“Suck it and See...”

Estimating HIV prevalence and unrecognised HIV infection among men who have sex with men in Victoria
Prepared by
Centre for Population Health
Burnet Institute
85 Commercial Rd
Melbourne Victoria 3004

Contributors
Alisa Pedrana, Centre for Population Health, Burnet Institute
Mark Stoové, Centre for Population Health, Burnet Institute
Margaret Hellard, Centre for Population Health, Burnet Institute
Carol El-Hayek, Centre for Population Health, Burnet Institute
Rebecca Guy, National Centre for HIV Epidemiology and Clinical Research, UNSW
Garrett Prestage, National Centre for HIV Epidemiology and Clinical Research, UNSW
Kim Wilson, National Serology Reference Laboratory
Sue Best, National Serology Reference Laboratory

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Executive Summary

Overview of study

The major aim of the ‘Suck it and See’ study was to estimate HIV biological prevalence and the prevalence of unrecognised HIV infections among men who have sex with men (MSM) in Victoria. In addition, the study aimed to explore factors associated with HIV status and unrecognised HIV infection and assess the acceptability and feasibility of using oral fluid testing in community-based venues to estimate HIV biological prevalence. Participants were recruited through three gay bars/clubs, four gay sex-on-premises venues (SOPV) and two gay men’s health clinics and were asked to self-complete a behavioural questionnaire and provide an oral fluid specimen for HIV testing. Participation was voluntary.

Introduction

Between 1999 and 2006, the number of HIV diagnoses in Victoria more than doubled with the majority of cases in MSM. This has resulted in increased scrutiny of surveillance systems that aim to measure accurately the key outcomes and impacts of HIV prevention programs over time.

In Victoria, HIV surveillance systems has been primarily based on reporting of new HIV diagnoses but as trends rely on the extent of diagnosis they can be biased by any activities which influence testing patterns. This routine surveillance system is supplemented by repeated behavioural surveys in MSM (Melbourne Gay Community Periodic Survey) which measure HIV program and prevention outcome indicators such as self-reported sexual behaviour and self-reported HIV and sexually transmissible infection (STI) testing rates. More recently, a HIV sentinel surveillance system was introduced in Victoria providing much needed HIV incidence estimates and other biological HIV and STI testing outcomes among MSM attending clinical services. Incidence estimates are the most sensitive measure of the impact of HIV programs.

One area where the surveillance system is clearly lacking is its ability to measure the biological prevalence of HIV, another key impact indicator that, in combination with incidence, can more comprehensively track the progression of the HIV epidemic. Victoria has relied upon self reports of HIV status through the behavioural surveys as a proxy for HIV prevalence, which, based on findings in MSM studies overseas, are unlikely to be accurate due to some men being unaware of being infected with HIV (‘unrecognised HIV infection’).

There is therefore clearly a need in Victoria to develop more robust strategies to estimate biological HIV prevalence. In response, in 2008-2009 a community-based oral fluid study was undertaken to estimate HIV prevalence and unrecognised HIV infections among MSM in Victoria. The study also aimed to assess the acceptability and feasibility of using oral fluid testing in community-based HIV biological prevalence estimations. This study was named ‘Suck it and See’ and was conducted by the Burnet Institute in collaboration with National Serology Reference Laboratory (NRL), researchers from the MGCPS, the VAC/GMHC and was overseen by a Study Advisory Committee.

‘Suck it and See’ Estimating HIV Prevalence among MSM : Melbourne 2008
Methods

The ‘Suck it and See’ study was preceded by a social marketing campaign conducted by the Victorian AIDS Council to raise awareness about the novel nature of specimen collection. In June 2008, a cross-sectional sample of MSM were recruited through seven gay social venues (three gay bars/clubs and four gay SOPVs) and two gay men’s health clinics. The sampling frame was similar to the MGCPs, except that two additional SOPVs were included and recruitment did not occur at the main gay carnival ‘MidSumma’.

Data collection occurred on-site at the social venues and gay men’s health clinics. MSM were invited to participate in the study when approached by field researchers at social venues or by clinician’s during a routine clinical consultation. After MSM received information about the study and provided verbal consent they self-completed a behavioural questionnaire and provided an oral fluid specimen using a commercial collection kit. These activities occurred in a pre-specified location under supervision by researchers or clinicians. The surveys were anonymous, with the questionnaire and oral fluid specimen matched by a unique number. MSM who wished to receive a summary of the aggregated results provided their contact details on a separate slip of paper stored separately to the questionnaire. Individual results were not given back to participants as oral fluid testing for HIV infection is not registered in Australia due to the slightly lower sensitivity and specificity demonstrated compared to testing of blood specimens. The oral fluid specimens collected were refrigerated and transported every few days to the National Serological Reference Laboratory for HIV testing using standard algorithms. The study was undertaken in close collaboration with researchers from the annual MGCPs and used similar survey questions, protocols and recruitment methods. Logistic regression was used to examine associations between HIV status and unrecognised HIV infection and various predictors of interest.

Main Findings:

In 2008, 745 men were recruited: 36.9% from bars/clubs, 48.9% from SOPVs and 14.2% from gay men’s health clinics.

Biological HIV Prevalence

Of the 745 participants who provided both an oral fluid specimen for testing and completed a behavioural questionnaire, 100 participants returned HIV positive oral fluid specimens and 645 participants returned negative oral fluid specimens, resulting in an overall HIV prevalence 13.4% (95% CI 11.1-16.0).

Of the 100 HIV positive MSM, 20% (95% CI 13.0-28.7%) were identified as unrecognised HIV infections.

MSM recruited from clinics were over-represented by HIV positive men attending to get routine HIV management so were excluded from the overall HIV prevalence estimate.

Of the 639 men recruited at social venues (bars/clubs and SOPVs), 61 returned HIV positive oral fluid specimens, resulting in a HIV prevalence of 9.6% (95% CI 7.5%-12.0%). This result should be considered a more reliable estimate of HIV prevalence among socially and sexually active gay men in Melbourne.
**HIV positive MSM**

MSM identified as being HIV positive through biological testing were found to have a number of characteristics that were significantly different to HIV negative men, they were as follows;

- more commonly recruited at clinics;
- more likely to be older in age;
- more likely to know other men with HIV;
- more likely to be engaging in UAIC;
- more likely to be engaging in group sex (with casual or regular partners);
- more likely to disclose their HIV status to casual partners;
- more likely to have had STI tests other than for HIV in the past six months; and

For men with regular sex partners;

- more likely to be in an open relationship or to have several regular partners;
- have agreements allowing UAI outside their regular relationship; and
- have a partner who is also HIV positive.

**MSM with unrecognised HIV infections**

Differences between men identified as having an unrecognised HIV infection and self-report HIV positive men and HIV negative men were explored. Although the prevalence of unrecognised HIV infection among MSM was relatively high at 20%, this translated to only 20 infections; which limits the ability to determine predictors of unrecognised infection in logistic regression models. As such, the key differences are still described below but none were found to be statistically significantly different.

The main characteristics found to be different between MSM identified as having an unrecognised HIV infection and HIV negative men were as follows;

- were more commonly recruited from SOPVs;
- were of similar age;
- more commonly reported being born overseas;
- more commonly reported completing high school or a tertiary degree;
- more commonly reported currently having sex with casual partners;
- more commonly reported UAIC in the past six months;
- more commonly reported multiple sex partners in the past six months;
- less commonly reported being confident in knowing their HIV status; and
- more commonly reported their last HIV test was more the 12 months ago.

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Oral fluid acceptability

As reported through the behavioural survey, the collection of oral fluid specimens was highly acceptable with over 90% of participants reported that they would participate in future MCGPSs if oral fluid specimens were collected.

Discussion:

In the ‘Suck it and See’ study, the HIV prevalence from social venue-based community sites was 9.6% (95% CI 7.5-12.0). Although this estimate of HIV prevalence is higher than the 5.8% reported in the 2008 MGCPS the difference is not unexpected due to the detection of additional unrecognised HIV infections in the ‘Suck it and See’ study and the different sampling frame used across studies.

Due to the biological testing, the ‘Suck it and See’ study was able to identify some important sexual risk behaviours more commonly reported among HIV positive men than HIV negative men; including multiple casual and regular sex partners, increased frequency of UAIC (receptive and insertive), group sex involving casual and regular partners and being in “open” relationships. One in five HIV positive participants in this study were unaware of their infection. Some concerning risk behaviours were identified among these men who were unaware of their HIV infection status of whom a third were shown to have acquired their infection in the last six months and thus likely to be highly viraemic.

These findings have clear implications for HIV transmission risk among gay men in Melbourne.

In the context of a HIV prevalence estimate approaching 10% in the MSM participating in the ‘Suck it and See’ study and high rates of other STIs in this population, the behaviours in HIV positive men and unrecognised infections need to be considered in relation to HIV prevention efforts in Victoria.

Almost one third of men identified as having an unrecognised HIV infection reported never having a HIV test. Also MSM with unrecognised HIV infections had a different demographic profile to HIV negative men in general – such as more men were born overseas, more commonly reported engaging unprotected anal intercourse, and more commonly reported that their last HIV test was more the 12 months ago. A qualitative study of such men with unrecognised infections may be useful to explore the issue further to inform the design of future prevention strategies aimed at men who have never tested.

The ‘Suck it and See’ study is an initial step towards establishing surveillance protocols that provide HIV prevalence estimates essential to inform and evaluate HIV public health and clinic programs, inform mathematical models and assess the suitability of current HIV care services in Victoria and other Australian jurisdictions.
**Recommendations**

1. Studies to estimate HIV prevalence should be conducted periodically so that the effect of prevention initiatives and surveillance of ongoing trends can be monitored effectively and emerging epidemiological trends explored in a timely manner. For example, repeating the ‘Suck it and See’ study with an over-representation of younger MSM or a larger sample size that includes more young MSM may be useful to explore recent declines in the median age of MSM reported with new HIV notifications in Victoria.

2. Repeating the ‘Suck it and See’ study at a national level would add substantial value to the findings reported from this study and provide a larger sample size of unrecognised HIV infections to more reliably identify factors associated with unrecognised HIV infection.

3. Further developing the capacity of laboratories, both within Victoria and in other jurisdictions, to conduct oral fluid HIV testing would greatly increase the ability of current surveillance systems to incorporate future studies to estimate HIV prevalence.

4. Consideration should be given to adapting the ‘Suck it and See’ study to incorporate rapid STI testing, particularly for infectious syphilis.


To find out where to get an HIV test in your area, call the HIV Connect line at 1800 038 125 or go to [www.connectline.com.au/](http://www.connectline.com.au/) for further testing information.

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If you have any questions about the study or its results please contact:

Alisa Pedrana

85 Commercial Road, Melbourne, Victoria, Australia 3004 GPO Box 2284, Melbourne, Victoria, Australia 3001 TEL 03 8506 2326 FAX 03 9282 2138

EMAIL alisa@burnet.edu.au

WWW [http://www.burnet.edu.au](http://www.burnet.edu.au)