

CHANGES IN SEXUALLY TRANSMITTED INFECTIONS AMONG GAY AND BISEXUAL MEN AFTER ENROLLING IN THE PREPX IMPLEMENTATION STUDY

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Background:

While there is growing evidence of increasing sexually transmitted infections (STIs) among gay and bisexual men (GBM) using PrEP, few studies have been able to measure STI incidence before PrEP commencement. We compare STI incidence among GBM before and after enrolment in the Pre-exposure Prophylaxis Expanded (PrEPX) study, a population-level, multi-site, PrEP implementation project in Melbourne, Australia.

Methods:

STI testing data from PrEPX participants attending five clinics specializing in GBM health were extracted prior to study enrolment and at scheduled three-monthly PrEP visits between July 2016-December 2017 through the Australian Collaboration for Co-ordinated Enhanced Sentinel Surveillance (ACCESS). We compared gonorrhea, chlamydia and syphilis incidence in the year before PrEPX enrolment and during PrEPX follow-up using negative binomial regression to calculate incidence rate ratios (IRRs). We adjusted for differential individual testing frequency between periods and stratified results by participants' self-reported pre-study PrEP use.

Results:

1,187 participants had at least one pre-enrolment clinic visit and were included in the analysis, contributing 748.2 person-years pre-PrEPX and 1317.0 person-years during PrEPX. Incidence of any STI increased 37% (IRR 1.37, 95% confidence interval [CI] 1.23-1.52) following enrolment. Although overall testing rate increased by 29% between periods, incidence still increased after adjustment (aIRR=1.26, 95% CI 1.12-1.41). The increase in any STI diagnosis was greater in participants reporting no prior PrEP use

(aIRR 1.41, 95% CI 1.21-1.64) than those using PrEP before enrolment (aIRR 1.11, 95% CI 0.96-1.28). Significant increases were observed for chlamydia and gonorrhoea at any anatomical site and rectal, pharyngeal and urethral infections overall. No change was observed for syphilis.

Conclusions:

STI incidence increased among GBM in PrEPX following enrolment, especially among those with no pre-study PrEP use. Our findings support ongoing and frequent STI screening alongside education on early identification of STI symptoms for PrEP users, especially among those exhibiting multiple STIs.