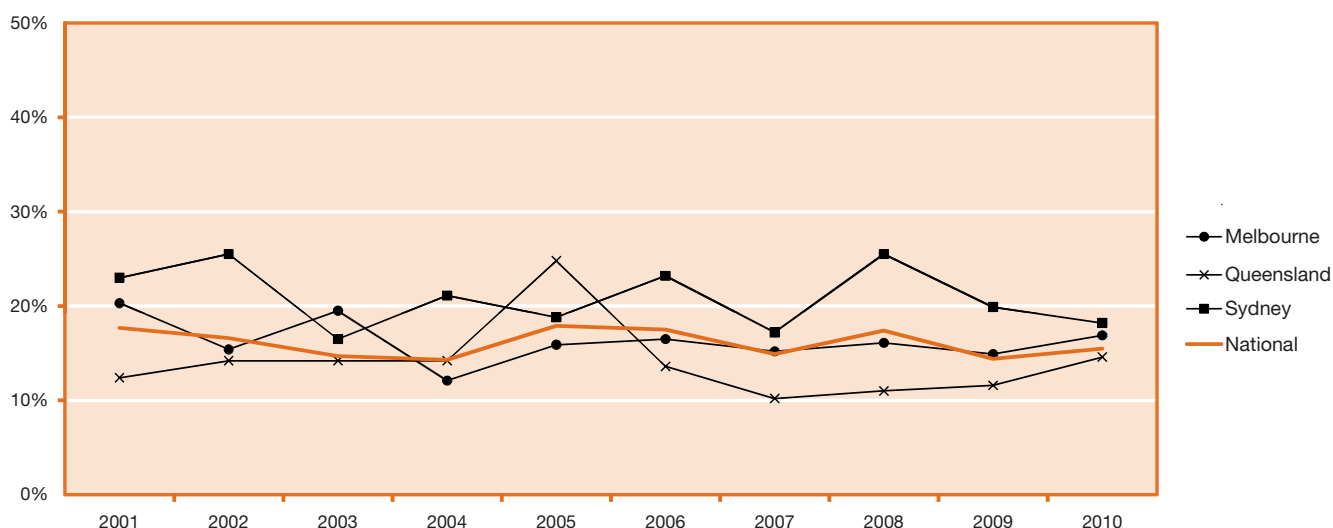
Nationally, the proportion of HIV-positive men recruited into the GCPS has been in the range of 14–18% between 2001 and 2010 (see Table 15 and Figure 12). The Sydney survey generally recruits the largest proportion of HIV-positive men, followed by Melbourne and Queensland. This appears to reflect the size of the gay male and HIV-positive populations in each jurisdiction (Prestage et al, 2008). Please note that the smaller surveys (Adelaide, Canberra and Perth) have been omitted from this section, as the relatively small numbers of HIV-positive men recruited in these locations may make the analysis unreliable.

The proportion of HIV-positive men participating in the GCPS appears to

be relatively stable over time. National estimates, on the other hand, suggest that the number of people living with HIV has increased substantially during the reporting period, and the majority of infections continue to occur among gay and other homosexually active men (National Centre in HIV Epidemiology and Clinical Research, 2010). We therefore would have expected the proportion of HIV-positive men in the GCPS to gradually increase over time. However, because an increase in prevalence has not been observed, this suggests that the social and demographic profile of HIV-positive gay men has changed over time, and that HIV-positive men are less likely to be recruited into the GCPS than we might otherwise expect. The recruitment focus of the GCPS (on gay men who live in metropolitan areas and who are involved in urban gay life) has not changed during the reporting period. That suggests the potential underrepresentation of HIV-

Table 15: Men who are HIV-positive: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Melbourne	20.3	15.4	19.5	12.1	15.9	16.5	15.2	16.1	14.9	16.9	ns	ns
Queensland	12.4	14.2	14.2	14.2	24.8	13.6	10.2	11.0	11.6	14.6	ns	↑
Sydney	23.0	25.5	16.5	21.1	18.8	23.2	17.2	25.5	19.9	18.2	ns	↓
All six states/ territories	17.7	16.6	14.7	14.3	17.9	17.5	14.9	17.4	14.4	15.5	ns	ns

**Figure 12: Men who are HIV-positive: GCPS, 2001–2010**

positive men in the GCPS may be due to HIV-positive gay men becoming less likely to live in metropolitan areas, and that HIV-positive men may have become less engaged in urban gay life. HIV-positive men may also have become more reliant on the internet rather than physical venues to socialise with other gay men (see section 1.2 above).

3.2 Uptake of antiretroviral treatment among HIV-positive gay men

Martin Holt and Limin Mao

Use of combination antiretroviral therapy by HIV-positive men in the GCPS is shown in Table 16 and Figure 13. Please note that the smaller surveys (Adelaide, Canberra and Perth) have been omitted from this section, as the

relatively small numbers of HIV-positive men recruited in these locations may make the analysis unreliable. The national trend indicates that generally over 60% of HIV-positive men in the GCPS reported being on antiretroviral therapy between 2001 and 2010. Please note that this is a markedly higher level of treatment uptake than we reported last year (Hopwood et al., 2010), as we have modified the age standardisation procedure this year.

In 2010, over two-thirds of HIV-positive men in the Melbourne, Queensland and Sydney surveys reported being on treatment. While the national trend indicates that the proportion of HIV-positive men on treatment is increasing over time, we note that there has been substantial fluctuation in this indicator during the reporting period.

Table 16: HIV-positive men on antiretroviral treatment, GCPS 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Melbourne	61.4	75.3	60.6	63.8	56.5	55.3	51.5	63.3	61.3	69.7	ns	↑
Queensland	57.5	53.3	54.6	63.5	55.3	71.9	64.4	66.1	61.5	68.5	↑	↑
Sydney	68.3	64.2	70.9	54.9	64.4	54.7	53.2	70.6	73.5	68.9	↑	ns
Six states/ territories	63.4	66.2	63.5	61.9	60.3	60.1	57.2	68.0	67.4	69.5	↑	ns

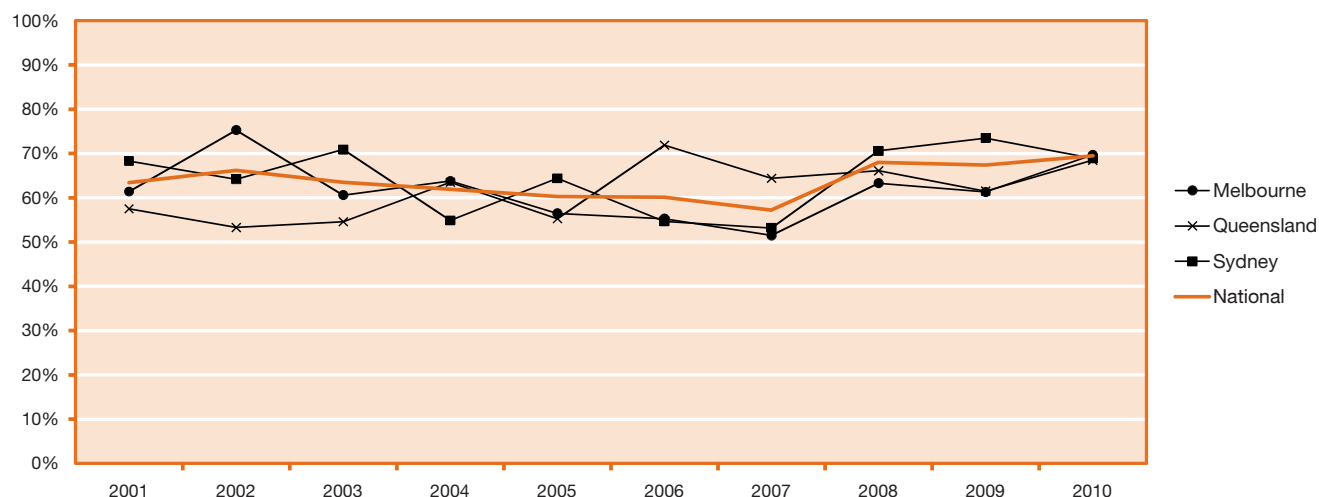


Figure 13: HIV-positive men on antiretroviral treatment: GCPS, 2001–2010

Since 2002, HIV-positive men in the GCPS have been asked to indicate their last HIV viral load test result. Table 17 and Figure 14 show the proportions of HIV-positive men reporting a detectable viral load (having a detectable viral load is an indicator of increased viral replication and therefore infectiousness). Please note that this includes all HIV-positive men, regardless of whether they are receiving treatment or not. As above, the smaller surveys (Adelaide, Canberra and Perth) have been omitted from this section.

There have been significant reductions in the proportions of HIV-positive men reporting a detectable viral load in all three eastern states since 2002. In Melbourne and Sydney the proportion reporting a detectable viral load has more than halved during the reporting period. This probably reflects ongoing improvements in the targeting and delivery of antiretroviral treatment so that more people who need treatment are receiving it and the treatment they receive is more effective.

Table 17: HIV-positive men who reported a detectable viral load: GCPS, 2002–2010

	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Melbourne		38.4	33.5	44.7	37.0	39.9	23.4	30.1	15.6	↓	↓
Queensland	41.5	44.9	30.8	38.9	33.3	38.3	26.3	29.5	25.7	↓	ns
Sydney		38.1	41.8	36.6	38.0	34.2	29.2	23.4	16.5	↓	↓
All three eastern states	41.5	40.1	34.1	39.5	35.5	35.6	26.7	26.5	18.5	↓	↓

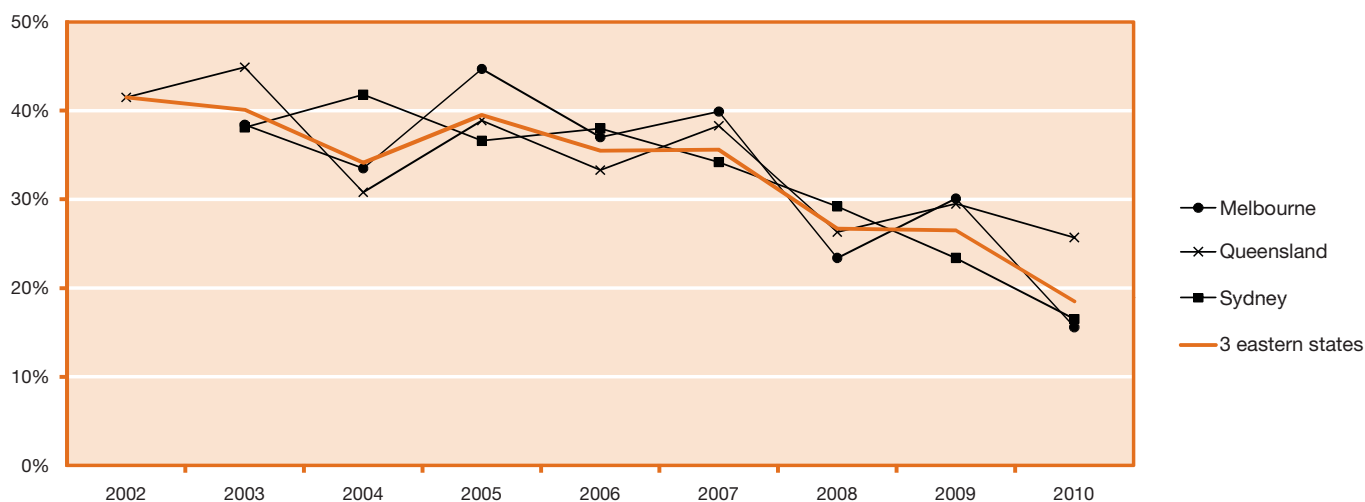


Figure 14: HIV-positive men who reported a detectable viral load: GCPS, 2002–2010

3.3 Experience and expression of HIV-related stigma

John de Wit, on behalf of the study teams

The outlook for people living with HIV has dramatically changed over the past decade or so, primarily due to the impact of antiretroviral therapies in the mid-1990s. Nevertheless, living with HIV continues to pose many challenges for the individuals and communities it affects. According to both anecdotal evidence and findings from international research, stigma and discrimination remain major ongoing challenges for individuals living with HIV. There is a substantial body of international research that documents HIV-related stigma and discrimination. This literature outlines the negative experiences of people living with HIV, as well as the range of contexts in which these occur, and sometimes also provides evidence on predictors of stigma. However, to date not a great deal of research on HIV-related stigma and discrimination has been conducted in Australia. In view of the significant consequences of HIV-related stigma and discrimination for people living with HIV and their communities, NCHSR has initiated a program of research into stigma related to HIV as well as hepatitis C that can inform policy and practice to address stigma and discrimination.

In collaboration with the AFAO–NAPWA Education Team NCHSR conducted the HIV Stigma Barometer study that aimed to assess HIV-related stigma and discrimination perceived by HIV-positive people in Australia and expressed by HIV-negative and untested people (study team: John de Wit, Dean Murphy, Simon Donohoe & Philippe Adam). This online survey went live on 1 December 2009 and recruitment was open for a period of two months, ending on 31 January 2010. Respondents were recruited through several different sources, including through email lists of community organisations, banner advertisements on gay chat sites and social networking sites, and through advertisements and a group on Facebook. The study sample comprised 1,260 gay and other men who have sex with men. Of these men, 915 (72.6%) were HIV negative, 214 (17.0%) were HIV positive, and 131 (10.4%) were of unknown HIV status (either because they had never been tested or were unsure of their status). All respondents answered 22 items regarding attributions of responsibility, negative emotional reactions, social distancing and sexual exclusion they experienced (HIV-positive men) or held (HIV-negative and status unknown men).

Analyses conducted to date show that HIV-positive men experience low levels of attributions of responsibility and social distancing and moderate levels of negative emotional reactions. Perceived stigma is highest with respect to experienced sexual exclusion. Expressions of HIV-related stigma of HIV-negative and status unknown men are similar to stigma experienced by HIV-positive men. This cross-validation suggests that HIV-related stigma among gay men mostly plays out in the sexual domain, through the exclusion of HIV-positive men as sexual or romantic partners by HIV-negative and status unknown men. Among HIV-negative and status unknown men, HIV-related

stigma is associated with higher perceived risk of HIV transmission from an HIV-positive man with unknown viral load, suggesting that fear of infection may contribute to HIV-related stigma. Furthermore, HIV-negative and status unknown men who expressed more HIV-related stigma, are more likely to select their sexual partners based on (similar) HIV status, suggesting that serosorting to reduce risk of HIV transmission may (at least in part) reflect and compound HIV-related stigma among gay men.

In collaboration with NAPWA, NCHSR is conducting a quantitative survey that is part of NAPWA's HIV stigma audit (Study team: Loren Brener, Sean Slavin, John de Wit & Philippe Adam). This online survey of people living with HIV (PLHIV) assesses a range of experiences associated with HIV stigma to strengthen understanding of its social and psychological effects. The survey also aims to understand what enables PLHIV to be resilient to stigma. Data were obtained from almost 700 PLHIV, mostly gay men, who were recruited using a range of online and offline strategies. Participants answered questions regarding their experiences with HIV stigma, depression, anxiety, stress, resilience, quality of life and self-esteem, using modified versions of existing scales and well as some measures newly developed for this study. Data collection has been completed and preliminary data analysis indicates that participants experience substantial HIV-related stigma. Further analysis will focus on resilience and how this acts as a buffer against the experiences of stigma for PLHIV. This is in line with the idea that a focus on building resilience and coping among those who experience stigma is likely to have a positive impact on their health status and well being, and hence will mitigate against the negative consequences of stigma.

In collaboration with ASHM, NCHSR completed a review of the existing evidence on HIV- and hepatitis C-related stigma and discrimination in the healthcare sector (Study team: Loren Brener, Robyn Horwitz, Denton Callander & John de Wit). This review in particular focussed on the experiences and implications of stigma and discrimination in the health care sector for people living with either HIV or HCV. Evidence was obtained from the Australian and international peer-reviewed and grey literature as well from interviews with key stakeholders. Findings have been published in a recent report (Australasian Society for HIV Medicine & National Centre in HIV Social Research, 2011).

3.4 Heterosexual men, HIV and masculinity

Asha Persson and Kate Reakes

For men living heterosexually with HIV in Australia, their perceived sexual orientation and sexual identity can be a major concern. In their interactions with the Heterosexual HIV/AIDS Service (Pozhet), and when participating in social research (the Straightpoz study), these men often seem compelled to affirm their identity as heterosexual men.

When these men first enter Pozhet, re-engage with the service, or meet new staff the first time, they tend to

emphasise their heterosexuality, despite the service's unambiguous name, and will commonly relate stories that foreground what could be described as dominant "masculine" traits, such as physicality, hard work, sporting achievements, getting into fights, and past sexual pursuits with women. These men often express relief about being able to access a service for "straight" men where their sexual orientation "isn't an issue". Yet, curiously, many still feel a need to declare their heterosexual identity. Similar expressions of identity were common throughout the course of the Straightpoz Study, a qualitative longitudinal study exploring the experiences of men and women living heterosexually with HIV (Persson, Barton, & Richards, 2006; Persson, Richards, Barton, & Reakes, 2009). Despite the explicit focus of this study, men who have participated have nonetheless shown a need to confirm a heterosexual identity to the interviewing researcher. They have done so by clarifying that they are not gay or else by emphasising their engagement in traditionally "masculine" pursuits, as described above. Some have elaborated extensively on their sexual history with women, or talked about their present or future desires to fulfill gender role expectations as husbands, providers, or fathers. Many have expressed their discomfort about health workers or acquaintances making assumptions about their sexuality on the basis of their HIV status, or described how they have not felt welcome or comfortable when accessing predominantly gay-oriented HIV services.

On the face of it, this seeming need to emphasise heterosexuality can lend itself to a perception of potential homophobia. However there is a need to better understand this pervasive and persistent narrative among these men and its relationship to the similarly pervasive and persistent power of heterosexuality as a norm in society. The concept of "heteronormativity" describes the power of heterosexuality when it operates as a norm, as a regulatory practice that sets the conditions of possibility for gender identity and behaviours. As such, scholars argue that heteronormativity should be distinguished from homophobia; because the use of homophobia as a political concept encourages an interpretation that reduces the political and material effects of heteronormativity to the explicit prejudices of homophobic individuals, and thereby risks obscuring the larger, systemic problems at play. Heteronormativity reveals institutional, cultural and legal norms that reify and encode the norm of heterosexuality. It reveals that heterosexual desire and identity are not merely assumed; they are expected and demanded in multiple ways. Everyone, straight or queer, is measured and judged from the perspective of this norm. It privileges and rewards those who conform to it, while stigmatising or rendering invisible those that deviate from it (Chambers, 2007). Within this heteronormative framework, the cultural formation of gender identity emerges out of negation. Heterosexual masculinity, in this case, is defined by what it is not, by what it rejects. Inherently unstable and fragile, it depends on the repetitive repudiation of homosexuality for its own security and coherence (Butler, 1997).

Because of the historical and cultural association between HIV and homosexuality in Australia, having HIV clearly deviates from heteronormative masculinity. For men in the Straightpoz study, the cultural inscribing of HIV as "gay" was often experienced as a loss of control over their identity. Regardless of how they got HIV, they often felt as if they were being forced into an "identity corner" where they had to counter or pre-empt other people's assumptions about their sexuality, or else keep their HIV status a secret. If a heterosexual man is concerned that his HIV-positive status signals homosexuality, it can lead to hyper-conformity with heteronormative masculinity. He might try to reduce the dual stigmas of HIV and homosexuality by actively dissociating himself from one of them. In some instances where men have a history of engaging in both gay and straight sex, the HIV diagnosis becomes as a catalyst for returning to, or entering into, exclusive heterosexuality. But while the stigma surrounding HIV can cause some men to respond to their diagnosis by embracing heterosexuality, it also thwarts their perceived ability to meet the expectations and norms of heterosexual masculinity.

In our work, we have encountered many men who have given up on the possibility of intimate relationships and fatherhood, who have isolated themselves from friends, family and the wider community as a result of secrecy and shame, and who have ceased work due to illness or fear of unwanted disclosure. Due to poor mainstream awareness of the implications of living with HIV, many men believe that their life's ambitions are made redundant as a result of their HIV diagnosis. It is also important to note that many heterosexual men are diagnosed late and often with many health complications that compromise their ability to have sex, to reproduce or to work. Inability to meet the perceived standard of heteronormativity can negatively affect the mental health of men and has been related to levels of psychological distress, leading to experiences of both internal and external stigma (Szymanski & Carr, 2008).

In conclusion, Australian heterosexual men experience a privileged position in society. When this position is compromised and their identity "spoiled" (Goffman, 1963), by a condition not frequently associated with the mainstream population, such as HIV, greater importance might be placed on reclaiming their status as a heterosexual man. Reinforcement of sexual orientation and sexual identity might be a way to regain a sense of power and normality in the face of a spoiled identity or when experiencing HIV-related stigma. While heterosexual men with HIV cannot change or control their serostatus, their perceived sexual orientation and sexual identity might constitute aspects of their life and self that they can perhaps more readily control. This is a complex issue affecting an often isolated population of men living with HIV, and we should therefore be careful not to dismiss it as simply an expression of homophobia, but rather try to understand the dynamics behind it and the purposes it may serve.

3.5 The HIV General Practice Workforce Project: Interviews with 'key informants' from government, non-government and professional organisations

Christy Newman, Michael Kidd, Robert Reynolds, Peter Canavan, Susan Kippax, and John de Wit

HIV care is provided in a range of settings in Australia, but as the population of people living with HIV across the nation becomes increasingly larger, more dispersed, and older, the recruitment and retention of an expert primary care workforce, which provides quality and accessible HIV care in the community, is increasingly important. Yet the number of GPs training as community-based HIV medication prescribers has been identified in both policy and advocacy debates as potentially insufficient to replace those retiring, reducing hours or changing roles.

In 2009, NCHSR was funded by the NHMRC to conduct the first national study of the HIV general practice workforce in Australia. In collaboration with a range of research partners, including Flinders University, NAPWA, ASHM, the Royal Australian College of General Practitioners and AFAO, this qualitative study aims to: 1) identify the key factors that influence the decision of Australian GPs to pursue or continue careers in HIV clinical care, given the increasing number and age of people living with HIV in Australia; 2) compare the professional interests and aspirations of GPs who have worked in HIV medicine for various lengths of time; 3) examine barriers and incentives to providing HIV care in different primary care settings, including areas of high and low HIV caseloads, and urban and regional Australia. In achieving these aims, the study will also produce new knowledge on the role of GPs in maintaining and enhancing the health of people living with HIV in Australia.

The broader study includes in-depth interviews with clinicians working in general practice settings, and an analysis of how the role of the GP is represented in Australian policy, education and research documents about HIV care. The initial publications to come out of the study are focussed on the first round of 'key informant' interviews. We conducted semi-structured interviews between February and April 2010 with 24 purposively recruited professionals who held senior roles in organisations that influence Australian HIV care policy. Participants represented all the Australian states and territories, and the setting in which they were currently engaged was split across the non-government (10), government (7) and professional education/training (7) sectors. The scope of their professional interest in HIV was mostly state-level (12) and national (9), and three participants were focused on particular affected populations. Interview questions aimed to understand what these key informants believed to be the most important issues facing the HIV general practice workforce in Australia today.

Two peer-reviewed journal articles are currently in press (Newman, de Wit et al., in press; Newman, Kidd et al., in press) from this phase of the study. The first article

explores how key informants described the role of the GP in the Australian approach to HIV care, and how they conceptualised the challenges that are currently inspiring debate around future models of care. The second article considers how these key informants characterised GPs as being 'moved' to pursue or sustain a special interest in HIV medicine. While these two articles are very much focussed on the particular context of the Australian health system, and of HIV care within that, we believe they, and others to be published during the remainder of the study, will be useful for also understanding how health professionals become engaged in other areas of specialist interest.

3.6 Future developments

HIV-positive people from culturally and linguistically diverse backgrounds: Negotiating the intersections of migration, gender and sexuality

Henrike Körner

This study explores how being HIV-positive and being a migrant from an ethnic minority background interact in shaping the lives of individuals. It explores how these phenomena are interwoven and how their intersections are experienced by gay men, heterosexual men and heterosexual women from culturally and linguistically diverse backgrounds. For migrants, language problems, insecure residency status, and lack of familiarity with health care systems pose structural and cultural barriers to health care, for men and women alike (Körner, 2007a), and knowledge about HIV, culture and belief systems from the country of origin continue to have a strong influence on how migrants experience living with HIV (Åsander et al., 2004).

Disclosure of HIV status is deeply related to ethnicity, gender and sexual orientation. Gay men from ethnic minority backgrounds have much lower rates of disclosure than Caucasian gay men (Kennamer, Honnold, Bradford, & Hendricks, 2000; Keogh, Henderson, & Dodds, 2004). For women, disclosing HIV status is particularly problematic because of concerns about burdening others (Körner, 2007b), and fear of violence from their families (Anderson & Doyal, 2004). There are also differences according to gender and sexual orientation in the way HIV-positive people from migrant backgrounds use health services. For example, research has found that Caucasian gay men were more self-directed, while the access of Spanish-speaking Latina women to services was driven by agencies (Takahashi & Rodriguez, 2002).

So far there has been only one study, of HIV-positive African migrants in London, that systematically investigated the interrelations of gender, sexuality, HIV-positivity and migration. Heterosexual African women faced a major moral dilemma in reconciling their HIV positivity with motherhood (Doyal, 2009). For heterosexual African men the main challenges were managing their illness and the economic and sexual expectations of what it means to be a man (Doyal, 2009). For African gay and bisexual men there was a constant need to manage the contradictory reality of being gay/bisexual, an African, and an HIV-positive

person. (Paparini, Doyal, & Anderson, 2008). In Australia there has been no research that systematically explores the experience of people with HIV from CALD backgrounds and the interrelationships between migration, ethnicity, gender and sexuality. This study fills this gap.

Multiple marginalisation due to HIV-positive status, ethnicity, gender and/or sexuality require solutions that take into account the interaction of these contingencies. Intersectionality is both a theoretical concept and an approach to empirical research that pays attention to such interactions and acknowledges that different dimensions of social life cannot be neatly separated out into discrete categories (Brah & Phoenix, 2004; Hancock, 2007). As a concept, intersectionality is preferable to 'difference', as 'difference' implies a norm and a deviation from this norm (Burman, 2004). At a theoretical level, an intersectional study will provide a more nuanced picture of the gendered nature of the HIV-epidemic in Australia that goes beyond statistics of new diagnoses and country of birth. It will also allow us to develop a more nuanced understanding of HIV-related stigma that goes beyond 'sexual deviance'. At a practical level, the findings from this study will: (1) enable the Multicultural HIV/AIDS and Hepatitis C Service (MHAHS) and other service providers to better promote their services to potential clients from CALD backgrounds; (2) contribute to needs-specific health promotion programs; (3) contribute to the capacity of ethnic communities in Sydney to address HIV-related stigma in their communities, for example, by developing media campaigns.

To explore HIV-positive people from CALD backgrounds' experiences of living as migrants, and as men and women

with HIV, qualitative research methods are used. A qualitative approach is especially appropriate for the study of vulnerable people and sensitive topics (Liamputtong, 2007). It allows exploring the thoughts, perceptions, experiences and attitudes of research participants, the meanings they attach to their experiences and how this, in turn, influences their actions and their social lives (Minichello, Aroni, & Hays, 2008). The study is aiming for a purposeful sample of 30 participants (10 gay men, 10 heterosexual men and 10 heterosexual women) from a variety of ethnic backgrounds to be recruited among current and former clients of the MHAHS and other service organizations for people living with HIV. The sample is designed to achieve diversity rather than representativeness.

Data are being collected through semi-structured in-depth one-on-one interviews. Interviews involve mainly open-ended questions to afford participants the opportunity to speak about their perceptions, views and experiences in their own way. Topics explored in the interviews include, but are not limited to, the following: reasons for and circumstances of migrating to Australia; use of and pathways/referrals to health and social services; connectedness with other people from the same ethnic background/other ethnic backgrounds; changes in socializing since HIV diagnosis; old and new social networks; parenthood; work and career; hopes and expectations for the future; and for gay men, being gay in Australia compared to being gay in their country of origin; and connectedness with gay community. Recruitment and data collection commenced in April 2011 and is continuing until the target has been reached.

Spotlight Impact of alcohol and drug use on the diagnosis and management of depression in gay men: A sub-study of the Primary Health Care Project on HIV and Depression

Christy Newman, Joanne Bryant and Martin Holt

General practitioners (GPs) have identified that depression can be difficult to diagnose in populations with high rates of alcohol and other drug (AOD) use. This is a particular concern with gay men who are a population known to engage in high rates of AOD use and who are vulnerable to depression. With funding from beyondblue – the national depression initiative, the National Centre in HIV Social Research conducted secondary analyses of data collected for the Primary Health Care Project on HIV and Depression (which was funded by the National Health and Medical Research Council). Our aims in this sub-study have been to explore more closely the issues associated with AOD use in that data, and to develop and distribute a short report of key findings about how AOD use might impact the diagnosis and management of depression in gay men, particularly in general practice settings.

Two papers from this sub-study are currently in press and a third is under review. The aim of the first paper (Holt et al., In press) was to clarify the role of AOD use in major depression using survey data collected from 531 gay men attending high-HIV-caseload general practices in Adelaide and Sydney, Australia. The second paper (Bryant et al, In press) uses data from those surveys with gay men in combination with surveys from their GPs to describe concordance between 'doctor' and 'patient' assessments of major depression and, in particular, whether AOD use undermines concordance. The third paper (Newman et al, Under review) examines the theme of AOD use in the available qualitative data, which comprised in-depth interviews with 16 general medical practitioners working in seven 'gay-friendly' practices in Sydney, Adelaide and a rural-coastal city in New South Wales, and 40 gay men with depression recruited through four of the Sydney and Adelaide practices. This paper identifies and compares the beliefs articulated by doctors and patients about the role of illicit drug use in gay men's depression, and consider how to address any divergent beliefs which may create particular barriers to achieving open communication and 'shared decision making' in this setting.

A short report of key findings from this study will be distributed towards the end of 2011 to interested clinicians, researchers, advocates and educators who work with gay men.

4

Drug use and drug treatment



4.1 Drug use by gay and other homosexually active men

Martin Holt and Limin Mao

In previous versions of the Annual Report of Trends in Behaviour we have reported on a range of drug use by gay and other homosexually active men. Last year we only reported use of one drug, amyl nitrite or 'poppers', because it is commonly used by gay men as a euphoric and as a muscle relaxant for anal sex (Hopwood et al., 2010). This year we present a slightly different analysis, focusing on those men who report the use of amyl nitrite, Viagra (or similar drugs) and (meth)amphetamine in the six months prior to being surveyed. Viagra and similar drugs may be used by gay men to maintain erectile performance when using condoms, particularly when

intoxicated (Holt, 2009). Amphetamines (particularly crystal methamphetamine) are used to boost mood and to enhance endurance for partying and for sexual play (Hurley & Prestage, 2009). Those men who use all three drugs may be indicative of men who sometimes use drugs for extended sexual play, and therefore they may be a particular target group for health promotion and HIV prevention.

The proportion of men across all six participating states and territories reporting the use of amyl nitrite, Viagra and (meth)amphetamine is shown in Figure 15 (page 28). The proportion of men reporting the use of these three drugs is relatively small, varying between 5% and 7% since 2004. Although it increased briefly in 2006, otherwise the proportion of men reporting the use of these three drugs has been relatively stable for the last seven years.

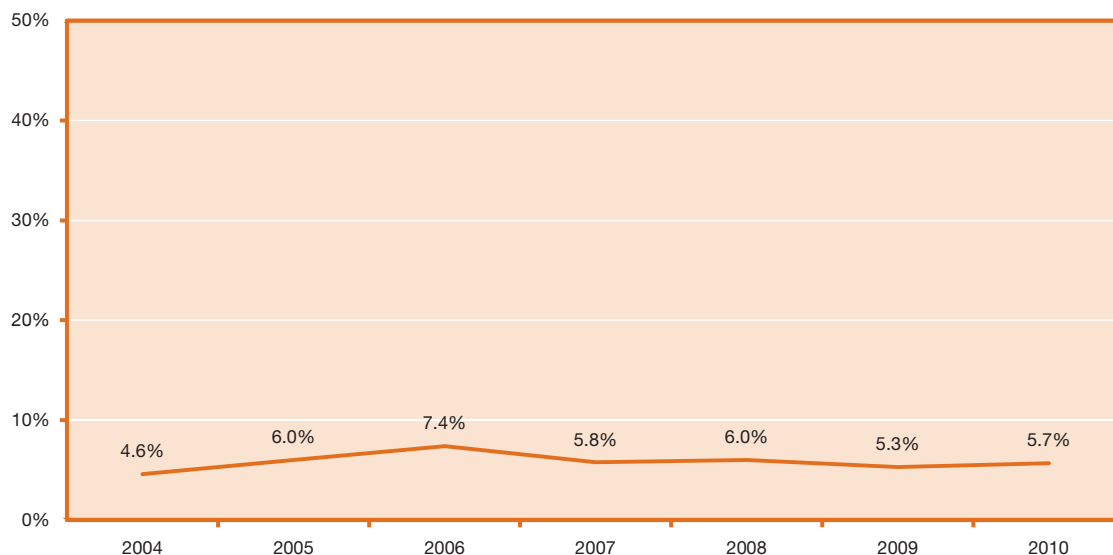


Figure 15: Men who reported using amyl nitrite, Viagra and (meth)amphetamine in the six months prior to the survey: GCPS, 2004–2010

4.2 Drug injection by gay and other homosexually active men

Martin Holt and Limin Mao

Injecting drug use (IDU) remains relatively rare among gay men, although it is much more common than among the general population (see Table 18 and Figure 16). Please note

that, due to infrequent reporting the rates of IDU by gay men in Adelaide, Canberra and Perth have been omitted, although data from these locations is included in the national rate.

Nationally, the proportion of men reporting any IDU in the six months prior to survey has declined slightly from around 8% in 2001 to 5% in 2010. Rates of IDU by gay men are generally somewhat higher in Sydney compared

Table 18: Men who reported any injecting drug use in the six months prior to the survey: GCPS, 2001–2010

	2001 %	2002 %	2003 %	2004 %	2005 %	2006 %	2007 %	2008 %	2009 %	2010 %	Overall trend	Trend in last 3 years
Melbourne	8.8	8.0	6.0	5.4	6.2	8.0	4.9	6.2	6.7	4.5	↓	ns
Queensland	7.0	10.2	8.5	7.7	4.0	8.0	2.9	5.1	6.1	5.3	↓	ns
Sydney	8.7	5.1	8.6	10.2	6.7	6.5	8.4	8.1	7.8	6.9	ns	ns
All six states/ territories	8.1	7.5	7.6	7.5	5.7	7.2	5.6	6.6	6.5	5.4	↓	ns

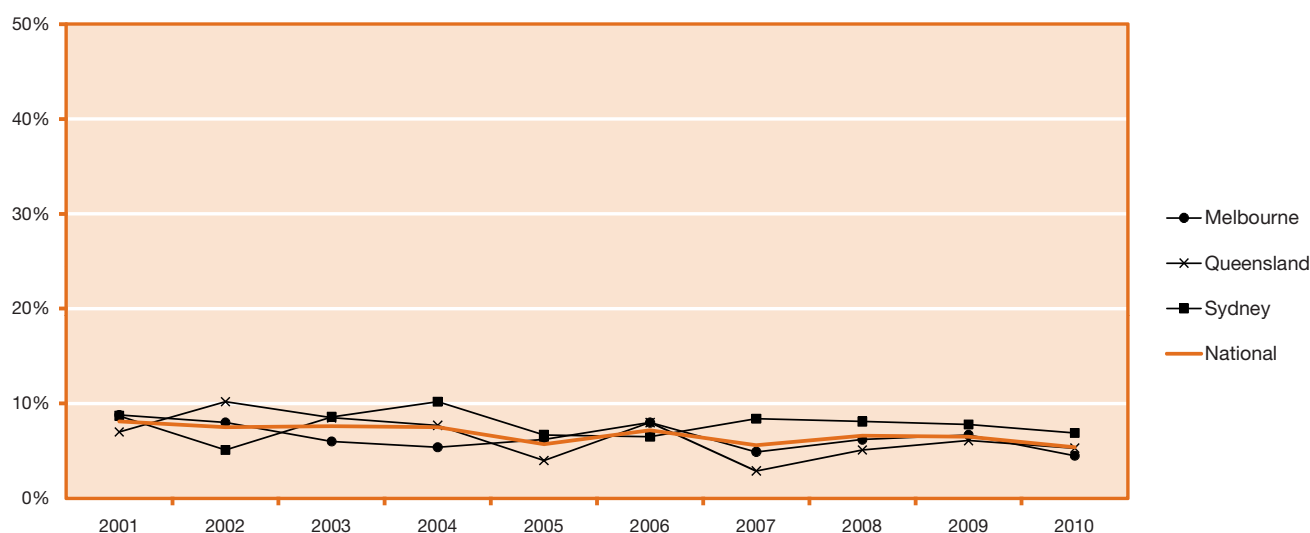


Figure 16: Men who reported any injecting drug use in the six months prior to the survey: GCPS, 2001–2010

with Melbourne and Queensland. There have been no significant changes in these rates in the last three years. Although it is not shown here, we note that rates of IDU among HIV-positive men are disproportionately high compared with HIV-negative men, with IDU being reported by up to one in six HIV-positive men in the eastern states (Hull et al., 2011a, 2011b; Lee et al., 2011).

4.3 Syringe coverage among people who obtain injecting equipment from pharmacies in NSW

Joanne Bryant, Dana Paquette and Hannah Wilson

Since 2006, data has been collected from people who obtain sterile needles and syringes from pharmacies in metropolitan Sydney and the Newcastle and Hunter regions of NSW. In 2009, the survey area was expanded to incorporate all regions of NSW. During the study period in December, pharmacy staff distributed a self-complete survey to each person who bought or exchanged sterile needles and syringes. Respondents were given \$10 on return of their survey. Forty pharmacies facilitated the study in 2009, collecting a total of 490 surveys from clients of their NSP services. The response rate was 78.5%.

We used the 2009 data to calculate individual-level syringe coverage using a method developed by Bluthenthal, Anderson, Flynn and Kral (2007). This method calculates the ratio of syringes obtained for personal use to the total number of injections per individual in a given time period. In other words, it measures the extent to which a person obtains at least as many syringes as their number of self-reported injections. We summed the total number of syringes obtained (from each of three sources: pharmacies, needle and syringe programs, and peers), less the number given away, and multiplied this by the number of visits (to a pharmacy or NSP) or the number of times syringes were received from a peer. The total number of retained syringes was then divided by the total number of reported injections in the previous month, and multiplied by 100 to derive the percent of syringe coverage for each survey respondent.

There was a U-shaped distribution of syringe coverage with many people having very high or very low coverage. About a quarter of participants (23%) reported having less than 50% syringe coverage, 14% had 50–99% coverage, 11% had 100–149% coverage, and half (51%) had 150% coverage or more. Overall, two-thirds of respondents (63%) reported adequate coverage ($\geq 100\%$). Bivariate analysis indicated that respondents with inadequate coverage were more commonly men (73.1% vs 58.6%, $p = .007$) and were younger (34.4 years vs 36.7 years, $p = .023$). Also, they more commonly reported injecting daily or more frequently (72.2% vs 43.8%, $p < .001$), and less commonly reported that they were currently receiving treatment for their drug use (45.7% vs 59.2%, $p = .019$). A significantly higher proportion of respondents with inadequate coverage reported receptive syringe sharing, compared to those with adequate syringe coverage (40% vs 25.8%, $p = .003$). Finally, about

two-thirds of respondents with inadequate coverage reported having exclusively used a pharmacy in the previous month, a proportion significantly higher than among respondents with adequate coverage (65.3% vs 45.2%, $p < .001$). There was no significant relationship between syringe coverage and peer distribution; respondents who had received sterile syringes from their peers were no more or less likely to have adequate syringe coverage. More information about this study can be found in Bryant, Paquette and Wilson (in press).

4.4 The role of respondent-driven sampling in the behavioural surveillance of people who inject drugs

Dana Paquette, Joanne Bryant and John de Wit

Many developed countries, including Australia, make use of service-based sampling for behavioural surveillance surveys of people who inject drugs (PWID), in which participants are recruited from services such as needle and syringe programs (NSP). The major limitation of service-based sampling is that the sample captured is likely a biased subset of the population. Respondent-driven sampling (RDS) is a relatively new sampling method that is similar to snowball sampling in that participants are asked to recruit people they know. The developers of RDS claim it has several advantages over other sampling methods, including the calculation of unbiased population estimates if certain assumptions are met. RDS has become increasingly popular as a sampling method for behavioural surveillance. However, few reports have been published on the use of RDS in developed countries outside of the US. This study aimed to describe the role of RDS in the behavioural surveillance of PWID in Sydney.

An RDS study of PWID was conducted in 2009 in south east Sydney. Five people were selected to start the recruitment, which led to a sample of 261 participants over 16 waves. The initial five participants were given three recruitment coupons and told to give the coupons to their peers. The coupons allowed the recruits to come in for an interview. Participants were reimbursed for completing the survey, and for each of their recruited peers that were interviewed. This process was repeated for new recruits, and sampling was continued until the target sample size was reached ($N = 258$). The study was based out of an NSP run by a state-based, user-driven organisation.

This study showed that it was possible to conduct an RDS study with minimal existing resources (Paquette, Bryant, Crawford, & de Wit, 2011). This was facilitated by several contextual factors, including an ongoing collaboration with the organisation who ran the NSP, no collection of biological samples and the use of a brief, self-completed questionnaire. Basing the study out of the NSP led to an increased awareness of the organisation and its services among the RDS participants, and an increase was seen in the number of services provided during and after data collection. The main challenge involved crowd control. However, an examination of the

recruitment process and the assumptions underlying the calculation of unbiased population estimates suggested that the population estimates resulting from the study were likely biased (Paquette, Bryant, & de Wit, 2010). Furthermore, a comparison of the participants in this RDS study with participants in two other behavioural surveillance surveys of PWID in Sydney that sample from NSP and pharmacies, respectively, found that only a small proportion of RDS participants would not have been accessible through the combination of these service-based surveys. No marked differences in demographic profile were found between the participants from the different sampling methods and RDS was not any better at capturing PWID who were at higher risk and/or more marginalised than those captured through the service-based sampling studies (Paquette, Bryant, & de Wit, 2011a, 2011b).

Despite that RDS did not live up to its claims of unbiased population estimates and was not able to capture a more broad or more at-risk sample of PWID when compared to service-based sampling, there were benefits found to using RDS. In particular, the RDS study provided useful information on injecting networks (Paquette, Bryant, & de Wit, 2011c), information that is typically not collected in behavioural surveillance surveys using alternative sampling methods. RDS provides measures of how well people are connected to each other and whether people form network clusters according to particular demographic or drug use characteristics. This network information can be used to gain insight into potential network barriers or facilitators that could impact on the success of peer interventions. Peer interventions have been shown to be effective in improving knowledge and reducing risk practices among PWID.

4.5 National Treatment Service Users Project: Phase 2

Carla Treloar and Jake Rance

NCHSR has enjoyed a long-term partnership with AIVL (the Australian Injecting and Illicit Drug Users League) in exploring consumer participation in drug treatment services during two phases of the National Treatment Service Users Project. The focus of the project has been to explore the involvement of service users in decision making about the planning and delivery of services they utilise. In the first phase of the project, surveys of service providers and service users were conducted in three states (New South Wales, Victoria and Western Australia). During this phase we drew upon models employed in general health care to develop one appropriate to consumer participation within drug treatment settings.

In the second phase, completed in 2010, consumer participation demonstration projects were established and evaluated in five drug treatment services, including opiate substitution ($n = 3$), outpatient detoxification ($n = 1$) and residential rehabilitation programs ($n = 1$)

(Australian Injecting & Illicit Drug Users League, 2011). The services were drawn from the same states as those in phase 1. The evaluation involved interviews with four groups of participants: key staff (those directly involved in consumer participation activities); key consumers (those directly involved in consumer participation activities, such as consumer representatives); staff not directly involved in consumer participation activities; and consumers not directly involved in consumer participation. Interviews were conducted at baseline and at post-implementation (3–6 months after the project had begun) with a total of 106 participants.

All projects aimed to recruit one or more consumers into consumer representative roles. Although the goals of the projects varied, all demonstration projects experienced problems in achieving their stated outcomes. A number of service and system level issues directly influenced the progress of the projects. Staff and management explanations for this situation included a belief that services are over-stretched and under-resourced. Services also consistently acknowledged that they had underestimated the amount of work involved in implementing the demonstration projects. In analysing the implementation and progress of demonstration projects, a number of inter-connected themes were apparent. The importance and framing of some issues shifted significantly between baseline and evaluation data collection, suggesting the experience of conducting consumer participation projects was somewhat disconnected from initial expectations.

Levels of awareness and understanding of consumer participation exhibited among consumers across all five sites remained low throughout the project. A clear exception was apparent in those instances where consumer representative positions had been created as part of the demonstration project and the consumers fulfilling these roles were able to be interviewed. Most consumers did value the concept of consumer participation in principle once it had been adequately explained to them. Although staff were generally more likely than consumers to be familiar with the term 'consumer participation' and broadly supportive of it, very few had any practical experience of conducting consumer participation activities in drug treatment settings. Aside from a minority of staff that remained consistently disinterested, opposition among staff appeared strongest when higher forms of consumer participation (such as consumer involvement in staff recruitment or appraisals) were discussed.

A second key finding concerned the notion of 'stability'. At baseline, 'stability' was considered in relation to individuals, particularly consumers, regarding their ability to operate as consumer representatives. However, stability was primarily discussed within post-implementation interviews in relation to the suitability of services to conduct consumer participation projects. That is, what began as an assessment of the readiness of individuals to take on the responsibilities of consumer participation, over the course of the project became more of a concern about the capacity of services to run the project.

A topic of discussion in this project concerned that notion of "who is a consumer" and who can represent service users. Not unlike 'stability', the terms 'ex-user' and 'consumer' have become normalised within the taxonomy of drug and alcohol practice and policy. However, like 'stability', these terms are neither neutral nor fixed: their meaning and application varied across treatment settings and between speakers, from senior staff to consumers and across type of service. The fluidity (and power) of these terms needs to be recognised in the context of this project where each carried considerable currency. These findings suggest that the model of consumer participation needs some further elaboration to account for the possible heterogeneity of treatment services users involved as consumers and consumer representatives.

Expectations of the projects remained low to non-existent among consumers due to universally poor levels of awareness about both the projects themselves and the concept of consumer participation. The exception was among those consumers who had been recruited specifically into the roles of consumer representatives. Staff were mixed in their aspirations for the long-term benefits of consumer participation, but a number of staff interviewed noted the positive impact of consumer participation on consumers in relation to gains in self-confidence and empowerment. At baseline, staff across most services also believed that they did not require any specific training or education in regard to consumer participation. This led to services, as a whole, being somewhat underprepared in their planning, implementation and management of the demonstration projects. The existing culture in most drug treatment settings, including power dynamics between staff and consumers, can result in barriers to communication and trust, which in turn can affect the success of consumer participation in this context. There is a need for careful consideration and planning before services take on consumer participation.

4.6 Future developments

The exposure and transition study: exposure to injecting and hepatitis C among young people at risk

Joanne Bryant, Jeanne Ellard and Carla Treloar

This project, funded by NSW Health, builds on earlier work conducted by NCHSR showing that many young people are exposed to injecting drug use through their social networks.

While existing research provides some information about young people who are at risk for injecting, it generally uses data collected retrospectively from people who already inject rather than those who do not inject but are exposed to injecting.

The aim of this study is to explore socially vulnerable young people's experiences with exposure to injecting, including the context in which exposure to injecting happens, their understandings of the risks of injecting drug use and acquiring hepatitis C, and their knowledge and opinions about blood-borne virus and drug-related health services. Data collection is cross-sectional and comprises a mixed method approach incorporating approximately 300 quantitative surveys and 30 qualitative in-depth interviews. Data collection began in September 2010 and is expected to be complete in August 2011.

The study will provide information about how to maximise vulnerable young people's early introduction to harm reduction services.

Spotlight Perceptions of discriminatory treatment by staff as predictors of drug treatment completion

Loren Brener

Drug treatment retention and completion has consistently been associated with positive outcomes including improved mental and physical health, positive changes in drug use, decreases in criminal activity, and increased employment. Understanding the factors that may contribute to treatment completion is particularly important in light of the high dropout rates among clients in drug treatment. Staff interactions with their clients are an important factor in the quality of care that is provided to people in drug treatment. Yet there is very little research that addresses staff attitudes or clients' perceptions of discrimination and prejudice by staff with regard to treatment outcomes. Healthcare workers report that injecting drug users are often their most difficult clients, as they expect them to be more dangerous, less cooperative, more aggressive, less truthful, less likely to complete treatment, and more demanding than other clients. Perceived prejudice and discrimination in the health sector can impact on receipt of care and health seeking behaviour. People who fear discrimination may be less likely to disclose their health condition if it is associated with stigma and hence may be less likely to receive appropriate care for that condition. Fear of discrimination by health staff is also a deterrent from adhering to health regimens.

This research aimed to assess whether perceptions of discrimination by staff predict drug treatment completion (Brener, von Hippel, von Hippel, Resnick, & Treloar, 2010). The study used a mixed methods approach. Ninety-two clients in residential rehabilitation facilities in Sydney were administered a series of quantitative measures assessing drug history, severity of drug use, treatment history, perceptions of staff discrimination, and treatment motivation. Clients were followed up regularly until an outcome (dropout or completion) was obtained for the full sample. Perceptions of discrimination were a significant predictor of treatment completion, with greater perceived discrimination associated with increased dropout. Qualitative interviews with 13 clients and eight health care workers from these treatment services were then conducted to gain insight into how perceived discrimination may impact on treatment experiences. Clients and staff discussed how they would address the issue of perceived discrimination during the current treatment experience.

Most research on treatment outcomes for people who use illicit substances focuses on variables associated with the client such as motivational status, frequency of drug use and psychological health. This research illustrates the importance of the interaction between staff and client variables in determining outcomes, specifically client perceptions of discrimination by staff. The data show that perceived discrimination is a significant predictor of treatment completion; clients who felt staff did not treat them well were less likely to complete treatment. This finding points to the significance of exploring other, non client-related variables in understanding treatment outcomes.

People who inject drugs may interact with others in particular ways because they anticipate that they will be discriminated against. Studies on perceived stigma have found that expectations can influence what is attended to in a social situation and the inferences that are drawn about others. Similarly, fear of rejection and discrimination can create strained and uncomfortable interactions with those who could potentially stigmatise, such as treatment staff. Research has shown that the more the stigmatising condition is viewed as pivotal in shaping social encounters, the greater the expectation that interactions with others will be influenced by this stigmatised condition. As the qualitative data show, drug-using clients are already sensitised to discrimination and may expect to be treated negatively by treatment staff. These feelings could also be based on past negative experiences in the health sector. The findings of this study point to the need for drug treatment staff to be aware of the potential health consequences of perceived discrimination. As the qualitative data suggest, both staff and clients need to consider any past history of discrimination and negative health care experiences that could shape clients' perceptions of staff within the current treatment encounter. Additionally, staff who have a history of past drug use are perceived by clients to be more sensitive to their experiences, especially in relation to concerns about prejudice and discrimination.

Prevention and treatment of viral hepatitis



5.1 Technical review of hepatitis C health promotion resources

Carla Treloar

NCHSR was funded by NSW Health to undertake a review of existing HCV prevention education resources aimed at people who inject drugs (PWID). While there is much literature about HIV prevention interventions, there are few published studies that have examined the effectiveness of HCV educational interventions and fewer assessing print materials. However, social research has highlighted some important issues for framing HCV prevention strategies. The ability of PWID to adopt safer injecting practices is influenced by structural, social and environmental factors. The risk of arrest, stigmatisation, drug withdrawal, breeches of confidentiality, and violence may play a part in decision making and compete with the priority of HCV prevention. In the context of materials conveying safer injecting

advice to prevent HCV transmission, this study aimed to establish what resources and messages had been produced; catalogue the type of message and delivery format; examine any evaluations of resources or messages; drawing on those evaluation findings, identify successful resources and messages to be replicated or built on and document gaps in the existing range; and make recommendations for messages and targeting of these for particular priority groups.

Educational print resources were collected from Australian organisations working with people affected by, or at risk of, hepatitis C infection. This included, for example, state-based hepatitis organisations, state-based drug-user advocacy groups ('drug user organisations'), health services and other community-based advocacy and health organisations. The initial collection occurred between November 2008 and October 2009, and a follow-up collection—limited to NSW-based and national organisations only—was conducted during August 2010 to ensure

materials produced since October 2009 were included in this analysis. A total of 159 resources were catalogued and analysed. The materials were produced between 1991 and 2010 with the majority (78%) being produced in the last decade (2000–2010). Materials can be divided into two loose categories: (1) generic hepatitis C information covering, in brief or in detail, basic HCV information including epidemiology, transmission, symptoms, living with hepatitis C, possible infection outcomes, prevention advice, testing, and treatments, and (2) resources addressing a specific aspect of HCV, such as transmission risks and prevention. The former were more likely to be aimed at the general community and the latter more commonly targeted PWID and specific risk groups of PWID (e.g. young people, prisoners, Aboriginal people).

Based on the analysis of these educational materials and the broader research literature on which it builds, a series of recommendations was developed and will be addressed in future projects. These recommendations should be considered in the design and distribution of HCV educational materials aimed at PWID and relate to all aspects of the conceptualisation, development, design, dissemination and evaluation of hepatitis C prevention resources (print and other). The recommendations included noting the need to address responsibility for hepatitis C prevention as shared between individuals, organisations and institutions, and the significant restrictions on safe injecting and supply of equipment that the local environment can pose. Messages should be targeted and repackaged for specific groups to account for the diversity of injectors' experiences. The language used should be conditional (rather than absolute) and avoid jargon. Resources should be provided in a way that allow the reader to consider the timeliness of the information, given the rapidly changing knowledge environment. Finally, attention is required to ensure that the target audience is involved in aspects of this process and that policy support is required to clarify and support the delivery of appropriately targeted and specific resources in this challenging and sensitive context.

5.2 Hepatitis C health promotion for couples who inject

Carla Treloar

As detailed in section 5.1, considerable effort has been expended on developing health education materials aimed at reducing hepatitis C transmission. However, additional effort is required to repackaging materials for specific audiences. One such audience are PWID within sexual partnerships. Previous research has established both the importance of sexual relationships as a site of equipment sharing and the practice of injecting within couples being deeply imbued with notions of intimacy, trust and love.

The study analysed the subjects addressed and represented in health education materials aimed at the prevention of HCV transmission among PWID, paying particular attention to couples who inject (Dwyer et al., 2001). More specifically, if sharing of needles and syringes most

commonly occurs between people in intimate sexual relationships (hereafter 'couples'), then are couples who inject addressed in HCV prevention materials? It is important to understand the health messages contained in these materials in order to ascertain how the materials target defined segments of the population and to explore how materials contribute to the development of norms and expectations of behaviour.

Using the same data source that was outlined in section 5.1, the materials were examined to determine whether they addressed the individual or the group (Dwyer, Fraser, & Treloar, 2011). Nearly three-quarters (74%) of the sample of materials addressed the individual, 14% addressed the group or specific social groups, and 12% addressed both the individual and the group. Materials addressing the group were directed towards a range of social groups: the general population ('people'), 'Australians', 'people who inject drugs', 'people who are HCV positive', 'Indigenous communities', 'women', 'health professionals' and 'prisoners'. While couples were sometimes addressed in sections of the materials discussing sexual transmission, only two of the materials specifically addressed couples in the context of injecting transmission. In both of these materials, the couple as the subject addressed and as the unit of action constitutes only a small proportion of the overall text.

Just over 20% of materials contained images of both individuals and groups, and images of couples featured in 18% of the materials. In one-third of these, the couple relationship was explicit—images of two people kissing or in bed together—or the relationship was indicated in text. For the remaining materials, a couple relationship was assumed from the depictions of physical intimacy between two people—hand-holding, embracing, one person leaning against the other and so forth. All but one of these materials depicted heterosexual couples.

Our examination of a sample of Australian health education print materials targeting HCV prevention in the context of injecting drug use revealed that, despite a considerable body of research demonstrating the social embeddedness of injecting, these materials continue to primarily address and represent an individual injector. Even in materials addressing a group, often, once discussion of injecting transmission began, the subject switched to an individual injector enjoined to practise hygienic and responsible injecting behaviours. While health education print materials are but one element in hepatitis C prevention strategies, they remain the key strategy that PWID are most likely to encounter beyond the broader structural initiative of provision of sterile injecting equipment. As health education is considered more likely to be effective when people consider it relevant to themselves, it is important that recognition of the complexity of drug users' sociality, relationality, sexuality, and drug use is incorporated into HCV prevention print materials and that greater consideration be given to the specific social context of couples injecting together. This, in turn, requires more research into the complexities of the conditions under which needle and syringe (and other injecting-equipment) sharing occurs within couples.

5.3 MHAHS Egyptian community viral hepatitis project

Robyn Horwitz, Loren Brener, Carla Treloar, Wa'el Sabri, Renee Moreton and Ashraf Sedrak

NCHSR conducted a study on hepatitis C among the Egyptian community in NSW as part of a community development project implemented by MHAHS. Egypt has the highest prevalence of hepatitis C worldwide, ranging from 6% to more than 40% in some regions and among some demographic groups (Lehman & Wilson, 2008). The high prevalence of hepatitis C among people born in Egypt can be attributed to mass vaccination campaigns in which over 35 million injections were given over a 20-year period (1960–1980) for the treatment of schistosomiasis (a common parasitic disease in Egypt) (Lehman & Wilson, 2008). Due to insufficient resources and time constraints, injection equipment was inadequately sterilised (Pybus, Drummond, Nakano, Robertson, & Rambaut, 2003) contributing to a massive increase in the reservoir for hepatitis C in the general Egyptian population. Given the high hepatitis C prevalence in Egypt, Egyptian-Australians represent a high-risk population for hepatitis C infection.

This exploratory project used a range of strategies designed to increase knowledge and awareness of hepatitis C prevention, testing, and treatment among a population at high risk of hepatitis C-related liver disease. It was designed as a two-phase study to gauge changes in community awareness, knowledge, attitudes and perceptions of hepatitis C transmission, prevention, treatment options and health practices. The target sample comprised members of the Egyptian community living in Sydney and was recruited through convenience sampling. Survey 1 was completed by 131 participants, and Survey 2 by 121 participants recruited in inner and suburban Sydney. The survey was translated into Arabic and checked for accuracy, appropriateness and consistency by Arabic-speaking workers at the MHAHS.

Key findings from Survey 1 include: 69% of participants prefer to see a doctor from their own cultural background, over half the sample (56%) regards hepatitis C to be more of a problem in Egypt than Australia, and 62% think hepatitis C is a problem in Egypt. Over three-quarters (76%) had heard about hepatitis C and 52% had had a blood test for hepatitis C. Survey 1 also revealed that knowledge of hepatitis C treatment and transmission was inconsistent. While the majority of participants correctly identified that hepatitis C can be transmitted through unsterile tattooing and piercing and through sharing needles and syringes, knowledge of other routes of transmission and of treatment options was poor. Attitudes towards, and awareness of, people with hepatitis C varied but on the whole reflected favourable attitudes towards people living with hepatitis C.

The administration of Survey 1 resulted in a large amount of missing data. A shorter version, Survey 2, was designed to improve the response rate and overcome shortcomings in Survey 1. The same 14-item Hepatitis C Knowledge scale was used in Survey 2 and a 6-item attitude scale was developed to assess attitudes to people with hepatitis C.

Key findings from Survey 2 include: 80% of participants had heard about hepatitis C, 38% had had a blood test, and just under half knew someone with hepatitis C. Knowledge of hepatitis C treatment and transmission was again inconsistent, with knowledge of treatment options less accurate than knowledge of transmission routes. Attitudes towards people living with hepatitis C were again found to be favourable. Over two-thirds of the sample agreed that people living with hepatitis C deserved support and should not be excluded from community events. A favourable attitude towards people living with hepatitis C, having heard about hepatitis C and having had a blood test for hepatitis C were independently associated with better hepatitis C knowledge. Regression analysis further revealed that the shorter the period of time participants had lived in Australia and knowing someone with hepatitis C were independently associated with more favourable attitudes towards people with hepatitis C.

The data illustrate that knowledge around routes of hepatitis C transmission is inconsistent and highlight the importance of increasing awareness of transmission routes. There is a need for culturally appropriate health promotion materials in Arabic, developed in consultation with the communities themselves. These should be designed with messages for populations like the Egyptians who may have acquired hepatitis C through atypical routes of transmission, and should be made available at general practitioners, especially those of Egyptian background. An awareness of options around hepatitis C treatment is imperative to both increase numbers of people accessing hepatitis C treatment and to prevent late presentation when treatment is less effective. This study strengthens the findings of previous research that knowledge of transmission and treatment of hepatitis C among migrant communities is poor and emphasises the need for further research concerning culturally appropriate hepatitis C interventions and information.

5.4 Disclosing hepatitis C infection

Max Hopwood

Past research has demonstrated the beneficial psychological effects of disclosing a chronic illness (Pennebaker, 1995). Disclosing chronic illness assists affected people to accept a new diagnosis and to cope emotionally with a changing set of personal health circumstances. Disclosing a chronic illness also facilitates the acquisition of support from family and friendship networks and health services. Conversely, disclosing a stigmatised illness or condition potentially adds to the burden of disease, which has been reported from previous research into HIV disclosure (Ariss, 1997). Until recently, few studies have specifically investigated the dynamics of hepatitis C disclosure. This previous research includes the construction of a typology of approaches to disclosure from interviews with participants receiving hepatitis C treatments (Hopwood, Treloar, & Redsull, 2006). Four categories of disclosure were identified: (i) total non-disclosure where people tell no-one; (ii) strategic disclosure where people only disclose when it has a specific purpose or benefit for the affected person; (iii) substitute disclosure

Table 19: Characteristics of sample from The 3D Project (N = 504)¹

Characteristic	n	%
Gender (n = 499)		
Male	254	50.4
Female	244	48.4
Transgender	1	0.2
Age (n = 472)		
18–30 years	65	12.9
31–50 years	334	66.3
51–77 years	73	14.5
Education (n = 495)		
Up to and including Year 12	269	53.4
Diploma/degree	183	36.2
Postgraduate	43	8.5
Income per year (n = 448)		
Less than \$10,000	184	36.5
\$10,001–\$20,000	92	18.3
\$20,001–\$30,000	58	11.5
\$30,001–\$40,000	29	5.8
\$40,001–\$50,000	33	6.5
\$50,001–\$60,000	30	6.0
More than \$60,000	22	4.4
Self-reported source of infection (n = 494)		
Injecting drug use	290	57.5
Medical blood products	74	14.7
Tattooing	20	4.0
Sex	15	3.0
Body piercing	5	1.0
Other	44	8.7
Multiple responses	46	9.1
Self-reported time since infection (n = 490)		
Within the last year	12	2.4
1–5 yrs ago	67	13.3
6–10 yrs ago	82	16.3
11–20 yrs ago	199	39.5
More than 20 yrs ago	130	25.8
Injected in the last month (n = 496)		
Yes	138	27.4
No	358	71.0

1 Proportions do not add to 100% due to missing data.

where people disclose that they are receiving treatment for a 'blood-disorder' or 'liver condition' etc., and, (iv) open disclosure where people disclose to anyone who is interested.

Despite a nascent interest in the dynamics of hepatitis C disclosure, estimates of the proportion of people who experience negative outcomes from disclosing do not appear in the literature. Similarly, little attention has been paid to exploring who practices widespread disclosure of hepatitis C infection and what happens with this information. This investigation of the dynamics of hepatitis C disclosure drew upon data from an earlier study (Hopwood & Treloar, 2003), and asked: (i) what proportion of people experience discrimination as an

outcome of disclosing their hepatitis C infection; (ii) who reacts negatively to hepatitis C disclosure; and (iii) what factors predict whether or not an individual engages in widespread disclosure of hepatitis C (Hopwood, Nakamura, & Treloar, 2010).

In order to participate in the study people had to have hepatitis C infection and be living in New South Wales, Australia. A total of 504 participants were recruited to the study by using a convenience sampling frame. No financial incentives were extended and all participants completed an anonymous, short questionnaire containing items that focussed on their experience of living with hepatitis C infection. Participants were mainly older, former injecting drug users. They were not highly educated and existed on low incomes, and most had been living with hepatitis C for many years. Approximately three-quarters of participants had disclosed to a regular partner and to their family. Similarly, most participants had disclosed their infection to their doctor or another healthcare worker and friends. In contrast, few people had disclosed to their employer or workmates. Over half of participants had disclosed their infection to at least four categories of people and one-third had disclosed to at least five categories of people.

Half of participants reported that someone had reacted badly to their disclosure of hepatitis C infection. Bad reactions were reported from a range of people including family, friends, partners, healthcare workers and doctors. This corroborates qualitative research by Crofts, Louie and Loff (1997) and the findings of the Anti-Discrimination Board of New South Wales' (2001) enquiry. These findings are worrying given that over 200,000 Australians (or more than 1% of the population) have chronic hepatitis C infection and approximately 10,000 new infections occur each year. A substantial minority of participants reported their doctor or other healthcare workers having reacted badly following disclosure of hepatitis C. This is a concern as, throughout the developed world, prevention of infection and the promotion of interferon-based treatments are central to efforts aimed at curbing future morbidity, mortality and healthcare costs associated with

Table 20: Disclosure of hepatitis C infection and subsequent 'bad' reactions (N = 504)

People who were disclosed to	Number who disclosed n (%) ¹	Bad reaction to disclosure n (%) ²
Casual sex partner	96 (19.0)	26 27.1
Family (i.e. parents/siblings)	359 (71.2)	81 22.6
Friend	348 (69.0)	68 19.5
Flatmate	90 (17.9)	17 18.9
Partner	369 (73.2)	63 17.1
Boss	83 (16.5)	14 16.9
Other healthcare worker(s)	331 (65.7)	54 16.3
Workmate	87 (17.3)	12 13.8
Doctor	383 76.0	44 11.5
Children	143 28.4	14 9.8

1 Percentage of total sample

2 Of those who disclosed, the proportion who experienced a bad reaction

Table 21: Reduced model for disclosure of hepatitis C infection

Variable	B ¹	SE ²	Sig.
Level of education	0.38	0.12	<.01
Number of hepatitis C positive people that participant knows	0.40	0.07	<.01
Feeling tired due to hepatitis C over the past month	0.36	0.16	<.05
Advised to tell no one or only close family of hepatitis C	-0.92	0.24	<.01
Hepatitis C infection disclosed without permission	0.39	0.17	<.05

1 standardised regression co-efficient

2 standard error

hepatitis C-related liver disease. Hepatitis C-related stigma in the healthcare sector decreases the likelihood that affected people will access healthcare to address hepatitis C symptoms or to commence interferon-based treatments. One approach to ameliorate health-related stigma and discrimination is to improve healthcare workers' education and understanding of hepatitis C infection.

Healthcare workers were also reported to have spread personal health information without participants' permission and to have pressured participants into disclosing their hepatitis C infection. Unauthorised and coerced disclosures are unethical and increase the likelihood that patients will lose trust in healthcare providers. In this study, participants who had their status disclosed without their permission disclosed more widely, perhaps in response to requests to confirm leaked information. Government departments also reportedly pressured some participants to disclose their infection. Such findings highlight a need for people to be better informed of their rights regarding disclosure of personal health information.

5.5 Future developments

Evaluation of the New South Wales health program to increase capacity in the delivery of hepatitis C care and treatment for Aboriginal people

Carla Treloar, Loren Brener and Clair Jackson

Indigenous Australians are over-represented in most indicators relating to hepatitis C. Although Indigenous Australians comprise approximately 2.4% of the population, approximately 16,000 (7.3%) of the total number of people living with chronic hepatitis C are Indigenous (National Centre in HIV Epidemiology and Clinical Research, 2008). Increasing treatment uptake has become an important goal to both address individuals' health outcomes and the longer-term burden on the health system (and associated costs) as a result of advanced liver disease. However, treatment uptake remains low, with approximately 3,000–4,000 people per year of the estimated 210,000 Australians living with chronic infection undertaking treatment.

Research on decisions about, and uptake of, treatment often refers to the complexity of the lives of some people with hepatitis C. Given the demands of treatment and, for many people, the lack of urgency to have treatment, treatment can be delayed until people feel better able to cope, such as when children are older, or housing is more stable. For Indigenous Australians, hepatitis C competes with a range of other health and social issues that contribute to a markedly lower life expectancy. McNally and Latham (2009) have conducted the most detailed examination of hepatitis C treatment and care in Indigenous communities. This work positions hepatitis C within a broader view of the health and well being of Indigenous Australians. Some of their main findings were: an equal emphasis on care and treatment for hepatitis C, and that living well with the virus was an appropriate and acceptable goal for Indigenous people, at this stage. McNally and Latham (2009) describe and elaborate on the significance and centrality of shame in relation to hepatitis C for Indigenous Australians. Shame, stigma and discrimination were also described as influencing Aboriginal people's decisions about seeking care for hepatitis C and unwillingness to use Aboriginal specific or mainstream health services (Coupland, Ball, Costello, Harvey, & Maher, 2005).

To address these concerns, NSW Health initiated a program to support the care and treatment of Aboriginal people living with hepatitis C in NSW through the establishment of eight coordinator positions whose aim was to facilitate liaison between the specialist hepatitis C treatment and care services (such as liver clinics within tertiary hospitals) and the organisations and health workers providing general health and social care for Aboriginal people (such as Aboriginal Community Controlled Health Organisations or Aboriginal Medical Services).

The aims of this evaluation project are to examine the experience of people living with hepatitis C in relation to care and treatment, in the context of evaluating this investment in coordinator roles (and other programs) initiated by NSW Health. In particular, it aims (1) to explore the structural and organisational barriers and facilitators in implementing the NPA program, specifically the role of the hepatitis C coordinators in the eight AHS, (2) to explore the experience of Aboriginal people with or at risk of hepatitis C in engaging with services providing hepatitis C testing, programs supporting self-care and hepatitis C treatment, and (3) to make recommendations for changes to the role or operation of the hepatitis C care and treatment coordinator and to consider issues relating to the sustainability of this program.

This project will comprise two arms: (1) qualitative interviews with people living with hepatitis C at various stages of the treatment and care journey and with health workers working with Aboriginal people, and (2) surveys at two time-points conducted with Aboriginal people living with hepatitis C. The project will be overseen by an advisory committee and will include sufficient staffing by Aboriginal people to ensure appropriate cultural

protocols are followed and that all staff abide by principles of culturally safe research. The staffing of this project will include an Aboriginal cultural mentor/advisor and Aboriginal liaison officer. The role of the cultural mentor/advisor will assist in ensuring that Aboriginal researchers

have the appropriate level of control over the data collection tools, their implementation, and interpretation of data. The cultural mentor/advisor will also assist Aboriginal staff in following appropriate cultural protocols, both for those they interview and work with, and for themselves.

Spotlight Uptake and delivery of hepatitis C treatment in Opiate Substitution Treatment: Perceptions of clients and health professionals

Carla Treloar

Worldwide there is a growing interest in the provision of care and treatment for people with hepatitis C virus infection (HCV) in opiate substitution treatment programs (OST). However, few studies have brought together the views of clients and health professionals on the acceptability of uptake and delivery of HCV treatment in OST and examined them from a personal, interpersonal, organisational and societal perspective. This study used qualitative methods to explore OST clients' and health professionals' reports of the barriers and incentives to the delivery and uptake of HCV treatment in OST clinics (Treloar, Newland, Rance, & Hopwood, 2010). In total, 27 interviews were conducted with current OST clients. One focus group with six health professionals and 16 telephone interviews with health professionals were conducted. For both groups of participants, their concerns clustered around organisational and personal levels factors.

All OST participants had self-reported HCV infection. The majority were unaware of their HCV genotype (89%) and had no previous HCV treatment experience (89%). OST clients reported that if HCV treatments were offered at their OST clinic they would be more likely to commence treatment, as it would provide a convenient "one-stop shop". OST clients reported that their often long-standing relationships with health professionals at their OST clinic would facilitate treatment uptake because they had good rapport with their OST service provider, trusted them, and these health professionals understood their circumstances. On the other hand, OST client participants raised concerns regarding confidentiality in regard to the one-stop-shop model. This service environment could result in people's HCV status becoming public without authorised individual disclosure, and participants were worried about the implications of this for their lives outside treatment.

Generally, OST client participants were aware that treatment for HCV infection existed, however, their understanding of the treatment regime was limited. Further, OST client participants reported not having commenced treatment in the past because treatment options had not been discussed with them by a health professional. These participants identified a variety of competing priorities that presented barriers to HCV treatment uptake such as parenting and unstable housing. They also identified a diverse range of competing physical and psychological health priorities that presented a barrier to the uptake of HCV treatment which included HIV, stroke, heart attack, diabetes, epilepsy, hepatitis B, serious physical injuries, depression and aggression towards others.

Twenty-two health professionals (medical practitioners, nurses, pharmacists and clinical managers, who worked in predominantly publicly funded OST clinics, participated in a focus group or individual interview. They revealed strong support for extending the provision of HCV treatment and care to include OST settings. The notion of a one-stop-shop, was endorsed as a potentially efficient means of improving HCV treatment access, uptake and retention. A one-stop-shop model could build upon existing staff-client relationships, particularly where strong levels of trust and rapport had already been established, and this was perceived as a distinct strength of the integrated model. There was some disagreement among health professionals of the position of HCV treatment in OST clinics. For some the provision of HCV treatment was arguably a duty of care, while for others there was a sense that they, or their colleagues, would consider the provision of HCV treatment as outside their 'core business'. This dichotomy of 'duty of care' versus 'non-core business' operated alongside another dichotomy of 'client interest' versus 'indifference to HCV treatment'. For some health professionals their clients' low motivation represented the primary barrier to HCV treatment uptake while others reported very positive client attitudes toward the uptake of HCV treatment in OST clinics.

This study examined barriers and incentives to HCV uptake in OST settings. While there are often ways to address current OST clients' personal circumstances to facilitate treatment uptake, the organisational and structural settings in which HCV treatment is delivered will also need to be modified to support and encourage health professionals' engagement with OST clients. We interpreted issues raised by participants from an organisational perspective to generate novel organisation-based possibilities for change. This focus was to recognise the importance of organisational operations, structures and policies in shaping programs in ways that are often invisible to those who designed them, work within them or indeed those who engage with them as clients. In summary, there was agreement between clients and health professionals in this study that offering HCV treatment in OST clinics would be convenient for clients and would be assumed to lead to increases in treatment uptake and adherence. However, combining very different models and cultures of care is not without challenge. The potential to reach many more people with HCV treatment in OST settings is compelling. However, the capacity to do harm or provide further marginalising care is also present. Given the calls for resources for the urgent expansion of HCV treatment in OST settings, our data highlight the importance of including the perceptions and experiences of clients and various health professionals in future research and that research is designed to examine this model of care from a range of positions to reflect the complexity of care and treatment for people in marginalised social circumstances.



6.1 Preparing for biomedical HIV prevention

Martin Holt, Jeanne Ellard and John de Wit

In the last two years a number of landmark results have been announced from international trials of biomedical HIV prevention technologies. A trial of an HIV vaccine candidate in Thailand found a reduction in HIV infection of 26% (Rerks-Ngarm, et al., 2009). A vaginal microbicide gel containing tenofovir, an antiretroviral drug, showed a 39% reduction in HIV infection among the women who used the gel (Karim, et al., 2010). Three trials of pre-exposure prophylaxis or PrEP (HIV-negative people taking a daily dose of tenofovir, or tenofovir and emtricitabine) have found efficacy levels of 44–73% in preventing HIV infection (Baeten, 2011; Grant, et al., 2010; Thigpen, et al., 2011) and the HPTN 052 study has confirmed what many had already suspected: early and sustained HIV treatment reduces the transmission of HIV by 96% between serodiscordant

partners (Cohen, et al., 2011). These findings have stimulated a great deal of interest and international debate. While the findings from the vaccine and microbicide trials indicate more work needs to be done to make these technologies useful ‘in the field’, the success of antiretroviral treatment in preventing transmission between serodiscordant partners has renewed discussion about treatment access and initiation guidelines. The PrEP trial results also appear compelling enough to make PrEP available in some settings. For example, the Centers for Disease Control and Prevention have issued interim guidelines for the prescription and monitoring of PrEP use in the United States (Centers for Disease Control and Prevention, 2011).

As yet there appear to be no plans to make PrEP available in Australia, although clinicians, policymakers, educators and researchers will be considering the issue over the coming months. What is clear is that the prevention landscape is changing, and that this requires thought, planning

and careful monitoring of the impact on the epidemic. The promise of new prevention options is welcome, but there are risks as well as opportunities. One of the primary considerations is the effect of new prevention options on existing practices such as condom use. The perception that new technologies may make HIV more difficult to acquire (or easier to manage) can lead to what is referred to as 'risk compensation', a decreased likelihood to use condoms in general and particularly with partners whose HIV status is different or unknown to you (Eaton & Kalichman, 2007). The concern here is not so much the likelihood of risk compensation among people using the new technology (who will be protected to some degree from HIV) but the likelihood of risk compensation among the broader community, in which a decline in condom use might lead to an increase in HIV infections. This effect has been seen before when combination antiretroviral treatments became widely available. It was found that optimism about HIV treatments was associated with subtle but significant increases in the rates of unprotected sex among gay men in Australia, and an increased likelihood of HIV seroconversion in some countries, although this pattern is far from clear internationally (Elford, 2006; Stolte, Dukers, Geskus, Coutinho, & de Wit, 2004; Van de Ven, Rawstorne, Nakamura, Crawford, & Kippax, 2002; Van der Snoek, de Wit, Mulder, & Van der Meijden, 2005).

Social science research has an important role to play in planning for, adapting to and monitoring the effects of biomedical HIV prevention. This role is not just to identify which people are willing to use new technologies or how best to implement them (although that is undoubtedly important). Social scientists, like many of their biomedical peers, are also interested in how trial efficacy translates into real world effectiveness, the unintended and unforeseen consequences of new technologies, and the impact of technological innovation on social networks, cultures and perceptions of risk (Imrie, Elford, Kippax, & Hart, 2007). The social, biomedical and technological are not separate domains but intertwine and mutually affect each other (Rosengarten, Michael, Mykhalovsky, & Imrie, 2008). We therefore need to attend to the ways in which biomedical technologies are taken up, used in line with or against clinical guidelines or educational recommendations, and the flow-on effects that these combinations of people, technologies and knowledge about HIV have on existing cultures of safety and risk. For example, how would PrEP use be viewed by the majority of gay men who currently use condoms? How would this play out in sexual situations in which one partner may be using PrEP while another expects to use condoms? What are these actors' expectations of appropriate sexual conduct, safety and risk?

We have begun to explore some of these issues in a pilot study of Australian gay and bisexual men's attitudes to and expectations of PrEP (the PrEPARE Project). In collaboration with colleagues at the University of New South Wales, the Australian Federations of AIDS Organisations and Goldsmiths College, London, we completed a national online survey of gay and bisexual men earlier this year and are currently conducting follow-up, qualitative interviews in Sydney. The initial findings from the project were presented at *Locating the Social: the 1st International HIV Social*

Science and Humanities Conference in Durban, South Africa. The survey revealed that most HIV-negative and untested men who participated were interested in PrEP, with nearly 8 out of 10 saying they would be willing to take PrEP to prevent getting HIV. Nearly half said they would take PrEP even if it wasn't 100% effective and half said they were prepared to pay for PrEP. However, there was also caution about PrEP. Only a quarter thought that PrEP would be effective in preventing HIV and over half were worried about taking it on an ongoing basis. Two-thirds were concerned about potential side effects.

We have conducted additional analyses to identify which HIV-negative and untested men are most interested in PrEP and the likelihood of decreased condom use among men willing to take PrEP. These analyses will be presented and discussed in more detail at the 2011 Australasian HIV/AIDS Conference in Canberra. Of note is the finding that men who engage in unprotected anal intercourse with casual partners and who perceive themselves to be at risk of HIV are particularly likely to be interested in using PrEP.

We will explore these and other issues in more depth as we continue to analyse the survey data and follow up interested participants for in-depth interviews. The interviews are an opportunity to discuss HIV-negative gay men's investment in avoiding HIV and the ways they consider acceptable to do so. We explore ideal forms of HIV prevention, inviting men to contrast what they currently do to avoid HIV with forms of biomedical prevention currently in development. Participants are asked about their experience and knowledge of antiretroviral drugs. This includes the previous use of post-exposure prophylaxis, the non-prescribed use of antiretrovirals as informal PrEP and whether they know someone who has been on antiretroviral treatment. The interview also considers how, in the participant's view, PrEP or other technologies might impact on gay men's sexual practices.

PrEP and other technologies in development require careful analysis and monitoring by social researchers. When new options become available, we all have an investment in them being implemented in the most effective ways possible. That means paying close attention to the expectations of affected communities, the likely ways new prevention technologies will be used, and the potential impacts on existing sexual cultures. In our opinion, it does not matter whether PrEP becomes formally available in Australia in the near future (although that conversation is already underway). In the Melbourne and Sydney Gay Community Periodic Surveys (conducted in early 2011) 1.5% of gay men reported the use of antiretroviral drugs as non-prescribed PrEP (Hull, et al., 2011a; Lee, et al., 2011). This is the first reported use of PrEP in Australia, despite it not being officially available. This confirms our previous experience that gay men in particular will react to developments within the field, adapting their sexual practices and meanings of risk in reference to trial results, new technologies and other forms of biomedical knowledge (Kippax & Race, 2003). This process may be subtle, and its effects difficult to ascertain; however, that does not mean we should avoid engaging with these developments. Indeed, it is essential that we do.

References

- Anderson, J., & Doyal, L. (2004). Women from Africa living with HIV in London: a descriptive study. *AIDS Care*, 16(1), 95–105.
- Anti-Discrimination Board of New South Wales. (2001). *C-Change: Report of the enquiry into hepatitis C-related discrimination*. Sydney: Anti-Discrimination Board of New South Wales.
- Ariss, R. M. (1997). *Against death: The practice of living with AIDS*. Amsterdam BV: Gordon and Breach Publishers.
- Åsander, A.-S., Belfrage, E., Pehrson, P.-O., Lindstein, T., & Björkman, A. (2004). HIV-infected African families living in Stockholm/Sweden: their social network, level of disclosure and knowledge about HIV. *International Journal of Social Welfare*, 13, 77–88.
- Australian Injecting & Illicit Drug Users League. (2011). *Treatment Service Users Project: Phase Two Final Report*. Canberra: Australian Injecting & Illicit Drug Users League.
- Australasian Society for HIV Medicine & National Centre in HIV Social Research. (2011). *Stigma and Discrimination around HIV and HCV in Healthcare Settings Research Project*. Sydney: Author.
- Baeten, J. (2011). *Antiretroviral pre-exposure prophylaxis for HIV-1 prevention among heterosexual African men and women: the Partners PrEP study*. Paper presented at the 6th IAS Conference on HIV Pathogenesis, Treatment and Prevention, Rome.
- Bluthenthal, R. N., Anderson, R., Flynn, N. M., & Kral, A. H. (2007). Higher syringe coverage is associated with lower odds of HIV risk and does not increase unsafe syringe disposal among syringe exchange program clients. *Drug and Alcohol Dependence*, 89, 214–222.
- Brah, A., & Phoenix, A. (2004). 'Ain't I a woman?' Revisiting intersectionality. *Journal of International Women's Studies*, 5, 75–86.
- Brener, L., von Hippel W., von Hippel C., Resnick I., & Treloar C. (2010). Perceptions of discriminatory treatment by staff as predictors of drug treatment completion: utility of a mixed methods approach. *Drug and Alcohol Review*, 29, 491–497.
- Bryant, J., Newman, C. E., Holt, M., Paquette, D. M., Gray, R., Canavan, P., ... Kidd, M. R. (2011). *Does drug and alcohol use undermine concordance between doctors' and patients' assessments of major depression among gay men attending general practice?* Manuscript submitted for publication.
- Bryant, J., Paquette D., & Wilson, H. (2011). Syringe coverage in an Australian setting: Does a high level of syringe coverage moderate syringe sharing behaviour? *AIDS and Behaviour*. Advance online publication. doi: 10.1007/s10461-011-0010-3
- Burman, E. (2004). From difference to intersectionality: challenges and resources. *European Journal of Psychotherapy, Counselling & Health*, 6, 293–308.
- Butler, J. (1997). *The Psychic Life of Power: Theories in Subjection*. Stanford: Stanford University Press.
- Centers for Disease Control and Prevention. (2011). Interim guidance: preexposure prophylaxis for the prevention of HIV infection in men who have sex with men. *Morbidity and Mortality Weekly Report*, 60(3), 65–68.
- Chambers, S. (2007). An incalculable effect: Subversions of heteronormativity. *Political Studies*, 5, 656–679.

- Coates, T. J. (2008). What is to be done? *AIDS*, 22, 1079–1080.
- Cohen, M. S., Chen, Y. Q., McCauley, M., Gamble, T., Hosseinipour, M. C., Kumarasamy, N., ... Fleming, T. R. (2011). Prevention of HIV-1 infection with early antiretroviral therapy. *New England Journal of Medicine*, 365(6), 493–505.
- Coupland, H., Ball, K., Costello, M., Harvey, B., & Maher, L. (2005). *'Something is going to get us': a consultation and development project for a national campaign addressing injecting drug use in Indigenous communities*. Darlinghurst, NSW: Australian Injecting and Illicit Drug Users League.
- Crawford, J. M., Rodden, P., Kippax, S., & Van de Ven, P. (2001). Negotiated safety and other agreements between men in relationships: risk practice redefined. *International Journal of STD & AIDS*, 12, 164–170.
- Crofts, N., Louie, R., & Loff, B. (1997). The next plague: Stigmatisation and discrimination related to hepatitis C virus infection in Australia. *Health and Human Rights*, 2, 86–97.
- de Wit, J., Treloar, C., & Wilson, H. (2009). *HIV/AIDS, hepatitis and sexually transmissible infections in Australia: annual report of trends in behaviour 2009* (Monograph 4/2009). Sydney: National Centre in HIV Social Research, The University of New South Wales.
- Doyal, L. (2009). Challenges in researching life with HIV/AIDS: an intersectional analysis of black African migrants in London. *Culture, Health & Sexuality*, 11, 173–188.
- Dwyer, R., Fraser, S., & Treloar, C. (2011). Doing things together?: Analysis of health promotion materials to inform hepatitis C prevention among couples. *Addiction Research and Theory*, 19(4), 352–361.
- Eaton, L. A., & Kalichman, S. C. (2007). Risk compensation in HIV prevention: implications for vaccines, microbicides, and other biomedical HIV prevention technologies. *Current HIV/AIDS Reports*, 4, 165–172.
- Elford, J. (2006). Changing patterns of sexual behaviour in the era of highly active antiretroviral therapy. *Current Opinion in Infectious Diseases*, 19(1), 26–32.
- Goffman, E. (1963). *Stigma: Notes on the Management of Spoiled Identity*. London: Penguin Books.
- Grant, R. M., Lama, J. R., Anderson, P. L., McMahan, V., Liu, A. Y., Vargas, L., ... Gidden, D. V. (2010). Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *The New England Journal of Medicine*, 363, 2587–2599.
- Hancock, A.-M. (2007). When multiplication doesn't equal quick addition: Examining intersectionality as a research paradigm. *Perspectives on Politics*, 5(1), 63–79.
- Holt, M. (2009). 'Just take Viagra': erectile insurance, prophylactic certainty and deficit correction in gay men's accounts of sexuopharmaceutical use. *Sexualities*, 12(6), 746–764.
- Holt, M. (2011). Gay men and ambivalence about 'gay community': from gay community attachment to personal communities. *Culture, Health & Sexuality*, 13(8), 857–871.
- Holt, M., & Ellard, J. (2011). *HIV risk reduction strategies among gay men*. Sydney: Australian Federation of AIDS Organisations.
- Holt, M., & Mao, L. (2010). Trends in testing for HIV among gay and other homosexually active men. In M. Hopwood, M. Holt, C. Treloar, & J. de Wit (Eds.), *HIV/AIDS hepatitis*

and sexually transmissible infections in Australia: annual report of trends in behaviour 2010 (pp. 15–17). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Holt, M., Bryant, J., Newman, C. E., Paquette, D. M., Mao, L., Kidd, M. R., ... Kippax, S. C. (2011). Patterns of alcohol and other drug use associated with major depression among Australian gay men attending general practice. *International Journal of Mental Health and Addiction*. Advance online publication. doi: 10.1007/s11469-011-9330-9

Holt, M., Rawstone, P., Worth, H., Bittman, M., Wilkinson, J., & Kippax, S. (2011). Predictors of HIV disclosure among untested, HIV-negative and HIV-positive Australian men who had anal intercourse with their most recent casual male sex partner. *AIDS & Behavior*, 15, 1128–1139.

Holt, R., Court, P., Vedhara, K., Nott, K. H., Holmes, J., & Snow, M. H. (1998). The role of disclosure in coping with HIV infection. *AIDS Care*, 10, 49–60.

Hopwood, M., & Treloar, C. (2003). *The 3D project: Diagnosis, disclosure, discrimination and living with hepatitis C* (Monograph 6/2003). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Hopwood, M., Holt, M., Treloar, C., & de Wit, J. (Eds.). (2010). *HIV/AIDS, hepatitis and sexually transmissible infections in Australia: annual report of trends in behaviour 2010* (Monograph 4/2010). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Hopwood, M., Nakamura, T., & Treloar, C. (2010). Disclosing hepatitis C infection within everyday contexts: implications for accessing support and healthcare. *Journal of Health Psychology*, 15, 811–818.

Hopwood, M., Treloar, C., & Redsull, L. (2006). *Experiences of hepatitis C treatment and its management: What some patients and health professionals say* (Monograph 4/2006). Sydney: National Centre in HIV Social Research, UNSW.

Hull, P., Holt, M., Mao, L., Kao, S. C., Prestage, G., Zablotska, I., ... de Wit, J. (2011a). *Gay Community Periodic Survey: Sydney, February 2011*. Sydney: National Centre in HIV Social Research, The University of New South Wales.

Hull, P., Holt, M., Mao, L., Prestage, G., Zablotska, I., Norton, G., ... de Wit, J. (2011b). *Gay Community Periodic Survey: Queensland 2010*. Sydney: National Centre in HIV Social Research, The University of New South Wales.

Hurley, M., & Prestage, G. (2009). Intensive sex partying amongst gay men in Sydney. *Culture, Health & Sexuality*, 11(6), 597–610.

Imrie, J., Elford, J., Kippax, S., & Hart, G. J. (2007). Biomedical HIV prevention—and social science. *The Lancet*, 370(9581), 10–11.

Jin, F., Crawford, J., Prestage, G. P., Zablotska, I., Imrie, J. C., Kippax, S. C., ... Grulich, A. E. (2009). Unprotected anal intercourse, risk reduction behaviours, and subsequent HIV infection in a cohort of homosexual men. *AIDS*, 23, 243–252.

Karim, Q. A., Karim, S. S. A., Frohlich, J. A., Grobler, A. C., Baxter, C., Mansoor, L. E., ... Taylor, D. (2010). Effectiveness and safety of tenofovir gel, an antiretroviral microbicide, for the prevention of HIV infection in women. *Science*, 329(5996), 1168–1174.

- Kennamer, J. D., Honnold, J., Bradford, J., & Hendricks, M. (2000). Differences in disclosure of sexuality among African American and white gay/bisexual men: Implications for HIV/AIDS prevention. *AIDS Education and Prevention*, 12, 519–531.
- Keogh, P., Henderson, L., & Dodds, C. (2004). *Ethnic minority gay men: redefining community, restoring identity*. London: Sigma Research.
- Kippax, S., & Race, K. (2003). Sustaining safe practice: twenty years on. *Social Science & Medicine*, 57(1), 1–12.
- Kippax, S., Connell, R. W., Dowsett, G. W., & Crawford, J. (1993). *Sustaining safe sex: gay communities respond to AIDS*. London: The Falmer Press.
- Körner, H. (2007a). 'If I had my residency I wouldn't worry': negotiating migration and HIV in Sydney, Australia. *Ethnicity and Health*, 12, 205–225.
- Körner, H. (2007b). Negotiating cultures: Disclosure of HIV-positive status among people from ethnic minorities in Sydney. *Culture, Health & Sexuality*, 9, 137–152.
- Lee, E., Holt, M., Mao, L., McKenzie, T., Batrouney, C., Kennedy, M., ... de Wit, J. (2011). *Gay Community Periodic Survey: Melbourne 2011*. Sydney: National Centre in HIV Social Research, The University of New South Wales.
- Lehman, E. M., & Wilson, M. L. (2008). Epidemic hepatitis C virus infection in Egypt: estimates of past incidence and future morbidity and mortality. *Journal of Viral Hepatitis*, 16, 650–658.
- Li, A., Varangrat, A., Wimonasate, W., Chemnasiri, T., Sinthuwattanawibool, C., Phanuphak, P., ... van Griensven, F. (2009). Sexual behavior and risk factors for HIV infection among homosexual and bisexual men in Thailand. *AIDS and Behavior*, 13, 318–327.
- Liamputtong, P. (2007). *Researching the vulnerable*. London: Sage.
- Mao, L., McCormick, J., & Van De Ven, P. (2002). Ethnic and gay identification: gay Asian men dealing with the divide. *Culture, Health & Sexuality*, 4, 419–430.
- Mao, L., Van de Ven, P., Prestage, G. P., Wang, J., Hua, M., Prihaswan, P., & Ku, A. (2003). *Asian gay community periodic survey: Sydney 2002*. Sydney: National Centre in HIV Social Research, The University of New South Wales.
- McNally, S., & Latham, S. (2009). *Recognising and responding to hepatitis C in Indigenous communities in Victoria*. Melbourne: ARCSHS, La Trobe University.
- Minichello, V., Aroni, R., & Hays, R. (2008). *In-depth interviewing* (3rd ed.). Frenchs Forest, Sydney: Pearson Education Australia.
- National Centre in HIV Epidemiology and Clinical Research. (2008). *Bloodborne viral and sexually transmitted infections in Aboriginal and Torres Strait Islander people: surveillance report 2008*. Sydney: National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales.
- National Centre in HIV Epidemiology and Clinical Research. (2010). *HIV/AIDS, viral hepatitis and sexually transmissible infections in Australia: annual surveillance report 2010*. Sydney: National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales.
- Newman, C. E., de Wit, J. B., Kippax, S. C., Reynolds, R. H., Canavan, P. G., & Kidd, M. R. (2011). *The role of the general practitioner in the Australian approach to HIV*

care: Interviews with 'key informants' from government, non-government and professional organisations. Manuscript submitted for publication.

Newman, C. E., Holt, M., Bryant, J., Kippax, S. C., Paquette, D. M., Canavan, P., ... Saltman, D. C. (2010). *Comparing 'doctor' and 'patient' beliefs about the role of illicit drug use in gay men's depression*. Manuscript submitted for publication.

Newman, C. E., Kidd, M. R., de Wit, J. B., Reynolds, R. H., Canavan, P. G., & Kippax, S. C. (2011). *What moves a family doctor to specialise in HIV? Interviews with Australian policy key informants*. Manuscript submitted for publication.

Paparini, S., Doyal, L., & Anderson, J. (2008). 'I count myself as being in a different world': African gay and bisexual men living with HIV in London. An exploratory study. *AIDS Care*, 20, 601–605.

Paquette, D. M., Bryant, J., & de Wit, J. (2010). A respondent-driven sampling (RDS) survey of people who inject drugs in south east Sydney: An assessment of RDS assumptions and requirements. *Contemporary Drug Problems*, 37, 575–598.

Paquette, D. M., Bryant, J., & de Wit, J. (2011a). Respondent-driven sampling and the recruitment of people with small injecting networks. *AIDS and Behavior*. Advance online publication. doi: 10.1007/s10461-011-0032-x

Paquette, D. M., Bryant, J., & de Wit, J. (2011b). *Comparison of participants from respondent-driven sampling and service-based sampling studies of people who inject drugs*. Manuscript submitted for publication.

Paquette, D. M., Bryant, J., & de Wit, J. (2011c). Use of respondent-driven sampling to enhance understanding of injecting networks: A study of people who inject drugs in Sydney, Australia. *International Journal of Drug Policy*, 22, 267–273.

Paquette, D. M., Bryant, J., Crawford, S., & de Wit, J. (2011). Implementing RDS with the use of existing resources. *Drug and Alcohol Dependence*, 116, 125–131.

Pennebaker, J. W. (1995). *Emotion, disclosure and health*. Washington DC: American Psychological Association.

Persson, A., Barton, D., & Richards, W. (2006). *Men and women living heterosexually with HIV: The Straightpoz study, Volume 1* (Monograph 2/2006). Sydney: National Centre in HIV Social Research, The University of New South Wales.

Persson, A., Richards, W., Barton, D., & Reakes, K. (2009). *Men and women living heterosexually with HIV: The Straightpoz Study, Volume 2* (Monograph 1/2009). Sydney: National Centre in HIV Social Research, the University of New South Wales.

Prestage, G., Ferris, J., Grierson, J., Thorpe, R., Zablotska, I., Imrie, J., ... Grulich, A. (2008). Homosexual men in Australia: population, distribution and HIV prevalence. *Sexual Health*, 5, 97–102.

Prestage, G. P., Hudson, J., Bradley, J., Down, I., Sutherland, R., Corrigan, N., ... Grulich, A. E. (2007). *Three or more study*. Sydney: National Centre in HIV Epidemiology and Clinical Research, The University of New South Wales.

Pybus, O. G., Drummond, A. J., Nakano, T., Robertson, B. H., & Rambaut, A. (2003). The epidemiology and iatrogenic transmission of hepatitis C virus in Egypt: a Bayesian coalescent approach. *Society for Molecular Biology and Evolution*, 20, 381–387.

- Rawstorne, P., Holt, M., Kippax, S., Worth, H., Wilkinson, J., & Bittman, M. (2009). *e-male survey 2008: key findings from a national online survey of men who have sex with men in Australia* (Monograph 3/2009). Sydney: National Centre in HIV Social Research, The University of New South Wales.
- Rerks-Ngarm, S., Pitisuttithum, P., Nitayaphan, S., Kaewkungwal, J., Chiu, J., Paris, R., ...Kim, J. H. (2009). Vaccination with ALVAC and AIDSVAX to prevent HIV-1 infection in Thailand. *New England Journal of Medicine*, 361(23), 2209–2220.
- Reynolds, R. (2007). *What happened to gay life?* Sydney: University of New South Wales Press.
- Rosengarten, M., Michael, M., Mykhalovsky, E., & Imrie, J. (2008). The challenges of technological innovation in HIV. *The Lancet*, 372(9636), 357–358.
- Rowe, M. S., & Dowsett, G. W. (2008). Sex, love, friendship, belonging and place: is there a role for 'gay community' in HIV prevention today? *Culture, Health & Sexuality*, 10(4), 329–344.
- Serovich, J. M. (2001). A test of two HIV disclosure theories. *AIDS Education and Prevention*, 13, 355–364.
- Smith, G., Worth, H., & Kippax, S. (2004). *Sexual adventurism among Sydney gay men* (Monograph 3/2004). Sydney: National Centre in HIV Social Research, The University of New South Wales.
- Stolte, I. G., Dukers, N. H. T. M., Geskus, R. B., Coutinho, R. A., & de Wit, J. B. F. (2004). Homosexual men change to risky sex when perceiving less HIV/AIDS threat since availability of highly active antiretroviral therapy: a longitudinal study. *AIDS*, 18, 303–309.
- Szymanski, D. M., & Carr, E. R. (2008). The roles of gender role conflict and internalized heterosexism in gay and bisexual men's psychological distress: Testing two mediation models. *Psychology of Men and Masculinity*, 9, 40–54.
- Takahashi, L. M., & Rodriguez, R. (2002). Access redefined: service pathways of persons living with HIV and AIDS. *Culture, Health & Sexuality*, 4(1), 67–83.
- Thigpen, M. C., Kebaabetswe, P. M., Smith, D. K., Segolodi, T. M., Soud, F. A., Chillag, K., ... Paxton, L. A.. (2011). *Daily oral antiretroviral use for the prevention of HIV infection in heterosexually active young adults in Botswana: results from the TDF2 study*. Paper presented at the 6th IAS Conference on HIV Pathogenesis, Treatment and Prevention, Rome.
- Treloar, C., Newland, J., Rance, J., & Hopwood, M. (2010). Uptake and delivery of hepatitis C treatment in Opiate Substitution Treatment: Perceptions of clients and health professionals. *Journal of Viral Hepatitis*, 17, 839–844.
- Van de Ven, P., Rawstorne, P., Nakamura, T., Crawford, J., & Kippax, S. (2002). HIV treatments optimism is associated with unprotected anal intercourse with regular and with casual partners among Australian gay and homosexually active men. *International Journal of STD & AIDS*, 13, 181–183.
- Van der Snoek, E. M., de Wit, J. B. F., Mulder, P. G. H., & Van der Meijden, W. I. (2005). Incidence of sexually transmitted diseases and HIV infection related to perceived HIV/AIDS threat since highly active antiretroviral therapy availability in men who have sex with men. *Sexually Transmitted Diseases*, 32(3), 170–175.
- Wohlfeiler, D. (2002). From community to clients: the professionalisation of HIV prevention among gay men and its implications for intervention selection. *Sexually Transmitted Infections*, 78(Suppl. 1), i176–i182.
- Zablotska, I. B., Holt, M., & Prestage, G. (2011). Changes in gay men's participation in gay community life: implications for HIV surveillance and research. *AIDS & Behavior*. Advance online publication. doi: 10.1007/s10461-011-9919-9