immunocompromised and likely to present with co-morbidities like tuberculosis and have short-term mortality. Delay in diagnosis is significant to both disease prognosis at patient level as well as transmission at community level. An early diagnosis provides opportunities of reducing or halting further transmission. Present study was designed to determine proportion of late presenters and those with advanced HIV disease based on CD4 count and correlate same with socio-demographic characteristics of newly diagnosed HIV patients in Southern India.

Methods This observational study was done by extracting data from medical records of all HIV patients who attended ART centre of tertiary care hospital, using a pre tested data extraction sheet. Diagnosis of HIV infection with CD4 count.

Results 475 HIV patients with mean age of 40.9±10.8 years were studied. Median CD4 count at initial presentation was 265 cells/mL. Main mode of transmission was heterosexual. Commonest opportunistic infection was tuberculosis. Total of 312 patients (65.9%) were late presenters and 218 patients (45.9%) had advanced HIV disease. Males, patients of higher age groups and unemployed patients tend to be late presenters. Majority of study population presented at stage I (66%). However, a significant number of patients present with stage IV disease (21.4%).

Conclusion Significant proportion of HIV patients were late presenters and had advanced disease at initial presentation. There was a significant association between gender, age group and occupation with late presentation as well as advanced disease. Health education and awareness generation about importance of early presentation is crucial to decrease mortality in HIV population.

P2.08 MICROBIOLOGICAL FACTORS THAT CONTRIBUTE TO THE DEVELOPMENT OF BACTERIAL VAGINOSIS: A LONGITUDINAL STUDY

Introduction The aetiology and pathogenesis of bacterial vaginosis (BV) are unclear which has impacted greatly on efforts to improve the efficacy of current treatment approaches. We examined the microbial composition of the vaginal microbiota and factors associated with the development of BV, in women-who-have-sex-with-women (WSW) who were participating in a two year cohort study, in order to gain insights into the microbial changes that occur around the development of BV.

Methods 298 women self-collected high vaginal swabs and completed questionnaires detailing behavioural practices and symptoms three monthly for 24 months or until incident BV, whichever occurred first. BV was diagnosed by the Nugent method and women could only enrol in the cohort if they were BV negative on 3 weekly vaginal samples at screening. Fifty-one cases of incident BV occurred over 24 months (BV incidence rate, 9.75/100 woman-years). Vaginal swabs were stored at -80°C. Available longitudinal vaginal specimens from the 51 cases who developed BV and 51 age-matched controls who did not, were included in this study to examine the vaginal microbial composition by 16S rRNA gene sequencing; 47 case participants and 50 control participants met the requirements for specimen submission and sequencing quality (353 swabs). Microbial factors associated with the development of BV were determined by multivariable analysis, adjusting for sexual behaviours. Microbial diversity and stability were assessed by the Shannon diversity index and Bray-Curtis dissimilarity scores between consecutive paired longitudinal samples.

Results For each 1% increase in Gardnerella vaginalis abundance there was a 2% increased risk of developing BV (Adjusted Hazard Ratio [AHR]=1.02, 95% CI 1.01–1.03, p=0.001). Detection of BVAB TM7 (uncharacterised bacterium of candidate division TM7) was associated with a 6 fold increase in risk of developing BV (AHR=6.06, 95% CI: 1.99, 18.43, p=0.002). In contrast for each 1% increase in Lactobacillus crispatus abundance there was a 1% reduction in the
risk of developing BV (AHR=0.99 95% CI 0.098–1.00, p=0.038). The vaginal microbiome of women who developed BV was characterised by high microbial diversity and less stability compared to controls (p=0.04).

**Conclusion** In a cohort that was designed carefully to study incident BV, lower abundance of L. crispatus, increased abundance of G. vaginalis, and detection of BVAB TM7 were significantly associated with development of BV, after adjusting for bacterial species and sexual behaviour. Increased vaginal microbial diversity, decreased stability and exposure to new sexual partners were also associated with the development of BV in WSW. Incident BV may result from sexual exchange of key BV-associated bacteria such as G. vaginalis which could destabilise the microbial ecology through displacement of beneficial bacteria such as L. crispatus.

**P2.09 KNOWLEDGE OF MICROBICIDE AMONG COMMERCIAL SEX WORKERS IN NAIROBI KENYA**

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**Introduction** To determine the current knowledge of Microbicide and its future usage among Commercial Sex Workers who are exposed to unproductive sex. Also to assess how Microbicide could affect their sexual behaviours.

**Methods** Self administered Questionnaires among 55 respondents were used in a cross sectional way to investigate how they will take Microbicide as a preventive measure. This survey was conducted in the month of August-September 2015.

**Results** 58.5% of the respondents have never heard of Microbicide while 41.5% of the respondents have heard of Microbicide. The respondents in both cases were sexually active. The acceptance of Microbicide among the respondents was 80.2% if administered by a medical personnel advise while 19.8% of the respondents were ready to use immediately without an advice of a medical personnel advise. 2.1% of the respondents were used in a cross sectional way to investigate how they will take Microbicide as a preventive measure. This survey was conducted in the month of August-September 2015.

**Conclusion** In our setting routine PT is unlikely to be worth the considerable effort and cost it entails. Further research is required to assess its utility in specific circumstances.

**P2.10 WHAT IS THE ROLE OF PAIRED RPR TESTING IN THE DIAGNOSIS OF SYPHILIS REINFECTION AND THE FOLLOW UP OF SYPHILIS?**

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**Introduction** Syphilis reinfections are playing an increasing role in syphilis transmission in a number of populations. The assessment of reinfection and response to treatment depends on accurately measuring intra-individual changes in non-treponemal tests (delta-NTTs). In a 0 to 6 month delta-RPR determined by routine RPR testing (RT), samples would be tested 6 months apart with differences in reagent batches, environmental temperatures and observers all leading to measurement errors. We hypothesised that conducting paired RPR (PT) would enable a more accurate determination of delta-RPR than RT.

**Methods** 120 patients with a new diagnosis of syphilis were followed up at 0, 3, 6, 9, 12, 18 and 24 months with RPRs performed via RT at each study visit and at any suspected reinfection. RPR PT was performed at 0 and 6 months and at any suspected reinfection.

**Results** The quantitative agreement +/-1 dilution among PT and RT was 97.4%. There was no difference in the proportion with an incomplete serological response at 6 months: 21 (19.4%) and 19 (17.6%) according to PT and RT, respectively (p=0.726). There was no statistically significant difference between 0 to 6 month delta-RPR as determined by PT and RT in predicting seroresponse at 12 months (86.1% and 91.6% agreement with 12 month classification, respectively, p=0.262). PT did not reduce the numbers of those classified with asymptomatic reinfections.

**Conclusion** In our setting routine PT is unlikely to be worth the considerable effort and cost it entails. Further research is required to assess its utility in specific circumstances.