

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%,

$p = 0.02$, respectively); however, among MSM, age was no longer statistically significant (62.8% vs. 70.8%, $p = 0.25$, respectively).

Conclusions A substantial proportion of persons newly diagnosed with HIV were also recently infected with syphilis, with young age strongly associated with ES among non-MSM. In addition to MSM, women and MSW under 30 years old may be appropriate foci for targeted control.

P3.213 SEROPREVALENCE OF HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION AMONG TUBERCULOSIS PATIENTS ATTENDING TB/DOTS CENTRE IN NNEWI

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Background TB and HIV co-epidemic is a major public health problem in many parts of the world, particularly in developing countries. This study was a prospective cohort design to determine the seroprevalence of HIV infection among tuberculosis patients attending TB/Directly Observed Treatment Short-course (DOTS) centre in a tertiary hospital in Nnewi, Nigeria

Methods TB diagnosis was based on combined evaluations of clinical, radiological and laboratory features of the patients with the protocol established by the National Tuberculosis Control Program (NTBCP). Laboratory diagnosis of HIV infection was based on rapid HIV test kits according to the national HIV testing algorithm.

Results Of the 1356 tuberculosis patients tested, 404/1356 (29.9%) were positive to the HIV antibodies. The prevalence was higher in females (15.6%) compared to males (14.2%). The prevalence of HIV in 49 years of age or less population was 15.6 times (28.0%) higher compared to 50 years and older (1.8%). 823 out of 1356 (60.6%) were Smear Positive TB (SPTB). Extra-Pulmonary Tuberculosis (EPTB) 89/404 (22%) and Smear Negative TB (SNTB) 326/404 (58.7%) were frequently associated with HIV/TB co-infection.

Conclusion Our results indicate that the prevalence of HIV/TB co-infection in Nnewi, Nigeria deserves special attention, screening of HIV among TB populations should be performed as this would assist in the treatment of both diseases.

P3.214 HIV PREVALENCE TREND IN THE CONFLICT TO POST-CONFLICT TRANSITION PERIOD IN GULU DISTRICT, NORTHERN UGANDA

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Background Since 1986, North Uganda has been affected by civil strife and most of its population have been displaced in protected camps. However, since 2007, the increased security conditions have allowed many people to leave the camps and return to their villages. This study aims at estimating the HIV prevalence trend among pregnant women in Gulu district in the conflict (2005–2006) to post-conflict (2007–2010) transition period.

Methods In 2005–2006 and 2007–2010, a total of 2318 and 25,924 ANC attendees of the St. Mary's Hospital Lacor, respectively, were anonymously tested for HIV within the national sentinel surveillance system. Differences in HIV prevalence by testing period and displacement status were evaluated using the chi-square test.

Results The overall HIV prevalence in 2005–2006 was 11.0% compared with 9.9% in 2007–2010 ($P = 0.074$). In both periods, as previously found, prevalence among internally displaced women

(IDW) was lower than prevalence among women living outside camps. However, the difference in prevalence between these two groups decreased in the transition period. In fact, while the prevalence remained quite stable among IDW (9.2% in 2005–2006 compared with 8.3% in 2009–2010; $P = 0.370$), it significantly decreased among women living outside camps (12.6% in 2005–2006 compared with 10.4% in 2009–2010; $P = 0.020$), mostly reflecting the population movements occurred since 2007 (IDW were 45.0% of the ANC attendees in 2005–2006 compared with 27.5% in 2009–2010; $P < 0.001$).

Conclusions The HIV prevalence in Gulu district is still high compared with the rest of Uganda. It remained quite stable, thus suggesting that no HIV-related behavioural changes in the post-conflict period have occurred or that their effects are not yet observable. However, the reduced difference in HIV prevalence between IDW and women living outside of protected camps suggests that the HIV epidemiological profile in this district is changing, mainly as a result of the post-conflict population movements

P3.215 HIV/AIDS COINFECTION WITH THE HEPATITIS B AND C VIRUSES IN BRAZIL

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Background Hepatitis B and C viruses and the HIV virus share the most important forms of transmission. Infections by these viruses present a dynamic interaction, amplifying each other and leading to greater morbidity and mortality. The objective of this study is to estimate the prevalence and to describe the epidemiological profile of individuals coinfecting with HIV/HBV and HIV/HCV in Brazil.

Methods AIDS cases were obtained from the “Sistema de Informação de Agravos de Notificação” (Sinan) and the “Sistema de Controle de Exames Laboratoriais” (Siscel). Coinfection was identified through probabilistic record linkage of the AIDS cases with hepatitis viral (B and C) from Sinan's notifications. The probabilistic records linkages were performed using the RecLink III software.

Results Between 1999 and 2010, 370,672 AIDS cases were reported, of which 3,724 (1.0%) were identified as HIV/HBV coinfections and 5,932 (1.6%) as HIV/HCV coinfections. The chance of coinfection increases with age, it is 3 times higher in aged 45 and older individuals coinfecting with HBV than patients aged 24 and younger; the chance is 12 times higher among those coinfecting with HCV. The chance for coinfections increases 2- to 6-fold for HBV and HCV, respectively, for the “injecting drugs users” (IDU) category compared to sexual exposure.

Conclusions The IDU category is one of the main forms of HCV and HIV transmissions, which may explain the higher chance of coinfection in this category. This study permitted an important evaluation of HBV/HIV and HCV/HIV coinfections in Brazil by the use of reported cases, without the need to conduct seroprevalence research.

P3.216 HIV AND VIRAL HEPATITIS (B,D,C) CO-INFECTION, GENOTYPING, EPIDEMIOLOGICAL PROFILE IN WEST OF TEHRAN

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Background/Aims In HIV infected patients, HBV, HDV and HCV co-infections have important implications for their clinical course