

**THEME: PREVENTION, EPIDEMIOLOGY AND HEALTH PROMOTION ON HIV AND/OR SEXUAL HEALTH IN THE AUSTRALASIAN REGION
UPDATE ON STI TRENDS IN A COHORT OF HIGH-RISK GAY AND BISEXUAL MEN BEFORE AND AFTER RAPID SCALE UP OF HIV PRE-EXPOSURE PROPHYLAXIS IN NSW, AUSTRALIA: THE EPIC-NSW STUDY**

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Background: The EPIC-NSW study rapidly implemented HIV pre-exposure prophylaxis (PrEP) from 2016, and participants were recommended to be tested for sexually transmissible infections (STI) 3-monthly. This provided an opportunity to measure STI trends associated with PrEP access. We use increased follow-up and enrolments to update findings first reported at ASHM 2018.

Methods: We included high-risk HIV-negative GBM enrolled in EPIC-NSW between 1-March and 31-December-2018, with no recent PrEP use and ≥ 2 tests in the year prior to enrolment. Data on testing and diagnoses of chlamydia, gonorrhoea, and infectious syphilis in the year before and up to 2 years after enrolment were collected using the ACCESS system. These data were used to assess change in trends in quarterly testing positivity associated with enrolment, and additional increase in positivity associated with enrolment, after adjusting for trend.

Results: Analyses included 2,404 men. STI positivity was 52% in the year after PrEP (23.3% per quarter; 95%CI, 22.5%-24.2% per quarter) with no significant trend (mean rate ratio [RR] increase of 1.01 per quarter [95%CI, 0.99-1.02]; $P = .29$), compared with 50% positivity in the year prior to PrEP (20.0% per quarter [95%CI, 19.04%-20.95% per quarter]; RR for overall STI positivity, 1.17 [95%CI, 1.10-1.24]; $P < .001$), where STI positivity increased at 8% per quarter (mean RR of 1.08 per

quarter [95%CI, 1.05-1.11]; $P < .001$). This represented a drop in trend of 7% after enrolment (RR, 0.93 [95%CI, 0.90-0.96]; $P < .001$). Findings were similar when stratified by specific STIs and anatomical site and when adjusted for calendar period of enrolment.

Conclusions:

STI rates were high but stable among high-risk MSM while taking PrEP, compared with a high but increasing trend in STI positivity before commencing PrEP. These findings suggest the importance of considering trends in STIs when describing how PrEP use may be associated with STI incidence.

Disclosure of Interest Statement: Dr Grulich reported receiving personal fees from Gilead and Viiv outside the submitted work. Dr Vickers reported receiving personal fees from the University of New South Wales during the conduct of the study. Dr Bavinton reported receiving personal fees from Gilead outside the submitted work. No other disclosures were reported.