

aetiology that causes vaginal discharge but due of the complications that a recurrent BV infection can cause in women especially pregnant women, its management must be effective in gynecologic and obstetric services and also in the campaigns against STIs and HIV that are regularly conducted at the national level.

**P3.94 DOES MASS DRUG ADMINISTRATION WITH AZITHROMYCIN FOR TRACHOMA CONTROL HAVE AN IMPACT ON THE PREVALENCE AND MACROLIDE RESISTANCE OF GENITAL MYCOPLASMA GENITALIUM INFECTION?**

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**Introduction** The first round of Mass Drug Administration (MDA) with 1g oral azithromycin for ocular *Chlamydia trachomatis* (CT) infection, which is a key component of trachoma control strategies, concomitantly reduced genital CT infection in the Solomon Islands. However, this dose is known to be sub-optimal for the treatment of genital *Mycoplasma genitalium* (MG) infection and may also encourage emergence of antimicrobial resistance (AMR) to macrolides in MG.

**Methods** Pre-MDA and 6 months post-MDA CT-negative self-collected vulvo-vaginal swabs from women attending three outpatient antenatal clinics (Honiara, Solomon Islands), already investigated for the impact of MDA on genital CT prevalence, were tested for MG infection using nucleic acid amplification. MG positive samples were subsequently tested for macrolide resistance by sequencing domain V of 23S rRNA DNA region of MG.

**Results** MG positivity was found in 11.9% (28/236) of women pre-MDA and in 10.9% (28/256) 6 months post-MDA ( $p=0.7467$ ). 22 MG positives from each of the pre-MDA and post-MDA samples were sequenced, all showing a macrolide susceptible genotype.

**Conclusion** A single MDA round in an island population with apparent high MG prevalence with 1g azithromycin did not impact on either MG positivity or detection of genetically determined macrolide resistance in this population, in contrast to decreased genital CT positivity in the same population. It is unclear if this apparent lack of impact is due to inadequate efficacy of single-dose azithromycin or transmission dynamics of the infection. Further investigation of the impact of multiple rounds of MDA on antibiotic-experienced and -naïve populations is warranted.

**P3.95 QUALITY OF CARE AND INCIDENCE OF STIS IN A COHORT OF TRANSGENDER WOMEN LIVING WITH HIV**

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**Introduction** Transgender women are at high risk for HIV infection, but less is understood about their rates of sexually

transmitted infections (STIs) and the quality of sexual health services they receive. The Washington University Virology Clinic (St. Louis, MO USA) serves patients living with HIV; 2% of patients report being transgender women.

**Methods** We conducted a retrospective cohort study of transgender women living with HIV ( $n=41$ ) to document frequency of testing for incident bacterial STIs [syphilis, gonorrhoea (GC), chlamydia (Ct)], with demographic information, markers of HIV care, and STI test results from 2011–2015.

**Results** Most patients were African American (91%) and on antiretroviral medications (>88%), although only 56% maintained HIV viral load suppression. Health challenges included a history of disrupted antiretroviral treatment (66%) and STIs (65%). Incident syphilis was diagnosed in 7.3% patients, and GC and Ct were diagnosed in 19.5% and 9.8% of patients, respectively. For syphilis screening, 90% of patients were tested at least once a year, and 53% of patients were tested more than once a year. For GC/Ct screening, 89% of patients were tested at least once a year and 49.3% of patients were tested more than once a year. For patients with GC or Ct infection, only 44% of patients were retested at the site of infection 3–6 months after treatment. Reinfection with GC or Ct was subsequently diagnosed in 19.5% of patients. Frequency of three site testing for GC/Ct (genital, rectal, pharyngeal) increased over the course of the study period (from 3% of patients to 34% of patients,  $X^2=17.69$ ,  $p=0.001$ ).

**Conclusion** Transgender women living with HIV are at high risk for incident bacterial STIs. Frequency of testing for STIs increased over a five-year period, but many patients with documented infection were not re-tested after treatment as recommended by current guidelines. Understanding STI rates, primary locations of infection, and lack of retesting in patients will improve patient education and standardise care for patients.

**P3.96 FACTORS ASSOCIATED WITH COMMERCIAL SEXUAL BEHAVIOUR AMONG MEN WHO HAVE SEX WITH MEN IN SHENZHEN, 2011 TO 2015**

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**Introduction** With the use of new-type drugs, Money boys (MB) will have unprotected sex and injection behaviours easily, thus accelerate the spread of HIV among men who have sex with men (MSM) through sexual transmission and blood transmission. Our study is to investigate the status and factors associated with commercial sexual behaviour among MSM in Shenzhen, China.

**Methods** Convenience sampling method was used to recruit MSM from 2011 to 2015. Questionnaire-based interviews were conducted on a one-on-one basis. Data were collected including socio-demographic information, HIV testing history, history of blood donation and drug abuse in recent two years, self-identified sexual orientation, role in homosexual behaviour, ever being MB and clients of MB. 5 ml blood samples were taken and tested for treponema pallidum and HIV antibodies.

**Results** Among the total of 3040 MSM recruited, 341 (11.2%) reported ever being MB. The prevalence of syphilis, HIV, and syphilis-HIV co-infection among MB were 27.0%, 16.4%, and

8.8% and those among general MSM were 17.2%, 8.9% and 4.6%, respectively. Compared with general MSM, MB had significantly higher prevalence of syphilis, HIV, and syphilis-HIV co-infection. In the multivariate logistic regression analysis, MSM aged greater than 30 years, having college or above education level, residing in Shenzhen for 0.5–3.0 years and greater than 3.0 years were less likely to serve as MB in comparison with those aged less than 30 years, having high school or below education level, residing in Shenzhen for less than 0.5 years. Monthly income more than 5000 Yuan, having drug abuse history, ever being clients of MB, ever reported both insertive and receptive anal sex behaviours will increase the risk of serving as MB among MSM in comparison with monthly income less than 3000 Yuan, never having drug abuse, never being clients of MB and ever reported predominantly insertive anal sex behaviours.

**Conclusion** Various factors were associated with MSM serving as MB and needed to be considered when designing syphilis/HIV prevention programs targeted them.

**P3.97 A SCOPING REVIEW OF PREVALENCE, INCIDENCE AND RISK FACTORS FOR HIV INFECTION AMONGST YOUNG PEOPLE IN BRAZIL**

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**Introduction** Despite young people being a key population for HIV prevention, the HIV epidemic amongst young Brazilians is perceived to be growing. We therefore reviewed all published literature on HIV prevalence and risk factors for HIV infection amongst 10–25 year olds in Brazil.

**Methods** We searched Embase, LILACS, PsycINFO, PubMed and Web of Science for studies published up to May 2015 and analysed reference lists of relevant studies. We included peer-reviewed studies from any time in the HIV epidemic which provided estimates specific to ages 10–25 (or some subset of this age range) for Brazilians on either: (a) HIV prevalence or incidence; or (b) the association between HIV and socio-demographic or behavioural risk factors.

**Results** 37 studies in 36 publications met the inclusion criteria: 33 cross-sectional, two case-control, two cohort. Three studies analysed national data. 31 studies provided HIV prevalence estimates, largely for six population subgroups: Counselling and Testing Centre attendees; blood donors; pregnant women; institutional individuals; men-who-have-sex-with-men (MSM) and female sex workers (FSW); two provided HIV incidence estimates. Ten studies showed HIV status to be associated with a wide range of risk factors, including age, sexual and reproductive history, infection history, substance use, geography, marital status, mental health and socioeconomic status.

**Conclusion** Few published studies have examined HIV amongst young people in Brazil, and those published have been largely cross-sectional and focused on traditional risk groups and the south of the country. Despite these limitations, the literature shows raised HIV prevalence amongst MSM and FSW, as well as amongst those using drugs. Time trends are harder to identify, although rates appear to be falling for pregnant women, possibly reversing an earlier de-masculinization of the epidemic. Improved

surveillance of HIV incidence, prevalence and risk factors is a key component of efforts to eliminate HIV in Brazil.

**P3.98 SYPHILIS PREVALENCE AND HIV CO-INFECTION AMONGST MEN WHO HAVE SEX WITH MEN (MSM) IN SAO PAULO, 2011 AND 2016**

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**Introduction** Syphilis infection rates began an upward trend in the late 1990s, disproportionately affecting men who have sex with men (MSM). Many of these MSM were co-infected with Human Immunodeficiency Virus (HIV). Co-infection often results in a significantly higher burden of disease. Little data examine the prevalence of syphilis in Brazil, the largest country of Southern America. The purpose of this study is to examine disease prevalence and rates of syphilis and HIV co-infection among MSM in São Paulo, the most populous city in Brazil.

**Methods** This study analyses data from two separate surveys. The first study recruited 771 MSM at randomly selected venues where MSM congregate using time-location sampling (TLS) in 2011. HIV testing was done with all MSM in the field; Syphilis testing was done on a sub-sample of MSM (n=227) who presented to a specialty clinic for screening. The second study recruited MSM by peer referral through respondent-driven sampling (RDS) in 2016. All participants (n=338) were tested for HIV and syphilis. RDS and TLS weights were used in the analysis to provide data representative of the population of interest.

**Results** In 2011, 19.8% (CI 13.5–28.1) of MSM were positive for syphilis and 14.7% (CI 9.2–22.7) were positive for HIV, particularly affecting people within 35–49 years (representing 37% and 35% of the syphilis and HIV positive results, respectively). Among the MSM living with HIV, co-infection with syphilis was 45%. In 2016, 30.67% (CI 21.8–39.5) of MSM were positive for syphilis and 23.0% (CI 13.17–32.9) were positive for HIV. In the MSM living with HIV, 48% tested positive for syphilis. In a Poisson regression, the risk for HIV and Syphilis is higher for 2016.

**Conclusion** HIV and Syphilis prevalences are at high levels among MSM sampled in São Paulo. An alarming majority of MSM with HIV tested positive for syphilis in 2016. Interventions promoting frequent STI screening among HIV-positive and negative MSM are needed to address both epidemics and mitigate the adverse health outcomes of co-infection and to prevent onward transmission.

**P3.99 IDENTIFYING VARIABILITY IN HIV AND SYPHILIS TRANSMISSION RISK IN MSM SEX PARTNER MEETING PLACES**

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