

Executive Summary

MSS 214 R - HIV infection and related sexual behaviours of cross-border Hong Kong MSM and their sex partners in Shenzhen

- Objectives

- To investigate the prevalence of HIV and syphilis infections and the changing trend in cross-border Hong Kong MSM (cbMSM) and their mainland male sex partners (szMSP);
- To determine the related risky sexual behaviours and other socio-economic factors for HIV and syphilis infections among these people
- To identify the level of transmitted drug resistance among HIV positive cbMSM and szMSP
- To compare the HIV strains circulating among cbMSM and szMSP with other MSM in Shenzhen and Hong Kong

- Design

We used a serial cross-sectional study design to recruit 500 cbMSM and 1500 szMSP and analyze data in a consecutive three years.

- Setting

The venues where the cbMSM visited including bars, saunas, and parks in Shenzhen

- Participants

Criteria for eligible cross-border Hong Kong MSM in this study include biological male, 18 years old or above, Hong Kong resident, having a homosexual activity in Shenzhen in 6 months before the survey.

Criteria for eligible mainland sex partner of cbMSM include biological male, 18 years old or above, living in Shenzhen at the time of survey, residence in mainland China, having a homosexual activity with Hong Kong MSM in Shenzhen in 6 months before the survey.

- Main outcome measures

We used a structured questionnaire to collect individual behavioural data. Meanwhile, blood sample was collected from each subject for serological tests. In addition to HIV and syphilis tests, subtype and genetic clusters of HIV strains in the HIV positives were identified and compared.

- Results

In total, 2185 subjects were enrolled in this project. Among them, 131 (6.0%) subjects were HIV-seropositive, with 5.3% (32/600) in cbMSM and 6.2% (99/1585) in szMSPs. In addition, 182 (8.3%) were tested as syphilis positive, with 7.3% (44/600) in cbMSM and 9.0% (142/1585) in szMSPs. A significantly higher rate of HIV infection was found in

MSM who were syphilis positive ($p < 0.001$).

In the comparison of sexual behavior patterns (in the previous 6 months) and HIV infection rates, a slightly larger proportion in szMSPs than cbMSM reported anal intercourses with multiple male sex partners. Similar proportion in szMSPs and cbMSM practiced unprotected anal intercourse in male anal sex (31.6% vs. 31.2%).

CRF01_AE and CRF 07_BC were the predominant genetic forms, followed by CRF55_01B, subtype B and other subtypes. No cbMSM was found to be clustered with szMSPs, but 9 cbMSM were found to be clustered together with Shenzhen MSM and 7 of these clustered cbMSM were tested and analyzed in Shenzhen.

- Conclusions

Our study suggested that cross-border MSM had a similar rate of HIV infection and syphilis infection compares to their Shenzhen sex partners. The HIV infection rate of cbMSM was higher than that in Hong Kong local MSM. The rate of unprotected anal intercourse in cbMSM was similar to that in both Shenzhen and Hong Kong MSM, indicating that there was a high possibility of HIV transmission between Shenzhen and Hong Kong MSM.

執行摘要

MSS 214 R - 在深圳的香港跨境男男性接觸者及其性夥伴的愛滋病傳染及相關危險性行為研究

- 目標

- 調查香港跨境男男性接觸者及其深圳性夥伴愛滋病及梅毒的感染率及其變化趨勢；
- 測定這些人中愛滋病毒和梅毒感染的相關風險性行為和其他社會經濟因素
- 識別在香港跨境男男性接觸者及其深圳性夥伴傳播的抗藥性水準
- 比較男男性接觸者與其它愛滋患者的 HIV 菌株

- 設計

我們採用一系列橫斷面研究設計、連續三年招募了 500 名香港跨境男男性接觸者和 1500 名 深圳性夥伴，並對資料進行分析。

- 場景

香港跨境男男性接觸者及其深圳性夥伴到訪過的深圳的場地包括酒吧、桑拿和公園。

- 參與者

在本研究中符合條件的跨境香港男男性接觸者的標準包括：生理上是男性、18 歲或以上、香港居民、調查前 6 個月內在深圳進行過同性戀行為。

香港跨境男男性接觸者深圳性夥伴的標準包括：生理上是男性、18 歲或以上、在研究期間住在深圳、中國大陸居民、調查前 6 個月內與香港跨境男男性接觸者在深圳進行過同性戀行為。

- 主要結局測量

我們使用一個結構性的問卷來收集個人行為數據。同時，從每個參與者收集血液樣本進行血清檢測。除愛滋病毒和梅毒檢測外，愛滋病毒株的分型和遺傳群會在愛滋病陽性參與者中被鑑定和比較。

- 結果

共有 2185 人參加了這個項目。在他們之間，有 131 (6.0%) 人為愛滋病毒陽性，當中 5.3% (32/600) 屬香港跨境男男性接觸者，6.2% (99/1585) 屬其深圳性夥伴。此外，182 人(8.3%)被測試為梅毒陽性，當中有 7.3% (44/600) 屬香港跨境男男性接觸者、9.0% (142/1585) 屬其深圳性夥伴。在梅毒陽性的參與者中發現 HIV 感染率明

顯較高 ($p < 0.001$)。

在比較性行為模式（前 6 個月內）和愛滋病毒感染率方面，深圳性夥伴比香港跨境男男性接觸者更多地聲稱與多個男性性伴侶進行肛交。在男性肛交中進行無保護的肛交，在深圳性夥伴和香港跨境男男性接觸者中的比例相類似（31.6% vs. 31.2%）。

CRF01_AE 及 CRF 07_BC 是主要的遺傳形式，其次是 CRF55_01B，分型 B 及其他分型。沒有發現 HIV 菌株在深圳性夥伴與香港跨境男男性接觸者聚類，但發現 9 名香港跨境男男性接觸者的菌株與深圳男男性接觸者聚類，其中 7 個在深圳進行測試和分析。

- 結論

我們的研究表明，香港跨境男男性接觸者與他們深圳的性夥伴相比，有相似的愛滋病毒感染率和梅毒感染率。香港跨境男男性接觸者的愛滋病毒感染率高於香港本地的男男性接觸者。香港跨境男男性接觸者進行無保護的肛交比例與深圳和香港的男人性接觸者相似，表明深圳與香港的男人性接觸者之間愛滋病毒傳播的可能性大。