

gonorrhoea and Chlamydia screening. Prevalence of condyloma acuminatum, HIV, gonorrhoea and Chlamydia were performed. Analysis unites and multivariates in logistic regression have been performed to estimate the influence of these factors in the appearance of condyloma acuminatum among FSWs in DIST.

**Results** Among the 403 FSWs enrolled, the prevalence of condyloma acuminatum was 5.2%. The one of HIV infection was 37%. Prevalence of gonorrhoea and Chlamydia were nil. This remark certifies the high level of condom use (87.3%) among FSWs. HIV infection was significantly associated with appearance of condyloma acuminatum in the cohort of FSWs attending the STI dispensary with an adjusted OR of 2.4 (95% CI= 0.90 to 6.43).

**Conclusion** Condyloma acuminatum remains a way in HIV infection transmission. A meticulous check and treatment contributes to reduce HIV/AIDS risk.

# P1-S2.16 WHAT DO FEMALE SEX WORKERS DO IF THEY HAVE GENITAL SYMPTOMS?

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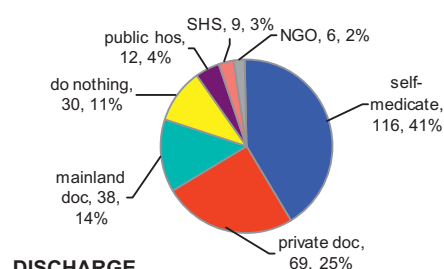
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**Background** Female sex workers (FSW) is an important population in sexually transmitted infection (STI) epidemiology because of their extended partnership pattern that possibly leads to rapid STI spread. Prompt STI diagnosis, treatment and surveillance among FSW is therefore necessary for effective control of STI in the community, and public STI clinics remain the key platform for such. Yet, much is unknown about the pattern of health-seeking behaviour including STI clinic attendance of the FSW.

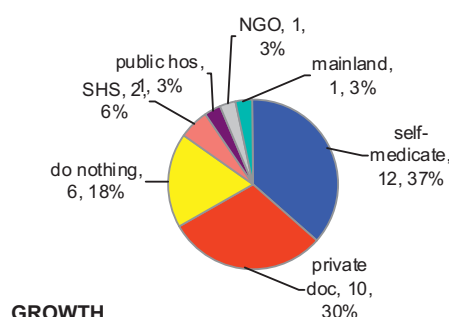
**Methods** A cross-sectional survey of 986 FSWs sampled from one-woman brothels, bars, clubs and streets in Hong Kong were conducted in 2009. Questions on last year attendance at public STI clinics, NGO testing centres, prior 6-month self-reported STI, STI symptoms and the subsequent actions regarding the symptoms were asked. Descriptive analysis was performed to show these frequencies. Self-reported rate among those with or without symptoms were calculated. Self-reported STI and STI symptoms among those STI clinic and NGO attendees and non-attendees were compared using  $\chi^2$  test.

**Results** Overall, 7.8% respondents reported having at least one episode of STI in the last 6 months. About one-third reported either having abnormal vaginal discharge, growth or ulcer in recent 6 months. Strikingly, about two-thirds would either self-medicate or adopt wait and see approach and about one-third attended private doctor or doctor across the border. Altogether less than 5% would attend NGO/STI clinic. Only 26% reported attendance at public STI clinic and 25% in NGO testing centre in the past 1 year. Self-reported STI was reported by 4% of those asymptomatic respondents, and 14% among those reported having any genital symptoms ( $p<0.05$ ). The self-reported STI rate and STI symptom pattern did not differ significantly between the public STI and NGO attendees and the non-attendees see Abstract P1-S2.16 Figure 1.

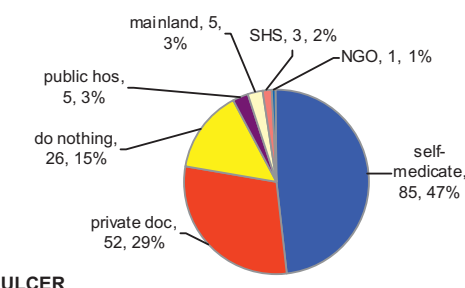
**Conclusions** STI are three times more commonly reported among FSWs who reported genital complains. However, majority of them would not seek appropriate medical care when symptoms occur indicating that treatment might have been delayed. Self-medication is common and remain a challenge for health promotion in FSW. Although no significant difference is found between clinic attendees and non-attendees on STI symptoms, STI clinic data only captures a fraction of STI burden in FSW.



DISCHARGE



GROWTH



ULCER

Abstract P1-S2.16 Figure 1 Actions subsequent to presence of genital symptoms (vaginal discharge, genital growth or ulcer). SHS, public STI clinic.

# P1-S2.17 MODELLING THE IMPACT OF RAPID TEST SYPHILIS SCREENING AMONG FEMALE SEX WORKERS IN CHINA

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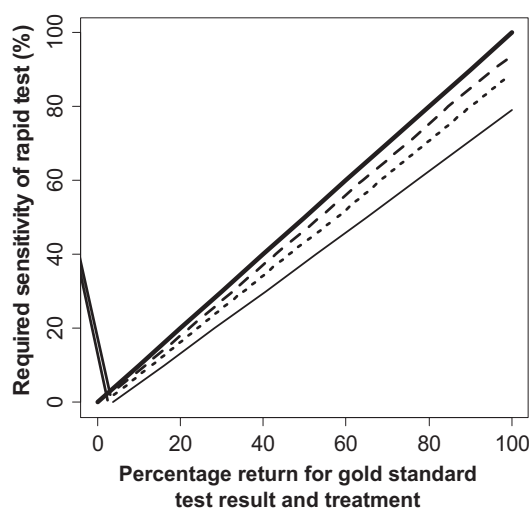
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**Background** In China, female sex workers (FSWs) are hard to reach for public health interventions. STIs and syphilis (Tp) in particular, are now a major public health concern in China. Currently, diagnosis of active Tp requires laboratory tests, which have high sensitivity, are capable of diagnosing active Tp infection, but involve delays between testing and treatment. Such delays lead to a low proportion of FSWs returning for treatment. In contrast, rapid Tp tests can provide instant results, thereby offering the possibility of immediate treatment, but are generally lower sensitivity and cannot differentiate between active and previous Tp infection. In this study, we estimate the impact of using rapid tests to screen FSWs for Tp in a Chinese setting and compare the performance with lab-based diagnosis.

**Methods** A deterministic model of Tp transmission among FSWs and clients was parameterised and fitted to data from the medium prevalence setting (Kaiyuan City). Random sampling of parameter uncertainty ranges was used to find multiple fits. Model fits were used to explore the epidemiological impact of providing rapid Tp

testing and treatment for FSW at different annual coverage levels for 3 years, in comparison to using a high sensitivity lab-based test. Because of evidence for Tp rebounding following treatment, the impact of the intervention after it has ended was evaluated.

**Results** The model projected the 3-year impact of annually screening 40% or 80% of FSWs with a rapid Tp test (sensitivity 87%) would result in a 46% (43–54%) or 69% (66–77%) relative reduction in Tp prevalence in this setting, respectively. The corresponding decrease in Tp prevalence among clients was estimated to be 2 to 3-fold less but more infections were averted among them. The Abstract P1-S2.17 figure 1 shows that for a lab-based testing strategy to achieve the same impact as using a rapid test with 87% sensitivity would require a return rate of 92% or 98% if the delay in treatment was 1 or 2 weeks, respectively. After screening ceases, the model projects the percentage of infections averted would continue increasing for a number of years in this setting.



Abstract P1-S2.17 Figure 1 Required return rate for lab-based gold standard test to have same impact as a rapid test for different delays in treatment. Different lines are for different delay periods between testing and treatment for the lab test - thick line, 0 weeks; dashed line, 1 week; dotted line, 2 weeks; narrow line, 4 weeks.

**Conclusions** In a moderate Tp prevalence setting, a rapid test point of care intervention could have considerable impact on Tp transmission. Unless there is very low sensitivity for the rapid test and a very high return rate for the lab-based method of screening, the rapid test intervention will provide a greater relative reduction in Tp prevalence.

#### P1-S2.18 SYPHILIS PREVALENCE AND RELATED RISK FACTORS AMONG FEMALE WORKERS AT SOCIAL VENUES IN LIUZHOU, CHINA

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**Background** In the context of rapid urbanisation and economic growth in China, places where social mixing intersects with commercial activities could play an important role in the formation of new partnerships and spread of sexually transmitted infections (STIs) including HIV. People who work at such venues may be at

higher risk of STIs. A study was conducted from October 2009 through February 2010 in Liuzhou, China to estimate the prevalence of syphilis and related risk factors among females working at places where people go to meet new sexual partners.

**Methods** Using a two-stage venue-based sampling method called PLACE, data were collected through interviews with 656 females nested within 36 venues with a minimum of five females per venue. A venue was classified as a "sex venue" if the manager or at least one of the females reported solicitation of commercial sex at the venue in the past 4 weeks. All respondents were screened for syphilis onsite using a rapid treponemal-specific test which represents lifetime syphilis infection acquired at anytime. Multi-level regression modelling was used to examine individual and venue correlates of syphilis infection and to account for clustering.

**Results** 23 of the 36 venues were classified as sex venues. Among all females, those working at sex venues and at venues with no report of sex work, the weighted lifetime syphilis prevalence was 5.8%, 16.3%, 0.5% respectively and the reported average number of new sexual partners in the past 4 weeks was 1.5, 4.4, 0.1 respectively. After adjusting for other individual characteristics and clustering, two venue-level factors, that is working at sex venues (AOR 24.0, 95% CI 2.5 to 227.6), working in venues located in rural counties (AOR 3.6, 95% CI 1.2 to 10.9), and two individual correlates, ie, self-report of sex work (AOR 2.3, 95% CI 1.0 to 5.3) and being in elder age groups (AOR 7.0, 95% CI 1.5 to 32.2) were significantly associated with risk of lifetime syphilis infection.

**Conclusions** Females working at social venues had a high rate of new sexual partner acquisition and a high prevalence of lifetime syphilis infection. Females working at sex venues or venues located in rural counties were at relatively high risk of syphilis infection, despite whether they reported engaging in sex work. An intervention strategy focused on the places where social mixing occurs rather than risk group status may contribute to the prevention and control of HIV/STIs in China.

#### P1-S2.19 UNPROTECTED FELLATIO AND PHARYNGEAL GONORRHOEA IN SYDNEY SEX WORKERS

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**Background** Sex workers are a priority population in the WHO sexually transmitted infection (STI) global strategy. In Australia, condom use for vaginal sex has remained high over the past decade rates in sex workers with corresponding low rates of STIs. In recent years, there have been anecdotal reports of Sydney sex workers increasingly reporting unprotected fellatio with clients which has coincided with an increase in cases of pharyngeal gonorrhoea in these women. The aim of this study was to investigate the extent and predictors of inconsistent condom use for fellatio at work, and rates of pharyngeal gonorrhoea among sex workers attending a large sexual health clinic.

**Methods** All female sex workers reporting fellatio at work seen at the Sydney Sexual Health Centre from May 2009 to January 2011 were included. Demographic data, risk behaviours and STI diagnoses were extracted from the clinic database. Pharyngeal gonorrhoea cultures were collected routinely. Multivariate logistic regression analysis was used to determine predictors of inconsistent condom use for fellatio at work.

**Results** There were 1539 sex workers seen during the study period—most (n=1142, 74%) worked in brothels and 24% reported inconsistent condom use for fellatio at work. Significant independent predictors of reporting inconsistent condom use for fellatio at work were being a new client at our clinic (compared to an