National surveillance of home-based HIV testing among Australian gay and bisexual men, 2018-2020

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The Kirby Institute, UNSW Sydney

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Background

- Male-to-male sex continues to be the major HIV risk exposure in Australia
- Late diagnosis is still common among gay and bisexual men (GBM) (CD4 cell count<350 cells/ µL)
- Specific priority subgroup of GBM experience suboptimal access to testing services, resulting a higher rates of late diagnosis

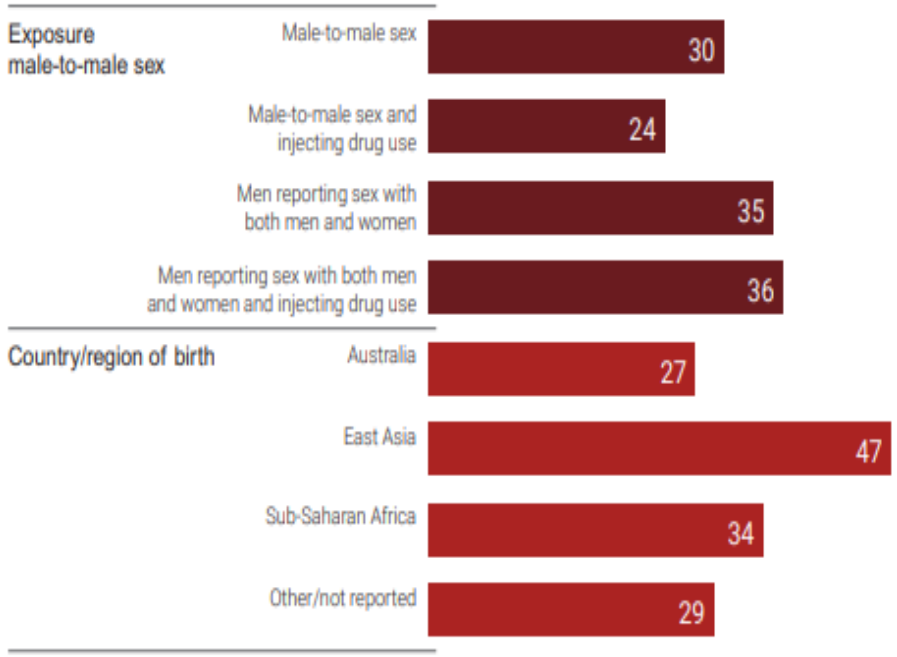

Figure 1: Proportion of late HIV diagnoses among men who have sex with men, 2016-2020

Ref: Aung E. (2020). Identifying gaps in achieving the elimination of HIV transmission among gay, bisexual, and other men who have sex with men in Australia: The Gaps Project Report. Kirby Institute, UNSW Sydney;

King, J. (2022). HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2022, The Kirby Institute, UNSW Sydney, Sydney, Australia.

Patel PG. (2021). Increased targeted HIV testing and reduced undiagnosed HIV infections among gay and bisexual men. HIV Medicine

Background

- HIV self-testing enables people to test in the privacy of their own home
- HIV self-testing can increase the frequency of HIV testing among GBM, particularly among infrequent testers
- One finger-prick HIV self-test kit was approved for use in Australia in the end of 2018

Source: www.racgp.org.au

Ref: World Health Organization. (2016). Guidelines on HIV Self-Testing and Partner Notification: Supplement to Consolidated Guidelines on HIV Testing Service
Jamil MS. (2017). Effect of availability of HIV self-testing on HIV testing frequency in gay and bisexual men at high risk of infection (FORTH): a waiting-list randomised controlled trial. Lancet HIV;4(6):e241-e50
Katz DA. (2018). HIV Self-Testing Increases HIV Testing Frequency in High-Risk Men Who Have Sex With Men: A Randomized Controlled Trial. J Acquir Immune Defic Syndr.78(5):505-12
Regulator-approved HIV self-testing kits have finally gone on sale in Australia [press release]. (2019) ABC.net

Background

- Commercial availability of HIV self-test restricted
  - online purchase, with mandatory instructional video, $25
  - strict advertising regulations

- Data on HIV self-test uptake post-commercial availability limited

Ref: World Health Organization. (2016). Guidelines on HIV Self-Testing and Partner Notification: Supplement to Consolidated Guidelines on HIV Testing Service
Jamil MS. (2017). Effect of availability of HIV self-testing on HIV testing frequency in gay and bisexual men at high risk of infection (FORTH): a waiting-list randomised controlled trial. Lancet HIV;4(6):e241-e50
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Australian Gay Community Periodic Surveys (GCPS)

- Repeated, behavioural surveillance of gay and bisexual men
- Recruited participants during LGBTQ festival periods on through online websites (Facebook)
- Participants complete questionnaire on HIV/sexual health-related behaviour
- Conducted every 1-2 years in 7 states/territories

Source: Holt M. et al. Adapting behavioural surveillance to antiretroviral-based HIV prevention: reviewing and anticipating trends in the Australian Gay Community Periodic Surveys. Sex Health. 2017;14(1):72–9

Study aims

Using the Australian Gay Community Periodic Surveys (GCPS):

- to determine the uptake of HIV home testing among Australian gay and bisexual men between 2018-2020, in a period of restricted availability

- to determine the uptake of HIV home testing among subgroups of gay and bisexual men where there are known gaps in the frequency of HIV testing

The primary study outcome

“Where did you have your last HIV test”

- “testing at home” - home testers

Covariates

-subgroups of interest

- Overseas-born GBM especially those recently arrived in Australia (lived in Australia <5 years)
- GBM who lived in postcodes where <5% of the adult male population identified as gay
- Infrequent tester: last HIV test was more than a year ago
- At high risk of HIV: had any condomless anal intercourse with casual partners with no use of PrEP in the last six months

Ref: Nigro SJ. Unpublished analysis of NSW HIV notifications, 2008-2021. Sydney: Health Protection NSW, NSW Health.; 2022

Study population

- For the analysis of trends in home testing during 2018-2020

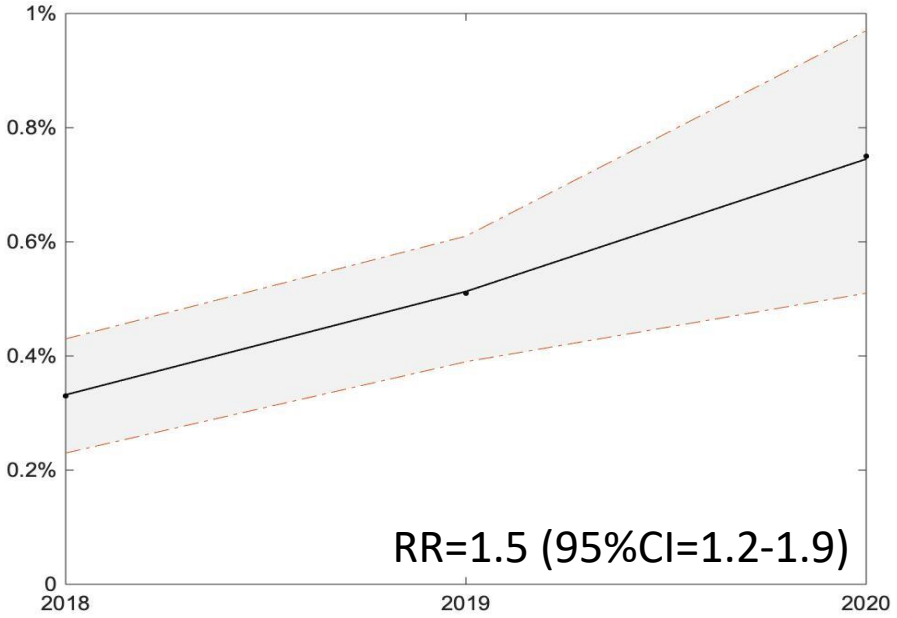
- Participants in the GCPS between 2018-2020

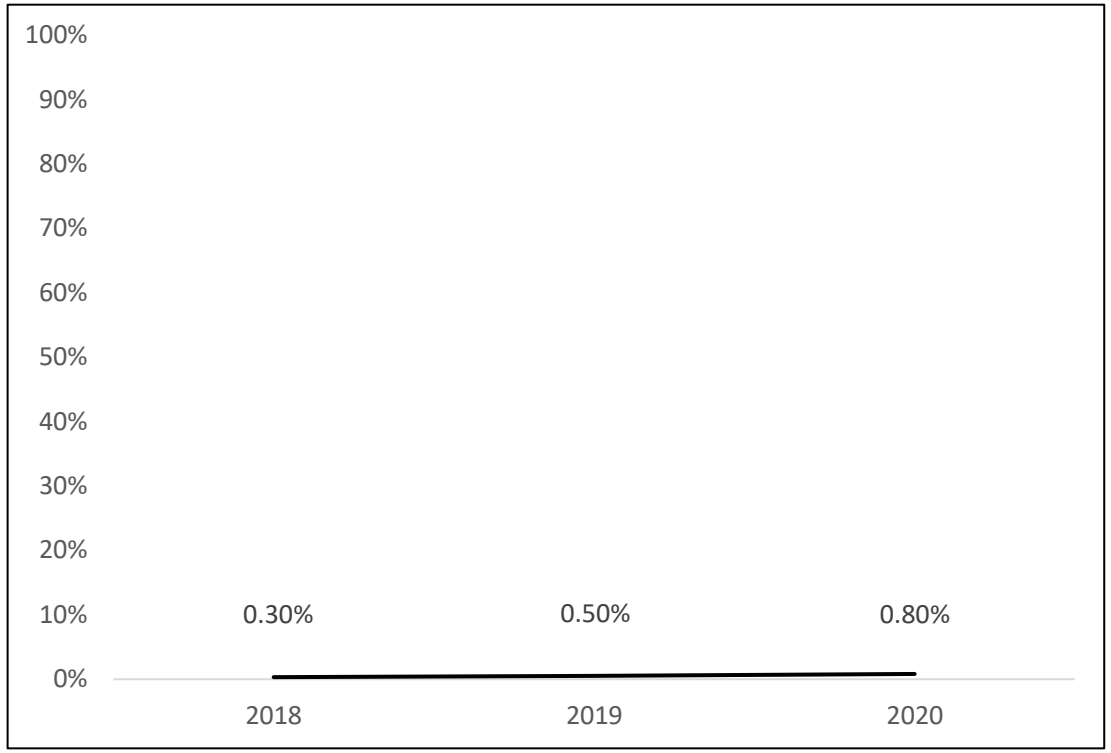
- “Non-HIV-positive” participants
  - GBM who reported that their last HIV test result was negative
  - GBM who reported their HIV status was unknown
  - GBM who had never tested before

Trends in home testing (2018-2020)

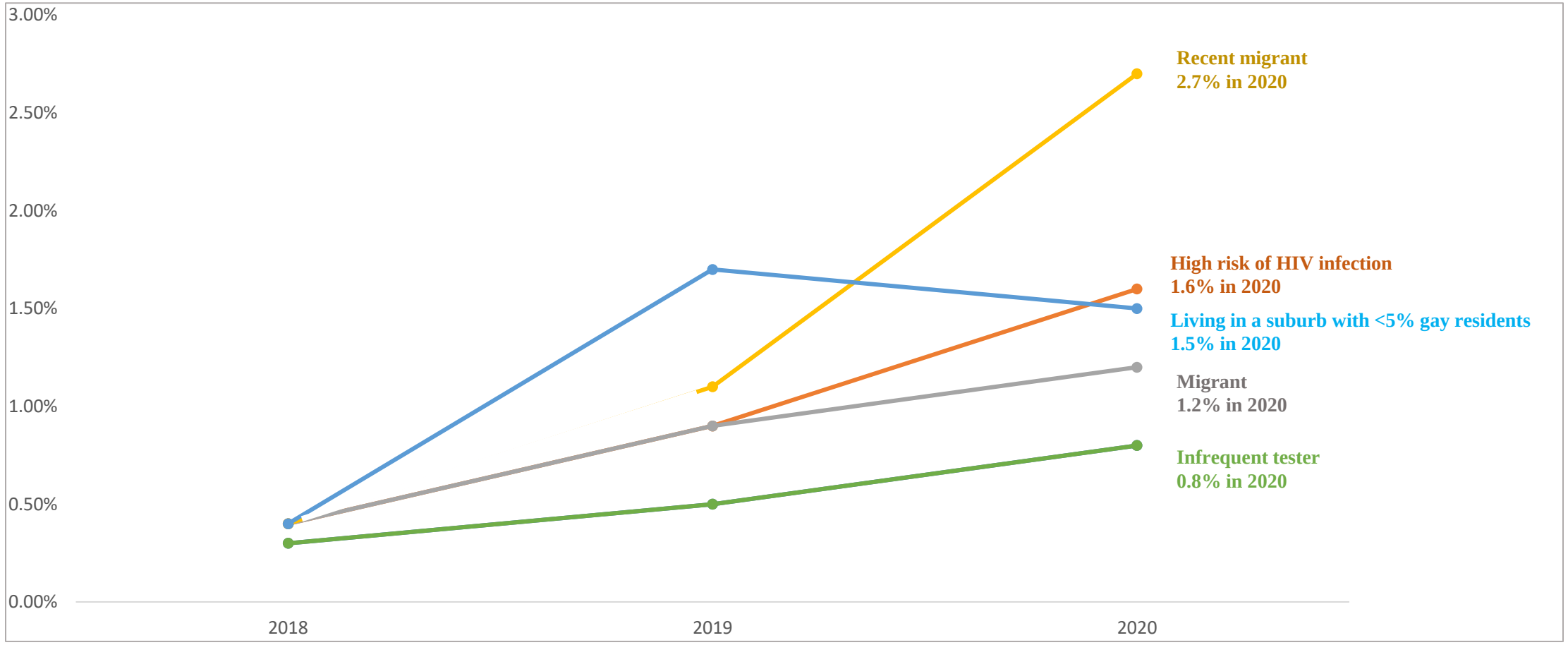
The trends in last HIV test at

Year	2018 (n=7846)	2019 (n=8508)	2020 (n=7860)
No. of HIV home tests	26 (0.3%)	43 (0.5%)	59 (0.8%)





Trends in home HIV testing among subgroups of Australian non-HIV-positive GBM, 2018-2020



Study population

- for the analysis of correlates of home testing

- GBM who participated the most recent survey in each jurisdiction (2019-2020)
- “Non-HIV-positive” participants
- Participants who had ever tested

  home testing vs facility testing

State	Recruitment year and month		
	2018	2019	2020
New South Wales	Jan.	Jan.	Jan.
Victoria	Jan.	Jan.	Jan.
Queensland	Sep.	Sep.	Sep.
Western Australia		Nov.	
Australian Capital Territory		Nov.	
South Australia	Nov.		Nov.
Tasmania	Nov.		Nov.

Comparison of socio-demographic and behavioural practices of non-HIV-positive GBM whose last tested HIV at home or at a facility site in 2019-2020

Variables	Tested at home	Tested in facility-based settings	Adjusted Odds Ratio (95% CI)
Overall	62	7724	
Age (median, IQR†)	29 (25-39)	35 (28-45)	0.98 (0.95-1.01)
Born overseas			
No	31 (50.0%)	5362 (69.4%)	Ref
Arrived in Australia >5 years ago	8 (12.9%)	1570 (20.3%)	0.87 (0.38-2.06)
Arrived in Australia< 5 years ago	22 (35.5%)	759 (9.8%)	4.71 (2.59-8.56)***
Living in a suburb			
<5% gay residents	39 (62.9%)	4767 (61.7%)	
≥5% gay residents	21 (33.9%)	2868 (37.1%)	
At high risk of HIV infection‡			
No	46 (74.2%)	6705(86.8%)	Ref
Yes	16 (25.8%)	1019(13.2%)	2.17 (1.14-4.12)**
Time since last HIV test			
Frequent tester	37 (59.7%)	5695 (73.7%)	Ref
Infrequent tester§	25 (40.3%)	2015 (26.1%)	2.09 (1.15-3.81)**

Main Findings

- Low home HIV testing (less than 1 in 100 GBM) between 2018-2020

- Uptake was slightly higher among a number of priority groups in Australia's HIV epidemic, including non-HIV-positive GBM

  - who were born overseas and recently arrived in Australia
  - men who reported higher levels of HIV risk
  - infrequent HIV testers.

Possible reasons for low uptake

- Restriction on access
- Cost
- Decoupled testing for sexually transmitted infections
- High uptake of PrEP
- Low awareness

Ref: Zhang Y. Sustaining success: a qualitative study of gay and bisexual men's experiences and perceptions of HIV self-testing in a randomized controlled trial. BMC Public Health. 2021 Nov 9;21(1):2048. doi: 10.1186/s12889-021-12011-0.
Ong JJ. The Preferred Qualities of Human Immunodeficiency Virus Testing and Self-Testing Among Men Who Have Sex With Men: A Discrete Choice Experiment. Value Health. 2020 Jul;23(7):870-879.

Next steps

- In October 2021, the TGA eased conditions on the registration of HIVST
  - test available OTC in pharmacies
  - easier online access for HIV self-test purchase, no instructional video required
  - retailers and other organizations can now advertise the HIV self-test for promotion
- CBOs have launched demonstration projects delivering free HIV self-test kit in various location
- New HIV testing awareness study will be conducted in New South Wales

Acknowledgement

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Dr. Hamish McManus
Dr. Nicholas Medland
Prof. Garrett Prestage
Prof. Virginia Wisemen

And we thank all participants of the Gay Community Periodic Surveys

Limitations

- The question asked in the survey may underestimate the level of home testing.

- The questionnaire asked HIV testing ‘at home’, rather than the specific use of HIV self-testing.

- The GCPS target GBM at higher risk of HIV through gay venues and events and online, and are unlikely to be representative of all GBM in Australia