

the last year, 18% with a new partner. Condom use with sexual intercourse was reported at 37% every time, 26% sometimes and 37% never. 63.5% of women reported ever having an STI. Specifically; herpes 31%, condylomas 29%, chlamydia 22%, gonorrhoea 15%, trichomonas 13% and syphilis 9%. Multivariable logistic regression was used to determine predictors associated with history of an STI. Compared to black women, white women (OR = 2.4,  $p < 0.02$ ) and aboriginal women (OR = 7.9,  $p < 0.01$ ) were more likely to report an STI. Older women were less likely (OR = 0.5/5 years,  $p = 0.02$ ) and women who had been sexually active for longer were more likely to report an STI (OR = 2.5,  $p = 0.001$ ).

**Conclusion** A reported history of STI infection was notably higher in aboriginal and white women compared to black women. Younger women and those with more years of sexual activity were also more likely to report a prior STI. Despite a substantive history of STI's once engaged in HIV care a significantly lower incidence of concurrent active STI's was observed in this population of women.

**P3.210 HIV AND SYPHILIS CO-INFECTION IN PATIENTS ATTENDING AAR HEALTH SERVICES CLINIC IN UGANDA**

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**Background** AIDS remains a leading cause of mortality in Sub Saharan Africa accounting for almost half of the worlds HIV related deaths. On the other hand bacterial sexually transmitted infections (STIs) such as syphilis exert a heavy toll in terms of morbidity and mortality in the developing world. Syphilis in HIV positive people may increase HIV transmissibility and adversely affect reproductive health. Diagnosis and treatment of curable STIs in HIV infected persons can aid in preventing spread to partners.

**Methods** AAR Health Services provides prevention, care and treatment services to the general population. Between December 2011 and December 2012, we screened and tested 4,350 patients with symptoms of genital ulcer disease, urethral and abnormal vaginal discharges to diagnose HIV and Syphilis infection. Participants were counselled before screening and testing. Serological diagnosis of HIV included the use of three rapid test kits in sequence (Determine®, Statpak® and Unigold®). Serological diagnosis of syphilis involved conducting a *Treponema pallidum* - specific antigen test, *Treponema pallidum* haemagglutination test. Persons with a positive serology were treated for syphilis with 3 intramuscular doses of 2.4 mU of benzathine penicillin administered once weekly.

**Results** Overall, the HIV prevalence was 8.2% while that of Syphilis was 5.4%. Syphilis was significantly more predominant among female clients as compared to male clients. The rate of HIV-syphilis co-infection was 4.2%.

**Conclusions** The rate of HIV-syphilis co infection among patients who attend AAR Health Services clinic is at the increase. Early screening of Syphilis and other STIs is an effective initiative for detecting and controlling treatable STIs and curbs spread of HIV to partners. A number of primary preventive interventions for HIV and syphilis need to be adopted including use of condoms and medical male circumcision in order to improve sexual and reproductive health amongst AAR clients.

**P3.211 EXTREMELY HIGH RISK OF SYPHILIS CO-INFECTION AND RE-DIAGNOSIS AMONG MEN WHO HAVE SEX WITH MEN LIVING WITH HIV IN ONTARIO, CANADA**

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**Background** Since 2000, new syphilis cases increased ten-fold in Canada, particularly among men who have sex with men (MSM) co-infected with HIV. We calculated the prevalence and incidence of syphilis in a large cohort of HIV-positive MSM.

**Methods** We analysed data from 2,903 MSM followed from 2000 to 2009 in the OHTN Cohort Study, an ongoing cohort of persons in HIV care in Ontario, Canada. Syphilis serology was obtained via record linkage with the provincial public health laboratories. We classified reactive rapid plasma reagin results as acute ( $\geq 16:1$ ) or non-acute ( $\leq 8:1$ ) and calculated the lifetime and annual prevalence of syphilis and incidence of new syphilis diagnoses and re-diagnoses. Risk factors were identified using Poisson regressions and are reported as rate ratios (RR) with 95% confidence intervals (CI).

**Results** We linked 7,036 syphilis results from 2,422 men (83.4%). Lifetime prevalence was 23.4% (95% CI 21.7, 25.2) by 2009. The annual prevalence of acute syphilis increased from 0.1% (95% CI 0.002, 0.5) in 2000 to 3.8% (95% CI 3.0, 4.6) in 2009. Among 1505 men with a negative specimen, incidence of first syphilis infection was 2.7/100PY (95% CI 2.3, 3.1), with higher rates in men who were aged  $< 30$  years (RR = 2.8, 95% CI 1.4–5.5), ART-naïve (RR = 1.7, 95% CI 1.2–2.5), and had high viral load ( $> 100,000$  copies/mL cf undetectable: RR = 1.8, 95% CI 1.1–3.0). Incidence rose over time, peaking in 2009 at 3.97/100PY (95% CI 3.0, 5.2). Among 591 men with past infection, the rate of re-diagnosis was 4.8 per 100PY (95% CI 3.7, 5.5), with 35% experiencing multiple re-diagnoses.

**Conclusion** Syphilis incidence among HIV-positive MSM was over 300 times greater than in the general male population. Temporal and regional trends mimicked provincial surveillance reports and remain extremely high despite public health education and testing campaigns. Re-diagnosis was common, suggesting treatment failure or re-infection. Novel syphilis control efforts are urgently needed.

**P3.212 YOUNG PERSONS AND MEN WHO HAVE SEX WITH MEN ARE MORE LIKELY TO HAVE HAD AN EARLY SYPHILIS DIAGNOSIS SHORTLY BEFORE OR AFTER AN HIV DIAGNOSIS**

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**Background** High rates of HIV co-infection have been observed in recent syphilis epidemics, and persons diagnosed with HIV and early syphilis (ES) within a short period of time may be an appropriate focus for targeted HIV control strategies. Targeted control strategies seek to prevent HIV transmission by focusing specifically on those most likely to transmit, i.e., high viral load or concurrent STIs. To implement targeted HIV control in Baltimore, Maryland, we sought to characterise persons newly diagnosed with HIV who also received an ES diagnosis.

**Methods** Using retrospective public health surveillance data of newly diagnosed HIV cases reported to the Baltimore City Health Department from 2009 to 2011, we measured the proportion of persons with ES diagnoses. Chi-square tests were used to assess differences in age ( $> 30$  vs.  $< 30$ ), gender, and sexual orientation by infection (HIV only vs. ES-HIV).

**Results** Of the 811 persons with newly diagnosed HIV, 104 (12.8%) also received at least one ES diagnosis between 2009 and 2011, 95% of whom were male. Compared to persons receiving only an HIV diagnosis, persons receiving both HIV and ES diagnoses were more likely to be younger (35.8% vs. 69.2%,  $p < 0.001$ , respectively) and men who have sex with men (MSM) (24.3% vs. 62.5%,  $p < 0.001$ , respectively). When controlling for sexual orientation, younger age was significantly associated with ES among men who have sex with women (MSW) (28.0% vs. 64.7%,  $p < 0.01$ , respectively) and females (25.9% vs. 80.0%,