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Background We estimated the 72-month efficacy of medical male circumcision (MMC) against HSV-2 seroincidence among men in the randomised trial of MMC in Kisumu, Kenya.

Methods From 2002–2005, 2,784 men aged 18–24 were randomised 1:1 to immediate circumcision or control. At trial end in December 2006, control men were offered free circumcision. Follow-up continued through September 2010. Cox proportional hazards regression incorporating stabilised inverse probability of treatment and censoring weights generated through marginal structural modelling was used to account for potential time-varying confounding and censoring to estimate the efficacy of MMC on HSV-2 risk. Conventional Cox regression identified multivariable risks for HSV-2 acquisition.

Results Among 2,044 men who were HSV-2 seronegative at baseline, the cumulative 72-month HSV-2 seroincidence was 33.1%: 32.7% among circumcised men, 33.5% among uncircumcised men. In weight-adjusted Cox regression, the HR was 0.88 [95% CI: 0.77 – 1.10]. In conventional multivariable analyses, risks ($p < 0.05$) for HSV-2 included: HIV infection [aHR = 3.75], GUD [aHR = 4.75], penile epithelial trauma [aHR = 1.47], ≥ 2 recent sex partners [aHR = 1.54], and being married/cohabiting [aHR = 1.66]. Of men with seroincident HSV-2, 21% experienced GUD and 80% reported penile epithelial trauma. Conversely, 45% of men with GUD and 80% of men reporting penile epithelial trauma did not acquire HSV-2. GUD preceded HSV-2 in 59% of men with both conditions, with median time to HSV-2 of 12 months. Penile epithelial trauma preceded HSV-2 in 92% of men with both conditions, with median time to HSV-2 of 24 months.

Conclusion MMC had no effect on HSV-2 acquisition at 72 months. The temporal sequence and limited correlation between HSV-2, GUD, and penile epithelial trauma indicate these are distinct phenomena, rather than misclassification of HSV-2 symptoms. Determining the aetiology of non-STI GUD and penile epithelial trauma is necessary as both are risks for HIV acquisition, and are common in populations in sub-Saharan Africa.

P3.229 PREVALENCE AND CORRELATES OF *MYCOPLASMA GENITALIUM* IN HIV-POSITIVE AFRICAN WOMEN

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Background To assess the prevalence of *Mycoplasma genitalium* (MG) among HIV-positive African women and its associations with cervical infections and disease, other STI signs and CD4+ counts.

Methods The HARP study aims to evaluate cervical cancer screening tests among HIV-positive women aged 25–50 in Burkina Faso (BF) and South Africa (SA). In addition, real time PCR assays were used to detect *Neisseria gonorrhoeae* (NG), *Chlamydia trachomatis* (CT), *Trichomonas vaginalis* (TV), and MG, using Sacace RT-PCRs in BF, and multiplex PCR followed by confirmatory APTIMA® assays for NG/CT and Sacace RT-PCR for TV/MG in SA. HPV genotyping was performed using Digene® HC2 assay.

Results 628 women were enrolled in BF and 624 in SA, two-thirds of whom were on antiretroviral therapy. The distribution of CD4+ count (cells/μL) was similar in both sites: 68% with CD4+ ≥ 350 and 10% with CD4+ < 200. Prevalence of MG was similar in both populations: 7.1% in BF (41/575) and 7.6% (47/622) in SA, and, overall, 6.7%, 8.2% and 10.1% among women with CD4+ ≥ 350, 200–349 and < 200, respectively (Table). MG was detected in 8.2% of high-risk (HR)-HPV-positive women vs. 3.9% of women without HR-HPV (P = 0.005), and in 7.7% of women with low-grade cervical intraepithelial lesions (LSIL), and 10.0% of women with high-grade lesions (HSIL+) and above vs. 6.2% in women without lesions (P-trend = 0.095). Co-infection with NG, CT, TV and BV was observed in 0%, 11.4%, 11.4% and 9.0% respectively. In multivariate analysis (Table), MG correlated negatively with age (P-trend = 0.003) and clinical PID (aOR = 0.29, P = 0.05), and positively with *T vaginalis* (aOR = 1.7, P = 0.06) but not with any other particular STI infection or syndrome; and tended to increase with decreasing CD4+ count (P = 0.13).

Conclusions MG prevalence is relatively high among these HIV-positive African women and is associated with younger age, trichomoniasis and marginally with CD4.

Table. Multivariate analysis showing factors originally associated in univariate analysis with *Mycoplasma genitalium* in Burkina Faso and South Africa

Abstract P3.229 Table 1

	Mycoplasma genitalium	
	n/N (%)	Adjusted OR (95% CI)
Age group (years)		P-trend = 0.003
25–29	22/243 (9.1%)	1
30–34	31/318 (9.8%)	0.98 (0.52–1.80)
35–39	19/285 (6.7%)	0.60 (0.30–1.20)
40–49	16/351 (4.6%)	0.35 (0.17–0.74)
CD4+ count (cells/μL)		P-trend = 0.13
< 200	12/119 (10.1%)	1
200–349	22/269 (8.2%)	0.62 (0.28–1.40)
>= 350	54/808 (6.7%)	0.54 (0.26–1.10)
T vaginalis		P = 0.06
Negative	59/924 (6.4%)	1
Positive	29/254 (11.4%)	1.70 (0.98–2.92)
Clinical PID		P = 0.05
Absent	73/923 (7.9%)	1
Present	3/116 (2.6%)	0.29 (0.87–0.99)

P3.230 USE OF THE EPI-REVIEW TOOL IN PREPARATION FOR MODES OF TRANSMISSION INCIDENCE MODELLING

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Guyana (one of the most heavily impacted countries by HIV in the Caribbean) embarked upon a Modes of Transmission Incidence Study (MOT) in 2010 with the support of the UN Joint Programme on HIV and AIDS (UNAIDS). The MOT was developed by UNAIDS to help resource constrained countries use pre-existing epidemiological data to estimate the distribution of new HIV infections for the following year by modes of transmission and better target prevention programming. The newly developed EPI- review tool was used to determine data availability and quality.

A technical working group (TWG) conducted an inventory of available data in preparation for the MOT Study. Data was collected

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/mm^3 and median log viral load 4.4 (IQR 2.6) copies/ml. Prevalence of genital tract abnormalities was 58.5% (439/750);