

## Trends and associated factors in HIV testing among heterosexual men and women in Melbourne, Australia, 2012-2020

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**Background:** Despite the recent increase in the proportion of HIV notifications attributed to heterosexuals in Australia, little is known about HIV testing practices among heterosexuals. We aimed to investigate the trends and factors associated with HIV testing practice among heterosexuals.

**Methods:** This is a retrospective analysis of heterosexuals first attending Melbourne Sexual Health Centre between 2012 and 2020. We calculated the proportion of heterosexuals who had ever tested for HIV, had tested for HIV in the last 12 months and the number of months since their last HIV test. Univariable and multivariable logistic regression analyses were performed to identify the factors associated with ever HIV testing and HIV testing in the last 12 months.

**Results:** In total, 78,651 heterosexuals were included, with 41,778 (53.1%) men and 36,873 (46.9%) women. Overall, the proportion of heterosexuals ever tested for HIV was 40.8% (32,075/78,651), with a declining testing trend from 41.0% (5,332/12,992) in 2012 to 36.4% (2,163/5,936) in 2020, with a significant annual decrease of 1.0% (95%CI 1.0-1.0,  $P_{\text{trend}} < 0.001$ ) after adjusting for confounders. Additionally, the proportion of heterosexuals tested for HIV in the last 12 months was 15.7% (12,354/78,651), with no significant change in the testing trend from 14.8% (1,928/12,992) in 2012 to 14.7% (873/5,936) in 2020 ( $P_{\text{trend}} = 0.512$ ). The median months since last HIV test decreased from 18.8 (IQR 7.3-38.7) in 2012 to 15.0 (IQR 6.4-32.5) in 2020 ( $P_{\text{trend}} < 0.001$ ). Furthermore, having condomless sex with casual partners (aOR=0.51, 95% CI: 0.46-0.56) and women (aOR=0.92, 95% CI: 0.91-0.99) were less likely to get an HIV test in the last 12 months.

**Conclusions:** HIV testing was low among heterosexuals, which raises concern given that individuals who had condomless sex were less likely to get tested. To end HIV transmission in Australia by 2025, we need strategies to improve testing for HIV among heterosexuals.

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