**Supplemental tables**

**Supplement Table 1: Baseline and time varying factors associated with bacterial vaginosis (BV), vaginal candidiasis and trichomoniasis**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Non-BV intervals** | **BV intervals** | **cHR**  **(95% CI)** | **Non-Candidiasis intervals** | **Candidiasis intervals** | **cHR**  **(95% CI)** | **Non-Trichomoniasis intervals** | **Trichomoniasis Intervals (%)** | **cHR**  **(95%CI)** |
| **WOMAN BASELINE VARIABLES** | | | | | | | | | |
| **Demographics** |  |  |  |  |  |  |  |  |  |
| **Woman age (per year increase)** ¶ | 27.8±7.4 | 26.7±7.3 | 0.98\*\* (0.97-1.00) | 27.8±7.5 | 26.5 ±6.8 | 0.98\*\*\*  (0.97-0.99) | 27.6±7.3 | 26.9±7.6 | 0.99  (0.97-1.01) |
| **Monthly family income (per USD increase)** ¶ | 55.1±65.7 | 54.8±56.1 | 1.00  (1.00-1.00) | 55.1±63.9 | 55.0 ±64.9 | 1.00  (1.00-1.00) | 55.3±64.3 | 52.4±59.3 | 1.00  (1.00-1.00) |
| **Woman reads Nyanja** |  |  |  |  |  |  |  |  |  |
| Yes, easily | 1523(24%) | 336 (21%) | *Ref* | 1512(24%) | 330 | *Ref* | 1731(24%) | 127(22%) | *Ref* |
| With difficulty/not at all | 4785(76%) | 1229(79%) | 1.10  (0.91-1.34) | 4750 (76%) | 1194 | 1.09  (0.93-1.28) | 5560(76%) | 445(78%) | 1.07  (0.76-1.53) |
| **Number of previous pregnancies (per pregnancy increase)** ¶ | 3.8±2.6 | 3.3±2.6 | 0.95  (0.91-0.98) | 3.8±2.7 | 3.3±2.5 | 0.94\*\*\* (0.92-0.97) | 3.4±2.7 | 3.1±2.3 | 0.91\*\*\*  (0.86-0.96) |
| **Clinical** | | | | | | | | | |
| **Couple HIV Status** |  |  |  |  |  |  |  |  |  |
| Male HIV-positive,  Female HIV-negative | 3499(55%) | 647(42%) | *Ref* | 3346 53%) | 767(50%) | Ref | 3919(54%) | 227(39%) | Ref |
| Male HIV-negative,  Female HIV-positive | 2836(45% | 911(58%) | 1.54\*\*\* (1.32-1.80) | 2941(47%) | 762(50%) | 1.09  (0.94-1.25) | 3398(46%) | 348(61%) | 1.74\*\*\*  (1.35-2.25) |
| **HIV stage of positive partner** |  |  |  |  |  |  |  |  |  |
| Stage I | 1692(27%) | 426(27%) | 1.25  (0.87-1.79) | 1690(27%) | 404(26%) | 1.10  (0.81-1.50) | 2(0%) | 131(23%) | 1.09  (0.64-1.85) |
| Stage II | 2418(38%) | 580(37%) | 1.23  (0.86-1.74) | 2426(39%) | 548(36%) | 1.05  (1.08-1.47) | 2776(52%) | 222(39%) | 1.34  (0.80-2.25) |
| Stage III | 1704(27%) | 460(30%) | 1.37  (0.96-1.95) | 1665(26%) | 475 (31%) | 1.28  (0.94-1.74) | 1977(37%) | 188(33%) | 1.51  (0.88-2.57) |
| Stage IV | 520(8%) | 92(6%) | *Ref* | 505(8%) | 102(7%) | *Ref* | 578(11%) | 34(6%) | *Ref* |
|  | **Non-BV intervals** | **BV intervals** | **cHR**  **(95% CI)** | **Non-Candidiasis intervals** | **Candidiasis intervals** | **cHR**  **(95% CI)** | **Non-Trichomoniasis intervals** | **Trichomoniasis Intervals** | **cHR**  **(95%CI)** |
| **Log viral load (per log10 copies/ml increase)** ¶ | 4.7±0.8 | 4.7±0.8 | 0.98  (0.88-1.10) | 4.7 ±0.9 | 4.7±0.8 | 0.96  (0.86-1.08) | 4.7±0.8 | 4.6±0.8 | 0.89  (0.73-1.08) |
| **HSV-2** |  |  |  |  |  |  |  |  |  |
| Positive | 3089(82%) | 756(87%) | 1.49  (1.05-2.12) | 3110(84%) | 686(79%) | 0.70\*\*  (0.55-0.89) | 3516(82%) | 328(89%) | 0.37  (0.10-1.32) |
| Negative | 475(13%) | 70(8%) | *Ref* | 399(11%) | 136(16%) | *Ref* | 512(12%) | 33(9%) | *Ref* |
| Discrepant | 213(6%) | 45(5%) | 1.25  (0.74-2.10) | 212(6%) | 41(5%) | 0.61  (0.36-1.03) | 252(6%) | 6(2%) | 1.44  (0.92-2.24) |
| **WOMAN TIME-VARYING VARIABLES** | | | | | | | | | |
| **Number of unprotected sex acts with study partner since last visit** ¶ | 3.4±11.1 | 5.6±16.4 | 1.00  (0.99-1.00) | 3.6 ±11.5 | 5.0 ±15.3 | 1.00  (1.00-1.00) | 3.8±12.2 | 5.2±13.8 | 1.00  (1.00-1.01) |
| **Any self-reported unprotected sex with study partner since last visit** |  |  |  |  |  |  |  |  |  |
| Yes | 2516(40%) | 736(47%) | 1.27\*\*\* (1.14-1.42) | 2540(40%) | 694(45%) | 1.14  (1.02-1.26) | 3002(41%) | 249(43%) | 1.04  (0.86-1.27) |
| No | 3815(60%) | 822(53%) | *Ref* | 3744(60%) | 834(55%) | *Ref* | 4311(59%) | 326(57%) | ***Ref*** |
| **Sperm present on wet-prep** |  |  |  |  |  |  |  |  |  |
| Yes | 877(17%) | 306(25%) | 1.50\*\*\* (1.32-1.72) | 916(18%) | 267(21%) | 1.23  (1.06-1.42) | 1104(18%) | 79(20%) | 1.07  (0.83-1.37) |
| No | 4281(83%) | 934(75%) | *Ref* | 4190(82%) | 1021(79%) | *Ref* | 4895(82%) | 320(80%) | ***Ref*** |
| **Pregnant** |  |  |  |  |  |  |  |  |  |
| Yes | 629(10%) | 154(10%) | 1.03  (0.86-1.23) | 512(8%) | 258(17%) | 1.93\*\*\*  (1.67-2.24) | 708(10%) | 74(13%) | 1.32  (1.02-1.72) |
| No | 5630(90%) | 1394(90%) | *Ref* | 5712(92%) | 1260 (83%) | *Ref* | 6530(90%) | 494(87%) | ***Ref*** |

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Non-BV intervals** | **BV intervals** | **cHR**  **(95% CI)** | **Non-Candidiasis intervals** | **Candidiasis intervals** | **cHR**  **(95% CI)** | **Non-Trichomoniasis intervals** | **Trichomoniasis Intervals** | **cHR**  **(95%CI)** |
| **Breastfeeding** |  |  |  |  |  |  |  |  |  |
| Yes | 175(28%) | 317(20%) | 0.69\*\*\* (0.59-0.81) | 1695(27%) | 359(23%) | 0.84  (0.73-0.98) | 1953(27%) | 115(20%) | 0.65\*\*  (0.50-0.87) |
| No | 4584(72%) | 1241(80%) | *Ref* | 4591(73%) | 1170(77%) | *Ref* | 5364(73%) | 460(80%) | ***Ref*** |
| **Syphilis (RPR)** |  |  |  |  |  |  |  |  |  |
| Yes | 49(1%) | 22(2%) | 1.36  (0.86-2.16) | 61 (1%) | 9 (1%) | 0.58  (0.29-1.16) | 64(1%) | 7(1%) | 1.26  (0.59-2.66) |
| No | 5654(99%) | 1378(98%) | *Ref* | 5601(99%) | 1376(99%) | *Ref* | 6536(99%) | 496(99%) | ***Ref*** |
| **Active genital ulcer (acute or chronic)** |  |  |  |  |  |  |  |  |  |
| Yes | 891(14%) | 271(17%) | 1.30\*\* (1.12-1.51) | 918(15%) | 239(16%) | 1.00  (0.93-1.25) | 1019(14%) | 143(25%) | 1.82\*\*\*  (1.45-2.27) |
| No | 5444(86%) | 1287(83%) | *Ref* | 5368 (85%) | 1290(84%) | *Ref* | 6298(86%) | 432(75%) | ***Ref*** |
| **Vaginal Candidiasis** |  |  |  |  |  |  |  |  |  |
| Yes | 1210(19%) | 319(20%) | 1.05 (0.93-1.20) |  |  |  | 1442(20%) | 87(15%) | 0.75  (0.57-0.97) |
| No | 5047(81%) | 1239(80%) | *Ref* |  |  |  | 5798(80%) | 487(85%) | ***Ref*** |
| **Trichomonas Vaginalis** |  |  |  |  |  |  |  |  |  |
| Yes | 368(6%) | 207(13%) | 2.00\*\*\* (1.72-2.33) | 487(8%) | 87(6%) | 0.79  (0.62-1.01) | --- | --- | --- |
| No | 5966(94%) | 1351(87%) | *Ref* | 5798(92%) | 1442(94%) | *Ref* | --- | --- | --- |
| **Bacterial Vaginosis** |  |  |  |  |  |  |  |  |  |
| Yes | --- | --- | --- | 1210(19%) | 319(20%) | 1.01  (0.88-1.15) | 1351(18%) | 207(36%) | 2.21\*\*\*  (1.81-2.70) |
| No | --- | --- | *---* | 5047(81%) | 1239(80%) | *Ref* | 5966(82% | 368(64%) | *Ref* |
| **MAN BASELINE AND TIME-VARYING VARIABLES** | | | | | | | | | |
| **Circumcised male partner** |  |  |  |  |  |  |  |  |  |
| Yes | 872(14%) | 252(16%) | *Ref* | 885(14%) | 228(15%) | *Ref* | 1025(14%) | 99(17%) | *Ref* |
| No | 5462(86%) | 1306(84%) | 0.86  (0.68-1.08) | 5400 (86%) | 1301(85%) | 0.96  (0.78-1.17) | 6291(86%) | 476(83%) | 0.76  (0.53-1.09) |
|  | **Non-BV intervals** | **BV intervals** | **cHR**  **(95% CI)** | **Non-Candidiasis intervals** | **Candidiasis intervals** | **cHR**  **(95% CI)** | **Non-Trichomoniasis intervals** | **Trichomoniasis Intervals** | **cHR**  **(95%CI)** |
| **HSV-2 status of man** |  |  |  |  |  |  |  |  |  |
| Positive | 2450(64%) | 493(57%) | 0.71  (0.57-0.90) | 2365(64%) | 540(62%) | 0.88  (0.72-1.08) | 2734(64%) | 209(57%) | 0.70  (0.49-0.99) |
| Negative | 918(24%) | 272(32%) | *Ref* | 928(25%) | 245(28%) | *Ref* | 1073(25%) | 117(32%) | *Ref* |
| Discrepant | 431(11%) | 95(11%) | 0.74  (0.53-1.04) | 426(11%) | 91(10%) | 0.80  (0.59-1.07) | 488(11%) | 38(10%) | 0.69  (0.42-1.12) |
| **Genital inflammation of man** |  |  |  |  |  |  |  |  |  |
| Yes | 3532(56%) | 797(51%) | 0.98  (0.86-1.11) | 3469(55%) | 816(54%) | 0.97  (0.86-1.09) | 3992(55%) | 336(59%) | 1.06  (0.86-1.29) |
| No | 2784(44%) | 759(49%) | *Ref* | 2803(45%) | 707(46%) | *Ref* | 3306(45%) | 237(41%) | *Ref* |
| **Genital ulcer of man** |  |  |  |  |  |  |  |  |  |
| Yes | 1104(17%) | 249(16%) | 0.94  (0.82-1.08) | 1089(17%) | 254(17%) | 0.94  (0.82-1.11) | 1250(17%) | 103(18%) | 1.00  (0.80-1.26) |
| No | 5220(83%) | 1307(84%) | *Ref* | 5190(83%) | 1269(83%) | *Ref* | 6055(83%) | 471(82%) | *Ref* |
| **Foreskin smegma** |  |  |  |  |  |  |  |  |  |
| Yes | 563(9%) | 158(10%) | 1.21  (1.01-1.45) | 564(9%) | 145(10%) | 1.07  (0.89-1.29) | 642(9%) | 79(14%) | 1.51\*\*  (1.17-1.94) |
| No | 5737(91%) | 1391(90%) | *Ref* | 5688(91%) | 1376(90%) | *Ref* | 6637(91%) | 490(86%) | *Ref* |

BV: bacterial vaginosis; cHR: crude hazard ratio; CI: confidence interval; USD: United States Dollar; OCP: oral contraceptive pill; IUD: copper intrauterine device; STI: sexually transmitted infection; RPR: rapid plasma reagin; HSV: herpes simplex virus; Ref: reference

VL collected from 1999

¶Indicates a continuous variable, mean and standard deviation reported

‡no method, condoms, permanent (excludes IUDs)

\*p<0.05, p\*\*<0.01, \*\*\*p<0.001