

**Methods** We analysed follow up (FU) data from women with a CT infection who visited the STI clinic of Amsterdam, the Netherlands, from September 2015 through June 2016. After giving informed consent, participants underwent baseline and three FU speculum examinations to obtain cervical swabs for both CT culture and NAAT testing. Speculum examinations were scheduled at 7, 21 and 49 days after treatment (single dose 1000 mg azithromycin). Collected samples were analysed using a RNA and DNA-based NAAT. CT cell culture was performed on all samples at baseline, and in FU samples that were NAAT-positive. Clearance was defined as conversion to negative NAAT results at any FU visit.

**Results** We included 78 women with NAAT proven CT infection prior to receiving treatment of whom 58 (74%) were also culture positive. At the first visit after treatment (median 7 days; IQR 7–8) 44 (47%) women were NAAT positive, of whom three tested also positive by culture. CT infection was cleared in 73 women (94%), of whom 61 (78%) at their second FU visit (median 21 days; IQR 21–25). Of the five women who did not clear their infection, three were also culture positive indicating a viable infection. All five reported unprotected sexual contact after inclusion prior to their last FU visit, indicating potentially new infections.

**Conclusion** We observed prolonged and intermittent positive results over time for both NAAT tests. For three participants (4%) viable CT infections were detected 49 days after treatment. All three cases reported new sexual contacts. In conclusion, persisting infections or treatment failure were rare.

**Support:** Hologic provided Aptima test materials and kits in-kind. Roche provided Cobas test materials and kits in-kind. Copan provided Universal Transport Medium in-kind

### P3.19 RISK FACTORS FOR HIV INFECTION AMONG FEMALE COMMERCIAL SEX WORKERS IN BANGUI, CENTRAL AFRICAN REPUBLIC

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**Introduction** The categorization of female commercial sex work according socio-anthropologic criteria constitutes a prerequisite to assess differential risks of HIV exposure.

**Methods** A cross-sectional questionnaire survey was conducted to describe the spectrum of commercial sex work in Bangui, the capital city of the Central African Republic, among 345 sexually active women having more than 2 sexual partners other than their regular partner during the last 3 months and reporting to have received money or “gifts” in return of their sexual relationships.

**Results** HIV infection in study female sex worker (FSW) population was strongly associated with anal sex practice with last clients (OR, 4.3), irregular condom use in last 3 months (OR, 24.9), and alcohol consumption before sex (adjusted OR, 2.8). Networks of commercial sex work comprised six different FSW categories, including two groups of “official” professional FSW primarily classified according to their site of work [i) “kata” (18.6%) representing women working in poor neighbourhoods of Bangui; ii) “pupulenge” (13.9%) working in

hotels and night clubs to seek White men] and four groups of “clandestine” nonprofessional FSW classified according to their reported main activity [i) “market and street vendors” (20.8%); ii) “schoolgirls or students” (19.1%) involved in occasional transactional sex (during holydays); iii) “housewives or unemployed women” (15.7%); “civil servants” (11.9%) working as soldiers or in public sector]. HIV varied according to FSW categories. HIV prevalence was 6-fold higher among “kata” than “pupulenge” (39.1% versus 6.3%). “Students”, “civil servants” and “housewives” were the less HIV-infected (6.1%, 9.8%, 13.0%, respectively), whereas “sellers” constituted the category of highest HIV prevalence (31.9%).

**Conclusion** Our observations highlight the high level of vulnerability of both poor professional “kata” and nonprofessional “street vendors” FSW categories which should be particularly taken in account when designing prevention programs for STIs/HIV control purposes.

### P3.20 PREVALENCE OF *CHLAMYDIA TRACHOMATIS*, *NEISSERIA GONORRHOEAE* AND *TRICHOMONAS VAGINALIS* IN FEMALE SEX WORKERS IN MOROCCO

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**Introduction** The incidence of reported sexually transmitted infections (STIs) in Morocco is over than 350.000 per year. The management of cases is based on syndromic approach especially in women. While female sex workers (FSWs) are assumed to be at increased risk of STIs, there are limited comparative data with other population groups available. Two studies have been conducted between 2013–2014 in different cities in Morocco in order, to explore the prevalence of *Chlamydia trachomatis* (CT), *Neisseria gonorrhoeae* (GC), and *Trichomonas vaginalis* (TV) among FSWs and to compare them with prevalences found in women consultant in family planning units (FPU).

**Methods** A sample of 519 FSWs and 537 asymptomatic women consultant in FPU was recruited in basic health services and NGOs. All consenting FSWs and women consultant in FPU underwent pretest counselling and provided socio-demographic and behavioural data using a structured questionnaire. The women were also asked to provide vaginal and cervical specimens to detect the respective STIs. GC identification was performed by culture and PCR, CT was detected by PCR and TV was detected by culture.

**Results** The prevalence of CT, GC, and TV were 20,7%, 9,35%, and 13,3%, respectively, in the FSWs, compared with 3%, 0,4%, and 5,6% respectively in the women consultant in FPU. These results show a high prevalence of CT, GC and TV in Moroccan FSWs than women consultant in FPU.

**Conclusion** Most STIs prevalences are lower in comparison with prevalences found for FSWs in other countries. However, the National Aids Program conclude that continued close monitoring of the prevalence of CT, GC and TV infection in FSWs is important for preventing the dissemination of these microorganisms, and that further investigation of CT as a sexually transmitted pathogen in women is needed.

**P3.21** PREVALENCE OF *TRICHOMONAS VAGINALIS* PREDICTED TO INCREASE SUBSTANTIALLY IN AUSTRALIA DUE TO REPLACEMENT OF PAP SMEARS WITH HPV TESTING FOR CERVICAL SCREENING: A MODELLING STUDY

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**Introduction** The prevalence of trichomoniasis is very low (~0.4%) in the general Australian population. This is attributed in part to the opportunistic detection of *Trichomonas vaginalis* (TV) in PAP smears of women participating in the cervical screening program. From 2017 the cervical screening program will transition from cytology to human papillomavirus (HPV) testing as the primary triage. We hypothesise that as a result of this transition, and with an increasing proportion of the population vaccinated against HPV, fewer cases of TV will be detected and the prevalence will consequently increase.

**Methods** A mathematical model was developed to describe the transmission of TV in the general population. We assume that following the transition from cytology to HPV testing; individuals with asymptomatic TV who test negative for high-risk (HR) HPV will remain undiagnosed and untreated. We investigate the change in TV prevalence over time as the proportion of the population vaccinated against HR HPV increases. We assume ongoing coverage of 80% in the HPV vaccination program.

**Results** Our modelling predicts that if the prevalence of HR HPV does not change then 10 years after the transition from PAP to HPV testing, TV prevalence will have increased from 0.4% to 1.65%, and after 20 years prevalence will have reached 3.83%. If we assume that HR HPV prevalence continues to decrease at the current rate, TV prevalence will reach 1.68% after 10 years and 4.06% after 20 years.

**Conclusion** Our results suggest that TV prevalence will increase in Australia over time due to changes in the cervical screening program. The extent of this increase will depend on the impact of HPV vaccination on the prevalence of HR HPV. Consideration should be given to enhancing TV surveillance to monitor for increasing incidence. Adding a TV test to the HPV test that will be used in cervical screening and or including TV in sexual health checks for asymptomatic individuals (contingent on an observed increase in incidence) should also be considered.

**P3.22** PREVALENCE AND DETERMINANTS OF TOBACCO USE AMONG PATIENTS LIVING WITH HIV (PLHIV) IN KINSHASA

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**Introduction** Worldwide the prevalence of smoking among people living with human immunodeficiency virus (HIV) is elevated compared to the general population. Tobacco use remains one of the major cardiovascular risk factors and its use in antiretroviral (ARV) treated human immunodeficiency virus infected people may lead to activation of immune cells

and rendering them more susceptible to HIV. We determined the prevalence of and factors associated with tobacco use in an antiretroviral treated HIV infected congolese people.

**Methods** The study was a cross-sectional, conducted in Kinshasa, Democratic republic of Congo(DRC). We randomly selected patients and 9 support structures for PLHIV, from May 2015 to August 2015. Socio-demographic, tobacco and alcohol use data were collected using World Health Organisation stepwise approach to surveillance (STEPS) questionnaire. The Chi-square test was used to compare categorical variables between tobacco users and non tobacco users. The multiple logistic regression analysis was used to determine the predictors of tobacco use status.

**Results** On a global active file of 5724 PLHIV, 400 were included. Of 400 ARV treated HIV infected participants, 309 (77.3%) were females and 91 (22.7%) were males. The mean age of participants was 43 years. About 32 (8%) of participants were tobacco users. A higher proportion of females than males (59.4% versus 40.6%,  $p=0.521$ ) used tobacco. Food insecurity (AHR: 3.349; 95% CI: 1.378–8.142;  $p=0.008$ ) and alcohol consumption (AHR 3,826; 95% CI:1,583–9,249;  $p=0,003$ ) were significant independent predictors of tobacco use.

**Conclusion** Tobacco use among ARV treated HIV infected people was common. Food insecurity and alcohol consumption were the risk factors for tobacco use. There is need to scale up the awareness on how tobacco use, apart from being a risk factor for cardiovascular diseases, interferes with viral suppression despite treatment with antiretroviral drugs.

**P3.23** DETERMINANTS OF NON-ADHERENCE TO ANTIRETROVIRAL THERAPY IN ADULTS IN THE CITY OF KINSHASA

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**Introduction** Adherence of 95% or more to antiretroviral therapy is generally considered necessary for optimal virologic suppression in patients living with HIV/AIDS (PLWHA). In the African context of access followed by low viral load, understand the determinants of poor adherence is essential to improve compliance, optimise virologic suppression and reduce morbidity and mortality.

**Method** A transversal analytical study referred to was conducted on patients aged at least 18 years on antiretroviral treatment for at least three months. We randomly selected patients and 9 support structures for PLWHA from 63 following more than 100 patients in Kinshasa, from May 2015 to August 2015. The Case Adherence Index (subjective method) and renewal of order (method objective) were used as indicators of compliance. Khi-2 and Student tests were used for comparisons. The determinants of nonadherence were sought in multivariate logistic regression analysis.

**Results** On a global active file of 5724 patients, 400 were included. The median age was 43 years and the sex ratio in favour of the three women. The overall incidence of non compliance was 25%. The prevalence of non-objective compliance was higher than that of non-subjective compliance (29% vs 21%,  $p=0.01$ ). In multivariate analysis, the payment of the consultation [adjusted OR 1.70 95% CI (1.020 to 2.813),