

TRENDS IN GONORRHOEA TESTING AND INCIDENCE AMONG GAY AND BISEXUAL MEN IN AUSTRALIA DURING PREP IMPLEMENTATION: AN ANALYSIS OF A DECADE OF SURVEILLANCE DATA (2012–2023)

Authors

Aung HH^{1,2}, Guy R³, Chow EPF^{2,4,5}, Ong J^{4,5}, Varma R^{3,6}, Thng C⁷, Shaw M⁸, Templeton DJ^{3,9}, Cornelisse VJ¹⁰, Heath-Partner D¹¹, Aung HL³, Asselin J^{1,3}, Donovan B³, Hellard ME^{1,12}, Stooze MA^{1,12}, Traeger MW^{1,12}

Author affiliations

¹Burnet Institute, Melbourne, Australia, ²School of Population and Global Health, University of Melbourne, Melbourne, Australia, ³The Kirby Institute, UNSW Sydney, Sydney, Australia, ⁴Melbourne Sexual Health Centre, Alfred Health, Melbourne, Australia, ⁵School of Translational Medicine, Monash University, Melbourne, Australia, ⁶Sydney Sexual Health Centre, Sydney, Australia, ⁷Gold Coast Sexual Health Service, Gold Coast Health, Australia, ⁸M Clinic, Perth, Australia, ⁹Department of Sexual Health Medicine, Sydney Local Health District, Australia, ¹⁰HIV and Sexual Health Services, Mid North Coast & Northern NSW Local Health Districts, NSW Health, Australia, ¹¹Health Equity Matters, Sydney, Australia, ¹²School of Public Health and Preventive Medicine, Monash University, Melbourne, Australia

Background: Changes in sexual networks associated with HIV PrEP and treatment-as-prevention may be influencing gonorrhoea transmission among gay and bisexual men (GBM). We describe trends in gonorrhoea testing and incidence among GBM over twelve years spanning PrEP implementation in Australia.

Methods: We analysed linked clinical data from 76 services participating in the ACCESS surveillance network between Jan-1-2012 to Dec-31-2023. We calculated annual test uptake (proportion of attendees with at least 1 test event in a year) and, among those with multiple tests during the study period, gonorrhoea incidence per 100 person-years. Annual testing rate and incidence were stratified by HIV status and evidence of PrEP prescribed (categorised into ever/never-PrEP users). Multivariable Poisson regression explored associations between HIV status, PrEP use and incident gonorrhoea, adjusted for calendar year and age.

Findings:

A total of 193,053 GBM attended a clinic during the study period, of which 176,244 (91.3%) were tested for gonorrhoea at least once. Annual testing rate increased from 58.7% in 2012 to 75.2% in 2023, largely driven by increased testing among ever-PrEP users. Among 119,741 GBM with ≥ 2 tests, 61,896 gonorrhoea infections were diagnosed over 542,949.1 person-years (overall incidence rate: 11.4/100 person-years). From 2012 to 2023, incidence among HIV-negative ever-PrEP users increased from 6.2 to 19.6/100 person-years, and among GBM with HIV from 8.6 to 18.8/100 person-years. Recurrent infections were common, with 13,620 (11.4%)

GBM diagnosed with ≥ 2 infections, accounting for 69.1% of all diagnoses. Ever being prescribed PrEP (aIRR=2.40, 95% CI:2.35–2.45) and living with HIV (aIRR=3.05, 95% CI:2.97–3.13) were strongly associated with incident gonorrhoea.

Conclusion:

In this large cohort of GBM, gonorrhoea incidence increased during PrEP implementation, however incidence was already rising before large-scale PrEP roll-out in 2016. GBM living with HIV, using PrEP, or with a prior gonorrhoea infection should be prioritised for biomedical risk-reduction strategies (i.e., vaccination).

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