**P1-S2.08** GEOGRAPHY, MOBILITY, WORK VENUE, AND SEXUALLY TRANSMITTED INFECTIONS AMONG 4100 FEMALE SEX WORKERS IN 20 CITIES IN PERU

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**Objectives** To estimate and compare prevalences of five STI Chlamydia trachomatis (CT), Neisseria gonorrhoeae (NG), Trichomonas vaginalis (TV), T pallidum (syphilis), and HIV infection for female sex workers (FSW) according to home geographic region and mobility, and to identify other STI risk factors.

**Methods** Data on geographic region, internal mobility (defined as having engaged in sex work in >2 Peruvian cities in the previous 12 months or was working away from their home city at enrolment), sex work characteristics, socioeconomic variables and, behaviours, were collected together with vaginal and blood specimens from 4100 FSW in 20 Peruvian cities. Multivariate analysis identified factors associated being infected with any of the five STI.

**Results** FSW from the jungle region had higher prevalences of CT, NG, TV, syphilis, and HIV than FSW from the coastal or highland regions. In univariate analysis, having worked in >2 more cities or working away from home were significantly negatively associated with having any STI. In multivariate analyses the mobility status variable showed a trend towards protective associations; neither remained significant. Risk of any STI was significantly and independently associated with bar/nightclub or street work, being from the jungle region, and not completing high school.

**Conclusion** Findings suggest that internal mobility does not increase risk among Peruvian FSW. Preventive interventions should focus on FSW from the jungle region, those working in bars/nightclubs or on the street and those lacking secondary education to halt the spread of STI among FSW and, presumably, to the general population.

**Poster Sessions**

**P1-S2.07** Table 1 Association between selected risk factors and being “STI positive” (testing positive for Chlamydia, Gonorrhoea, Syphilis and/or Trichomoniais) among female sex workers attending STI testing sites in Germany, 2010 (N=1142)

<table>
<thead>
<tr>
<th></th>
<th>Ntotal</th>
<th>Nactive</th>
<th>OR (95% CI)</th>
<th>p Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>German language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fluent (R)</td>
<td>437</td>
<td>59</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>301</td>
<td>34</td>
<td>0.82 (0.52 to 1.30)</td>
<td>0.376</td>
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<tr>
<td>Very poor / None</td>
<td>375</td>
<td>135</td>
<td>3.60 (2.55 to 5.10)</td>
<td>0.000</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range 15−77 years</td>
<td>1142</td>
<td>233</td>
<td>0.95 (0.93 to 0.97)</td>
<td>0.000</td>
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<tr>
<td>Health insurance</td>
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<tr>
<td>No (R)</td>
<td>450</td>
<td>138</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>648</td>
<td>87</td>
<td>0.35 (0.25 to 0.47)</td>
<td>0.000</td>
</tr>
<tr>
<td>Meet clients on the street</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (R)</td>
<td>995</td>
<td>173</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>101</td>
<td>43</td>
<td>3.52 (2.30 to 5.40)</td>
<td>0.000</td>
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<tr>
<td>Meet clients through internet or ads</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>No (R)</td>
<td>908</td>
<td>195</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>88</td>
<td>21</td>
<td>0.46 (0.28 to 0.74)</td>
<td>0.002</td>
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<tr>
<td>Number of clients per week</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range 1−75</td>
<td>270</td>
<td>37</td>
<td>1.02 (1.00 to 1.04)</td>
<td>0.028</td>
</tr>
</tbody>
</table>

Explanatory factor included as continuous variable in logistic regression. (R), Reference group.

**P1-S2.09** WHO IS AT HIGHER RISK OF STIs AND HIV—BROTHEL-BASED OR STREET-BASED FEMALE SEX WORKERS? EVIDENCE FROM TWO ROUNDS OF BIO-BEHAVIOURAL SURVEYS

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**Background** Female sex workers (FSWs) are considered a high-risk group for HIV and other STIs. Sex work practices of FSWs in Maharashtra are diverse and vary according to the sex work milieu (eg, street-, brothel- and bar-based). We examined changes in HIV and STI prevalence, associated risk behaviours and socio-economic variables among street-based (SB) and brothel-based (BB) FSWs in Maharashtra.

**Methods** Two rounds of cross-sectional surveys were conducted in 2005 (R1) and 2009 (R2) in selected districts of Maharashtra. Probability sampling methods, such as conventional and time-location cluster sampling, were used to sample 2257 (1212 BB and 1045 SB) FSWs in R1 and 2228 (1182 BB and 1046 SB) FSWs in R2. Sexual behaviours were assessed, blood and urine samples were collected to measure the prevalence of HIV, Neisseria gonorrhoeae (NG), Chlamydia trachomatis (CT) and syphilis. Changes were analysed using bivariate and multivariate methods.

**Results** HIV prevalence increased significantly among SB FSWs from 17.2% in R1 to 24.3% in R2 (OR 1.54, p=0.04), whereas among BB FSWs, there was no significant change (28.4 in R1 to 28.9 in R2, OR 1.03, p=0.88). Prevalence of active syphilis (TPHA and RPR positive at any titre) declined among BB FSWs from 15.4% (R1) to 11.0% (R2) (OR 0.67, p=0.05), while the decline among BB FSW was not significant (R1=15.6% to R2=10.6%; OR 0.75, p=0.22). NG prevalence fell from 7.7% (R1) to 5.9% (R2) (OR 0.48, p=0.006) for BB FSWs, whereas for SB FSWs, it declined from 7.2% in R1 to 4.2% in R2 (OR 0.56, p=0.07). No significant change was observed in the prevalence of CT in either group. Self-perceived risk of HIV among BB FSWs increased from 52.5% (R1) to 62.5% (R2) (OR 1.5, p=0.02); whereas among SB FSWs, it was unchanged (49.8% in R1 to 50.3% in R2, OR 1.02, p=0.23). The proportion of illiterate BB FSWs decreased from 80.1% (R1) to 74.3% (R2), (OR 0.72, p=0.02) while for SB FSWs, illiteracy increased significantly from 64.4% (R1) to 77.1% (R2), (OR 1.86, p<0.001). The proportion of FSWs having more than 10 clients per week was same over both rounds for BB FSWs but for SB FSWs, it increased significantly to 49.9% (R2) from 32.8% (R1) (OR 2.04, p<0.001).

**Conclusion** SB FSWs are at higher risk of contracting HIV and other STIs and are more vulnerable compared to BB FSWs. Prevention interventions must account for differences in profiles, risk behaviours and sex work typology to customise strategies for these groups for maximum impact.

**P1-S2.10** FEMALE CLIENTS AND PARTNERS OF MSM SEX WORKERS IN A RESOURCE-POOR SETTING, WEST AFRICA

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MSM are becoming increasingly important in HIV epidemics in Africa and their population is growing in Nigeria. However, there’s paucity of data on HIV epidemics in MSM in Nigeria and West Africa region. Though HIV transmission in Africa is mainly heterosexual, interactions between HIV epidemics in MSM and
heterosexual populations are not well understood. Objective was to describe female clients and partners of MSM sex workers (MSM-SW) in Lagos and to determine risk factors for unprotected sex between women and MSM-SW.

Methods MSM were recruited through respondent driven sampling, a novel methodology designed to access hidden populations. MSM-SW were identified through self-reporting and consent was obtained. Participants completed a pre-tested questionnaire and a behaviour diary. The questionnaire included questions on details of each sexual partner for 4 weeks; each sexual encounter with each partner; and the three most recent partnerships. Data were summarised as proportions and compared using chi square test.

Results 62 MSM-SW participated in the study and concluded the self-reported questionnaire and behaviour diary. MSM-SW recorded 311 transactions, 71% of which were paid or were paid for sex (39/60, 65% paid MSM-SW while 21/60, 35% were paid by them). There were 52 single episode sexual contacts and 14 regular partnerships. Of the 50 non-transactional contacts, more than half (56%) met in the bars, restaurants, clubs, motels and beaches. All the sexual encounters between MSM-SW and their female partners involved penetrative sex—vaginal sex (VS)(53, 80%); anal sex (AS)(39, 59%); and both (31, 47%). Unprotected sex was significantly more frequently associated with sex with regular partner than with single episode sexual contact (79% vs 52%; p=0.02, OR=3.0) and non-transactional sex than sex paid for by the female partners (71% vs 46%; p=0.029, OR=2.3).

Conclusion MSM-SW in Nigeria have a lot of female clients and partners and frequently engage in transactional and unprotected sex with them. Majority of these female partners are in heterosexual married relationships. Understanding these interactions between MSM and heterosexual populations is very crucial to any HIV prevention strategies. Furthermore, targeted health education to encourage safer sex is needed.

P1-S2.11 HIGH PREVALENCE OF HIV, OTHER SEXUALLY TRANSMITTED INFECTIONS AND RISK PROFILE IN MALE COMMERCIAL SEX WORKERS WHO HAVE SEX WITH MEN IN THE NETHERLANDS

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Background Little is known about the epidemiology and burden of sexually transmitted infections (STI) in male commercial sex workers who have sex with men (MSM-CSWs) in the Netherlands and other Western countries. MSM-CSWs are often hard to reach for prevention and STI testing. This feasibility study aimed to reach MSM-CSWs, assess their socio-demographics and prevalence of HIV and other STI, and their risk profile.

Methods Retrospective, cross sectional study. Demographic and STI diagnosis data were retrieved from standardised medical records of MSM-CSWs consulted during outreach activities by a public health service in Southern Limburg, The Netherlands (2009 and 2010). Chlamydia trachomatis (CT) and Neisseria gonorrhoeae (NG) were diagnosed by NAAT and serology was performed for HIV (HIV-Ag/Ab), syphilis (TPPA, FTA-ABS, VDRL) and hepatitis B (anti-HBc and HBsAg).

Results In 2009 and 2010 139 consultations by 99 MSM-CSW were performed. Their median age was 26.6 years. 56% of participants were of Romanian nationality, 20% of other (East) European nationality, 16% of South American nationality and 8% of Dutch nationality. Of participants, 50% self identified as homosexual, 33% as bisexual and 17% as heterosexual. All MSM-CSWs were tested for STI. Results of first time consultation revealed that 45.5% was diagnosed with at least one STI—infection with CT was most prevalent (18.2%), followed by infection with NG (12.1%) and HIV (11.1%). Of participants, 24.2% had evidence of exposure to Treponema pallidum; half was infectious at time of diagnosis. Of participants, 28.3% had evidence of previous exposure to hepatitis B virus (anti-HBc positive); 8.1% was infectious at time of diagnosis (HBsAg positive). 24.2% was fully vaccinated against hepatitis B.

Conclusions Identification and recruitment for STI testing and prevention of this population at high risk for HIV and STI is shown to be feasible. Follow-up and retention appears to be a challenge.

P1-S2.12 IMPROVING ACCESS TO STI CARE AMONG FEMALE SEX WORKERS BY STRENGTHENING SERVICE PROVIDER NETWORKS IN BANGALORE, SOUTH INDIA

doi:10.1136/sextrans-2011-050108.69

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Background The Karnataka Health Promotion Trust, in partnership with non-governmental and community-based organisations, has been implementing a focused HIV prevention project among female sex workers (FSWs) in Bangalore since 2005. Over 25 000 distinct female sex workers have been contacted to date, and approximately 10 000 distinct FSWs are regularly contacted each month. The majority of FSWs are street-based and home-based, and are dispersed throughout the city. In the first 3 years of the project, STI services were provided through eight program-linked clinics located in program drop-in-centres, and 20 external referral doctors. Discussions with FSWs indicated that distance and inconvenient timings of the clinics were major barriers to accessing STI services. A strategy was therefore developed in 2008 to expand the network of referral doctors. Referral doctor networks were established at sites based on recommendations made by FSWs, both in government facilities and in private clinics. A total of 70 referral doctors (preferred providers) were identified and trained to provide quality STI services. We evaluated the outcome of this changed strategy.

Methods Indicators related to STI services provided and their accessibility were extracted from the program’s computerised management information system (CMIS).

Results Following the change in strategy, average monthly clinic visits by FSWs increased from 16% to 28% of the total available population. Quarterly clinic visits increased from 41% in 2008 to 65% in 2010. Administration of presumptive STI treatment for newly identified FSWs increased from 35% in 2008 to 58% in 2010. Focus group discussions with FSWs indicated that they are more comfortable in accessing clinic services, as the preferred providers are closer to where they live and work, and are available at more convenient times, especially in the evenings. This resulted in higher levels of service coverage. The sex workers also indicated that, although services currently are provided at no charge to them, they would continue to access them from the preferred providers if the project ended, even if they had to pay for the services.

Conclusions Establishing a network of referral doctors who have been identified and sanctioned by the FSW community has complemented program-linked STI clinic services in the context of a large-scale HIV prevention program in the city of Bangalore, and has made STI services more accessible.
P1-S2.10 Female clients and partners of MSM sex workers in a resource-poor setting, West Africa

O Busari, M Nakayima and A Busari

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