Supplemental Digital Content 1

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| Supp-Table 1. Baseline Characteristics of Academic and Community-Based Study Sites. | | | | |
|  | Academic (n=119) | Community (n=120) | *p*-value |  |
| Female Gender | 14 | 8 | 0.1432 |  |
| Age | 46 (11) | 44 (10.5) | 0.7069 |  |
| Hispanic/Latino | 8 | 9 | 0.8159 |  |
| American Indian or Alaska Native | 15 | 9 | 0.2341 |  |
| Asian | 2 | 3 | 1.0000 |  |
| Black or African-American | 28 | 31 | 0.6697 |  |
| Native Hawaiian or Other Pacific Islander | 0 | 2 | 0.4979 |  |
| White | 61 | 50 | 0.1512 |  |
| Other Race | 7 | 11 | 0.3610 |  |
| No High School Diploma/GED | 15 | 14 | 1.0000 |  |
| HS Diploma/GED Only | 49 | 40 | 0.2404 |  |
| More than High School | 36 | 45 | 0.1870 |  |
| Man Who Has Sex with Men | 67 | 82 | 0.0118 | \* |
| Incarcerated More Than One Night | 56 | 42 | 0.0280 | \* |
| Injecting Drug Use Past 3 Months | 13 | 14 | 0.8497 |  |
| Any Methamphetamine | 13 | 20 | 0.1610 |  |
| Any Cocaine | 20 | 21 | 1.0000 |  |
| Any Methamphetamine or Cocaine | 28 | 34 | 0.3279 |  |
| Any Sex Past 3 Months | 55 | 65 | 0.1142 |  |
| No Condom with Main Partner | 8 | 14 | 0.2198 |  |
| No Condom with Other Partner | 9 | 19 | 0.0405 | \* |
| Unprotected Discordant Sex with Main Partner | 0 | 2 | 0.2469 |  |
| Unprotected Discordant Sex with Other Partner | 3 | 5 | 0.4994 |  |
| Condom Use with Problems | 11 | 14 | 0.5588 |  |
| Any Sex without Condoms | 17 | 29 | 0.0310 | \* |
| Any Sex without Condoms or with Condom Problems | 25 | 38 | 0.0508 | + |
| Adherence VAS | 96 (9) | 91 (19) | 0.0357 | \* |
| 96%+ Visual Analog Scale Adherence | 52 | 36 | 0.0173 | \* |
| 90%+ VAS Adherence | 77 | 62 | 0.0152 | \* |
| 86%+ VAS Adherence | 82 | 68 | 0.0150 | \* |
| 80%+ VAS Adherence | 86 | 79 | 0.1655 |  |
| 70%+ VAS Adherence | 90 | 87 | 0.5433 |  |
| Missed Doses Past 7 Days | 0 (1) | 0 (1) | 0.3411 |  |
| CD4 Nadir | 115.5 (202.25) | 87 (202.25) | 0.5391 |  |
| Viral Load Before Medication | 4.74 (2.69) | 5 (2.28) | 0.8130 |  |
| Ever Told Resistant Virus | 11 | 22 | 0.0348 | \* |
| Years Since HIV Diagnosis | 10 (7.19) | 13 (11) | 0.0503 | + |
| Depression Severity (PHQ9) | 7 (13) | 6.75 (14) | 0.7571 |  |
| Likely Depression Diagnosis (PHQ9) | 19 | 19 | 1.0000 |  |
| Anxiety More than Half of Past 7 Days | 27 | 32 | 0.3962 |  |
| Intimate Partner Violence Perpetration | 3 | 2 | 1.0000 |  |
| IPV Victimization | 3 | 13 | 0.0031 | \*\* |
| Past Adherence Intervention | 7 | 3 | 0.2534 |  |
| Past Risk Reduction Intervention | 13 | 9 | 0.4143 |  |
| log10 Viral Load | 1.48 (1.4) | 1.48 (1.14) | 0.5445 |  |
| Detectable Viral Load | 36 | 42 | 0.4224 |  |
| CD4 | 373 (415.5) | 359 (306) | 0.5398 |  |
| **Notes:** Percentage or Median (Interquartile Range); comparison by Fisher's exact test or Wilcoxon rank-sum test. + p <.10; \* p <.05; \*\* p <.01. A log10 viral load of 1.48 is “undetectable”. | | | | |

Supplemental Digital Content 2

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| Supp-Table 2. Generalized Estimating Equation Coefficients: Full Sample. | | | |
|  | Estimate | Std.err | *p*-value |
| **Log10 VL** |  |  |  |
| Intercept | 2.2102 | 0.1934 | 0.0000 |
| More than High School/GED vs. HS/GED | -0.0658 | 0.1683 | 0.6959 |
| No HS/GED vs. HS/GED | 0.1438 | 0.2390 | 0.5473 |
| Site Academic | -0.1738 | 0.1582 | 0.2718 |
| No Condom with Main Partner | 0.0320 | 0.2504 | 0.8984 |
| PHQ9 Likely Depression Diagnosis | 0.2760 | 0.2164 | 0.2022 |
| CARE+ | 0.2405 | 0.1729 | 0.1643 |
| Time | 0.0142 | 0.0123 | 0.2502 |
| CARE+ \* Time | -0.0335 | 0.0173 | 0.0529 |
| **Undetectable Viral Load** |  |  |  |
| Intercept | 0.7949 | 0.2983 | 0.0077 |
| More than HS/GED vs. HS/GED | 0.0272 | 0.2615 | 0.9171 |
| No HS/GED vs. HS/GED | -0.3630 | 0.3219 | 0.2595 |
| Site Academic | 0.2273 | 0.2340 | 0.3315 |
| No Condom with MP | -0.3259 | 0.3643 | 0.3710 |
| PHQ9 Likely Depression Diagnosis | -0.3297 | 0.2923 | 0.2593 |
| CARE+ | -0.4370 | 0.2685 | 0.1037 |
| Time | -0.0018 | 0.0189 | 0.9252 |
| CARE+ \* Time | 0.0518 | 0.0306 | 0.0901 |
| **VAS Adherence** |  |  |  |
| Intercept | 85.5208 | 3.0315 | 0.0000 |
| More than HS/GED vs. HS/GED | 1.4374 | 2.2438 | 0.5218 |
| No HS/GED vs. HS/GED | -4.7770 | 3.5862 | 0.1829 |
| Site Academic | 3.5561 | 2.2287 | 0.1106 |
| No Condom with MP | -2.3366 | 4.1081 | 0.5695 |
| PHQ9 Likely Depression Diagnosis | -2.2652 | 2.9508 | 0.4427 |
| CARE+ | -1.3406 | 2.6772 | 0.6165 |
| Time | -0.1548 | 0.2627 | 0.5557 |
| CARE+ \* Time | 0.6785 | 0.3394 | 0.0456 |
| **Sexual Transmission Risks** |  |  |  |
| Intercept | -0.2626 | 0.2727 | 0.3356 |
| More than HS/GED vs. HS/GED | -0.0552 | 0.2504 | 0.8256 |
| No HS/GED vs. HS/GED | -0.7335 | 0.3575 | 0.0402 |
| Site Academic | -0.9131 | 0.2371 | 0.0001 |
| PHQ9 Likely Depression Diagnosis | 0.0950 | 0.3022 | 0.7533 |
| CARE+ | -0.0928 | 0.2745 | 0.7353 |
| Time | 0.0104 | 0.0239 | 0.6640 |
| CARE+ \* Time | -0.0761 | 0.0370 | 0.0398 |

Supplemental Digital Content 3

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| Supp-Table 3. Generalized Estimating Equation Coefficients: Separate Estimates by Detectable Viral Load at Baseline. | | | |
|  | Estimate | Std.err | *p*-value |
| **Log10 Viral Load** |  |  |  |
| Intercept | 1.5660 | 0.1046 | 0.0000 |
| More than High School/GED vs. HS/GED | 0.0328 | 0.1133 | 0.7726 |
| No HS/GED vs. HS/GED | 0.1986 | 0.1726 | 0.2498 |
| Site Academic | -0.1038 | 0.1069 | 0.3317 |
| No Condom with Main Partner | -0.3509 | 0.1927 | 0.0687 |
| PHQ9 Likely Depression Diagnosis | 0.0236 | 0.1590 | 0.8822 |
| CARE+ | 0.0072 | 0.0625 | 0.9082 |
| Time | 0.0164 | 0.0091 | 0.0710 |
| Detectable Viral Load at Baseline | 1.9559 | 0.2317 | 0.0000 |
| CARE+ \* Time | 0.0051 | 0.0151 | 0.7371 |
| CARE+ \* Detectable VL at Baseline | 0.0173 | 0.3087 | 0.9554 |
| Time \* Detectable VL at Baseline | 0.0003 | 0.0369 | 0.9943 |
| CARE+ \* Time \* Detectable VL at Baseline | -0.0884 | 0.0453 | 0.0510 |
| **Undetectable Viral Load** |  |  |  |
| Intercept | 2.6887 | 0.5218 | 0.0000 |
| More than HS/GED vs. HS/GED | -0.3400 | 0.3470 | 0.3271 |
| No HS/GED vs. HS/GED | -1.1111 | 0.4063 | 0.0062 |
| Site Academic | 0.2086 | 0.2940 | 0.4780 |
| No Condom with MP | 0.5022 | 0.5663 | 0.3752 |
| PHQ9 Likely Depression Diagnosis | 0.4431 | 0.3835 | 0.2479 |
| CARE+ | -0.3053 | 0.7036 | 0.6643 |
| Time | -0.0608 | 0.0588 | 0.3016 |
| Detectable VL at Baseline | -4.1065 | 0.6952 | 0.0000 |
| CARE+ \* Time | 0.0146 | 0.0941 | 0.8769 |
| CARE+ \* Detectable VL at Baseline | 1.1461 | 0.9831 | 0.2437 |
| Time \* Detectable VL at Baseline | 0.0909 | 0.0876 | 0.2994 |
| CARE+ \* Time \* Detectable VL at Baseline | -0.0145 | 0.1313 | 0.9123 |
| **VAS Adherence** |  |  |  |
| Intercept | 91.7052 | 2.1072 | 0.0000 |
| More than HS/GED vs. HS/GED | 0.8343 | 2.0605 | 0.6856 |
| No HS/GED vs. HS/GED | -5.6771 | 3.3072 | 0.0861 |
| Site Academic | 3.4068 | 1.9776 | 0.0849 |
| No Condom with MP | 1.4189 | 3.4560 | 0.6814 |
| PHQ9 Likely Depression Diagnosis | -0.7405 | 2.7396 | 0.7869 |
| CARE+ | -2.5658 | 1.8140 | 0.1572 |
| Time | -0.2481 | 0.1666 | 0.1365 |
| Detectable VL at Baseline | -18.3641 | 5.0730 | 0.0003 |
| CARE+ \* Time | 0.4881 | 0.2379 | 0.0402 |
| CARE+ \* Detectable VL at Baseline | 6.4792 | 5.9936 | 0.2797 |
| Time \* Detectable VL at Baseline | 0.0783 | 0.7729 | 0.9193 |
| CARE+ \* Time \* Detectable VL at Baseline | 0.5701 | 0.9023 | 0.5275 |
| **Sexual Transmission Risks** |  |  |  |
| Intercept | -0.1735 | 0.3119 | 0.5780 |
| More than HS/GED vs. HS/GED | -0.0248 | 0.2526 | 0.9216 |
| No HS/GED vs. HS/GED | -0.7537 | 0.3662 | 0.0395 |
| Site Academic | -0.9603 | 0.2442 | 0.0001 |
| PHQ9 Likely Depression Diagnosis | 0.1094 | 0.3065 | 0.7211 |
| CARE+ | -0.2692 | 0.3574 | 0.4514 |
| Time | 0.0198 | 0.0275 | 0.4719 |
| Detectable VL at Baseline | -0.3494 | 0.4224 | 0.4082 |
| CARE+ \* Time | -0.0712 | 0.0489 | 0.1453 |
| CARE+ \* Detectable VL at Baseline | 0.5952 | 0.5730 | 0.2990 |
| Time \* Detectable VL at Baseline | -0.0233 | 0.0560 | 0.6774 |
| CARE+ \* Time \* Detectable VL at Baseline | -0.0106 | 0.0789 | 0.8934 |

Supplemental Digital Content 4

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| **Supp-Table 4. Contrasts Based on Generalized Estimation Equation Analysis.** | | | | |
|  | **95% Confidence Interval** | | |  |
| **Contrast** | **Estimate** | **Lower** | **Upper** | ***p*-value** |
| **Log10 Viral Load Full Sample** |  |  |  |  |
| 9M | -0.06 | -0.43 | 0.30 | 0.7413 |
| 6M | 0.04 | -0.29 | 0.36 | 0.8127 |
| 3M | 0.14 | -0.18 | 0.46 | 0.3857 |
| 0M | 0.24 | -0.10 | 0.58 | 0.1643 |
| CARE+ Change | -0.17 | -0.39 | 0.04 | 0.1118 |
| Control Change | 0.13 | -0.09 | 0.35 | 0.2502 |
| **Undetectable Viral Load Full Sample** |  |  |  |  |
| 9M | 1.03 | 0.58 | 1.81 | 0.9200 |
| 6M | 0.88 | 0.54 | 1.44 | 0.6149 |
| 3M | 0.75 | 0.47 | 1.22 | 0.2469 |
| 0M | 0.65 | 0.38 | 1.09 | 0.1037 |
| CARE+ Change | 1.57 | 1.03 | 2.39 | 0.0371 |
| Control Change | 0.98 | 0.71 | 1.37 | 0.9252 |
| **VAS Adherence Full Sample** |  |  |  |  |
| 9M | 4.77 | -0.79 | 10.33 | 0.0929 |
| 6M | 2.73 | -1.94 | 7.40 | 0.2519 |
| 3M | 0.69 | -3.85 | 5.24 | 0.7646 |
| 0M | -1.34 | -6.59 | 3.91 | 0.6165 |
| CARE+ Change | 4.71 | 0.95 | 8.48 | 0.0142 |
| Control Change | -1.39 | -6.03 | 3.24 | 0.5557 |
| **Sexual Transmission Risks Full Sample** |  |  |  |  |
| 9M | 0.46 | 0.25 | 0.84 | 0.0117 |
| 6M | 0.58 | 0.35 | 0.95 | 0.0297 |
| 3M | 0.73 | 0.45 | 1.16 | 0.1797 |
| 0M | 0.91 | 0.53 | 1.56 | 0.7353 |
| CARE+ Change | 0.55 | 0.34 | 0.91 | 0.0201 |
| Control Change | 1.10 | 0.72 | 1.67 | 0.6640 |
| **Log10 Viral Load Detectable at BL** |  |  |  |  |
| 9M | -0.73 | -1.42 | -0.03 | 0.0406 |
| 6M | -0.48 | -1.03 | 0.08 | 0.0941 |
| 3M | -0.23 | -0.74 | 0.29 | 0.3896 |
| 0M | 0.02 | -0.56 | 0.61 | 0.9348 |
| CARE+ Change | -0.60 | -1.01 | -0.19 | 0.0044 |
| Control Change | 0.15 | -0.48 | 0.78 | 0.6412 |
| **Undetectable Viral Load Detectable at BL** |  |  |  |  |
| 9M | 2.32 | 0.85 | 6.34 | 0.1007 |
| 6M | 2.32 | 1.02 | 5.27 | 0.0442 |
| 3M | 2.32 | 0.89 | 6.02 | 0.0839 |
| 0M | -- | -- | -- | -- |
| CARE+ Change | -- | -- | -- | -- |
| Control Change | -- | -- | -- | -- |
| **VAS Adherence Detectable at BL** |  |  |  |  |
| 9M | 13.44 | 0.73 | 26.14 | 0.0381 |
| 6M | 10.26 | 0.30 | 20.22 | 0.0434 |
| 3M | 7.09 | -2.37 | 16.55 | 0.1419 |
| 0M | 3.91 | -7.59 | 15.41 | 0.5047 |
| CARE+ Change | 8.00 | 0.37 | 15.62 | 0.0398 |
| Control Change | -1.53 | -14.84 | 11.78 | 0.8220 |
| **Sexual Transmission Risks Detectable at BL** |  |  |  |  |
| 9M | 0.66 | 0.26 | 1.70 | 0.3921 |
| 6M | 0.85 | 0.40 | 1.82 | 0.6715 |
| 3M | 1.08 | 0.52 | 2.27 | 0.8306 |
| 0M | 1.39 | 0.58 | 3.34 | 0.4673 |
| CARE+ Change | 0.46 | 0.24 | 0.91 | 0.0245 |
| Control Change | 0.97 | 0.41 | 2.29 | 0.9420 |
| **Notes:** Estimates are differences in adjusted means for log10 viral load and VAS Adherence and adjusted odds ratios for undetectable viral load and sexual transmission risks. | | | | |

Supplemental Digital Content 5

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| **Supp-Table 5. Generalized Estimating Equation Tests for Effect Modification by Study Site.** | | | | |
|  | **Estimate** | **Std.err** | **Wald** | ***p*-value** |
| **Full Sample** |  |  |  |  |
| log10 Viral Load | 0.0104 | 0.0341 | 0.0932 | 0.7602 |
| Detectable Viral Load | 0.0188 | 0.0607 | 0.0957 | 0.7571 |
| VAS Adherence | 0.1248 | 0.6861 | 0.0331 | 0.8557 |
| Sexual Transmission Risks | -0.0511 | 0.0731 | 0.4883 | 0.4847 |
| **Detectable Viral Load at BL** |  |  |  |  |
| log10 Viral Load | 0.0124 | 0.0834 | 0.0220 | 0.8821 |
| Detectable Viral Load | 0.3457 | 0.1796 | 3.7031 | 0.0543 |
| VAS Adherence | -0.1083 | 1.7911 | 0.0037 | 0.9518 |
| Sexual Transmission Risks | 0.0348 | 0.1156 | 0.0904 | 0.7636 |

Supplemental Digital Content 6

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| **Supp-Table 6. Generalized Estimating Equation Tests for Effect Modification by Detectable Viral Load at Baseline.** | | | | |
|  | **Estimate** | **Std.err** | **Wald** | ***p*-value** |
| log10 Viral Load | 0.0935 | 0.0440 | 4.5154 | 0.0336 |
| Detectable Viral Load | 0.0134 | 0.1295 | 0.0107 | 0.9176 |
| VAS Adherence | -0.5209 | 0.8982 | 0.3363 | 0.5620 |
| Transmission Risks | 0.0036 | 0.0782 | 0.0021 | 0.9633 |