

P1-S2.13 THE IMPACT OF THE 2010 WINTER OLYMPIC GAMES ON SEX WORK PATTERNS, SAFETY AND SEX WORKER VULNERABILITY TO HIV AND SEXUALLY TRANSMITTED INFECTIONS

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Background Large-scale international sports events such as the 2010 Winter Olympics Games in Vancouver, Canada can have significant impacts on the vulnerability of sex workers (SWs) to HIV and sexually transmitted infections (STIs). SWs in Vancouver continue to face extreme vulnerabilities to violence and HIV/STIs. Despite significant focus on the social legacy of large-scale sports events, there is surprisingly limited research evaluating the impact of such events on sex work. This study therefore examined the impact of the 2010 Olympic time period on sex work patterns, safety and HIV/STI vulnerability of SWs in Vancouver.

Methods Data were used from a screening questionnaire for a longitudinal cohort study of 230 SWs from January to July 2010. Bivariate and multivariable logistic regression was used to examine the impact of time period (pre/during-Olympics vs post-Olympics) on sex work patterns, safety and HIV/STI vulnerability in the last 30 days.

Results Overall, the median age of respondents was 33 years (IQR=28–40), and 106 (51.2%) SWs were non-Caucasian. In multivariable analysis (after adjusting for social and environmental factors) in the pre/during-Olympics period compared to post-Olympics, we found significantly higher odds of respondents reporting more police stopping SWs without arrest (adjusted ORs [AOR]—3.95, 95% CIs 1.92 to 8.14), reporting a decrease in the numbers of clients available (AOR—1.97, 95% CI 1.11 to 3.48), reporting difficulty hooking up with clients due to road closures/construction (AOR 7.68, 95% CI 2.46 to 23.98) and a decrease in the numbers of clients available (AOR 3.59, 95% CI 1.79 to 7.19). We found no significantly increased odds in new/trafficked SWs in the Olympic time period.

Conclusions There were significant changes in sex work patterns, safety and HIV/STI vulnerability of SWs immediately before and during the 2010 Winter Olympics compared to post-Olympics. Fears over an influx of new SWs or human trafficking appear to be unfounded. Displacement of SWs away from main streets/commercial areas has significant public health implications, since this previously has been shown to promote violence and coercive unprotected sex, and increase risk for HIV/STIs. Safer sex work spaces such as indoor brothels and policy reforms should be considered both in Canada and by other host countries of large-scale events to reduce the vulnerability of SWs to HIV from displacement and disruption.

P1-S2.14 NEISSERIA GONORRHOEA AND CHLAMYDIA TRACHOMATIS RE-INFECTION AND ASSOCIATED RISK FACTORS AMONG COHORT OF FEMALE SEX WORKERS IN INDIA

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Background *Neisseria gonorrhoea* (NG) and *Chlamydia trachomatis* (CT) infections can be completely cured by appropriate medication. Syndromic STI management often fails to cover asymptomatic NG/CT infections. Additionally, Female sex workers (FSWs), due to their

risky behaviour are vulnerable to repeated infections. Frequency of repeated infections with these pathogens was studied in a cohort of FSWs.

Methods In 6 months prospective cohort study, FSWs aged 18–40 years were recruited from three STI clinics in two states in India as a part of Bill & Melinda Gates Foundation funded operational research. Vaginal swab specimens were collected in all visits and were tested for NG/CT by Gen-Probe APTIMA Combo II assay. Presumptive treatment for gonorrhoea and chlamydia at the baseline visit and syndromic STI management at all subsequent visits was provided during the study period. Re-infection was defined as a laboratory confirmed NG/CT infection occurring after 30 days from an initial confirmed positive test result.

Results Of 417 FSWs recruited during 2008–2009, 360 made at least 1-monthly follow-up visit. At baseline and during follow-up, 184 were NG infected and 210 were CT infected see Abstract P1-S2.14 Table 1. A total of 39 (11.8%) NG re-infections and 30 (8.3%) CT re-infections were identified at follow-up visits. Among the factors studied, alcohol consumption (OR=2.4, p=0.01); relatively new to commercial sex work (within 3 years) (OR=2.16, p=0.03); had STIs in the past (OR=3.85, p=0.00) were significantly associated with the NG, CT re-infection.

Conclusion High frequency of NG and CT re-infection among FSWs highlights the need for regular screening for etiological diagnosis for effective treatment. New sex workers and those consuming alcohol need special attention in STI management.

Abstract P1-S2.14 Table 1 Re-infection frequency among female sex workers Cohort in India

NG-Re-infection	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Total
No re-infection/Negatives	417	343	288	244	175	1467
Re-infected (31–330 days)	00	17	4	6	12	39
Total	417	360	292	250	187	1506
CT-Re-infection						
No re-infection/ Negatives	417	346	282	250	181	1476
Re-infected (30–291 days)	00	14	10	0	6	30
Total	417	360	292	250	187	1506

P1-S2.15 PREVALENCE OF CONDYLOMA ACUMINATUM AND CERTAIN SEXUALLY TRANSMITTED DISEASES AMONG FEMALE SEX WORKERS (FSWs) IN A COHORT STUDY AT SEXUALLY TRANSMITTED DISEASES DISPENSARY (DIST) IN COTONOU, BÉNIN

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Background Condyloma acuminatum usually diagnosed among FSWs, represents an entrance for HIV infection. This study aimed to determine the prevalence of condyloma acuminatum and factors associated with its appearance among FSWs who attended this STI dispensary.

Methods From September 2008 to March 2010, each FSWs of the cohort at recruitment was probed with a questionnaire on her sexual behaviours, social and demographic characteristics, to provide a blood sample for HIV screening, vaginal and cervix samples for

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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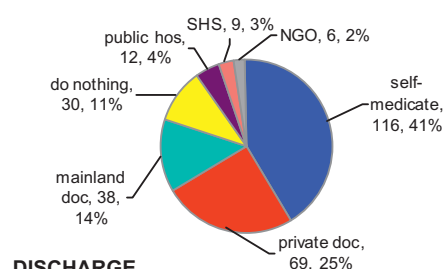
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Background Female sex workers (FSW) is an important population in sexually transmitted infection (STI) epidemiology because of their extended partnership pattern that possibly leads to rapid STI spread. Prompt STI diagnosis, treatment and surveillance 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.

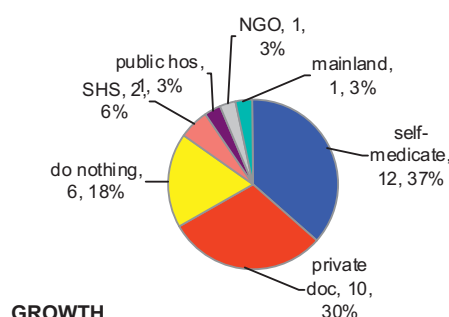
Methods A cross-sectional survey of 986 FSWs sampled from one-woman brothels, bars, clubs and streets in Hong Kong were conducted in 2009. Questions on last year attendance at public STI clinics, NGO testing centres, prior 6-month self-reported STI, STI symptoms and the subsequent actions regarding the 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 χ^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.

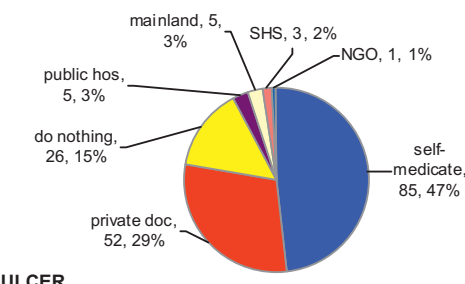
Conclusions STI are three times more commonly reported among FSWs who reported genital complains. However, majority of them would not seek appropriate medical care when symptoms occur indicating that treatment might have been delayed. Self-medication is common and remain a challenge for health promotion 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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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