Background HIV prevalence studies have found that male sex workers (MSWs) in China have high HIV prevalence, ranging from 5% to 9%. These "money boys" have been identified as a particularly vulnerable population, and it is imperative to develop effective programmes for HIV prevention in this population.

Objectives The study had 4 objectives: (1) to describe the operation of the male sex work industry; (2) to identify the environmental and structural factors that shape the risk practises of MSWs (3) to map solicitation venues and estimate the size of the MSW population to guide programme design and focus.

Method Ethnographic and geo-mapping techniques were combined to locate, enumerate and contextualise different aspects of the male sex trade industry. MSWs, network operators and brothel owners provided size estimates of MSWs for specific hotspots. Participant observation and key informant interviews were employed to understand the risk practises described by participants.

Results According to the ethnographic findings, MSWs are often recruited from rural villages via labour markets and from the urban gay community; they had high client volumes and were mobile within the city and between cities throughout China. Thirty MSW venues were mapped and 23 venues were validated. Systematic review and validation of gay websites revealed 48 brothels. Local prevention programmes reached only 16 venues. Five public toilets, 4 bathhouses and 7 parks, where MSWs frequented, were also mapped. The majority of venues were located within the commercial core, with easy access to public transportation. The MSW population was estimated between 373 and 1200. Some MSWs (n = 97) advertised on gay websites and through cell phone applications.

Conclusion Despite criminalization, there is a thriving male sex trade in Chengdu. Local efforts to reach these communities need to be scaled up to address programme coverage gaps.

O13.5 **THE HIV MODES OF TRANSMISSION MODEL: A SYSTEMATIC REVIEW OF ITS FINDINGS AND ADHERENCE TO GUIDELINES**

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Background The HIV Modes of Transmission model (MOT) estimates the annual percentage distribution of new HIV infections (PNI) by key risk groups. It was designed to guide country-specific HIV prevention policies. To determine if the MOT produced context-specific recommendations, we analysed the MOT results by regions and epidemic types and explored the factors (e.g. data inputs, adherence to guidelines) influencing the differences.

Methods We systematically searched MEDLINE, EMBASE, UNAIDS reports, and contacted UNAIDS country directors for published MOT results from 2003 (1st published MOT).

Results We included 4 journal articles and 20 UNAIDS reports covering 29 countries. The largest PNI was among the low-risk group (one heterosexual partner) in 13 countries [range 26–63%], and increased with low-risk population size. The estimated PNI among female sex workers (FSWs) was universally low [median 1.3%, range 0.04–14.4%], and showed little variability by region and epidemic type despite variation in sexual behaviour e.g. number of partners. In India and Thailand, where FSWs play an important role in transmission, the PNI among FSWs was 2% and 4% respectively. In contrast, the PNI among men who have sex with men (MSM) varied across regions [MSM, range 0.1–89%] and increased with MSM population sizes. The PNI among people who inject drugs [PWID, range 0–82%] was largest in 'early-phase' epidemics with low overall HIV prevalence. Most MOT studies are being conducted and reported as per guidelines. However, many countries (n = 23)

reported data limitations - especially on high-risk groups - when parameterising the MOT.

Conclusion Although countries are generally performing the MOT as per guidelines, results showed little variation in MOT outputs (except MSM and PWID) by regions and epidemic types. Homogeneity in MOT outputs for FSWs, clients and low-risk population may limit the utility of MOT for guiding country-specific interventions in heterosexual HIV epidemics.

O13.6 **FOCUSING THE DELIVERY OF THE ENGLISH NATIONAL CHLAMYDIA SCREENING PROGRAMME: EXPLORING OPPORTUNITIES TO EXPAND TESTING WITHIN LOCAL SERVICES**

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Background The National Chlamydia Screening Programme (NCSP) seeks to increase rates of chlamydia diagnosis amongst young people aged 15–24 across the 326 English Local Authorities (LA). 68% of screens and 79% of diagnoses are made in the community sexual health, general practise, pharmacy, termination of pregnancy (TOP) and genitourinary medicine (GUM) services that take part in the NCSP. These 'Core Services' are central to the delivery of the programme but not all clinics screen for chlamydia. This study was undertaken as part of a project to inform optimum services configuration to increase diagnostic rates to improve chlamydia detection and infection control.

Methods Diagnoses of genital chlamydia recorded in data from sexually transmitted disease clinics and NCSP surveillance datasets for 2011 were aggregated to LA level. Overall diagnostic rates (outcome) were calculated using Office of National Statistics (ONS) population estimates for the 15–24 year age group. This information was analysed together with the total testing at each Core Service and ONS area classification. Data were analysed using multivariable negative binomial poisson regression and spatial mapping techniques.

Results Overall chlamydia diagnostic rates were associated with increased rates of testing in community health services (RR = 1.02; p < 0.0001), general practise (RR = 1.01; p = 0.0176) and GUM (RR = 1.03; p < 0.0001) but not pharmacy or TOP. Diagnostic rates varied by geographic location (p < 0.0001), lower rates being seen in 'Central London' (RR = 0.63; 95% CI = 0.50–0.80), 'London Suburbs' (RR = 0.77; 95% CI = 0.61–0.96) 'Southern England' (RR = 0.63; 95% CI = 0.51–0.78) and 'Outer London' (RR = 0.64; 95% CI = 0.50–081). Diagnostic rates also increased as the range of service types contributing to testing increased (p = 0.0427).

Conclusions The analysis highlights the importance of community based testing and the provision of a range of services to achieving high rates of chlamydia detection. The study is being extended to investigate patient flow and service attendances within and between LAs in relation to gender, age group, ethnicity and service type.

O.14 - Clinical syndromes

O14.1 **BACTERIAL VAGINOSIS-ASSOCIATED BACTERIA (BVAB) AND NON-GONOCOCCAL URETHRITIS (NGU)**

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Background Traditional cultivation approaches have not identified additional pathogens responsible for the 45% of non-gonococcal