P.O3 - Epidemiology and Prevention Sciences

**P3.001** PATTERNS OF RECENT ALCOHOL AND MARIJUANA USE AS PREDICTORS OF CONDOM USE, PREGNANCY AND SEXUALLY TRANSMITTED INFECTIONS DURING 18-MONTHS OF FOLLOW-UP AMONG AFRICAN-AMERICAN FEMALE ADOLESCENTS

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**Background** Few, if any, studies have differentiated patterns of alcohol and marijuana use as predictors of sexual risk among adolescents. The objective was to compare recent use of alcohol and marijuana (A+M), alcohol only (AO) and marijuana only (MO) as predictors of condom use, pregnancy and sexually transmitted infections (STIs) during 18 months of follow-up among African-American female adolescents.

**Methods** The analytic sample included 213 African-American females (14-20 years) assigned to the control arm of an HIV prevention trial. Participants completed audio computer-assisted self-interviews at baseline and every 6 months for 18 months. At each assessment, a pregnancy test was conducted and specimens were collected and assayed for Trichomonas vaginalis, Chlamydia trachomatis and Neisseria gonorrhoeae using DNA amplification. Generalized estimating equations compared proportion condom-protected sex acts in the past 3 months, pregnancy and STI acquisition during follow-up among participants who in the 90 days prior to baseline assessment reported using A+M, AO and MO but no other illegal substances. Multivariable models controlled for group differences at baseline and corresponding baseline measure of the outcome.

**Results** Of 182 (85%) participants with follow-up data, 43% (n = 79) reported recent use of A+M, 59% (n = 71) AO and 17% (n = 32) MO. No group differences in retention or proportion condom-protected sex acts during follow-up were observed. There were no significant differences in STI acquisition or pregnancy among MO and AO users. Relative to AO users, A+M users were more likely to become pregnant (AOR: 2.5, 95% CI: 1.2, 5.3). Relative to MO users, A+M users were more likely to acquire an STI (AOR: 2.5, 95% CI: 1.0, 6.2) and become pregnant (AOR: 3.7, 95% CI: 1.1, 12.3).

**Conclusion** STI/HSV and pregnancy prevention programmes serving African-American female adolescents may benefit by intensifying services for recent A+M users and addressing the role of substance use on sexual risk.

**P3.002** DETECTION OF HUMAN PAPILLOMAVIRUS (HPV) INFECTION IN ANAL SAMPLES IN RUSSIAN MEN WHO HAVE SEX WITH WOMEN (MSW)

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**Background** HPV has been found in the anal canal of heterosexual men (MSWs) but knowledge on anal HPV epidemiology among MSWs is still limited.

**Methods** In total, B-globin positive anal samples from 350 Russian MSWs (age 18–58 years, sex debut 9–23 years, 1–700 lifetime sex partners) attending a urology unit of a STI clinic and HIV+ patients from a city infection hospital were collected in St. Petersburg. HPV testing and genotyping for 13 oncogenic and 25 non-oncogenic HPV types was conducted with a reference method from the WHO HPV LabNet global reference laboratory, using a proficient Luminox assay.

**Results** Overall HPV prevalence (including oncogenic and non-oncogenic types) was 17.1%, 15.2% in HIV- compared to 40.7% in HIV+ Russian MSW (p = 0.0022). HPV 16 infection was most common (5.4%) followed by HPV 51 (2.0%), HPV 45, (1.7%) and 87 (1.7%). Age, number of sexual partners, and age at sexual debut were not associated with HPV infection.

**Conclusion** HPV infection is common in anal samples of Russian MSWs. HPV prevalence is higher among men who were HIV-positive.

**P3.003** HETEROSEXUAL ANAL INTERCOURSE AMONG YOUTH: A SYSTEMATIC REVIEW AND METAANALYSIS

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**Background** Anal intercourse (AI) is a risk factor of HIV/HPV infection and anal cancer. However, heterosexual AI practices are ill-understood. Our objective was to understand the level and heterogeneity in AI among heterosexual youth.

**Methods** We conducted a systematic review and meta-analysis. PubMed was searched for studies reporting heterosexual AI among the general population with a mean age < 25 years published 1975–2012. Meta-analysis and meta-regression were used where appropriate to summarise estimates and test whether continent, survey year, mean age and interview method explained variation in AI prevalence among sexually active and all youth.

**Results** 110 eligible studies were identified from North America (n = 75), Europe (14), Africa (13), Latin America (4) and Asia (4). Studies of AI prevalence over lifetime (n = 66) and 3 months (n = 16) only are reported here. Both lifetime and three-month AI prevalence estimates were too heterogeneous to pool (I2 > 90%).

Lifetime AI prevalence was 0.2%–55.7% and 0.0%–38.8% in sexually active and all youth, respectively. AI among all youth increased significantly (p < 0.05) with mean age. Among sexually active youth, interview method explained 12% and 47% of variation in AI prevalence in male/mixed gender samples, respectively. Higher prevalence was reported using more confidential methods. Lifetime prevalence increased significantly with survey year among all gender groups in Europe, but not elsewhere.

Three-month AI prevalence was 5.1%–52.6% and 1.3%–22.7% in sexually active and all youth, respectively. Among all youth, mean age explained 76% and 80% of variation in female and mixed AI prevalence, respectively. Three-month prevalence increased significantly with survey year in sexually active female samples (all from North America).

**Conclusion** AI is common among all young heterosexual populations, with prevalence increasing in Europe and possibly among females in North America. It could therefore become an increasingly important determinant of HIV and HPV transmission.