

**Methods** Thirty-three asymptomatic, reproductive-age women self-collected mid-vaginal swabs every 3rd day for 16 weeks (998 samples). Participants reported behaviours and menstrual data on daily diaries. Bacterial communities were determined by pyrosequencing of barcoded 16S rRNA genes (V1–V2 region). Participants were clustered into five community classes based on temporal patterns of vaginal bacterial community composition using transition probabilities. A linear mixed effect model for the log of Jensen-Shannon rate of community change was utilised. The model accounted for correlations between samples from the same participant and was adjusted for time-varying confounders and normalised menstrual cycle time.

**Results** Three of the community classes were most often dominated by *Lactobacillus iners*, *L. crispatus*, or *L. gasseri*, respectively, while two lacked significant numbers of *Lactobacillus* spp. The latter classes were split into subtype A typified by *Corynebacterium*, *Anaerococcus*, *Peptinophilus*, *Prevotella*, and *Finexgoldia*, while those of subtype B showed a higher abundance of the genus *Atopobium*. The rank abundance and species composition of bacterial communities in some women changed markedly over short periods of time while others were relatively stable. Classes dominated by *L. crispatus* and *L. gasseri* experienced the fewest fluctuations in community composition, and communities that lacked significant number of *Lactobacillus* spp. also demonstrated some stability. Vaginal communities dominated by *L. iners* demonstrated either a lack of constancy or notable stability. The menstrual cycle was associated with temporal dynamics, but these effects were influenced by bacterial community class. Sexual activity the day prior to sampling was of borderline statistical significance ( $p=0.065$ ) and is a variable of interest in supplementary modelling.

**Conclusions** Vaginal microbiota can fluctuate rapidly. Future studies should investigate the role of temporal changes in vaginal microbiota on sexually transmitted infection risk. Longitudinal studies of the vaginal microbiome may allow for the future development of targeted individualised therapeutic approaches.

## Health services and policy poster session 1: Stigmatisation and Mental Health

### P5-S1.01 PERCEPTIONS AND PRACTICES OF EMPLOYERS OF LABOUR IN IBADAN NORTH LOCAL GOVERNMENT AREA TOWARDS PERSONS LIVING WITH HIV/AIDS

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The epidemic of HIV and AIDS constitute one of the major challenges to development worldwide. The disease condition reduces the productivity of Persons Living with HIV and AIDS (PLWHA) in the labour force and imposes a huge socio-economic burden on employers of labour. In Nigeria, employers of labour's perceptions and practices relating to HIV and AIDS have not been adequately explored. This study therefore determined public and private employers of labour's perceptions, practices and attitudes to persons who are living with HIV and AIDS in Ibadan North Local Government Area, Oyo state, Nigeria. The study was cross-sectional in design. A multistage sampling technique was used to select 400 study participants in the public (38) and private (362) sectors for interview. The instrument for data collection was a pre-tested semi-structured questionnaire. Data were analysed using descriptive statistics and the  $\chi^2$  test. There were more males (68.2%) than females (31.8%) among the participants. A majority, (79.0%), of the participants in the public sector (PuS) and 72.9% in the private sector (PrS) knew that an infected healthy looking person could harbour and transmit HIV to others. Overall, deep kissing (89.8%) topped the list of perceived mode of transmission of HIV; blood transfusion was mentioned by 46.3% of the participants while

unprotected sex (30.4%) was the least mentioned. The listed ways of preventing HIV were: use of condom (85.9%); avoiding deep kissing (71.3%); keeping one uninfected sexual partner (21.2%); and sexual abstinence (15.4%). Avoidance of unscreened blood transfusion (6.2%) was the least mentioned means of transmitting HIV. The perception of 77.0% of the entire participants was that HIV and AIDS do not reduce workers' productivity. A majority, (80.0%), of which 2.3% with no formal education, 1.0% primary education, 13.5% secondary education, 41.5% HND/B.Sc, 21.0% postgraduate and 0.8% with other qualifications were of the view that workers infected with HIV and AIDS should not be sacked. Slightly less than half (48.0%) would keep their staff's HIV status secret while more than half, (57.0%), would not recruit a PLWHA. More than half of the participants, (56.5%), expressed a positive attitude to staff who is a PLWHA. More respondents in the private sector, (47.8%), claimed to have ever organised HIV and AIDS-related educational programmes for their staff than those in the public sector (42.1%) ( $p<0.05$ ). Almost equal number of participants in the public (36.8%) and private (36.2%) sectors would require mandatory test for HIV before employment. Only 1.8% of participants in the PuS and 6% in the PrS ( $p<0.05$ ) reported that their organisations had a workplace HIV and AIDS policy. Although the participants would tolerate staff with HIV and AIDS, their perceptions are indicative of limited knowledge about the mode of transmission and prevention of HIV. Health education strategies such as training and workplace HIV and AIDS education are needed to address these shortcomings.

### P5-S1.02 SEXUAL RISK BEHAVIOURS AND MENTAL HEALTH CONCERNS AMONG HIV-INFECTED MSM

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**Background** Some HIV-infected MSM are at risk for acquisition and transmission of STDs because of ongoing high risk sexual behaviours. HIV-infected MSM also can experience psychosocial stressors and related mental health issues. We assessed the association between STD risk behaviours and the desire to discuss mental health issues, as reported by HIV-infected MSM currently receiving care in HIV clinics.

**Methods** In 2007, 426 HIV-infected MSM receiving care in eight urban HIV clinics were randomly selected to complete a survey that queried them about risk behaviours and health concerns. We estimated the percentages who answered that they wanted to discuss their mental health with their clinicians, by sexual behaviour and substance use in the past year. Differences in percentages of patients were considered statistically significant if the two tailed  $p$  value was  $\leq 0.05$  using a  $\chi^2$  test.

**Results** 90% of patients had initiated care for their HIV infection more than a year ago. In the year preceding the survey, 74% had multiple sexual partners, 75% engaged in anal intercourse, 48% had at least one HIV-uninfected partner, and 82% used illegal psychoactive drugs. Among those who reported anal intercourse, 39% did not use a condom during the most recent episode. Among patients, 70% wanted to talk with their clinicians about how they felt mentally or emotionally. Patients who engaged in unprotected receptive anal sex were more likely to want such a conversation than those who did not engage in unprotected receptive anal sex (80% vs 62%,  $p<0.01$ ); those who engaged in unprotected insertive anal sex were also more likely to want a discussion (81% vs 63%,  $p<0.01$ ).

**Conclusions** Although the vast majority of these patients had been in treatment for more than a year, a large percentage of patients