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| Supplemental Table 1. Indicator variables used for repeated measures latent class analysis of TasP-related attitudes, knowledge, and behavior. |
| Questionnaire Text | Categorization |
| **A person with undetectable viral load cannot pass on the virus.** |   |
|  Strongly Disagree | 0 – Disagree |
|  Disagree | 0 – Disagree |
|  Agree | 1 – Agree |
|  Strongly Agree | 1 – Agree |
| **People with undetectable viral load do not need to worry so much about infecting others with HIV.** |
|  Strongly Disagree | 0 – Disagree |
|  Disagree | 0 – Disagree |
|  Agree | 1 – Agree |
|  Strongly Agree | 1 – Agree |
| **It’s never safe to fuck without a condom regardless of viral load.** |   |
|  Strongly Disagree | 0 – Disagree |
|  Disagree | 0 – Disagree |
|  Agree | 1 – Agree |
|  Strongly Agree | 1 – Agree |
| **Knowing a sex partner’s viral load is just as important as knowing their HIV status.** |
|  Strongly Disagree | 0 – Disagree |
|  Disagree | 0 – Disagree |
|  Agree | 1 – Agree |
|  Strongly Agree | 1 – Agree |
| **Have you ever heard of the term "treatment as prevention"?** |   |
|  Yes | *Next Question* |
|  No | 1 – Hadn’t Heard of TasP |
| **How much do you think you know about what "treatment as prevention" means?** |
|  Not much, or nothing at all | 2 – Doesn’t understand  |
|  A bit in general | *Next Question* |
|  A lot | *Next Question* |
| **How do you think "treatment as prevention" changes your current risk of getting or transmitting HIV?** |
|  Makes it a lot lower | 5 – Lowers risk a lot |
|  Makes it a little lower | 4 – Lowers risk a little |
|  Makes no difference | 3 – Does not lower risk |
|  Makes it a little higher | 3 – Does not lower risk |
|  Makes it a lot higher | 3 – Does not lower risk |
| **Do you do any of the following to prevent getting/transmitting HIV?**  |   |
| **(check ALL that apply)** |
| *HIV-Negative:* Having anal sex without condoms with HIV-positive guys who have low viral loads or are on HIV treatment | 1 – if checked. |
| *HIV-Positive:* Having anal sex without condoms if my viral load is low or I’m on HIV treatment. | 0 – if not checked. |

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| Supplemental Table 2. Bivariate interactions testing the probability of transitioning towards greater TasP awareness across visits. |
|  | HIV-Negative or Unknown Observations | HIV-Positive Observations |
|  | N = 1845 | N = 754 |
|  | N (%) | OR (95% CI) | N (%) | OR (95% CI) |
| **Age** |  |  |  |  |
|  30-39 (vs. 16-29) | 547 (29.6) | 1.01 (0.90, 1.13) | 138 (18.3) | 1.76 (0.90, 3.44) |
|  >40 (vs. 16-29)  | 460 (24.9) | 0.92 (0.81, 1.04) | 585 (77.6) | **2.13 (1.13, 3.99)** |
|  **Sexual Orientation** |  |  |  |  |
|  Bisexual (vs. Gay) | 122 (6.6) | 0.98 (0.83, 1.16) | 47 (6.2) | 1.13 (0.92, 1.39) |
|  Other (vs. Gay) | 149 (8.1) | 1.03 (0.84, 1.26) | 31 (4.1) | 1.07 (0.76, 1.50) |
|  **Ethnicity** |  |  |  |  |
|  Other (vs. White) | 348 (18.9) | 0.93 (0.82, 1.06) | 90 (11.9) | **0.72 (0.57, 0.90)** |
|  Aboriginal (vs. White) | 81 (4.4) | 1.12 (0.95, 1.32) | 67 (8.9) | 1.12 (0.96, 1.31) |
|  **Post-secondary Education** | 1580 (85.6) | **1.16 (1.01, 1.34)** | 567 (75.2) | 0.90 (0.79, 1.04) |
|  **Currently Employed** | 1463 (79.3) | **1.13 (1.01, 1.26)** | 344 (45.6) | 1.02 (0.89, 1.16) |
|  **Annual Income** |  |  |  |  |
| >$30,000 CAD (vs <$30,000) | 885 (48.0) | 1.08 (0.99, 1.18) | 209 (27.8) | 1.09 (0.94, 1.26) |
|  **Regular Partner Current** | 821 (44.5) | **1.14 (1.03, 1.26)** | 290 (38.5) | 1.01 (0.89, 1.15) |
|  **Condomless Anal Sex in P6M** |  |  |  |  |
|  Concordant (vs. None) | 523 (28.3) | 1.06 (0.95, 1.19) | 172 (22.8) | 0.99 (0.85, 1.15) |
|  Discordant (vs. None)  | 586 (31.8) | **0.86 (0.76, 0.98)** | 321 (42.6) | 0.88 (0.76, 1.02) |
|  **No. of anal sex partners in P6M** |  |  |  |  |
|  1 (vs. 0) | 395 (21.4) | 1.05 (0.92, 1.19) | 120 (15.9) | 0.97 (0.80, 1.17) |
|  2-5 (vs. 0)  | 695 (37.7) | 1.05 (0.93, 1.19) | 225 (29.8) | 0.91 (0.77, 1.08) |
|  6+ (vs. 0)  | 428 (23.2) | 1.02 (0.87, 1.21) | 250 (33.2) | 0.91 (0.75, 1.10) |
|  **Always Using Condoms** | 1118 (60.6) | 1.08 (0.98, 1.20) | 222 (29.4) | **1.24 (1.09, 1.40)** |
|  **STI in P6M** | 118 (6.5) | **0.67 (0.50, 0.89)** | 71 (9.8) | 0.78 (0.61, 1.00) |
|  **Binge Drinking** |  |  |  |  |
| 1 time (vs. no binge drinking) | 295 (16.0) | 1.04 (0.91, 1.19) | 93 (12.4) | 0.93 (0.77, 1.12) |
| <1 time (vs. no binge drinking) | 820 (44.5) | 1.07 (0.95, 1.19) | 178 (23.8) | 1.01 (0.88, 1.16) |
|  **P6M Cocaine/Crack** | 441 (23.9) | 1.05 (0.94, 1.17) | 186 (24.7) | 0.90 (0.75, 1.08) |
|  **P6M Inhalants**  | 30 (1.6) | 1.17 (0.87, 1.57) | 2 (0.3) | **0.49 (0.45, 0.53)** |
|  **P6M Sedatives** | 236 (12.8) | 1.06 (0.88, 1.27) | 200 (26.5) | **0.81 (0.68, 0.97)** |
|  **P6M Street Opiods** | 26 (1.4) | 1.21 (0.78, 1.88) | 22 (2.9) | 0.99 (0.79, 1.24) |
|  **P6M Poppers** | 511 (27.7) | 1.06 (0.94, 1.20) | 319 (42.3) | **0.86 (0.76, 0.97)** |
|  **P6M Erectile Dysfunction Drugs** | 284 (15.4) | 0.96 (0.82, 1.13) | 323 (42.8) | 0.94 (0.83, 1.07) |
|  **P6M Other Drugs** | 144 (7.8) | **1.22 (1.04, 1.44)** | 111 (14.7) | 0.95 (0.79, 1.14) |
|  **P6M Party Drugs** | 640 (34.7) | 1.04 (0.92, 1.17) | 320 (42.4) | 0.97 (0.84, 1.11) |
|  **Social Time Spent with Gay Men** |  |  |  |  |
|  26-50% (vs. <25%) | 473 (25.6) | 1.06 (0.94, 1.20) | 194 (25.8) | 1.00 (0.84, 1.19) |
|  51-75% (vs. <25%) | 677 (36.7) | 1.08 (0.96, 1.23) | 188 (25.0) | 0.93 (0.77, 1.12) |
|  >76% (vs. <25%) | 371 (20.1) | 1.04 (0.89, 1.21) | 147 (19.5) | 1.11 (0.92, 1.33) |
|  **Treatment Adherence in P12M** |  |  |  |  |
|  95% or greater (vs. <95%)  | - | - | 462 (61.3) | 1.11 (0.95, 1.29) |
|  No ART or P12M Initiation (vs. <95%)  | - | - | 83 (11.0) | **1.45 (1.09, 1.94)** |
|  **CD4 counts (in cells / mm3)** |  |  |  |  |
|  200-349 (vs. < 200) | - | - | 71 (9.4) | 1.05 (0.84, 1.31) |
|  350+ (vs. < 200)  | - | - | 642 (85.1) | 1.03 (0.83, 1.27) |
|  **Viral Load <200 copies/ml** | - | - | 680 (90.2) | 0.87 (0.68, 1.11) |
| OR = Odds Ratio, CI = Confidence Interval, CAD = Canadian Dollars, P6M = Past Six MonthsInteraction odds ratios can be interpreted as the odds of increasing TasP awareness per visit. Odds ratios above 1 are indicative of “faster” or “earlier” awareness, and Odds ratios below 1 are indicative of “slower” or “later” awareness. |

Supplemental Figure 1. Model Fit Indices for HIV-stratified RMLCA Models