Results 112 HIV-infected women were enrolled, of whom 52 non-pregnant and 60 pregnant. In this population, mean age was 32.3 years (SD = 8.2), 62.5% had a previous history of sexually transmitted diseases, 46.4% began sex life with 15 years or less, 33.1% reported having less than 3 sexual partners throughout life, 45.8% had undetectable HIV viral load. We found a prevalence of 5.4% of *Chlamydia trachomatis* infection in HIV-infected women followed. There was an association of CT with the presence of pregnancy (10.0% versus 0.0%; p = 0.019), HIV viral load > 10,000 copies (p < 0.001) and the mean time of HIV diagnosis (21.0 versus 69.2 months; p = 0.032). We found no association with other risk factors studied (ethnicity, marital status, education, use of alcohol and drugs, $CD4^+$ T Lymphocyte count).

Conclusion Early access to diagnosis and treatment of infection by HIV and Chlamydia trachomatis is an important preventive action. In pregnant women infected with HIV, the prevalence of Chlamydia appears to be greater and this is a period where treatment can improve maternal and neonatal outcome.

P3.186 SUBSTANTIAL NATURAL CLEARANCE OF GENITAL AND EXTRAGENITAL *CHLAMYDIA TRACHOMATIS* AND *NEISSERIA GONORRHOEAE* IN STD CLINIC ATTENDEES

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Background Little is known on the natural history of extragenital Chlamydia trachomatis (Ct) and Neisseria gonorrhoeae (Ng). More insight in the natural history of extragenital Ct and Ng could influence standard operating procedures in screening facilities such as STD clinics. We evaluated proportions of natural clearance of Ct and Ng in genital and extragenital samples.

Methods We included self collected Ct and/or Ng positive genital (urine and cervicovaginal) and extragenital (anorectal and oropharyngeal) samples from STD clinic attendees [April 2011-December 2012]. Data on demographics and sexual behaviour were collected in an electronic patient file at initial testing. At follow-up for treatment, subjects were retested prior to treatment at the same anatomic site(s) as initial testing and provided an additional questionnaire on sexual behaviour since initial testing. Natural clearance rates of Ct and Ng were compared between anatomic sites. Data on the first 238 individuals (299 samples) are presented, enrollment is ongoing.

Results In total, 38% of the participants were male and the median age was 27 years. The median interval between initial and follow-up sample was 11 days. Natural clearance of Ct was 10.5% (22/210) for genital samples (36% urine, 64% vaginal) and 25.9% (7/27) for extragenital samples (57% anorectal, 43% oropharyngeal) (P = 0.49). For Ng this was 22.2% (2/9) for genital samples (0% urine, 100% vaginal) and 18.8% (3/16) for extragenital samples (33% anorectal, 67% oropharyngeal) (P = 0.84). Overall, natural clearance of Ct was 12.2% (29/237) and Ng was 20.0% (5/25) (P = 0.14). Age < 25 years (P < 0.01) and female sex (P = 0.03) were associated with overall Ct clearance. Median interval was not associated with Ct/Ng clearance (P = 0.13 and P = 0.11 respectively).

Discussion Natural clearance of Ct and Ng was substantial in both genital and extragenital samples. Further analysis on associated determinants as well as bacterial load determinations will provide more insight into these results.

P3.187 SEXUALLY TRANSMITTED INFECTIONS AMONG A COHORT OF HORMONAL CONTRACEPTIVE USERS IN IBADAN, NIGERIA

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Background Most women who acquire HIV and other sexually transmitted infections (STIs) are in their child bearing years and are current or potential users of contraceptive methods. The study was undertaken to provide information on the association between the hormonal contraceptive methods and STIs among women attending Family Planning clinics, University College Hospital,Ibadan,Nigeria.

Methods It was a cross-sectional study in a population of women using hormonal contraceptive methods attending Family Planning clinics. Detailed medical history, Endocervical and high vaginal swabs were collected from the women to establish diagnosis after clinical examination and informed consent. Aliquots of sera from venous blood samples of the women were tested for antibodies to HIV-1/2 and RPR. Data was analysed using SPSS for widows' version 15.0.

Results There were 102 women using hormonal contraceptive methods who participated in the study with mean age of 31.92 years (SD = 8.33, range = 16 –55). The mean age of sexual debut of participants was 19.5 years. The most common STI diagnosed was Vaginal candidiasis (22.5%) while others were bacterial vaginosis (21.6%), HIV (11.8%), Trichomoniasis (11.8%), Chlamydia cervicitis (8.8%), syphilis (5.9%), genital warts (6.9%) and gonorrhoea (2.9%).Younger age of sexual debut influenced the decision of selecting various forms of hormonal contraceptives especially the emergence of oral contraceptive forms (P = 0.043. Majority of the women on hormonal contraceptives had multiple sexual partners. There were significant associations between utilisation of hormonal contraceptive methods and transmission of trichomoniasis (P = 0.019, 4.2 (1.0–13.2).

Conclusions Women seeking contraception to prevent unintended pregnancy are as much in need of education about prevention of STIs. The study found that younger age, numbers sexual partners, and use of hormonal contraceptives could increase the risk of acquiring trichomonads infection.

P3.188 CYTOMEGALOVIRUS AND HIV CO-INFECTION AMONG PATIENTS ACCESSING CARE IN A TERTIARY CARE CENTRE IN NIGERIA

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Background Cytomegalovirus (CMV) is one of the commonest viral opportunistic infections in persons with Acquired Immune Deficiency Syndrome (AIDS). In AIDS patients, progressive loss of immune function, and in particular, loss of cell mediated immunity, permits CMV reactivation and replication. This study aimed to evaluate the prevalence of seropositivity for CMV IgG and IgM among HIV sero-positive patients in Ilorin, Nigeria

Methodology Sera obtained from 180 HIV sero-positive individuals and 180 HIV sero-negative blood donors participants were assayed for CMV IgG/IgM using Enzyme Linked Immunosorbent Assay (ELISA), The CD4 cell counts were also done. A semi-structured questionnaire was used to obtain information on the risk factors for CMV/HIV co-infection.

Result A total of 169(93.9%) of the HIV sero-positve were CMV IgG positive while, 174(96.7%) of the control were also CMV IgG positive. Among the HIV sero-positive, 20 (11.1%) were CMV IgM antibody positive, while 4(2.2%) of the HIV sero-negative control group were CMV IgM positive. Age of Participants (p = 0.000), number of sexual partners(p = 0.000) and CD4 cell counts(p = 0.000) were significantly related to CMV IgM sero-positivity. However the use of HAART (p = 0.777), history of blood transfusion(p = 0.837)

and sex of participants (p = 0.591) were found not to be significantly related to CMV IgM sero-positivity.

Conclusion Cytomegalovirus is hyperendemic among HIV sero-positive and sero-negative individuals in Ilorin. This suggests primarily a horizontal, non sexual route of transmission. There is need for multi-centre studies using more sensitive tests such as CMV DNA PCR in order to establish the prevalence of CMV infection among HIV/AIDS patients.

P3.189 HIV/STI BIO-BEHAVIOURAL CHARACTERISTICS OF KEY POPULATIONS AT HIGHER RISK

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Background From 2002 bio-behavioural surveillance has regularly conducted in Armenia to monitor HIV prevalence and behavioural characteristics among the key populations at higher risk.

In 2010 and 2012 integrated HIV/STI/Hepatitis biological and behavioural surveillance was conducted among persons who inject drugs (PWID), sex workers (SWs) and men who have sex with men (MSM) in three major cities of Armenia.

Methods Respondent driven sampling was used to conduct the surveillance in 2010 and 2012. 300 representatives of each population group participated in the surveillance surveys conducted in 2012 in Yerevan, the capital. STI component aimed to reveal risk behaviours recently exhibited by the respondents.

Results The biological and behavioural surveillance showed that HIV prevalence among PWID in Yerevan was 6.3%, syphilis prevalence was 0.8%, and hepatitis C prevalence - 52.6%. 55% of PWID did not use condoms at last sex with casual partners, 29.1% of those surveyed shared injecting equipment in the last 1 month.

HIV prevalence among SWs was 1.3%, syphilis prevalence - 4.3%, trichomoniasis prevalence - 22.5%, gonorrhoea prevalence - 6.6%. 10% of SWs did not use condoms at last sex with clients and only 40% used condoms at last sex with non-commercial partners. HIV prevalence among MSM was 2.6%, syphilis prevalence - 1.9%, and hepatitis B prevalence - 0.6%. 27% of MSM did not use condoms at last sex with casual partners.

Conclusion The surveillance results revealed that representatives of the key populations at higher risk continue to exhibit risk behaviours, which is proved by low condom use. Also, presence of sexually transmitted infections demonstrates their risk behaviours. Bio-behavioural surveys with the same methodology would be continued for making the trend analysis. The survey results should be considered while designing prevention activities. The study outcomes should be disseminated among stakeholders for better planning and among communities for advocacy.

P3.190 EPIDEMIOLOGY OF HIV INFECTION BEFORE AND AFTER RISING THE IRON CURTAIN: THE HUNGARIAN EXPERIENCE

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Background In the beginning of 21st Century Hungary has a good epidemiological situation concerning HIV infections and AIDS which was the result of the strict but consistent introduction of nationwide HIV screening in 1985, and the good cooperation of clinicians, researchers and government officials.

Methods HIV subtypes and genetic resistance (allele frequencies of CCR5-Δ32, CCR2–64I and SDF1–3'A) were determined by molecular virological methods, antiretroviral drug resistance in primary HIV infection and transmission of HIV CRFs by illegal migrants were analysed by genotyping (Truegene HIV-1 Genotyping System/Siemens/). New approach in inhibiting HIV infection on cellular level by modifying SH- groups of CD4 and HIV gp120 *env* by novel thyolated nucleosides were developed using viral pseudotypes.

Results In the last 28 years MSM is still the highest risk group, while HIV infection is low in i.v. drug users. In the early years HIV B subtypes were determined as major circulating variants. CCR5-Δ32 was found in 12% of general population and 15% in ethnic gypsy minority. Genotyping revealed, that approx. 15% of primary HIV infections are transmitted by drug resistant mutants mainly in MSMs. After 2004, when Hungary joined to the European Union illegal migration increased, besides the prostitutes mainly from SE Asia and Africa, resulting in the appearance of new HIV subtypes and African CRFs, such as CRF02_AG (28.5%), CRF06_cpx (17.8%) and CRF11_cpx(3.6%). Novel entry inhibitor UD was effective *in vitro* in 5 uM.

Discussion Transmission of drug-resistant HIV during primary infection, penetration of African CRFs raise serious clinical and public health consequences. To maintain the recent favourable epidemiological situation screening programmes should be continued, HIV genotyping at the time of diagnosis should be the standard of care, and introduction of novel compounds, such as entry inhibitors in the treatment are necessary.

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P3.191 DO GAINS IN THE PREVENTION OF HIV LEAD TO LOSSES IN THE PREVENTION OF OTHER SEXUALLY TRANSMITTED INFECTIONS?

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Background Aggressive efforts to reduce the viral load among persons with HIV infection, including early diagnosis, linkage to care, and early initiation of antiretroviral treatment may significantly reduce HIV transmission at the community level, and thus becoming a major focus of HIV prevention policy. However, it is not known how this approach will affect HIV risk behaviours and the epidemiology of non-HIV sexually transmitted infections (STI).

Objective To study trends in HIV, early syphilis, and high-risk behaviours among men who have sex with men (MSM) in Denver.

Methods We analysed and triangulated data from 3 sources: the Denver Metro Health (STI) Clinic; Denver STI surveillance; Thee Denver MSM waves of the National HIV Behavioral Surveillance system (NHBS).

Results Among MSM visiting DMHC, the rate of new HIV diagnoses decreased from 3.3% in 2007 to 2.5% in 2012 (–24%) while the rate of early syphilis increased from 1.3% to 2.5% (+92%) during the same time period. Similarly, in Denver (all populations), rates of newly reported HIV infections decreased from 32.4/100,000 in 2007 to 25.3/100,000 in 2011 (–22%), but newly reported cases of primary and secondary syphilis increased from 5.3/100,000 to 11.8/100,000 (+123%) during the same time period. Finally, Denver NHBS data showed the proportion of MSM reporting unprotected anal sex stable at 36%–37% between 2005, 2009 and 2011 data waves.

Conclusion Despite continued high levels of risk behaviours among Denver MSM, the rate of new HIV infections is decreasing, providing evidence for the effectiveness of efforts to reduce the community HIV viral load. However, at the same time, rates of early syphilis continue to rise. Without simultaneous efforts to reduce risk behaviours, a biomedical approach to reduce the community HIV viral load may result in gains for HIV prevention but losses in the prevention of syphilis and other STI.