#### **Executive summary (MSS 269R)**

A longitudinal study to investigate impact of an online real-time HIV self-testing and counselling (OSTC) service on prevalence of first-time HIV testing, retesting and sexual risk behaviours among Hong Kong MSM

#### Aim and objectives

The primary aims of this cohort study were to investigate: 1) prevalence of participants having taken up free online real-time HIV self-testing and counseling (OSTC) service after being exposed to an online intervention, 2) average number of OSTC being taken up within the 14-month follow-up period, and 3) factors predicting any OSTC retesting.

The secondary aims were to investigate: 1) change in sexual risk behaviors and 2) prevalence of HIV testing other than OSTC. In a separate pilot study involving 50 additional participants, we will investigate the percentage of participants who will take up OSTC with a fee of HK\$250 during a 6-month follow-up period.

### **Target population**

Participants are: 1) Hong Kong Chinese speaking men, 2) aged at least 18 years old, 3) anal intercourse with at least one man in the last six months, 4) willing to leave contacts (phone and/or social media) and be followed up by for brief evaluation surveys, 5) access to online face-to-face communication tools, and 6) no intention to leave Hong Kong for one month consecutively within the next 14 months. Those self-reported as HIV positive were excluded.

# Project design

A total of 501 eligible MSM were recruited through multiple sources. At baseline, participants were exposed to an online and theory-based intervention promoting OSTC. They received an online intervention promoting HIV retesting 6 and 12 months afterwards. Interested participants signed up for OSTC and received a high-quality oral-fluid-based HIV self-testing kit (a maximum of 3 kits during the project period). Trained HIV testing administrators would implement OSTC through live-chat applications upon appointments. Two telephone follow-up

surveys were conducted at Month 8 and 14, respectively. In a separate pilot study, 50 additional MSM were invited to use OSTC service with a fee of HK\$250.

#### Main achievements

Among 467 participants being followed up at 14 months, 83.1% had taken up at least one episode of OSTC. The average number of OSTC taken up by the participants was 1.8 (standard deviation: 1.1) during the follow-up period. After controlled for significant baseline background characteristics (condomless anal intercourse with men), perceived barriers [adjusted odds ratios (AOR): 0.96, 95%CI: 0.91, 1.00], perceived self-efficacy (AOR: 1.13, 95%CI: 1.00, 1.27), and behavioral intention to take up HIV testing regularly (AOR: 1.39, 95%CI: 1.14, 1.68), as well as perceived importance of counseling services supporting HIV self-testing (AOR: 1.06, 95%CI: 1.02, 1.10) were associated with uptake of at least two episodes of OSTC.

When comparing to baseline, a significant decrease in prevalence condomless anal intercourse with men (28.5% vs. 59.3%, p<0.001), multiple male sex partnerships (23.8% vs. 50.3%, p<0.001), and chemsex (2.8% vs. 6.0%, p=0.002) was observed at 14 months. Among participants who were followed up at 14 months, 31.5% had taken up at least one episode of other types of HIV testing.

One fifth (10/50) of the participants in a separate cohort took up OSTC with a fee of \$250 per episode.

#### **Conclusion**

Promoting free OSTC is useful to increase first-time HIV testing and retesting among MSM in Hong Kong.

推廣有即時網上咨詢的愛滋病自助測試服務對香港男男性接觸者愛滋病測試率和高危性行為的影響

# 研究目的

分析參加者中免費接受這種新型愛滋自助測試服務的比例和次數,以及預測重複接受該服務的因素。次要目標為分析參加者高危性行為的變化和接受其他類型愛滋病測試的比例。 本研究同時分析了額外 50 名參加者中以付費方式接受相同服務的比例。

# 研究人群

參加者為說中文的香港男男性接觸者。愛滋病陽性者將被排除。

### 研究設計

501 名合資格的男男性接觸者在基線,第6和第12個月接受三次網上健康促進。感興趣的參加者在登記後收到一份免費的自助測試套件。有經驗的測試員通過即時通訊軟件為他們提供服務。參加者將在第8和第14個月完成兩次電話訪問。本研究額外邀請50名男男性接觸者以付費的方式接受相同的自助愛滋病測試服務(250港幣一次)。

## 主要結果

在完成第 14 個月隨訪的 467 名參加者中,有 83.1%接受了至少一次這種新型自助測試服務 (平均 1.8 次)。與接受測試相關的障礙和自我效能,未來定期做測試的意願以及即時咨詢服務對自助愛滋病測試的重要程度與重複接受該服務顯著相關。參加者在第 14 個月的高危性行為發生率顯著低於基線。在另一個獨立的研究中有 20%的參加者付費接受了這種自助測試服務。

### 結論

推廣這種新型自我測試服務有助於讓更多香港男男性接觸者接受和重複接受愛滋病測試。