**Appendix C Regression Coefficients of the Linear Regression Metamodels (OLS) for the *EID* and *Screen and Test* StrategiesUsing the Total Dataset of 5,000 CEPAC-P Model Runs**

|  |  |  |
| --- | --- | --- |
| **Parameters**  | ***EID*** a | ***Screen and Test*** a |
| **LE in months (95% CI)** | **Costs in $ (95% CI)**  | **LE in months (95% CI)** |  **Costs in $ (95% CI)**  |
| Intercept | 326 (325.7-326.2) | -19 (-40.3-2.2) | 325.8 (325.4-326.3) | -29.9 (-64.6-4.9) |
| Maternal HIV prevalence (1) | -65.6 (-66.3- -65) | 637 (594.7-679.3) | -66.6 (-67.4- -65.8) | 579.4 (522.9-635.9) |
| Maternal HIV incidence during breastfeeding (2) | 0.9 (-1.6-3.3) | -1620 (-1787.4- -1452.6) | 1.1 (-2-4.2) | -1674 (-1895.6- -1453) |
| HIV status known in pregnancy (3) | -5.4 (-5.7- -5.2) | 255.7 (238.9-272.5) | -4 (-4.3- -3.7) | 331.9 (309.4-354.4) |
| ART coverage during pregnancy/breastfeeding (4)  | -4.2 (-4.4- -3.9) | 361.4 (344.6-378.1) | -4 (-4.4- -3.7) | 378.4 (356.3-400.4) |
| Breastfeeding probability (5) | 2.9 (2.6-3.3) | -365.1 (-389.4- -340.8) | 2.7 (2.3-3.2) | -364 (-396- -332.1) |
| Breastfeeding duration (in months) (6) | 0.1 (0.09-0.12) | -15.4 (-16.3- -14.5) | 0.1 (0.07-0.11) | -14.9 (-16.2- -13.7) |
| Immunization coverage (7) | -- | -- | -0.6 (-0.9- -0.3) | -14 (-36.3-8.4) |
| EID coverage (8) | -0.6 (-0.8- -0.3) | -31.6 (-48.3- -15) | -0.1 (-0.4-0.2) | -2.1 (-24-19.9) |
| Result-return and linkage to care/ART after PCR for EID (9) | -0.4 (-0.6- -0.1) | -31.8 (-48.6- -14.9) | -0.6 (-0.9- -0.3) | -33.2 (-55.6- -10.8) |
| Results-return time for PCR in EID (in months) (10) | -0.1 (-0.14-0.03) | 5.7 (-0.02-11.4) | 0.01 (-0.1-0.1) | 6.2 (-1.2-13.6) |
| Result-return and transfer to PCR after RDT (11)  | -- | -- | -0.5 (-0.8- -0.2) | -21.2 (-43.2-0.9) |
| Result-return and linkage to care/ART after PCR following RDT (12) | -- | -- | -0.1 (-0.4-0.3) | -57.1 (-79.7- -34.5) |
| Results-return time for PCR following RDT (in months) (13) | -- | -- | 0.1 (-0.03-0.2) | 4.2 (-3.2-11.6) |
| Maternal linkage to care/ART following RDT (14) | -- | -- | -0.2 (-0.5-0.1) | 1 (-21.6-23.7) |
| ART cost (15) | -- | -0.5 (-0.9- -0.1) | -- | -0.9 (-1.4- -0.4) |
| Cost of screening (per mother-infant pair) (16) | -- | -- | -- | 0.6 (0.2-1.1) |
| Routine care cost (17) | -- | -0.3 (-0.5- -0.2) | -- | -0.4 (-0.7- -0.2) |
| Acute OI cost (18) | -- | 0.003 (-0.01-0.02) | -- | 0.01 (-0.01-0.03) |

**Appendix C Regression Coefficients of the Linear Regression Metamodels (OLS) for the *EID* and *Screen And Test* StrategiesUsing the Total Dataset of 5,000 CEPAC-P Model Runs (continued)**

|  |  |  |
| --- | --- | --- |
| **Parameters** | ***EID*** a | ***Screen and Test*** a |
| **LE****(months)**  | **Costs** **($)** | **LE****(months)**  |  **Costs** **($)** |
| **Interaction termsb** |  |  |  |  |
| (1), (2) | 33.4 (29.2-37.6) | -1051 (-1294- -807.1) | 33.9 (29.6-38.3) | -1037 (-1301.5- -772.5) |
| (1), (3) | 24.6 (24.2-25) | -613 (-637.3- -588.7) | 22.4 (22-22.8) | -727.8 (-754.3- -701.4) |
| (1), (4) | 21.4 (21-21.8) | -812.3 (-836.6- -788) | 21.2 (20.8-21.6) | -845.1 (-871.6- -818.7) |
| (1), (5) | -5.7 (-6.3- -5.1) | 227.6 (192.1-263.1) | -5.5 (-6.2- -4.9) | 203 (164.3-241.6) |
| (1), (6) | -0.2 (-0.2- -0.1) | 8.1 (6.7-9.4) | -0.16 (-0.2- -0.1) | 7.5 (6-9) |
| (1), (7) | -- | -- | 3 (2.5-3.4) | 62.4 (35.9-89) |
| (1), (8) | 2 (1.6-2.4) | 90.9 (66.6-115.2) | 1.3 (0.9-1.8) | 58.3 (31.9-84.8) |
| (1), (9) | 2.1 (1.7-2.5) | 85.6 (61.4-109.9) | 2.6 (2.2-3.1) | 114.1 (87.8-140.3) |
| (1), (10) | -0.1 (-0.3-0.03) | -9.6 (-17.9- -1.2) | -0.2 (-0.4- -0.1) | -11.4 (-20.5- -2.4) |
| (1), (11) | -- | -- | 2.9 (2.4-3.3) | 154.1 (127.7-180.6) |
| (1), (12) | -- | -- | 2.3 (1.9-2.8) | 131.2 (104.2-158.2) |
| (1), (13) | -- | -- | -0.1 (-0.2-0.1) | -10.1 (-18.9- -1.2) |
| (1), (14) | -- | -- | -0.4 (-0.8-0.02) | 26.8 (0.2-53.4) |
| (1), (15) | -- | 11.5 (11-12) | -- | 12.7 (12.1-13.3) |
| (1), (16) | -- | -- | -- | -0.6 (-1.2- -0.1) |
| (1), (17) | -- | 8.2 (8-8.5) | -- | 8.9 (8.6-9.2) |
| (1), (18) | -- | 0.58 (0.56-0.6) | -- | 0.6 (0.56-0.61) |
| (2), (4) | -1 (-2.7-0.8) | 101.9 (3.6-200.3) | -0.2 (-1.9-1.6) | 124.3 (17.3-231.3) |
| (2), (5) | -45.8 (-48.2- -43.3) | 2187 (2044-2329) | -44.9 (-47.4- -42.3) | 2195 (2040.7-2350.1) |
| (2), (6) | -2 (-2.1- -1.9) | 108.1 (102.7-113.6) | -2 (-2.1- -1.9) | 108.9 (103-114.8) |
| (2), (8) | -1.3 (-2.9-0.4) | 130 (32.2-227.8) | -1.8 (-3.5- -0.02) | 118 (11.5-224.5) |
| (2), (12) | -- | -- | -2.6 (-4.4- -0.9) | 123.7 (16.9-230.6) |
| (2), (15) | -- | 9 (6.8-11.1) | -- | 9.7 (7.4-12) |
| (2), (17) | -- | 4.9 (3.9-6) | -- | 5 (3.9-6.1) |
| (2), (18) | -- | 0.4 (0.28-0.44) | -- | 0.3 (0.26-0.44) |
| (3), (4) | 8.5 (8.3-8.6) | -330.1 (-339.8- -320.4) | 8.2 (8-8.3) | -337.7 (-348.3- -327.2) |
| (3), (5) | 0.8 (0.5-1) | -30.7 (-44.9- -16.4) | 0.7 (0.4-0.9) | -20.3 (-35.8- -4.9) |
| (3), (6) | 0.03 (0.02-0.04) | -1.6 (-2.1- -1) | 0.03 (0.02-0.04) | -1.4 (-2- -0.8) |

**Appendix C Regression Coefficients of the Linear Regression Metamodels (OLS) for the *EID* and *Screen and Test* StrategiesUsing the Total Dataset of 5,000 CEPAC-P Model Runs (continued)**

|  |  |  |
| --- | --- | --- |
| **Parameters** | ***EID*** a | ***Screen and Test*** a |
| **LE****(months)**  | **Costs** **($)** | **LE****(months)**  |  **Costs** **($)** |
| (3), (7) | -- | -- | -0.6 (-0.8- -0.4) | -25.8 (-36.4- -15.2) |
| (3), (8) | 0.8 (0.7-1) | 32.5 (22.8-42.3) | 0.6 (0.4-0.8) | 16.4 (5.9-27) |
| (3), (9) | 0.8 (0.6-0.9) | 34 (24.2-43.8) | 1 (0.8-1.2) | 48.8 (38.1-59.4) |
| (3), (10) | -0.05 (-0.1-0.01) | -2.3 (-5.6-0.9) | -0.1 (0.8-1.2) | -3.6 (-7.1- -0.03) |
| (3), (11) | -- | -- | -0.8 (-0.9- -0.6) | -41.7 (-52.3- -31.1) |
| (3), (12) | -- | -- | -1.1 (-1.3- -0.9) | -44.9 (-55.5- -34.3) |
| (3), (13) | -- | -- | 0.1 (-0.1-0.2) | 2.6 (-0.9-6.2) |
| (3), (15) | -- | -1 (-1.3- -0.8) | -- | -1.4 (-1.6- -1.1) |
| (3), (16) | -- | -- | -- | -0.3 (-0.5- -0.1) |
| (3), (17) | -- | -0.7 (-0.8- -0.6) | -- | -0.8 (-1- -0.7) |
| (3), (18) | -- | -0.064 (-0.07- -0.06) | -- | -0.06 (-0.07- -0.05) |
| (4), (5) | 0.8 (0.5-1) | -45.6 (-59.9- -31.4) | 0.9 (0.7-1.2) | -51.8 (-67.4- -36.3) |
| (4), (6) | 0.02 (0.02-0.03) | -0.9 (-1.5- -0.4) | 0.03 (0.02-0.04) | -1.5 (-2.1- -0.9) |
| (4), (8) | -0.5 (-0.7- -0.4) | -30.4 (-40.2- -20.7) | -0.4 (-0.5- -0.2) | -23.1 (-33.6- -12.5) |
| (4), (9) | -0.7 (-0.9- -0.5) | -23.2 (-32.9- -13.5) | -0.9 (-1.1- -0.7) | -34.3 (-44.8- -23.7) |
| (4), (10) | 0.1 (0.04-0.2) | -0.6 (-3.9-2.7) | 0.1 (0.03-0.15) | -0.4 (-4-3.1) |
| (4), (15) | -- | -1.5 (-1.8- -1.3) | -- | -1.6 (-1.9- -1.4) |
| (4), (17) | -- | -1.1 (-1.2- -1) | -- | -1.2 (-1.3- -1.1) |
| (4), (18) | -- | -0.1 (-0.09- -0.07) | -- | -0.08 (-0.09- -0.07) |
| (5), (6) | -0.57 (-0.58- -0.56) | 30.1 (29.3-30.9) | -0.56 (-0.6- -0.5) | 29.8 (28.9-30.6) |
| (5), (15) | -- | 2.2 (1.9-2.5) | -- | 2.2 (1.9-2.5) |
| (5), (17) | -- | 1.5 (1.4-1.7) | -- | 1.5 (1.3-1.6) |
| (5), (18) | -- | 0.11 (0.10-0.12) | -- | 0.1 (0.1-0.12) |
| (6), (14) | -- | -- | 0.01 (0.003-0.02) | -0.2 (-0.4-0.7) |
| (6), (15) | -- | 0.11 (0.10-0.12) | -- | 0.1 (0.09-0.12) |
| (6), (17) | -- | 0.067 (0.06-0.07) | -- | 0.06 (0.06-0.07) |
| (6), (18) | -- | 0.0051 (0.005-0.006) | -- | 0.005 (0.004-0.01) |
| (7), (8) | -- | -- | -0.2 (-0.4- -0.02) | -4.6 (-15.3-6.1) |
| (7), (9) | -- | -- | 0.3 (0.1-0.5) | 8.4 (-2.3-19.1) |
| (7), (10) | -- | -- | -0.03 (-0.1-0.03) | 4.8 (1.3-8.3) |
| (7), (11) | -- | -- | 0.8 (0.6-1) | 38 (27.4-48.5) |
| (7), (12) | -- | -- | 0.6 (0.4-0.8) | 30.8 (20.2-41.4) |
| (7), (13) | -- | -- | -0.05 (-0.1-0.01) | -4 (-7.5- -0.4) |
| (7), (15) | -- | -- | -- | 0.3 (0.03-0.5) |
| (7), (16) | -- | -- | -- | 0.7 (0.4-0.9) |
| (8), (9) | 0.8 (0.6-1) | 28.9 (19.2-38.6) | 0.5 (0.4-0.7) | 15.2 (4.7-25.7) |
| (8), (10) | 0.01 (-0.04-0.1) | -3.4 (-6.6- -0.1) | 0.02 (-0.03-0.1) | -2.3 (-5.8-1.2) |
| (8), (11) | -- | -- | -0.1 (-0.3-0.03) | -19.1 (-29.7- -8.5) |
| (8), (17) | -- | 0.2 (0.1-0.3) | -- | 0.1 (-0.01-0.2) |
| (9), (11) | -- | -- | 0.3 (0.1-0.4) | 5 (-5.5-15.6) |
| (9), (17) | -- | 0.2 (0.1-0.3) | -- | 0.3 (0.2-0.4) |
| (11), (12) | -- | -- | 0.9 (0.7-1.1) | 54.4 (43.7-65) |
| (11), (13) | -- | -- | -0.07 (-0.1- -0.02) | -0.04 (-3.6-3.5) |
| (11), (15) | -- | -- | -- | 0.4 (0.2-0.6) |
| (11), (17) | -- | -- | -- | 0.2 (0.1-0.3) |
| (12), (13) | -- | -- | -0.03 (-0.1-0.03) | -6.2 (-9.8- -2.7) |
| (12), (15) | -- | -- | -- | 0.5 (0.2-0.7) |
| (12), (17) | -- | -- | -- | 0.3 (0.2-0.4) |
|  |  |  |  |  |
| R2 | 0.99 | 0.98 | 0.99 | 0.98 |

a. Variables that are not relevant for a particular strategy are indicated by “--”

b. Combinations of variables without any significant interaction terms are not displayed in the table.

**ART**, antiretroviral therapy; **Costs**, lifetime per-person HIV-related costs; **EID**, early infant diagnosis; **LE**, life expectancy; **OI**, opportunistic infection; **PCR**, polymerase chain reaction; **RDT**, rapid diagnostic test.