

# Finding a way: Addressing intangible barriers that create treatment and care inequities, and compromise the health outcomes of vulnerable PLHIV

Jasmine Gurm,<sup>1</sup> Wendy Zhang,<sup>1</sup> Julia Zhu,<sup>1,1</sup> Surita Parashar,<sup>1,2</sup> Hasina Samji,<sup>1,3</sup> Ryan McNeil,<sup>1</sup> Carol Strike,<sup>6</sup> Bernadette Pauly,<sup>4</sup> Kate Salters,<sup>1</sup> Catherine Worthington,<sup>4</sup> M-J Milloy,<sup>1</sup> Susan Kirkland,<sup>5</sup> Silvia Guillemi,<sup>7</sup> Stuart Skinner,<sup>8</sup> Ciro Panessa,<sup>9</sup> Patrick McDougall,<sup>10</sup> Rosalind Baltzer Turje,<sup>10</sup> Rolando Barrios,<sup>1</sup> Robert Hogg<sup>1,2</sup>

1. BC Centre for Excellence in HIV/AIDS 2. Simon Fraser University 3. Johns Hopkins University 4. University of Victoria 5. Dalhousie University 6. University of Toronto 7. AIDS Research Program 8. University of Saskatchewan 9. BC Ministry of Health Living and Sport 10. Dr. Peter AIDS Foundation

## Background

Among people living with HIV/AIDS (PLHIV), barriers to accessing HIV care and treatment can lead to poor health outcomes.

In our analysis, we compare important correlates of wellbeing and access to care among those who do and do not access the Dr. Peter Centre in Vancouver's west-end. The DPC provides low-threshold integrated healthcare, support services including a wide range of harm-reduction programming, in efforts to reduce inequities and mitigate the impact of barriers on the health outcomes of vulnerable PLHIV.

**Table 1: Characteristics of Non-DPC Participants to DPC Participants (N=917)**

| Variable  | Not DPC Participant<br>N=817<br>N(%) | DPC Participant<br>N=100<br>N(%) | P-Value |
|---|--------------------------------------|----------------------------------|---------|
| <b>Gender</b>   |                                      |                                  | 0.007   |
| Female  | 235(28.76%)                          | 14(14.00%)                       |         |
| Male  | 574(70.26%)                          | 85(85.00%)                       |         |
| Transgender   | 8(0.98%)                             | 1(1.00%)                         |         |
| <b>Aboriginal Ancestry</b>                                    |                                      |                                  | 0.103   |
| No  | 602(73.68%)                          | 66(66.00%)                       |         |
| Yes   | 215(26.32%)                          | 34(34.00%)                       |         |
| <b>Currently Employed</b>                                     |                                      |                                  | <0.001  |
| No  | 608(74.42%)                          | 95(95.00%)                       |         |
| Yes   | 209(25.58%)                          | 5(5.00%)                         |         |
| <b>Annual Income (Median IQR)</b>                             | 13200(12000-22000)                   | 12950(11000-15000)               | <0.001  |
| <b>Supportive Service Use</b>                                 |                                      |                                  | <0.001  |
| Daily   | 269(41.45%)                          | 71(73.20%)                       |         |
| Weekly  | 263(40.52%)                          | 22(22.68%)                       |         |
| Monthly   | 81(12.48%)                           | 3(3.09%)                         |         |
| 3 Months  | 36(5.55%)                            | 1(1.03%)                         |         |
| <b>Injection Drug Use</b>                                     |                                      |                                  | 0.001   |
| Never   | 331(40.71%)                          | 24(24.00%)                       |         |
| Ever  | 482(59.29%)                          | 76(76.00%)                       |         |
| <b>In alcohol/drug trx program ever (including methadone)</b> |                                      |                                  | <0.001  |
| No  | 350(43.26%)                          | 26(26.00%)                       |         |
| Yes   | 459(56.74%)                          | 74(74.00%)                       |         |
| Missing   | N= 8                                 | N=0                              |         |
| <b>Incarceration</b>  |                                      |                                  | 0.030   |
| Last 6 months   | 49(6.04%)                            | 6(6.00%)                         |         |
| > 6 months ago  | 360(44.39%)                          | 58(58.00%)                       |         |
| Never   | 402(49.57%)                          | 36(36.00%)                       |         |
| <b>Treatment Interruption (ever interrupted &gt; 1yr)</b>     |                                      |                                  | <0.001  |
| No  | 497(60.83%)                          | 43(43.00%)                       |         |
| Yes   | 320(39.17%)                          | 57(57.00%)                       |         |
| <b>Ever diagnosed with a mental health disorder?</b>          |                                      |                                  | 0.005   |
| No  | 313(38.36%)                          | 24(24.00%)                       |         |
| Yes   | 503(61.64%)                          | 76(76.00%)                       |         |
| <b>Ever attacked, assaulted, suffered violence?</b>           |                                      |                                  | 0.004   |
| No  | 214(26.39%)                          | 13(13.13%)                       |         |
| Yes   | 597(73.61%)                          | 86(86.87%)                       |         |
| Missing   | N=6                                  | N=1                              |         |

## Methods

- The Longitudinal Investigations into Supportive and Ancillary health services project (LISA) is a cross-sectional study of individuals on highly active antiretroviral therapy (HAART) in BC
- Participants ≥ 19 years of age were recruited from the Drug Treatment Program (DTP) at the BC Centre for Excellence in HIV/AIDS
- From 2007 – 2010, interviewer administered surveys captured information on illicit drug use, mental health, trauma, sexual behavior and socio-demographic variables
- We used the Chi-square test and the Wilcoxon rank sum test in the bivariate analysis, and logistic regression in our multivariable analysis, to compare LISA participants who have ever used the DPC versus those who have not

## Results

- 11% of 917 LISA participants reported having ever used the DPC (DPC clients)
- DPC clients were more likely to be male (Adjusted Odds Ratio [AOR] = 3.76; 95% Confidence Interval [CI] = 1.99-7.10), have been diagnosed with a mental health disorder (AOR = 2.19; 95% CI = 1.29-3.73) and have experienced violence in the form of attack(s)/assault(s) (AOR=2.32; 95% CI = 1.23 -4.40)
- DPC clients showed a greater likelihood of interrupted HAART >1 year (AOR = 2.15; 95% CI = 1.34-3.43) and of daily supportive service use (AOR = 4.91; CI = 3.03-7.98)

**Table 2: Multivariable Model - Factors associated with use of the DPC**

|   | Adjusted Odds Ratio (AOR) | P-value |
|---|---------------------------|---------|
| <b>Gender (M vs F)</b>  | 3.76(1.99-7.10)           | <0.001  |
| <b>Use of supportive services (Daily vs more than Daily)</b>    | 4.91(3.03 -7.98)          | <0.001  |
| <b>Ever attacked, assaulted/suffered violence (Yes vs No)</b>   | 2.32(1.23-4.40)           | 0.010   |
| <b>Treatment Interruption (ever interrupted &gt; 1 year)</b>    | 2.15(1.34-3.43)           | 0.001   |
| <b>Ever diagnosed with a mental health disorder (Yes vs No)</b> | 2.19(1.29-3.73)           | 0.004   |

## Discussion

Our analyses show that the DPC attracts PLHIVs whose current or recent experiences (i.e., mental health and/or violence) that may negatively influence their overall health and wellbeing. Also, the finding that DPC use is higher among those who use supportive services suggests that the DPC may address existing deficiencies in conventional health care settings. Our findings also hint towards a role that the DPC may play in linking their clients with other health and wellbeing support.

**We have no conflicts of interest to declare**