

for prescribed variables in the model and assessed for quality using the EPI-review tool. The review included an analysis of methodologies, questionnaires, recruitment strategies and raw data used in and generated by previous studies.

The TWG found approximately 50% of the data needed for use in the MOT study. Methodological issues with data collection activities were identified, key questions used in population-based studies were modified and reconstructed, and formal population size estimations were recommended.

The review generated substantive recommendations to enhance future data collection activities and improve programming. Stakeholder awareness about limitations of available data and the types of studies/data needed to help better understand the epidemic and determine appropriate responses. Periodic reviews of data availability and quality are critical to knowing your epidemic and the most appropriate response.

The EPI- review tool increased stakeholder's awareness about the limitations of the available data and the types of studies/data needed to help better understand the epidemic and determine appropriate responses. This capacity building effort generated substantial recommendations to enhance future data collection activities. The tool saved time and effort at the country level by focusing on the data needed to conduct the MOT.

P3.231 STUDY DRUG INTERRUPTION AMONG HIV SERODISCORDANT COUPLES IN PARTNERS PREP STUDY, THIKA-KENYA

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Background For successful implementation of PrEP as a HIV prevention strategy, participant's adherence to the intervention is vital. Frequent interruption of study product, impacts its effectiveness negatively. We documented the frequency and causes of study drug interruptions among participants enrolled in the Partners PrEP Study, Thika-Kenya

Methods Between October 2008 and November 2010, we enrolled 496 HIV serodiscordant couples who were followed up to 36 months. We categorised time off study drug into two; protocol-defined, in which the parameters of withholding study drug was clearly outlined in the study protocol and participant-initiated interruption where the participant opted to stop taking study drug. Data on study drug interruptions were captured on monthly basis and documented on specific case report forms in pharmacy.

Results We reported 152 cases of study drug interruptions, these were contributed by 128 participants. Sixty four per cent of HIV-1 uninfected participants who recorded study drug interruption were male, median age for both gender was 31.8 (IQR 26.5, 37.4) years. Sixty five (43%) of reported drug interruptions were participant initiated, cited due to marital disharmony 34 (22%), fatigue and loss of interest 24 (16%), perceived side effects in 7 (5%). The median time off study product was 90 (IQR 28, 268) days. Age, gender and education were not associated with participant-initiated interruptions. Pregnancy and possible seroconversion were some of protocol defined reasons to stop study drug.

Conclusions Marital disharmony and loss of interest were two of the most common reasons for participant initiated interruption of study drug. Going forward, psychosocial support and continuous adherence counselling should be part of the package for successful implementation of PrEP for HIV prevention.

P3.232 PREVALENCE OF MYCOPLASMA GENITALIUM AMONG WOMEN ATTENDING SEXUALLY TRANSMITTED INFECTION CLINIC IN KUMASI, GHANA

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Background *Mycoplasma genitalium* (MG) has been identified over the past decade as an aetiological agent of non-gonococci cervicitis in women. A multinational study in among female sex workers in West Africa which included Kumasi and Accra Ghana established *Mycoplasma genitalium* prevalence of 26.3%. The literature is however silent on prevalence of MG among women in the general population in Ghana. This study sought to determine the current state of affair in women patronising Sexually Transmitted Infection (STI) Clinic in Kumasi, Ghana.

Methods Specimens for DNA polymerase chain reaction (PCR) determination, were collected from the vagina and the cervix of 300 women: 150 sex workers (SW) and 150 non-sex workers (NSW), attending Suntreso STI Clinic in Kumasi for the first time, with complaint of vaginal discharge. Socio demographic characteristics of the women, symptoms and signs were recorded. Associations of factors with *Mycoplasma genitalium* were recorded and adjusted for other risk factors.

Results Ten (10) out of the 300 women representing 3.3% (10/300), were found to have *Mycoplasma genitalium*; $p = 0.000$, OR = 0.26, 95% CI = 0.07–0.87, $X^2 = 0.27$. Prevalence of *Mycoplasma genitalium* in female sex workers was higher (4.7%, 7/150) than non-sex workers (2.0%, 3/150). Younger age (15–29 years, 5.4%, 9/167) was found to be the strongest predictor of *Mycoplasma genitalium*.

Conclusion The study confirms *Mycoplasma genitalium* as an aetiological agent of vaginal discharge in women in Kumasi Ghana, conforming to other studies in West Africa with lower prevalence rate. It is possible that the actual rate, in the general population may be low as indicated by even lower rate among high-risk group like sex workers. Further study with larger sample size at the population level is required to guide the course of management.

P3.233 GENITAL TRACT ABNORMALITIES IN HIV-TB CO-INFECTED WOMEN INITIATING ANTIRETROVIRAL THERAPY (ART)

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Background HIV infected women have an increased risk of acquiring genital tract infections and progression of pre-malignant cervical lesions. We describe the prevalence and incidence of genital tract abnormalities in TB-HIV co-infected women initiating ART (Antiretroviral therapy).

Methods We conducted a retrospective study among 750 ambulant TB-HIV co-infected women initiating ART in Durban, between 2004 and 2011. All patients received sexual reproductive health services including a Papanicolaou (Pap) smear examination; and screening; diagnosis and management of sexually transmitted infections (STIs). Pap smear reporting included the Bethesda classification for endocervical abnormalities, and STI screening for Human papilloma virus (HPV), trichomonas vaginalis, bacterial vaginosis (BV) and candidiasis.

Results Baseline pap smears were obtained before or up to 6 months post-ART initiation in 750 women; mean (standard deviation(SD)) age 34.2 (8.0) years; mean CD4+ count 181.4 (SD 178.5) cells/mm³ and median log viral load 4.4 (IQR 2.6) copies/ml. Prevalence of genital tract abnormalities was 58.5% (439/750);

comprising 18.0% (135/750) cervical lesions only, 11.7% (88/750) STI's only and 28.8% (216/750) both STI's and endocervical lesions. No abnormalities were detected in 19.9% of women (149/750), while results from 21.6% (162/750) were missing. STI prevalence was 40.5% (304/750); comprising HPV 20.0% (150/750), candidiasis 16.1% (121/750), BV 7.9% (59/750), trichomonas vaginalis in 5.5% (41/750). Prevalence of endocervical abnormalities was 46.8% (351/750); comprising Atypical Squamous Cells of Unknown Significance (ASCUS) 10.1% (76/750); Cervical Carcinoma (CACX) 0.5% (4/750) and High (HGSIL) and Low (LGSIL) Grade Squamous Intra-epithelial Lesions of 12.1% (91/750) and 24.0% (180/750), respectively. The incidence HPV in this cohort was 24.8 per 100 women years (95% CI: 15.7 to 37.2), incidence of ASCUS 7.8, HGSIL 11.1, LSIL 25.9, and CACX 0 per 100 women years, respectively. HPV was present in 19.2% of LSIL, 0.4% of HGSIL, 0.1% of patients with ASCUS and CACX.

Conclusion HPV infections and LGSIL were the dominant genital tract abnormalities in TB-HIV co-infected patients accessing ART.

P3.234 PREVALENCE AND ESTIMATED HIV-1 INCIDENCE AT TWO VOLUNTARY COUNSELING AND TESTING CENTERS IN NORTHEAST OF BRAZIL

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Background Estimates of incidence and prevalence are important tools for the investigation of regional trends of the HIV epidemic. Currently, the use of immunoassays for epidemiology investigation is referred by RITA (Recent Infection Testing Algorithm). This study aimed to determine the prevalence HIV-1 incidence in two Voluntary and Counseling Testing (VCT) Centers, in the Metropolitan Region of Recife - Northeast of Brazil, in the period from 2008 to 2009

Methods Demographics and behavioural data were obtained from 245 individuals diagnosed as HIV-positive among 19,451 volunteers screened from January 2008 to December 2009. The BED - CEIA was used for the determination of recent infection and estimate HIV-1 incidence.

Results HIV-1 prevalence was 1.3% (95% CI: 1:14 to 1:46) and the corresponding HIV-1 estimated incidence was 0.71%/year (95% CI: 0.53–0.89). The males obtained a higher prevalence (2.6%, 95% CI: 2:13 to 3:07) and incidence (1.29%/year, 95% CI: 0.79–1.79) than females, whose prevalence was 0.8% (95% CI: 0.62–0.98) and the incidence rate was 0.52%/year (95% CI: 0.34–0.70). A high rate of recent infection was observed in both genders (male: 25% female: 29.9%).

Conclusions Our study shows a high rate of recent infection for HIV-1 in genders, as well as a high prevalence and incidence among males, indicating that prevention strategies in this population should be intensified.

P3.235 GLOBAL ECOLOGICAL STUDY OF HIV AND HSV-2 PREVALENCE

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Background HIV and herpes simplex virus type-2 (HSV-2) are infections transmitted predominantly through sexual intercourse. We explored the ecological association between the prevalence of HIV and HSV-2 among human populations through a global review.

Methods We conducted a global systematic literature review of HIV and HSV-2 prevalence following the PRISMA guidelines. Sources of data used were Medline (PubMed) and Embase databases, and several country-level reports. No language, country, or year limitations were imposed. We included any publication with a serological measurement of HIV and HSV-2 prevalence in the same study population.

Results A total of 2,927 records were screened. Based on preliminary descriptive analysis, we found that HIV prevalence increased steadily with HSV-2 prevalence in all populations where the dominant mode of transmission was sexual. HSV-2 prevalence was consistently larger than HIV prevalence. Overall, among high-risk populations, both infections prevalence was high. Among general population groups, HIV prevalence varied across settings, but was correlated with HSV-2 prevalence, which also varied widely. Though HIV and HSV-2 prevalence levels were correlated across populations, there were settings with very low HIV prevalence regardless of HSV-2 prevalence. For children and injecting drug users where the dominant mode of HIV transmission was not sexual, there was no apparent ecological association between the two infections.

Conclusions Our findings support a strong ecological association between HIV and HSV-2 prevalence in all populations where the dominant mode of HIV transmission is sexual. Sexual networks conducive of HSV-2 transmission appear to be also conducive of HIV transmission. Further analytical work is needed to quantify the ecological association between the two infections, to determine whether HSV-2 could be predictive of HIV epidemic potential, and to assess whether there is a threshold of HSV-2 prevalence necessary for a sexual network to be sustainable for HIV transmission besides HSV-2 transmission.

P3.236 ANALYSIS OF RISK FACTORS INCIDENCE OF SEXUALLY TRANSMITTED INFECTIONS IN THE WOMEN INDIRECT SEX WORKERS IN MATARAM CITY, INDONESIA, 2012

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Background Sexually transmitted infections are a public health problem in all countries, including Indonesia. The estimated number of people exposed to a sexually transmitted infection that can be treated approximately more than 30 million cases annually. In Mataram City 2011, found as many as 896 new cases of sexually transmitted infections. Women indirect sex workers have an important role in the spread of sexually transmitted infections and HIV-AIDS cases increased.

Research Methods Design study was a cross sectional with a total sample of 66 women indirect sex workers. Risk factor of STIs is age of first sex, ever having sex, the number of customers per day, use of condoms, clean hands after sex, change underwear after sex, alcohol consumption habits and the habit of consuming drugs. Potential risk factors were explored using a structured questionnaire of the month from May to June 2012. Data were analysed using, bivariable and multivariable statistics.

Results From the bivariable analysis, risk factors for STIs were ever having sex (OR 2.33, CI 5.15–1:05), not using condoms (OR 3.13, CI: 1.36 to 7.20) and the number of customers per day (OR 2.60, CI: 1.13 to 6.01). Multivariable analysis showed that the risk factors that influence the incidence of sexually transmitted infections are not using condoms (adjusted OR 6.55, CI 1.83 to 23, 43) and the number of customers per day (adjusted OR 5.01, CI 1.41 to 18.29)