

# **PRiSM - HIV Prevalence and Risk behavioural Survey of Men who have sex with men in Hong Kong 2017**



## **Background**

Men having sex with men (MSM) have continued or emerged to account for a significant proportion of newly acquired HIV infection in many areas around the world, including Hong Kong. The first PRiSM (HIV prevention and risk behavioural survey of men who have sex with men in Hong Kong) study was conducted in 2006. It was the first community-based MSM and HIV study of its kind in Hong Kong. Designed also as a regular public health surveillance programme to track the epidemic and inform intervention, the survey was repeated in 2008 and 2011. Special Preventive Programme of the Department of Health (DH) conducted this fourth round of PRiSM from April to September 2017. The study aims to update on the HIV prevalence among MSM in Hong Kong, and inform on HIV/STIs preventive interventions and the profile of risk behaviours of local MSM.

## **Methods**

A pilot survey of the pattern of social networking was done in Gay Pride Parade 2016 to identify popular online channels and venues frequented by MSM; a mapping exercise was subsequently done based on the findings; the target sample size was then estimated for each online and venue channel in Hong Kong, adjusted by age distribution of the male population from 2016 Census data. In early April 2017, another pilot study was conducted to evaluate and refine the survey questionnaire, together with a trial run of urine sample collection procedures. The study period was from 26 April to 30 September 2017, during which time participants were invited to access a designated website and self-administer an online bilingual questionnaire. Concurrently, the website was publicised in various platforms such as gay apps and local gay/transgender websites. Posters were also sent to lesbian, gay, bisexual, and transgender (LGBT) venues and NGOs to enhance publicity. An eligible participant would receive a unique code upon completion of the survey, with which he could submit a urine sample to one of 48 Community Collection Points in different districts of Hong Kong. They included 24 private clinics, 14 government clinics, 8 community organizations, the DH AIDS Counselling and Testing Service and the Red Ribbon Centre. Collected urine specimens were sent to DH's Public Health Laboratory Services Branch for HIV antibody testing. The participants would be informed of the test result when they called a designated hotline. Those who tested positive would be referred to DH HIV clinic for further management.

## **Results**

During the captioned period, a total of 4,133 MSM respondents participated in the survey, of whom 2,140 were recruited from internet, 981 from LGBT venues, 564 from NGOs, 317 from friends and 131 from other channels. 93.8% of the respondents identified themselves as Chinese. The median age was 31 years (range 12 to 80). In terms of age distribution, about 5.1% were below the age of 20, 39.2% aged 20-29, 29.9% aged 30-39 and 25.7% aged 40 or above.

### HIV prevalence

Overall, 60.8% of subjects submitted urine specimens and 2,427 urine specimens were successfully tested for HIV antibody. There were 161 subjects who self-reported as HIV-positive prior to testing, of whom 136 (84.5%) subjects were sexually active (i.e. having had anal sex with men in the past 6 months). After excluding subjects who were reported to be HIV-positive, 2.1% of the urine samples of sexually active MSM showed a positive result. Computing the HIV prevalence by adding the self-reported HIV-positive and those with urine tested positive for HIV among other subjects,

the overall HIV prevalence for sexually active MSM was estimated to be **6.54%**. Among the respondents who reported themselves as non-HIV positive, the HIV positive rate of urine samples collected from those aged 50 or above was 5.0%, which was the highest among all age groups. The age group with lowest rate was 20 to 29 (1.3%)

Among the respondents who reported themselves as HIV-positive (n=161), all reported to have been followed up for HIV care and more than 95% of them were followed up in one of the 3 public HIV clinics. Overall, 91.9% of them had received highly active antiretroviral therapy (HAART, cocktail therapy).

#### Sexual behaviour

Overall, 71.8% of the respondents were sexually active. 70.1%, 5.8% and 1.6% of the respondents had sex with men, women and transgender women (TGW) in the past 6 months respectively. Condom use rate in last anal sex with men was 74.3%, condom use rate in last anal/vaginal sex with women and TGW were 63.3% and 66.1% respectively.

Consistent condom use with men (defined as always using a condom for anal sex in the preceding 6 months) reported by respondents were 52.1% for receptive sex and 52.2% for insertive sex. For different types of male sex partners, the percentage of condom use in last sex were as follows –

- Emotional sex partner – 62.3%
- Regular sex partner – 75.6%
- Non-regular sex partner – 85.5%
- Commercial sex worker – 81.6%
- Commercial sex client – 79.7%

#### Recreational drug/substance use

Recreational drug/substance use during or before sex (“chemsex”) was reported in 16.2% of the respondents. The commonest used drug was Poppers (70.0%), followed by erectile dysfunction medications (42.8%), methamphetamine (38.3%), GHB (33.9%) and marijuana (16.4%). Among those having taken drug(s) during/before sex in the past 6 months, 4.2% reported taking the drug by injection. 44.0% of them reported needle sharing in the past 6 months. The commonest drug taken by injection among injectors was methamphetamine (60%), followed by ketamine (28%) and ecstasy (12%). Consistent condom use rate was low (15.5%) among methamphetamine or GHB user under effect of the substances.

#### Exposure to HIV prevention message

A majority (84.5%) of the respondents had received HIV prevention information in the previous year. 46.6% had received a free condom in Hong Kong in the previous year. Overall, 3,638 out of 4,133 (88%) of the respondents had received HIV prevention message and/or free condoms in the previous year.

#### HIV testing behaviour

79.4% of the respondents had ever had HIV testing and 52.6% of respondents had their recent tests performed in the previous year. 10.1% of the ever-testers had tried HIV self-testing before and 59.9% of the ever-testers not known to be HIV-positive would like to perform HIV self-testing in future. Ever testing rate was particular low (47.1%) among age group less than 20.

The factors which favour their HIV testing were also explored: 33.8% of respondents considered “privacy” was the most important, followed by “testing services open at night” (28.6%) and “testing services open on public holidays” (21.3%).

#### Sexually transmitted illness (STI)

Overall, 9.6% of respondents reported at least once diagnosed STI within past 12 months. 4.0% of the respondents reported syphilis, 2.7% reported gonorrhoea, and 2.7% *Chlamydia*.

## HIV Pre-exposure prophylaxis (PrEP) use

Among respondents ever tested HIV and last result was not positive, 3.6% of reported taking or having taken PrEP before. Most people (73.2%) spent HKD\$1,000 or below per month on PrEP. Most people (48%) obtained the drugs from overseas clinics (or institutions), followed by local private clinics (26%) and through online purchase (22.8%).

Given the condition that *“Studies have shown that PrEP could offer 86% protection and must be prescribed by a doctor, and regular (at least every 3 months) follow-up and blood tests are required.”*, 48.3% of those reported to have never taken PrEP before expressed willingness to use PrEP if offered free.

## **Discussion**

1. The method of calculating the HIV prevalence in this survey was different from previous PRiSM studies. In PRiSM 2017, 3.9% of MSM subjects reported to be HIV-positive, and their urine submission rate was much lower than those who reported HIV-negative (45% vs 66%), nevertheless, a vast majority of them (95%) reported having follow up in one of the public HIV clinics. Hence in PRiSM 2017, we considered it reasonable to count both self-reported HIV-positive and subjects with urine tested positive for HIV as cases (numerator) to calculate the HIV prevalence. The crude HIV prevalence rate for sexually active MSM in PRiSM 2017 was 6.54%, which was higher than the 3.3% in iPRiSM (internet-based survey) conducted by the Chinese University of Hong Kong (CUHK) in 2011 but was closer to the 5.85% prevalence in HARiS 2014 (venue-based) survey. Of note, the rates could not be directly compared because of differences in sampling size and recruitment strategies of the surveys.
2. HIV testing rates in the past 12 months among MSM (52.6%) was higher than in PRiSM 2011 (41%), but was slightly lower than HARiS 2016 results (around 60%). It suggested that MSM subjects not reached by NGOs might have a lower awareness of the need of regular HIV testing. HIV self-testing was not common among ever-testers (10.1%) but more than 50% of ever-testers would like to try HIV self-test in the future. As an additional approach to HIV testing services, HIV self-testing should be promoted.
3. Consistent condom use rate with men among MSM were unsatisfactory, at around 52% for both insertive and receptive sex. Education on safer sex practices, including persistent and proper use of condoms, should be reinforced.
4. The percentage of MSM practising chemsex in the past 6 months was higher in PRiSM 2017 than HARiS 2016 (16.2% vs 10.7%). The increase was likely due to difference in sampling frame (community subjects vs subjects recruited via NGOs). Literature generally showed that chemsex was associated with lower (anti-retroviral) drug compliance and increased unprotected sex, which could increase HIV, hepatitis B and C and STI transmission among MSM. The emergence of chemsex poses additional hazards to both individual and public health. The high rate of needle sharing among those injecting (recreational) drug users (44.0%) should also be closely monitored.

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### **FACTSHEET on PRiSM 2017**

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