

# The Role of Peer Research Associates in Collecting Data in Longitudinal Health Surveys

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## PEERING INTO HEALTH RESEARCH



### BACKGROUND

- Peer research associate (PRA) involvement in conducting interviews have qualitatively documented increased comfort of participants, minimized social desirability bias, and increased access to hard-to-reach populations<sup>1,2</sup>.
- However, few studies have quantitatively assessed the data quality of interviews conducted by PRAs in comparison to self-administered online health surveys.

**Research Question:** How does utilizing PRAs impact the quality of data collection in a cohort of people living with HIV (PLWH) in British Columbia (BC)?

### METHODS

We used survey results from the **STOP HIV/AIDS Program Evaluation (SHAPE)** study (n=644), a longitudinal cohort of people living with HIV (PLWH), aged 19 or older in BC. The survey is administered by PRAs in-person and over-the-phone, or self-administered online.

1) We examined which key populations complete surveys with PRAs:

- Inclusion criteria:** All baseline and follow-up #1 (FU1) surveys completed up to December 2019.
- Independent variables:** Key demographic groups of interest such as health authority, income, and experiences with homelessness.
- Outcome measures:** Surveys were grouped as completed with PRAs (in-person and over-the-phone) vs. without PRAs (online)
- Analysis:** Multivariable generalized linear mixed model (mGLMM) was used to model whether key demographic groups were associated with completing surveys with PRAs.

2) We further examined completeness of the survey with PRAs through prefer-not-to-answer (PNA) responses provided in follow-up survey 1 (until December 2019) stratified by survey, section, and sensitive questions such as drug use and sexual activity. Chi-square or Fisher's Exact test were used to test the association between percentage of PNA and completing the survey with a PRA.

### RESULTS

1) The descriptive analysis of key populations included 1105 baseline and FU1 survey visits from 644 SHAPE participants. mGLMM was used to account for within-person correlation and multiple visits per participant. The final multivariable model included 1069 survey visits. Variables included in the multivariable model are shown in **Table 1**.

- Other variables such as ethnicity, age, gender, sexual orientation, and injection drug use were included in the analysis but not selected in the final model.

2) Out of 644 SHAPE participants, 461 completed the FU1 survey where PNA was an option.

- The majority of interviewees had PNA responses between 0-5% in the overall survey (p-value >0.05; with PRA 93.8%, without 90.3%) and for sensitive questions (p-value >0.05; with PRA 93.8%, without 91.7%)
- Participants completing the survey without PRAs had significantly higher PNA responses >5% on sections about social support and service use (p-value=0.036), accessing HIV-care (p-value=0.002), and treatment adherence (p-value=0.009).

**TABLE 1:** Characteristics of SHAPE participants by survey administration type

| Variables                           | Survey administration type |                        | mGLMM of survey administration type (with vs without PRA) aOR (95% CI) |
|-------------------------------------|----------------------------|------------------------|--|
|                                     | Without PRA (N=688) N (%)  | With PRA (N=417) N (%) |  |
| Gender                              |                            |                        | Not selected   |
| Male                                | 573 (83.3)                 | 276 (66.2)             |  |
| Female                              | 100 (14.5)                 | 134 (32.1)             |  |
| Other                               | 15 (2.2)                   | 7 (1.7)                |  |
| MSM                                 |                            |                        | 0.22 (0.15, 0.33)  |
| No                                  | 150 (21.8)                 | 273 (65.5)             |  |
| Yes                                 | 538 (78.2)                 | 144 (34.5)             |  |
| Health authority                    |                            |                        | 2.20 (1.43, 3.38)  |
| Vancouver Coastal                   | 434 (63.1)                 | 173 (41.5)             |  |
| Other                               | 254 (36.9)                 | 244 (58.5)             |  |
| Ethnicity                           |                            |                        | Not selected   |
| Caucasian                           | 767 (69.4)                 | 519 (75.4)             |  |
| Indigenous                          | 171 (15.5)                 | 54 (7.8)               |  |
| Asian                               | 38 (3.4)                   | 31 (4.5)               |  |
| African/ Black / Caribbean          | 8 (0.7)                    | 2 (0.3)                |  |
| Latin American                      | 35 (3.2)                   | 28 (4.1)               |  |
| Other                               | 86 (7.8)                   | 54 (7.8)               |  |
| Potential for in-person interviews* |                            |                        | 4.01 (2.63, 6.13)  |
| No                                  | 398 (57.8)                 | 131 (31.4)             |  |
| Yes                                 | 290 (42.2)                 | 286 (68.6)             |  |
| Personal annual gross income        |                            |                        | 0.20 (0.10, 0.40)  |
| Less than 15000                     | 188 (28.0)                 | 231 (55.5)             |  |
| 15000 to 29999                      | 198 (29.5)                 | 140 (33.7)             |  |
| 30000 to 59999                      | 154 (23.0)                 | 33 (7.9)               |  |
| 60000 or more                       | 131 (19.5)                 | 12 (2.9)               |  |
| Homelessness in the past year       |                            |                        | 2.33 (1.38, 3.92)  |
| No                                  | 649 (94.3)                 | 330 (79.1)             |  |
| Yes                                 | 30 (5.7)                   | 87 (20.9)              |  |
| Violence ever                       |                            |                        | 2.39 (1.48, 3.86)  |
| No                                  | 201 (29.9)                 | 54 (13.0)              |  |
| Yes                                 | 471 (70.1)                 | 361 (87.0)             |  |

\* In-person interviews were offered at AIDS Service Organizations (ASOs) in Vancouver, Surrey, Nanaimo, Victoria and Abbotsford.

### DISCUSSION AND CONCLUSIONS

1) Individuals experiencing homelessness in the past year, experiences of lifetime violence, identifying as MSM, residence outside Vancouver Coastal Health Authority, and residence where in-person interviews were offered, were positively associated with completing the survey with a PRA. Personal gross income \$30,000 to <\$60,000 and ≥\$60,000 were negatively associated with completing the survey with a PRA.

2) Sections with significantly higher PNA responses included questions focused on attitudes and feelings that may be difficult for participants to reflect upon, such as 'How often do you have someone who hugs you?'. By sharing their responses with someone who can empathize with them such as peers, participants may feel safe and supported and more willing to answer.

- Limitations:** At the time of this analysis not all participants were due for FU1 or further contact efforts for FU1 was needed. Participants that required further engagement in follow-up were participants who were harder to reach and also tend to be ones who complete the survey over the phone or in person. As a result there may be an underrepresentation of harder-to-reach populations in this analysis. Future research should be updated to include the entire cohort in FU1 and further follow-up surveys.
- Future research should examine whether key populations are more likely to be influenced in selecting prefer-not-to-answer responses in the absence or presence of PRAs.