

We found a statistically significant lower HIV infection rate among participants aged 20–24 in 2011 compared to 2007 (5.0% vs 13.4%,  $p < 0.001$ ) and among those who reported having ever tested for HIV (3.0% vs 10.5%,  $p = 0.02$ ).

**Conclusion** The number and magnitude of differences in the characteristics of the two samples suggests that the two rounds of RDS likely sampled different subsets of the Zanzibar MSM population, limiting their comparability and ability to assess trends over time. Similar findings have been reported with repeated RDS surveys in other settings. Our results highlight the continuing challenge in obtaining representative data among key populations affected by HIV to make evidence-based policy and programme planning decisions. While repeated bio-behavioural cross-sectional surveys using the same methodology in the same population are the backbone of surveillance in key populations, we advocate caution in implementation and interpretation of repeated RDS surveys and that other sampling approaches (e.g., Time Location Sampling) be tested.

**P3.326 ESTIMATING THE SIZE OF THE FEMALE SEX WORKER POPULATION IN ASUNCION, PARAGUAY BY MAPPING AND MULTIPLIER ESTIMATES**

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**Introduction** Population size estimates for most at risk populations are essential for modelling and projections of the HIV epidemic and planning and prioritising prevention interventions. WHO/UNAIDS recommends countries produce multiple estimates given the large variance and biases inherent in available methods.

**Methods** Between January and May, 2012, 431 female sex workers (FSW) ages 18 and older recruited by time-location sampling participated in a HIV bio-behavioural surveillance survey (BSS) in the greater metropolitan area of Asuncion. Prior to recruitment, sex work venues and public places were mapped and FSW enumerated through key actor interviews. Makeup kits were then distributed to FSW present during site visits to a random sample of mapped venues. BSS question items assessed the percent of study participants that received the kit (the “unique object” method). Additional BSS question items assessed the percent of FSW that had accessed public HIV testing services from July to December, 2011 and services data were obtained on the number of FSW tested at the same sites in the same period (the services multiplier method). Estimated percentages from the BSS were weighted for differential probability of venue selection and incorporated Huber-White adjustments for clustering by venue.

**Results** Mapping identified 425 FSW at 72 sex work locations. Unique objects were distributed to 293 FSW. Of BSS participants, 22.7% (95% confidence interval [CI], 17.8%–28.4%) reported receiving the object, corresponding to a size estimate of 1292 (IC, 1031–1644) FSW. 53 FSW accessed HIV testing sites during the period and 6.0% (IC, 3.8%–9.4%) of BSS participants reported testing, for a size estimate of 880 (IC, 564–1392) FSW.

**Conclusion** Size estimates obtained by unique object and services multipliers were not significantly different, while mapping produced a significantly lower estimate, most likely reflecting changes in the population of FSW over time.

**P3.327 SURVEILLANCE AND CONTROL OF SEXUALLY TRANSMITTED INFECTIONS IN LITHUANIA**

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**Background** The contemporary national epidemiological surveillance system of sexually transmitted infections in Lithuania was legalised in 2009. A national computerised reporting system has been introduced, aiming to standardise the data collection and analysis for all communicable diseases and their etiological agents through the country.

**Methods** Analysis of the national database available at [www.ulac.lt](http://www.ulac.lt)  
**Results** There are four reportable STIs in Lithuania, namely syphilis, *Chlamydia trachomatis*, *Neisseria gonorrhoeae* and HIV. Since 2010 both the physicians and the laboratories report identified STI cases. The physician reports individual new STI cases weekly, while the laboratory reports are provided monthly and only as aggregated data. During the period of 2009–2011, the incidences of bacterial STIs in Lithuania have been decreasing. The incidence (cases per 100,000 population) of syphilism decreased from 9.6 to 8.5 cases, of gonorrhoea from 11.5 to 7.9 cases, and of genital *C. trachomatis* infection from 11.9 to 10.6. In contrast, the incidence of HIV infection during the same time period increased from 0.49 to 5.15 cases! These changes in STI incidences were not due to the level of testing, which has been relatively stable from 2009 to 2011.

**Conclusion** The substantial increase in HIV incidence during recent years in Lithuania is of major concern. The difference in reporting methodologies, namely reporting of individual cases by the physicians and aggregated data from the laboratory reports does not allow comparison of them sufficiency of such reporting as well as evaluation of the true epidemiological situation.

**P3.328 AIDS IN KOSOVO, STIGMA AND KNOWLEDGE AMONG YOUTH**

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**Background** The official HIV/AIDS data in Kosovo are based on HIV case reporting from health-care services, the blood transfusion system and Voluntary Counselling and Testing centres. Between 1986 and 2012, are reported 87 HIV and AIDS cases, of which 47 were AIDS, 40 HIV and 39 deaths. The majority (69%) of cases were men, age group 25 to 34 (37%) and route of transmission is: heterosexual (90%), MSM (7%), vertical transmission (2%) and IDU (1%). Based on existing data and the UNAIDS classification system, Kosovo is currently still categorised as having a low-level HIV epidemic. Even though with a low HIV prevalence, Kosovo faces a number of threatening factors, including increased number of drug users, a stigmatised and discriminated MSM community, high percentage of youth among general population (57% of the population under the age of 25), with changing social norms and especially the sexual ones.

**Methods** Data collection was done using self administered structured questionnaires amongst 249 high school students. Data were analysed using the Statistical Package for Social Sciences (SPSS).

**Results** The findings revealed that 68% of students know that HIV transmission can be reduced by having sex with only one uninfected partner who has no other partners, 94% know that the risk of getting HIV can be reduced by using a condom every time they have sex, 68% know that a person cannot get HIV from mosquito bites, 81% know that they cannot get HIV by sharing food with someone who is infected and 46% know that a healthy looking person can have HIV.

**Conclusions** Seventy one percent of high school students correctly identify ways of preventing the sexual transmission of HIV and who reject the major misconceptions about HIV transmission. The findings of the study indicate a need for more health education and promotion.

**P3.329 AWARENESS AND PREDICTORS OF USE OF FEMALE CONDOM IN THE PREVENTION OF SEXUALLY TRANSMITTED INFECTIONS IN NIGERIA**

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**Background** In Sub-Saharan Africa, women are disproportionately affected by HIV with more than half having HIV infection. This may be due to biological, socio-economic and other factors making them to be at higher risk of sexually transmitted infections (STIs) including HIV. Hence, there is a need for female-controlled methods against STIs. This study assessed awareness and predictors of female condom use among Nigerian women of reproductive age.

**Methods** Secondary analysis of data from 2007 National HIV/AIDS and Reproductive Health Survey (NARHS) involving women of reproductive age group 15–49 years was done. Multiple logistic regression was used to model for predictors of use of female condom.

**Results** The proportion of women in the study was 46.5% (5,360). The mean age was  $27.8 \pm 9.4$  years. The highest level of education was secondary education 34.9% and a higher proportion of them were from the Northwest geopolitical zone (24.9%). The mean age at first sexual intercourse was  $18.4 \pm 4.3$  years. About 5.5% had genital discharge in the past 12 months; 12.6% of the women had heard of female condoms and 5.7% knew where to get them. However, only 0.4% had ever used female condom and 0.9% knew someone who was currently using it. Very few (0.2%) of those that used said it felt good. Reasons for non-use were: it slipped out 0.2%, made noise 0.1% and not liked 0.1%. The predictors of use of female condom were age at first sexual intercourse  $\leq 16$  years OR = 2.0 95% CI: 1.1–3.9; having at least secondary education OR = 2.5 95% CI: 1.2–7.0; and sex for gift OR = 0.5 95% CI: 0.2–0.9.

**Conclusion** Awareness and use of female condom are low among Nigerian women of reproductive age. Therefore, there is urgent need for age-specific public enlightenment and education programme on this women-centred HIV prevention strategy. This initiative is vital in multi-pronged approach towards reducing HIV risk among women.

**P3.330 PREVALENCE AND IMMUNOLOGICAL CORRELATES OF OPPORTUNISTIC INFECTIONS AMONG HIV PATIENTS ATTENDING AT ART CLINIC OF UNIVERSITY OF GONDAR HOSPITAL**

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**Introduction** Human immunodeficiency virus (HIV) pandemic is among the greatest health crises ever faced by humanity. Morbidity and mortality in HIV disease is due to immunosuppression leading to life-threatening opportunistic infections (OIs) during the natural course of the disease.

**Objective** This study is aimed to assess the prevalence and CD4 correlates of OIs among HIV patients attending University of Gondar Hospital ART clinic.

**Methods** Institution based cross sectional study was conducted in 360 HIV patients attending the ART clinic during the study period. Current OI status of patients was determined through clinical

diagnosis and laboratory investigation. Patient's CD4 count was determined using flow cytometry technique as per the FACS Calibur standard operating procedure. The data was entered and analysed using SPSS [version 16] statistical software. Logistic regression analysis was done and X<sup>2</sup> tests were used as the measure of association. Significance level of P-value less than 0.05 was used.

**Results** In this study, 360 HIV patients were included, of whom, 216(60%) were females. The majority of patients (42.5%) were 25–34 years old followed by age groups 35–44 (34.2%). The overall prevalence of OIs was 79(19.7%). Tuberculosis 35(9.72%) emerged as the most frequent infection to be associated with HIV infection followed by oral candidiasis 18[5%] among the spectrum of OIs observed. CD4 count less than 200/mm<sup>3</sup> is found to have strong association with acquisition of OIs (OR = 4.933, P = 0.000). Statistically significant association was also depicted between prevalence of OIs and WHO clinical stage III (OR = 9.418, P = 0.000) and IV (OR = 22.665, P = 0.000).

**Conclusion** The overall prevalence of OIs is significant (19.7%). Tuberculosis followed by oral candidiasis and diarrhoea were the major OIs encountered by HIV patients. CD4 count less than 200/mm<sup>3</sup> and World Health Organization clinical stage III and IV were found to be strongly associated with acquisition of OIs.

**P3.331 PREVALENCE OF CHLAMYDIA TRACHOMATIS INFECTION AND ASSOCIATED FACTORS IN BRAZILIAN PREGNANT WOMEN: PRELIMINARY RESULTS OF A POPULATION-BASED STUDY**

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**Background** genital infections such as *Chlamydia trachomatis* are a serious public health problem worldwide and are related with several negative outcomes in the pregnancy as preterm birth. In Brazil there is a growing trend in preterm birth due to several factors. Despite the probability of association with this outcome and *Chlamydia trachomatis* infection, there is few Brazilian population-based studies on its prevalence and factors associated in pregnant women. This study aims to improve the knowledge about the current situation of *Chlamydia trachomatis* infection in pregnant women in Brazil.

**Methods** this is a cross-sectional study with pregnant women seen in all hospitals in the city of Pelotas, southern Brazil. Data was obtained from 361 pregnant women, below 30 years of age, interviewed between December 2011 and January 2013. Information on sociodemographic and behavioural factors were obtained through structured questionnaires and gestational age at delivery was obtained by medical examination. The status of *Chlamydia* infection was assessed by analysis of vaginal secretion, processed by Strand Displacement Amplification (SDA) BD ProbeTec™ system.

**Results** the prevalence of *Chlamydia trachomatis* infection was 15%. Pregnant women without steady partners were 2.2 times more likely to test positive to *Chlamydia* infection. We could not find statistically significant association between *Chlamydia* infection and the woman's age, smoking, alcohol use, drug use and preterm birth (gestational age  $\leq 36$  weeks).

**Conclusion** although preliminary, our results show that the prevalence of *Chlamydia trachomatis* among young pregnant women is high. Until the moment, we could not find association between infection and preterm birth, however it is necessary that the study be completed to better assess this relationship. Even though our results contribute to reinforce the idea that routine test for *Chlamydia trachomatis* should be added to the recommended antenatal tests, at least for young pregnant women in Brazil.