

# PRiSM - HIV Prevalence and Risk behavioural Survey of Men who have sex with men in Hong Kong 2011

## Background

Men having sex with men (MSM) has continued or emerged to account for a significant proportion of newly acquired HIV infection in countries around the world and also in Hong Kong. The first and second PRiSM was launched in 2006 and 2008 which revealed a HIV prevalence of 4.05% and 4.31% respectively. Organised as a regular public health surveillance programme to track the epidemic and inform intervention, a third round of PRiSM was conducted from July 2011 to February 2012. New components including the addition of internet survey and the inclusion of assessment for sexually transmitted infection (STI) prevalence were introduced in this third round.

## Methods

A focus group was first conducted in mid 2011 to update the situation of MSM in the local community. It was followed by a mapping exercise coupled with size enumeration, to define the catchment for the venue-based survey, to geographically locate all venues frequented by MSM in Hong Kong and to create a preliminary venue list. A pilot study for evaluation and refinement of the survey questionnaires and urine sample collection procedure was then performed. The venue-based survey was conducted from July to September 2011; it involved accessing MSM in bars, saunas and beaches for the completion of the questionnaire and urine collection. An internet extension of the survey (the iPRiSM) using the project website, <http://www.prismhk.org> was then carried out where viewers were invited to link to an online questionnaire and then submit the urine sample to one of 25 Community Collection Points. The urine samples collected were sent for laboratory detection of HIV antibodies and Chlamydia / Gonorrhoea (CT/NG). After the survey, the participant could call a designated hotline to obtain his urine test results in anonymity. Those with positive test for HIV and/or STI would be referred to DH AIDS Counselling and Testing Service for further management.

## Results

### Venue-based

22 venues (11 bars, 8 saunas and 3 beaches) were reached and 816 respondents (569 bar-goers, 192 sauna-goers and 55 beach-goers) were successfully recruited. 83% were local Chinese and the median age was 30.

30 urine samples were tested positive for HIV and the adjusted HIV prevalence was 4.08%. 41 urine samples were tested positive for Chlamydia and 2 positive for gonorrhoea. The adjusted prevalence for Chlamydia was 5.08%.

In the past 1 year, 78% had been exposed to HIV prevention information. 64% had received a free condom in Hong Kong with a majority received from bars (65%) and/or saunas (36%). 67% had ever had HIV testing and 40% had their recent HIV tests performed in the past one year. Consistent condom use was 52% for regular sex partners, 80% with non-regular sex partners in Hong Kong and 84% with non-regular sex partners outside Hong Kong.

### Internet-based

Out of the 3380 website visitors, 180 MSM were recruited in the iPRiSM. 85% were local Chinese and the median age was 29.5 years

6 urine samples were tested positive for HIV and the HIV prevalence was 3.3%. 6 samples were tested positive for Chlamydia. No case was detected positive with gonorrhoea infection.

In the previous one year, 81% had been exposed to HIV prevention information. 57% had received a free condom in Hong Kong and the main sources were NGOs (50%) and saunas (41%). 63% had ever had HIV testing and about 41% had their recent tests performed in the past one year. Consistent condom use was 42% for regular sex partners, 61% with non-regular sex partners in Hong Kong and 71% with non-regular sex partners outside Hong Kong.

### Comparison between venue-based and internet-based findings

Although there was no statistically significant difference observed between the demographics of the two groups, online MSM were found to have lower consistency in condom use with non-regular sex partner and with regular sex partner, less likely to report recreational drug use during anal sex and less likely to have been exposed to health information through gay venues. In contrast, they were more likely to have their most recent HIV/STI test at NGOs and receive money/rewards for anal sex.

### Factors associated with HIV/STI status

Positive HIV/STI status was found to be associated with some behavioural risk factors, including having anal sex within the last 6 months, more than 3 male sex partners, engaged in group sex in the last 6 months, concurrent use of recreational drugs during anal sex and received money/rewards for anal sex. On the other hand, factors of having regular sex partner only and consistent condom use with non-regular sex partner within last 6 months were associated with negative HIV/STI status.

### **Discussion**

1. Although the HIV prevalence of 4.08% in the 2011 PRiSM venue-based survey, as compared to the previous 2 round in 2006 (4.05%) and 2008 (4.31%), appears to remain stable, MSM still remained the major group of newly reported HIV infections in Hong Kong in 2011. The survey should be conducted regularly to closely monitor the situation. The HIV prevalence of internet-based was 3.3%, as compared to a self-reported 5.5% in an on-line survey Asia Internet MSM sex survey (AIMSS) conducted in 2010.
2. The adjusted prevalence of Chlamydia at the venues was 5.08% and that for iPRiSM was 3.3%. The result suggested that there was significant level of STI among MSM on a community level, and conceivably some were asymptomatic ones, which also imply a potential risk of HIV transmission in the same community.
3. The prevalence of consistent condom use with non-regular sex partners in the venue-based respondents was found to be 80%, which was the highest in the 3 serial surveys. However, MSM of age below 35 years were less likely to use condom consistently. Young MSM aged 21 or below, and those who had anal sex outside Hong Kong were of particular concern.
4. Both the ever HIV testing rate (67%) and HIV testing rate in past one year (40%) increased in 2011 round, as compared with 2008 figures (56.5% and 36% respectively). It might suggest an increased awareness to undergo HIV testing and even regular test in the gay community.
5. The online extension has demonstrated the feasibility of recruiting MSM, with different characteristics from those in conventional venues, through the internet. Specifically iPRiSM has recruited more MSM who had received money/other reward for anal sex than venue-based sampling which could potentially be explored as a means of accessing male sex workers for HIV prevention interventions.
6. Usage of condom at the first anal sex was found to be a factor strongly associated with consistent condom use in recent (past 6 months) sex life. As the median age of first anal sex was around 20-21 as gauged from the survey, intervention to instil a norm to use condom during the first sex in young MSM might help to combat the HIV epidemic in future.

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#### **FACTSHEET on PRiSM 2011**

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