

*M. genitalium*, HSV-2, syphilis], bacterial vaginosis (BV) and candida were assessed in each women.

**Results** The prevalence of STIs or BV was 71% in Cape Town and 54% in Johannesburg, with 47% of Cape Town and 42% of Johannesburg women having BV. The CT prevalence in Cape Town [62/148 (42%)] was substantially higher than Johannesburg [26/149 (17%);  $p < 0.0001$ ]. CT was highest in 16–17 year old women and lowest in 20–22 year olds in both sites. Among the Cape Town CT isolates studied in detail ( $n = 40/62$ ), five distinct sequence types were seen. Despite these differences in STI/BV prevalence between cohorts, the women had largely similar behavioural risk profiles, including sexual orientation, age of sexual debut and lifetime number of sexual partners, though adolescents from Johannesburg were more likely to report previous known symptomatic STIs ( $p = 0.03$ ). BV was the most inflammatory condition, with upregulated concentrations of many of cytokines and growth factors observed in both sites. While CT was associated with more moderate cytokine up-regulation in Cape Town, high levels of inflammation were observed in CT positive women from Johannesburg.

**Conclusion** An alarmingly high STI and BV prevalence was found in these at risk populations, indicating a need for improved preventative strategies. In young women, BV caused a greater degree of inflammation than STIs and its effective management requires further investigation.

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#### 018.4 SEX DIFFERENCES IN HIV KNOWLEDGE, TESTING BEHAVIOURS, AND DECISION MAKING INFLUENCES IN RURAL MALAWI

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**Introduction** HIV remains the leading cause of death among Malawian adults. Nationally, 72% of women and 51% of men report having had an HIV test. In the Central Region, 9% of women and 6% of men are estimated to be HIV-infected. Making the decision to be tested and treated for HIV would be critical to implementation of the treatment-as-prevention approach to HIV control.

**Methods** Using a standardised instrument and electronic data capture, our research program, Umoyo wa Thanzi (UTHA, *Health for Life*), interviewed reproductive-age women ( $n = 1030$ ) and their male partners ( $n = 442$ ) living in rural Lilongwe District. We assessed relationships between decision-making factors and timing of the most recent HIV test.

**Results** Both HIV knowledge and HIV testing access were high, although women differed from men. The majority (73%) knew that people with HIV may appear well (women 70%, men 80%,  $p = 0.001$ ) and (88%) knew that condom use prevents HIV

transmission (women 86%, men 91%,  $p = 0.004$ ). Ninety per cent reported ever having tested for HIV, and recent testing was more common in women: 65% of women and 59% of men had been tested in the past year ( $p = 0.019$ ). Fewer women (74%) than men (89%) knew that their partner had tested ( $p < 0.001$ ), and fewer women (22%) than men (27%) reported concerns about testing confidentiality ( $p = 0.044$ ). Concerns about knowing HIV-status (overall 15%) or fearing partner's response (overall 14%) were uncommon. Decision-making factors—knowing about partner's testing, concerns about confidentiality or about knowing HIV-status, or fears of partner's response—were not associated with HIV test timing for women or men.

**Conclusion** Women had and men had differential HIV knowledge and decision-making influences in rural Malawi, though these did not predict differential testing behaviours. Planned work by our team includes comprehensive, community-based HIV testing; such testing will be accompanied by referrals for ART.

**Disclosure of interest statement** The authors have no conflicts of interest or financial disclosures to report.

#### 018.5 EXAMINING HPV PREVALENCE AND UPTAKE OF CERVICAL CANCER SCREENING AMONG HIV POSITIVE AND NEGATIVE WOMEN PARTICIPATING IN A PILOT RCT IN UGANDA COMPARING SELF-COLLECTION BASED HPV TESTING TO VIA

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**Introduction** With innovations in cervical cancer prevention, researchers must define best practices for cervical cancer screening in diverse populations and contexts. This pilot RCT compares the standard of care in most resource constrained settings, visual inspection with acetic acid (VIA), to self collected sampling for detection of high risk human papillomavirus (HR-HPV) DNA. We compared HPV prevalence and uptake of screening among women living with HIV (WHIV) and HIV negative (HIV-) women who participated in the trial.

**Methods** The pilot RCT was conducted between April and June 2014 when 500 women were recruited by community outreach workers in Kisenyi and completed a survey for demographic and risk factors including self-identified HIV status. Women were randomised to self-collected HR-HPV testing or VIA screening at the local health unit. Women who were HPV positive were referred for VIA. Women who tested positive at VIA were provided treatment with cryotherapy at the same visit or referred for colposcopy. Uptake rates of screening and HPV status in WHIV vs HIV- women were compared using Chi-square or Fisher's exact test.

**Results** Uptake of self-collected HR-HPV testing was 95.5% (21/22) in WHIV and 99.6% (226/227) in HIV- women ( $p = 0.17$ ). Among WHIV, 42.9% (9/21) were HPV positive compared to 28.3% (64/226) HIV- women ( $p = 0.25$ ). A greater proportion of WHIV were infected with HPV genotype 16 or 18 (28.6%, 6/21) than HIV- women (5.3%, 12/226) ( $p = 0.004$ ). All 9 WHIV who were HPV positive attended VIA follow up, compared to 24/64 HIV- women. In the VIA arm, 64.0% (16/25) WHIV attended screening compared to 46.7% (105/225) HIV- women ( $p = 0.23$ ).

**Conclusion** Self-collection based screening had high uptake in WHIV and HIV- women, suggesting that this method is highly acceptable and improves access compared to VIA. As more WHIV were HR-HPV infected, there is additional benefit to providing this type of screening given their increased risk for cervical cancer.

**Disclosure of interest statement** None of the authors have any conflicts to declare.

**018.6 A METHOD TO ESTIMATE THE NATIONAL PREVALENCE OF HIV-INFECTION AMONG FEMALE SEX WORKERS IN ZIMBABWE BY POOLING DATA FROM MULTIPLE RESPONDENT DRIVEN SAMPLING SURVEYS AND PROGRAMME CONSULTATIONS**

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**Introduction** Respondent driven sampling (RDS) surveys are often used to estimate site-specific HIV-prevalence among female sex workers (FSW). Methods to combine data from multiple sites to estimate national or provincial HIV-prevalence are rarely described.

**Methodology** Using data from the Zimbabwean national FSW HIV prevention programme, working in 36 priority sites across all provinces, we estimated the average number of visits made by FSW to outreach sexual/reproductive health clinics each month at each site between January 2014–Dec 2014. We treated this variable as a proxy for the relative size of the FSW population at each site. We conducted RDS surveys with HIV testing among 200 FSW in 14 of the 36 sites, purposively selected. We used the RDS-2 analysis approach to estimate HIV prevalence in each of the 14 sites. We then combined data from the 14 sites, weighting each site by the proxy for FSW population size to provide an estimate of the national prevalence of HIV among FSW in Zimbabwe.

**Results** The HIV prevalence across sites ranged from 43 to 79%. The unweighted mean of the site-specific prevalences was 57.5% (95% CI 51.9–62.8%). The mean number of women visiting each site per month over 2014 ranged from 16 to 87. The weighted women visiting each site per month in 2014 mean of the site-specific HIV prevalences was 58.1% (95% CI 53.8–62.2%).

**Conclusions** HIV prevalence among FSW in Zimbabwe is very high but variable by site. We describe an approach to estimating national HIV prevalence from multiple site-specific surveys. Here, weighting made little difference to a mean approach though this may not always be the case. Several future refinements to the method proposed are possible and will be discussed.

**Disclosure of interest statement** The SAPPH-IRE trial is using Truvada donated by Gilead. We have no other relationships with commercial entities to disclose.

## 019 - Pre-exposure prophylaxis of HIV

**019.1 PREEXPOSURE PROPHYLAXIS OF HIV (PrEP): UTILISATION ESTIMATES IN AUSTRALIA**

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**Background** Preexposure prophylaxis (PrEP) with daily oral Truvada® is recommended for people at high risk for HIV infection. The population-level benefit of PrEP requires higher levels of use than is currently observed. In Australia, homosexually active men (HM), particularly those who identify as gay or homosexual, contribute most to HIV transmission. We estimated how many HM are eligible for and likely to request PrEP.

**Method** Using data from the Australian Bureau of Statistics (2013) and the second Australian Study of Health and Relationships (ASHR2, 2013), we estimated the number of HHMM nationally. PrEP eligibility was defined by the national PrEP guidelines. Input indicators from the 2013 Gay Community Periodic Surveys (GCPS) were applied to estimate the numbers of men eligible for PrEP based on each individual and any behavioural eligibility criteria. Using data from Treatment Options to Reduce Chances of HIV (TORCH) study, we estimated how many eligible HM are likely to request Truvada® for PrEP.

**Results** We estimated 143,000 Australian men would identify as ‘gay/homosexual’ plus 95,000 as ‘other’ HAM. In GCPS, 15.7% of the HIV non-positive respondents reported sustained risk behaviour (≥6 sex partners in previous 6 months). Overall, 5.7% of HIV non-positive respondents satisfied behavioural eligibility criteria for PrEP, while having at least one episode of receptive condomless anal intercourse in the previous 6 months appeared the most common criterion (5%). Based on national eligibility criteria, 8,300 ‘gay/homosexual’ and 5,300 ‘other’ HM can be considered eligible for daily PrEP in Australia, and 44.9% of those are likely to uptake PrEP.

**Conclusions** Our estimate of the number of HM eligible for PrEP in Australia is based on the current PrEP eligibility criteria, which target individuals at the highest risk for HIV infection. This estimation helps to predict service needed for PrEP prescribing nationally.

**Disclosure of interest statement** Input indicators for these analyses were obtained from Australian Bureau of Statistics, Australian Study of Health and Relationships and Gay Community Periodic Surveys (all funded by the Australian state and federal governments) and from Treatment Options to Reduce Chances of HIV (TORCH) study funded by Gilead Sciences. Funding sources were not involved in research conducted.