



The prevalence of undiagnosed HIV infection is lower than expected among gay and bisexual men in four Australian cities: preliminary findings from the COUNT study

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Undiagnosed HIV

- The current (7th) National HIV Strategy: “it is estimated that 10-20 per cent of Australians living with HIV have not been diagnosed [6], and that this undiagnosed group of people contribute to a significant proportion of HIV transmission and new cases of HIV [1]”
- This suggests a need to understand the profile of those with undiagnosed HIV, in order to promote testing and prevent HIV more effectively

Commonwealth of Australia, (2014). *Seventh National HIV Strategy 2014-2017*. Canberra: Australian Government Department of Health.



Undiagnosed HIV

- Previous prevalence studies of HIV among gay men in Queensland and Melbourne
 - Anonymous, venue recruitment, oral fluid samples, matched with behavioural questionnaires
- QLD study, n=465
 - HIV prevalence (by testing) = 8.8%
 - Undiagnosed = 19.5%
 - Undiagnosed men similar to HIV-negative men
- Melbourne study, n=639
 - HIV prevalence (by testing) = 9.5%
 - Undiagnosed = 31.1%
 - Undiagnosed men more likely to report condomless sex with casual partners and group sex in past six months than HIV-negative men

Birdell et al. (2016). Pilot of non-invasive (oral fluid) testing for HIV within a community setting. *Sexual Health*, 7, 11-16. doi: 10.1017/S1445207516000020

Prestage et al. (2012). High levels of undiagnosed HIV infections in a community sample of gay men in Melbourne, Australia. *AIDS*, 26, 34-38. doi: 10.1097/QAI.0b013e3182366869



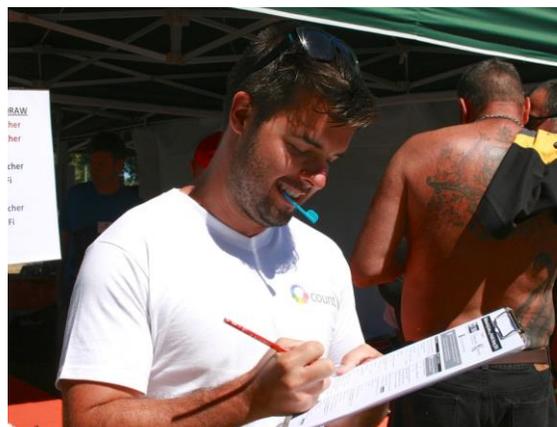
COUNT

- Funded by NHMRC, 2013-15
- Collaboration between CSRH, Burnet Institute and Kirby Institute (& many other partner orgs)
- Aims to provide better estimates of HIV and undiagnosed infection
- Larger in scale than previous studies (inc. six states/territories)
- Broader recruitment strategy (at gay venues and events in the Gay Community Periodic Surveys)
- Participants can choose to receive their results, providing a direct public health benefit



Study design

- Only GCPS participants can take part
- All consenting participants:
 - Complete GCPS questionnaire
 - Provide oral fluid sample to be tested for HIV
 - Questionnaire answers are linked with test result
- Anonymous participants:
 - Do not provide contact details, do not get their test result
- Confidential participants:
 - Provide contact details and get their test result





Results delivery



- Majority of results delivered by SMS (text message)
- HIV-negative results and previously diagnosed HIV-positive men: SMS and link to secure website with support information
- Potentially new cases of HIV (& indeterminate results): SMS asking participant to call 1800 number (followed up if no response)
 - Asked to attend local service for confirmatory testing
 - Followed up to check they are connected to care
- Participants also asked to provide landline and/or email as alternative contact methods



Participants (n=2345 so far)



- 47% of GCPS participants in Canberra, Melbourne, Sydney and Perth
- Mean age = 34.8yrs
- 90% gay-identified
- 67% Anglo-Australian
- 55% university educated
- 66% in full-time employment
- Self-reported HIV status:
 - No answer 0.9%
 - HIV-positive 6.1%
 - HIV-negative 81.5%
 - Untested/unknown 11.5%



Self-reported status vs. test result



Self-reported HIV status	Test result HIV-positive	Test result HIV-negative	Total
No answer	0	20	20
HIV-positive	144	0	144
HIV-negative	12 0.6%	1899	1911
Untested/unknown	4 1.5%	266	270
Total	160	2185	2345

- Overall, 73% opted to get their test results
- 24% of previously diagnosed HIV-positive men chose to get results
- 76% of negative and untested men chose to get results
- 10 (63%) of the 16 previously undiagnosed men chose to get results.



Preliminary estimates



	COUNT participants	HIV-positive n, %	95% CI	Undiagnosed HIV n, %	95% CI
Canberra	86	4, 4.7%	1.8–11.4	0, 0.0%	0.0–49.0
Melbourne	1001	70, 7.0%	5.6–8.7	5, 7.1%	3.1–15.7
Sydney	948	65, 6.9%	5.4–8.7	7, 10.8%	5.3–20.6
Perth	310	21, 6.8%	4.5–10.1	4, 19.0%	7.7–40.0
TOTAL	2345	160, 6.8%	5.9–7.9	16, 10.0%	6.2–15.6

- HIV prevalence lower in COUNT than in GCPS (previously diagnosed men are underrepresented)
- Estimates of undiagnosed HIV at lower end of estimates generated in previous studies/modelling (10-31%)
- Note wide confidence intervals for smaller samples



Correlates of undiagnosed infection



- Compared to men with HIV-negative test results, previously undiagnosed men (n=16) have been more likely to report:
 - Condomless anal sex with casual partners (44%, OR=2.73)
 - Use of party drugs for sex (44%, OR=3.40)
 - Use of GHB (25%, OR=4.52)
 - Any injecting (25%, OR=10.87)
- Similarly likely to report testing for HIV (in the last 12 months, 64%), use of PEP (6%).



Summary



- Large-scale, community-based recruitment of gay men for HIV testing is feasible
 - Given the offer, ¾ choose to get their results
- COUNT's preliminary estimates of undiagnosed HIV are at the lower end of previous estimates
- If correct, they suggest that the proportion of infections attributable to men with undiagnosed infection may be close to previous estimates (~30%; Wilson et al, 2009)
- Men who engage in condomless sex with casual partners, use drugs for sex and report injecting appear at much higher risk of undiagnosed HIV
- Recruitment has recently finished in Brisbane and moves to Adelaide next month





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