

associated with HIV (OR = 1.8 (1.5–2.1), HCV (OR = 1.7 (1.5–2.0) and syphilis (OR = 1.5 (1.2–1.9). Whenever regular partner was source of violence, FSWs had higher chances to be HIV (OR = 1.8 (1.3–2.6) and HCV (OR = 1.8 (1.3–2.4) positive. Moreover, those who experienced violence from police were more likely to suffer from HIV (OR = 1.4 (1.0–1.8).

Conclusions FSWs, with personal experience of violence, have increased risk of HIV/STI infections. Regular partner as sources of violence is important for HIV and HCV infections, as well.

P3.413 WITHDRAWN BY AUTHOR

P3.414 ADHERENCE TO HEPATITIS B VACCINE BY FEMALE SEX WORKERS IN A NORTHEAST CITY OF BRAZIL

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Background Women sex workers are considered vulnerable to sexually transmitted infections, such as hepatitis B and the human immunodeficiency virus (HIV), considering the unfavourable conditions by making verbal agreement with their clients. The study aimed to evaluate the adherence of female sex workers to three doses of hepatitis B vaccine.

Methods Cross-sectional study with female sex workers in the city of Teresina, Brazil. The study included 402 women, using the “snowball” technique. Sociodemographic data were gotten by individual interview, blood sampling for anti-HBs evaluation was collected and the doses of vaccine against hepatitis B were administered, according to the need and acceptance of participants. Data were analysed using Statistical Package for Social Science (SPSS) 18.0.

Results Of the 402 women who participated in study, 96 (23.8%) reported ever having received at least one dose of the vaccine, while 25 (6.2%) reported having received one dose only, 14 (3.4%) received two doses, 57 (14.1%) reported having received three doses and 50 (12.4%) did not know. Of those who reported having received three doses was carried anti-HBs, and reagent in 33 (50.7%). Thus, 57 (14.1%) reported already received three doses and 30 (7.4%) refused to receive the vaccine. Thus, 315 women were vaccinated. Of this total, 223 (70.7%) women receiving two doses and only 92 (22.8%) completed the scheme with three doses of the vaccine.

Conclusion Complete scheme of three doses of the vaccine in this population is challenging, it is necessary for both immunisation strategies and improving access of this population to public health, mainly through primary care.

P3.415 CONCURRENCY & SEROMIXING AMONG MSM WITH RECENT HIV INFECTION AND NEW HIV DIAGNOSIS: IMPLICATIONS FOR PREP

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Background Understanding the frequency of concurrent sexual partnerships, especially with HIV-positive partners, can guide prevention strategies such as pre-exposure prophylaxis (PrEP) for HIV-negative men who have sex with men (MSM).

Methods From 2009–2012, 295 MSM testing for HIV in Los Angeles reported up to 6 male sex partners via computer-assisted self-interviews.

Concurrency was defined as overlapping dates of sexual partnerships. Nucleic acid amplification tests and detuned assays were

performed to determine recent and longstanding HIV infections. Associations between HIV status (recent, longstanding, or negative) and partnership type, concurrency, and serostatus of partners were examined using multinomial logistic regression.

Results Participants were diverse (14.5% African-American, 27.0% White, 51.2% Latino), with mean age of 29.9 years (SD = 8.0); 42.0% had recent infection, 27.7% longstanding infection, and 36.6% were HIV-negative. 55.5% reported concurrent partnerships. Of the 887 partnerships reported, 30.6% (265/866) were main partnerships. Among main partnerships with HIV-negative partners, 47.8% (77/161) had ≥ 1 concurrent partner; of those 47.2% (34/72) included ≥ 1 HIV-positive/status unknown concurrent partner. In main partnerships with HIV-positive/status unknown partners, 55.1% (38/69) had ≥ 1 concurrent partner and of those 65.7% (23/35) had ≥ 1 HIV-positive/status unknown concurrent partner. Adjusting for age and race, compared to HIV-negative testers, having recent infection was associated with substance use (adjusted odds ratio [AOR] = 1.99, 95% CI: 1.03–3.85) and concurrency (AOR = 1.88, 95% CI: 1.05–3.39); having longstanding infection was associated with no main partner (AOR = 2.27, 95% CI: 1.00–5.16) or ≥ 1 HIV-positive/status unknown main partner (AOR = 3.63, 95% CI: 1.42–9.30) compared to having only HIV-negative main partners, but not with concurrency.

Conclusion The findings associating concurrency with recent infection indicate a broad need for PrEP by MSM with main HIV positive and HIV negative partners. For MSM exposure to HIV may be occurring from concurrent outside partners suggesting a need for PrEP for partnered and non-partnered MSM.

P3.416 HEALTH CARE SEEKING BEHAVIOUR AMONG MALE SEX WORKERS IN SOME SELECTED AREAS

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Background Male to male sex in Dhaka is fairly widespread and men who make up this group are considered to be vulnerable to contracting and transmitting HIV and other sexually transmitted infections. Men who have unprotected sex with sex workers are at risk not just of contracting HIV and STIs, but of passing them on to their wives and girlfriends.

Methods Cross sectional study was conducted among male sex workers with the objective of assessing their health seeking behaviour. Total 322 sex workers were interviewed by using structured questionnaires.

Results Study revealed that most of the sex workers were young age. Regarding knowledge on how to protect from getting infected with STIs, 90% respondents had knowledge that STIs can prevented by use condom during sex, 12% said washing of genitalia with disinfectants after sex, 12% said by washing with after sex. Regarding STIs majority of the respondents (47%) perceived that they were at medium risk of getting infected with STIs, 23% reported at low risk, 13% reported at high risk and 6% reported that they were not at all in risk of getting infected with STIs, 12% respondents thought that they have no idea regarding the risk. Among the respondents 83.3% suffered ever out of which 66.4% respondents suffered from STIs once, 27% twice, 4% thrice and 4% more than thrice in the last three months. Thirty seven percent respondents received treatment from NGO clinic, 23% from MBBS doctor, 17.33% from government hospital, 13.33% did self medication, 6% received treatment from homiopath, 9% received treatment from kabiraj and 2% of the respondents did not seek any treatment.

Conclusion It was evident that the knowledge of prevention and treatment measures among the male sex workers was inadequate.

HIV/STIs campaigns need to improve the sex workers awareness and treatment seeking behaviour for STIs.

P3.417 ASSOCIATION OF SITUATIONAL DRINKING WITH UNPROTECTED ANAL INTERCOURSE (UAI) AMONG MEN WHO HAVE SEX WITH MEN (MSM) AND TRANSGENDER WOMEN (TW) IN URBAN LIMA, PERU (2008)

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Background The association between general patterns of alcohol intake and sexual risk behaviours among men who have sex with men (MSM) and transgendered women (TW) populations has been well-established. However, there is limited event-level data on alcohol use and contact-specific risk behaviour from low resource settings with MSM/TW-concentrated HIV epidemics such as Peru.

Methods We performed secondary analysis of baseline data from a community-based HIV prevention trial with MSM/TW subjects from 24 neighbourhoods (clusters) in urban Lima. Using multivariate Poisson regression with standard errors estimated for clustered data to calculate prevalence ratios (PR), we measured the adjusted association between situational drinking and unprotected anal intercourse (UAI) during the subject's last sexual contact.

Results A total of 718 subjects were included (Mean age = 29, Range = 18–45; 71.1% MSM and 28.9% TW), of whom 63.3% had engaged in transactional sex during the previous year. Overall, 45.4% of subjects reported UAI with their most recent partner, and 46.1% reported alcohol intake before their last sexual encounter (drinking either with or without him/her). In multivariate analysis, participants were more likely to practise UAI in the last sexual encounter with their last partners if they drank alcohol before sex (PR = 1.23, 95% CI: 1.03–1.47), after adjusting for age, education, sexual identity, sexual role, number of partners over the last year, transactional sex during the previous year and partner type (stable, casual, or transactional sex partner).

Conclusions The independent association between contact-specific alcohol consumption before sex and UAI among MSM/TW in Peru warrants further in-depth exploration to understand the exact mechanisms and determinants of these two behaviours at individual-, partner- and community-levels. Interventions to reduce sexual risk behaviours should address situational drinking among MSM and TW populations.

P3.418 FACTORS ASSOCIATED WITH CONDOM BREAKAGE AMONG MEN WHO HAVE SEX WITH MEN IN INDIA

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Background Condom use has long been identified as one of the most effective means of preventing HIV/STI. However recent studies among female sex workers suggest high rates of condom breakage. There is paucity of evidence on the extent of condom breakage, its association with the prevalence of HIV/STI and the factors associated with condom breakage among men who have sex with men (MSM).

Methods Data were drawn from a cross-sectional bio-behavioural survey of 3806 self-identified MSM from three high prevalence states of India, recruited through probability based sampling in 2009–10. Logistic regression models were used to examine the association between condom breakage and the prevalence of HIV/STI and to identify the correlates of condom breakage.

Results Overall, 20% of MSM reported condom breakage in the month prior to the survey. Condom breakage was associated with increased odds of HIV/STI. Additionally, no significant difference in the prevalence of HIV/STI was observed between MSM who were inconsistent condom users and MSM who used condoms at every sexual encounter but reported condom breakage. MSM who were 25–34 years old; were predominantly receptive sexual partner; travelled outside their current place of residence and had sex at destination; consumed alcohol in the month prior to the survey; reported drug use (self or partner); had same sex sexual debut at a younger age and used oil based lubricant were significantly more likely to report condom breakage compared to their counterparts.

Conclusion Condom breakage was common among MSM in this study. Interventions with MSM in India which focus primarily on consistent condom use should also consider the threat posed by condom breakage. Special effort is required to provide information on correct condom use to MSM at higher risk of experiencing condom breakage.

P3.419 EFFECT OF INTERVENTION EXPOSURE ON SELF-REPORTED CONDOM USE AMONG MEN WHO HAVE SEX WITH MEN IN SOUTHERN INDIA

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Background The *Avahan* HIV prevention intervention programme promotes condom use amongst men who have sex with men (MSM) in high HIV prevalence states in India. We assessed how self-reported condom use varies with intervention exposure for MSM in Bangalore.

Methods Self-reported condom use and intervention exposure data came from a 2006 cross-sectional survey of MSM. Consistent condom use (CCU) with all, main, and casual male sex partners was assessed. Intervention exposure was measured by: whether MSM had been contacted by *Avahan*; duration since first contact; number of contacts in the past month; number of condoms received (log-transformed, as plots suggested a non-linear relationship); and number of condom demonstrations seen in the past month. Logistic regression was used to assess the relationship between each exposure variable and CCU with each partner type independently, controlling for demographic, socio-economic and behavioural factors associated with condom use.

Results 77% of MSM contacted by *Avahan* reported CCU with all partners, compared with 55% of those not contacted ($p = 0.019$, adjusted analysis). CCU was not associated with duration since first intervention contact or with number of contacts by the intervention in the past month. CCU with all partners and casual (but not main) partners increased with the number of condoms received. CCU increased with the number of condom demonstrations seen in the last month, for all, main and casual partners (odds of CCU with each partner type increased by 1.7–2.4-fold for each additional condom demonstration, $p < 0.001$ overall).

Conclusion Direct contact with the *Avahan* programme is associated with increased reported condom use amongst MSM in Bangalore. Although there is potential for social desirability bias, higher levels of reported condom use are associated with repeated contacts with the programme, particularly those involving demonstrations of correct condom use, and with receiving large numbers of condoms from the programme.