Challenges facing HIV-positive clients in methadone maintenance treatment in China

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Background

• In China, HIV prevalence was 5.9% among people who injected drugs by the end of 2016.

• At the end of 2016, there were 789 methadone maintenance treatment (MMT) clinics in 29 provinces serving 453,500 clients.

• Despite the impressive progress, a wide range of challenges remain.
Challenges

- Comorbidities, e.g., HIV, HCV
- Concurrent drug use
- Mental health issues
- High drop-out rates
- Gaps between clients’ needs and service coverage
Study objectives

• To describe the characteristics of HIV-positive clients in MMT settings

• To examine the disparities in heroin use and mental health issues between HIV-positive and HIV-negative clients
Methods

- Data: **Baseline data** of the intervention trial (R01DA033130) conducted between 2012 and 2013
- Sample: **68 Clinics**, with **36 clients in each clinic**, randomly selected in five provinces
- Assessment method: **Computer-assisted personal interview**
- Data analysis: **Descriptive analysis** and **multiple regression models**
Measures

- **Concurrent heroin use**
  - Self-reported heroin use in the past 7 days, or
  - Positive urine morphine test

- **Depressive symptoms**: Zung’s Self-Rating Depression Scale (Zung, 1965)

- **HIV status**: medical records

- **Other measures**:
  - **Demographics**: age, gender, year of education, marital status, employment status, and monthly household income
  - **MMT-related characteristics**: experiencing side effects (Y/N) and missing dose in last 30 days (Y/N)
Results

Table 1. Baseline characteristics comparison between HIV-negative and HIV-positive groups, N (HIV-negative) = 2275, N (HIV-positive) = 92

- Compared with HIV-negative clients, HIV-positive clients were more likely to
  - be unemployed, and
  - have lower monthly household income

- 69.6% HIV-positive clients in MMT settings were male
- The majority (57.6%) aged between 36 and 45

*: p-value <0.05 (Chi-square test)
### Results

Table 2. MMT-related characteristics and depressive symptoms between HIV-negative and HIV-positive groups

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>HIV-negative (%)</th>
<th>HIV-positive (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiencing side effects</td>
<td>1122 (50.2)</td>
<td>41 (46.6)</td>
</tr>
<tr>
<td>Missing dose in last 30 days</td>
<td>878 (38.6)</td>
<td>37 (40.2)</td>
</tr>
<tr>
<td>Concurrent heroin use*</td>
<td>484 (21.3)</td>
<td>34 (37.0)</td>
</tr>
<tr>
<td>Depressive symptoms* (Mean±SD)</td>
<td>16.4±5.1</td>
<td>18.4±5.7</td>
</tr>
</tbody>
</table>

*: p-value <0.05; Chi-square test for categorical variables, and t-test for continuous variables.
### Results

**Table 3. Comparing concurrent heroin use and depressive symptoms between HIV-negative and HIV-positive groups**

<table>
<thead>
<tr>
<th>Model Type</th>
<th>Status</th>
<th>Coefficient (β)</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Logistic regression model*</td>
<td>Concurrent heroin use</td>
<td>2.0</td>
<td>(1.3, 3.1)</td>
</tr>
<tr>
<td>HIV-positive group (versus HIV-negative)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Linear regression model*</td>
<td>Depressive symptoms</td>
<td>1.8</td>
<td>(0.8, 2.9)</td>
</tr>
<tr>
<td>HIV-positive group (versus HIV-negative)</td>
<td></td>
<td></td>
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</tbody>
</table>

* Covariates included in the model: age, gender, education years, marital status, employment status, household income, experiencing side effects, and missing dose in last 30 days.
Discussion

• This study highlights greater challenges facing clients living with HIV in MMT settings in China.

• To succeed in the MMT, HIV-positive clients are in need of extra attention and support to reduce concurrent heroin use and mental health issues.
Future directions

• MMT program could integrate comprehensive medical services, which could satisfy the service needs of the clients living with or without HIV.

• Psychiatrists should be involved in MMT clinics, or the service providers could be trained to provide psychological counseling for the clients in order to address disparities in psychiatric comorbidities.
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