

# Sexual practices and sexually transmitted infections in men who have sex with men only and men who have sex with men and women: a repeated cross-sectional study in Melbourne, Australia

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## Background:

In the last decade, there has been an increase in sexually transmitted infections (STI) in men who have sex with men (MSM) in Australia, and since 2015 in urban heterosexuals. Men who have sex with men and women (MSMW) have characteristics that may differ from both MSM only (MSMO) and heterosexual men. We aimed to compare the sexual practices and the trends in HIV/STI positivity between MSMO and MSMW.

## Methods:

We conducted a repeated cross-sectional study using data from MSM attending the Melbourne Sexual Health Centre, Australia, between 2011 and 2018. We examined the annual trends of sexual practices and HIV/STI positivity and assessed its association with sexual practice (MSMO versus MSMW) using logistic regression.

## Results:

Compared with MSMW (N=1,979), MSMO (N=12,795) were more likely to practice anal sex and to have condomless receptive anal sex with casual male partners, and less likely to have a current regular relationship. Over the 8-year period, there was an increase in condomless receptive anal sex with casual male partners for both groups (MSMO: 46.2% to 63.3%,  $P_{\text{trend}} < 0.001$ ; MSMW: 41.3% to 57.9%,  $P_{\text{trend}} = 0.011$ ). Syphilis positivity increased in MSMO (5.5% to 7.8%,  $P_{\text{trend}} = 0.012$ ) and MSMW (from 0.9% to 6.4%,  $P_{\text{trend}} = 0.004$ ), and HIV remained stable. Gonorrhoea increased among MSMO from 2011 to 2014 (from 6.7% to 9.6%,  $P_{\text{trend}} = 0.002$ ), but remained stable from 2015 to 2018. Compared with MSMW, MSMO had higher odds of testing positive for gonorrhoea (adjusted odd ratio [aOR] 1.36, 95% CI: 1.13-1.64), chlamydia (aOR 1.39, 95% CI: 1.16-1.67), syphilis (aOR 1.74, 95% CI: 1.37-2.22) and HIV (aOR 4.60, 95% CI: 2.43-8.70).

## Conclusion:

Overall, MSMW have lower reports of condomless anal sex and lower HIV/STI positivity compared with MSMO. From 2011 to 2018, changes in sexual practices have affected both MSMW and MSMO leading to an increased risk of STI in both groups.

## Disclosure of Interest Statement:

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