

# **Dramatic decline in HIV pre-exposure prophylaxis (PrEP) use and sexual behaviour among gay and bisexual men following COVID-19 physical distancing restrictions in Australia: Results from a 2014 prospective observational study and implications for trends in HIV.**

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## **Background:**

In late March 2020, Australian state and federal governments introduced physical distancing measures to combat COVID-19. We investigated the impact of these measures on HIV pre-exposure prophylaxis (PrEP) use and sexual behaviour among gay and bisexual men (GBM).

## **Methods:**

In April 2020, 940 participants in the ongoing Flux Study responded to questions about COVID-19 and changes in PrEP use and sexual behaviours before and following enactment of physical distancing measures. Binary logistic multiple regression was used to estimate adjusted odds ratios (aOR) and 95% confidence intervals (95% CI) to compare changes in sexual behaviours and PrEP use.

## **Results:**

Mean age was 43.9 years. Of 664 men who reported sex with either fuckbuddies or casual partners, 82.8% had ceased sex with those partners following COVID-19 physical distancing measures and average daily partner number decreased from 0.089 (SD: 0.144) to 0.031 (SD: 0.097;  $p < 0.001$ ), representing a reduction of 65.2%.

Among non-HIV positive GBM, 47.2% reported PrEP use prior to COVID-19. Among those, 41.8% ceased PrEP use since physical distancing restrictions were imposed. In multivariable regression, men who discontinued PrEP were less likely to have been tested for HIV in the previous month (aOR: 0.17; 95%CI: 0.09-0.34;  $p < 0.001$ ), or to report sex with casual partners (aOR: 0.28; 95%CI: 0.014-0.54;  $p < 0.001$ ).

## **Conclusion:**

Discontinuation of PrEP use since the COVID-19 restrictions was mostly due to simultaneous reductions in sexual activity. These dramatic changes will likely result in short-term reductions in new HIV and sexually transmissible infections diagnoses. These reductions may be transient as COVID-19 physical distancing restrictions are eased, and reinstated, over time. Messaging about PrEP recommencement and about on-demand PrEP should target GBM who have ceased PrEP use during physical distancing measures.

## **Disclosure of Interest Statement:**

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