

These results show extreme vulnerability of HIV-positive women, which has increased the common obstetric risks of gestational process, the immune compromised. Policies directed to the health needs of HIV-positive women become crucial to prevent maternal-to-child transmission of HIV and other STIs.

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#### P16.09 COINFECTION WITH GONORRHOEA, SYPHILIS OR BOTH DOES NOT APPEAR TO AFFECT HIV TRANSMISSION TO THE SEXUAL CONTACTS OF HIV+ PATIENTS WITH UNDETECTABLE VIRAL LOADS

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**Background** Infection with gonorrhoea (GC) or syphilis is postulated to increase the transmission of HIV 2–5 times; however, studies were done before highly effective HIV therapy was available. In Philadelphia, partner services (PS) is performed, regardless of viral load (VL), for HIV+ patients who are newly diagnosed, STI coinfecting, or who are reported as contacts to a patient with new STI or HIV. We hypothesised that STI coinfection would not affect HIV transmission among partners of patients with undetectable VL receiving PS.

**Methods** HIV+ Philadelphia residents receiving PS from January 2012–December 2014 with a VL within +/- 6 months of PS interview date, with or without STI within +/- 90 days of PS, were included. Partners not already known to be HIV+ who tested for HIV as part of PS were categorised into contacts of either 1) HIV+ patient, undetectable VL (<50 c/ml) or 2) HIV+ patient, detectable/unknown VL.

**Results** PS encounters were initiated 2,463 times; 80.9% of encounters resulted in interview and 2,106 partners were elicited. Of the 1,211 locatable partners not known to be HIV+, 668 (55.1%) were tested after PS. New HIV was diagnosed more often among partners of patients with detectable/unknown VL (57/435, 13.1%) versus those with undetectable VL (17/233, 7.3%) (OR = 1.9, 95% CI 1.1–3.5). When patient VL was undetectable, there was little difference in HIV diagnoses among partners of patients with no STI (8/89, 9.0%), syphilis (7/90, 7.7%), GC (2/49, 4.1%), or syphilis/GC (0/5).

**Conclusion** Patients with undetectable VL who were coinfecting with GC, syphilis or both did not transmit HIV to their named sexual contacts at a higher rate than those with HIV alone. Molecular sequencing data can add insight into actual transmission between partners. HIV/STI PS programs could consider deprioritizing the provision of PS to patients with undetectable VL regardless of STI coinfection.

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#### P16.10 WORSE EPIDEMIC OF EARLY HIV INFECTION AMONG MEN WHO HAVE SEX WITH MEN IN CHINA: IMPLICATION FOR REAL TIME ACTION

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**Background** Recent upsurge of new HIV infections among men who have sex with men (MSM) is a major concern in China. Paucity of national-level information regarding the burden and predictors of this progressive epidemic of new infections called for a multi-centric, timely and comprehensive investigation.

**Methods** Mixed methods were used to recruit MSM (MSM) from seven cities in China between 2012 and 2013. Early and established HIV infections were estimated by Western Blot and BED HIV-1 capture enzyme immunoassay. Syphilis and herpes simplex virus-2 (HSV-2) were also tested.

**Results** A total of 4496 eligible MSM were recruited. The majority was aged ≤35 years (77.5%), migrants (60.3%), never married (69.8%), and played receptive role in anal sex (70.5%). The HIV prevalence was 9.9%, and 41.9% were recently infected, with HIV incidence of 8.9/100 Person-Years (95% CI: 7.6–10.2). The prevalence of history HSV-2 and syphilis were 12.5% and 8.5%, respectively. Early HIV infection was associated with having multiple male partners (aOR = 1.4, 95% CI 1.1–1.9), recreational drug use (aOR = 2.2, 95% CI 1.6–3.0), anal bleeding (aOR = 2.1, 95% CI 1.4–3.0), circumcision experience (aOR = 2.0, 95% CI 1.3–3.1), syphilis infection (aOR = 2.8, 95% CI 1.9–4.3) and history HSV-2 infection (aOR = 2.3, 95% CI 1.5–3.3).

**Conclusion** High rate of early HIV infection is potentially resulting in progressive deterioration of the overall HIV epidemic among MSM in China. Targeted interventions to address high-risk MSM including those having multiple partners, history of recreational drug use and syphilis or HSV-2 infection seemed to be the need of the hour.

#### P16.11 ESTIMATING THE DISTRIBUTION OF NEW HIV INFECTIONS BY KEY DETERMINANTS IN GENERALISED EPIDEMICS OF SUB-SAHARAN AFRICA USING A VALIDATED MATHEMATICAL MODEL

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