STI TRENDS IN A COHORT OF HIGH-RISK GAY AND BISEXUAL MEN BEFORE AND AFTER RAPID SCALE UP OF HIV PRE-EXPOSURE PROPHYLAXIS IN NEW SOUTH WALES, AUSTRALIA: THE EPIC-NSW STUDY

Authors:
McManus H1, Grulich AE1, Amin J1,2, Watchirs-Smith L1, Selvey C3, Zablotska I4, Vaccher S1, Jin F1, Holden J3, Price K5, Yeung B1, Levitt G1, Ogilvie E1, McNulty A6, Smith D7, Cooper DA1, Guy R1 on behalf of the Expanded PrEP Implementation in Communities New South Wales (EPIC-NSW) research group

1The Kirby Institute, UNSW Sydney, Sydney, Australia, 2Department of Health Systems and Populations, Macquarie University, Sydney, Australia, 3NSW Government, Ministry of Health, NSW, Australia, 4Westmead Clinical School, Sydney University, Sydney, Australia, 5AIDS Council New South Wales, NSW, Australia, 6Sydney Sexual Health Centre, Sydney, Australia, 7North Coast HIV/Sexual Health Services, Lismore, Australia

Background:
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.

Methods:
We included high-risk HIV-negative GBM enrolled in EPIC-NSW between 1-March and 31-October-2016, with no recent PrEP use and ≥2 tests in the year prior to enrolment. We collected tests and diagnoses of chlamydia, gonorrhoea, and infectious syphilis in the year before and after enrolment, using the ACCESS system. Regression models were used to assess (i) change in trends in quarterly positivity associated with enrolment, (ii) any additional increase in positivity associated with enrolment, after adjusting for trend. We conducted sensitivity analyses adjusted for changes in testing frequency to reduce biases associated with case finding in participants with more frequent testing patterns after enrolment.

Results:
Analyses included 1,264 men. STI positivity ranged from 25.5% to 21.6% per quarter before enrolment, and 24.6% to 26.2% after enrolment. There was no difference in trends in quarterly positivity before and after enrolment for chlamydia, gonorrhoea, infectious syphilis; and by site of infection. There was no additional increase in STI positivity following enrolment after adjusting for trend, except for anorectal gonorrhoea (RR:2.04, 95%CI:1.03-4.02,p=0.040) which was followed by a decreasing trend after enrolment (-10.3%/quarter,95%CI:-18.2---1.7,p=0.020) and urethral chlamydia (RR:2.28,95%CI:1.09-4.8,p=0.028) which was followed by a marginal decreasing trend (-9.6%/quarter,95%CI:-18.5-0.2,p=0.054). Findings were similar when adjusting for changes in testing frequency.

Conclusions:
Our analysis suggests that in high-risk men who were testing frequently for STIs before PrEP there was no increasing trend in STI positivity after PrEP commencement. At enrolment there was an initial increase in urethral chlamydia and
anorectal gonorrhoea positivity, followed by declining trend. Findings highlight the importance of taking into account pre-existing epidemiology and testing patterns, when interpreting STI trends in the PrEP era.