**Supplemental Digital Content 1: Baseline characteristics of HIV-infected and HIV-uninfected women enrolled in the pregnancy outcome study, Blantyre, Malawi 2016-2017**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***(1) Characteristic*** | ***(2) Total***  ***N=1299 (%)*** | ***(3) HIV-infected***  ***N=614 (%)*** | ***(4) HIV-uninfected***  ***N=685 (%)*** | ***(5) P-value Column (3) vs (4) \**** |
| Maternal age - years  Mean (sd)  Category  Count (Percentage)  <20  20-24  25-29  30+ | *26·67 (6·01)*  *135 (10·39)*  *437 (33·64)*  *307 (23·63)*  *420 (32·33)* | *28·68 (5·98)*  *36 (5·86)*  *139 (22·64)*  *167 (27·20)*  *272 (44·30)* | *24·87 (5·43)*  *99 (14·45)*  *298 (43·50)*  *140 (20·44)*  *148 (21·61)* | *<0·01*  *<0·01* |
| *# Pregnancies*  *Mean (sd)*    *Category*  Count (Percentage)  *1*  *2-4*  *5+* | *2·92 (1·61)*      *270 (20·79)*  *830 (63·90)*  *199 (15·32)* | *3·37(1·57)*      *59 (9·61)*  *427 (69·54)*  *128 (20·85)* | *2·51 (1·54)*      *211 (30·80)*  *403 (58·83)*  *71 (10·36)* | *<0·01*        *<0·01* |
| *# Parity*  Mean (sd)  Category  Count (Percentage)  *1*  *2-4*  *5+* | *2·74 (1·52)*  *312 (24·04)*  *821 (63·25)*  *165 (12·71)* | *3·15 (1·48)*  *78 (12·70)*  *432 (70·36)*  *104 (16·94)* | *2·37 (1·46)*  *235 (34·31)*  *389 (56·79)*  *61 (8·91)* | *<0·01*  *<0·01* |
| *# Abortions*  Mean (sd)  Category  Count (Percentage)  *0*  *1+* | *0·14 (0·38)*  *1134 (87·30)*  *165 (12·70)* | *0·17 (0·41)*  *519 (84·53)*  *95 (15·47)* | *0·11 (0·35)*  *615 (89·78)*  *70 (10·22)* | *<0·01*  *<0·01* |
| *# Stillbirth*  Mean (sd)  Category  Count (Percentage)  *0*  *1+* | *0·03 (0·19)*  *1258 (96·84)*  *41 (3·16)* | *0·04 (0·21)*  *589 (95·93)*  *25 (4·08)* | *0·03 (0·18)*  *669 (97·66)*  *16 (2·34)* | *0·14*  *0·08* |
| *# Premature birth*  Mean (sd)  Category  Count (Percentage)  *0*  **Supplemental Digital Content 1: Baseline characteristics of HIV-infected and HIV-uninfected women enrolled in the pregnancy outcome study, Blantyre, Malawi 2016-2017 Cont.**  *1+* | *0·01 (0·11)*  *1286 (99·00)*  *13 (1·00)* | *0·02 (0·13)*  *603 (98·21)*  *11 (1·79)* | *0·00 (0·09)*  *683 (99·71)*  *2 (0·29)* | *0·03*  *<0·01* |
| *# born alive but died*  Mean (sd)  Category  Count (Percentage)  *0*  *1+* | *0·13 (0·42)*  *1159 (89·22)*  *140 (10·78)* | *0·21 (0·53)*  *510 (83·06)*  *104 (16·94)* | *0·06 (0·27)*  *649 (94·74)*  *36 (5·26)* | *<0·01*  *<0·01* |
| *Overall previous pregnancy losses or adverse outcomes (composite measure)* | *329 (25·33)* | *213 (34·69)* | *116 (16·93)* | *<·01* |
| *# Children alive today*  *Mean (sd)*  Category  Count (Percentage)  *1*  *2-4*  *5+* | *2·61 (1·42)*  *331 (25·50)*  *841 (64·79)*  *126 (9·71)* | *2·94 (1·36)*  *89 (14·50)*  *453 (73·78)*  *72 (11·73)* | *2·31 (1·41)*  *243 (35·47)*  *388 (56·64)*  *54 (7·88)* | *<0·01*  *<0·01* |
| Current marital status  Count (Percentage)  Married  Never married  Living with partner  Separated/divorced/widowed | *1076 (82·83)*  *76 (5·85)*  *112 (8·62)*  *35 (2·69)* | *515 (83·88)*  *32 (5·21)*  *41 (6·68)*  *26 (4·23)* | *561 (81·90)*  *44 (6·42)*  *71 (10·36)*  *9 (1·31)* | *<0·01* |
| Maternal education  Count (Percentage)  No schooling  Grade 1-8  Form 1-4/College/University | *74 (5·70)*  *585 (45·03)*  *640 (49·27)* | *47 (7·65)*  *318 (51·79)*  *249 (40·55)* | *27 (3·94)*  *267 (38·98)*  *391 (57·08)* | *<0·01* |
| Husband’s education  No schooling  Grade 1-8  Form 1-4  College/University  No husband/partner | *19 (1·46)*  *346 (26·64)*  *762 (58·66)*  *128 (9·85)*  *44 (3·39)* | *14 (2·28)*  *190 (30·94)*  *346 (56·35)*  *44 (7·17)*  *20 (3·26)* | *5 (0·73)*  *156 (22·77)*  *416 (60·73)*  *84(12·26)*  *24 (3·50)* | *<0·01* |
| Electricity in house (yes) \*\* | *637 (49·04)* | *293 (47·72)* | *344 (50·22)* | *0·37* |
| Number of antenatal care visits during current pregnancy – mean (sd) | *3·27 (1·06)* | *3·20 (1·06)* | *3·33 (1·06)* | *0·02* |
| Trimester during current pregnancy first antenatal visit occurred – Count (percentage)   * First trimester * Second trimester * Third trimester | *229 (17·63)*  *882 (67·90)*  *188 (14·47)* | *105 (17·10)*  *419 (68·24)*  *90 (14·66)* | *124 (18·10)*  *463 (67·59)*  *98 (14·31)* | *0·89* |
| Maternal body-mass index (BMI) – mean (sd) \*\*\*  **Supplemental Digital Content 1: Baseline characteristics of HIV-infected and HIV-uninfected women enrolled in the pregnancy outcome study, Blantyre, Malawi 2016-2017 Cont.** | *23·94 (3·59)* | *23·73 (3·45)* | *24·13 (3·69)* | *0·04* |
| Infant gender   * Male * Female | *614 (47·27)*  *685 (52·73)* | *285 (46·42)*  *329 (53·58)* | *329 (48·03)*  *356 (51·97)* | *0·56* |
|  |  |  |  |  |
| Birth weight (kg) distribution |  |  |  |  |
| * Mean (sd) | *3·05 (0·39)* | *3·04 (0·41)* | *3·06 (0·38)* | *0·39* |
| * Minimum | *1·90* | *2·00* | *1·90* |  |
| * 1st quartile | *2·80* | *2·80* | *2·80* |  |
| * Median | *3·00* | *3·00* | *3·00* |  |
| * 3rd quartile | *3·30* | *3·30* | *3·30* |  |
| * Maximum | *4·60* | *4·60* | *4·20* |  |
| Low birth weight (<2·5) | *78 (6·00)* | *44 (7·17)* | *34 (4·96)* | *0·10* |
| Normal birth weight (>2·5) | *1221 (94·00)* | *570 (92·83)* | *651 (95·04)* |  |
| Gestational age distribution  (weeks) |  |  |  |  |
| Mean based on Ballard score (sd) | *38·34 (1·26)* | *38·25 (1·23)* | *38·42 (1·29)* | *0·01* |
| * Minimum | *34·00* | *34·00* | *34·00* |  |
| * 1st quartile | *38·00* | *38·00* | *38·00* |  |
| * Median | *38·00* | *38·00* | *38·00* |  |
| * 3rd quartile | *40·00* | *38·00* | *40·00* |  |
| * Maximum | *42·00* | *42·00* | *42·00* |  |
| Classification (Ballard score): |  |  |  |  |
| * Preterm (<37 weeks) | *130 (10·01)* | *65 (10·59)* | *65 (9·49)* | *0·51* |
| * Full term (>37 weeks) | *1169 (89·99)* | *549 (89·41)* | *620 (90·51)* |  |
| Mean gestational age (weeks) based on last menstrual period [LMP] (sd) | *38·71 (2·33)* | *38·82 (2·31)* | *38·62 (2·35)* | *0·12* |
| * Minimum | *30·86* | *31·00* | *30·86* |  |
| * 1st quartile | *37·43* | *37·57* | *37·00* |  |
| * Median | *39·29* | *39·29* | *39·29* |  |
| * 3rd quartile | *4·014* | *40·14* | *40·14* |  |
| * Maximum | *44·86* | *44·86* | *44·71* |  |
| Classification based on LMP: |  |  |  |  |
| * Preterm (<37 weeks) | *251 (19·32)* | *110 (17·92)* | *141 (20·58)* | *0·22* |
| * Full term (>37 weeks) | *1048 (80·68)* | *504 (82·08)* | *544 (79·42)* |  |
| Small for gestational age (<10th percentile; reference population \*\*\*\*)   * Small * Normal | *231 (17·78)*  *1068 (82·22)* | *105 (17·10)*  *509 (82·90)* | *126 (18·39)*  *559 (81·61)* | *0·54* |
| Infant anthropometry at birth  Crown-heel length in cm - mean (sd)  Head circumference in cm - mean (sd) | *47·39 (3·04)*  *35·03 (1·65)* | *47·46 (3·23)*  *34·98 (1·80)* | *47·33 (2·87)*  *35·07 (1·50)* | *0·44*  *0·29* |
| Hemoglobin level g/dL  Mean (sd) | *11·70 (1·99)* | *11·19 (2·06)* | *12·16 (1·80)* | *<·01* |
| * <10 | *227 (17·50)* | *156 (25·41)* | *71 (10·40)* | *<·01* |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| * >=10 | *1070 (82·50)* | *458 (74·59)* | *612 (89·60)* |  |

**Supplemental Digital Content 1: Baseline characteristics of HIV-infected and HIV-uninfected women enrolled in the pregnancy outcome study, Blantyre, Malawi 2016-2017 Cont.**

\* T-tests for continuous variable, and Chi-square tests for binary/categorical variables

\*\* Availability of electricity in house: Indicator of higher socioeconomic status

\*\*\* BMI: body mass index - indicator of maternal nutritional status; calculated as Weight (kg) / Height (m)2

\*\*\*\* Reference population developed by Oken et al [24]

**Supplemental Digital Content 2: Association of HIV infection with birth weight outcome controlling for other factors; linear regression Model, pregnancy outcome study, Blantyre, Malawi**

| **Variable** | **Univariate Coefficient Estimate** | **Univariate p-value** | **Multivariate Coefficient Estimate** | **Multivariate p-value** |
| --- | --- | --- | --- | --- |
| Intercept |  |  | 2·86 | 0·00 |
| HIV Status (0=Uninfected, 1=Infected) | -0·02 | 0·40 | -0·02 | 0·30 |
| Maternal age (continuous) | 0·00 | 0·06 | -0·00 | 0·34 |
| Gravidity (continuous) | 0·02 | 0·01 | 0·03 | 0·00 |
| Previous pregnancy losses & adverse outcomes  (0=NO, 1=YES) | -0·02 | 0·54 | -0·06 | 0·03 |
| Maternal education (continuous) | -0·02 | 0·28 | -0·02 | 0·24 |
| Body mass index (continuous) | 0·02 | 0·00 | 0·02 | 0·00 |
| Hemoglobin level (0=>10, 1=<10) | -0·01 | 0·86 | 0·02 | 0·60 |
| Electricity1 (1=YES, 2=NO) | -0·09 | 0·00 | -0·10 | 0·00 |

1Indicator of socioeconomic status.

**Supplemental Digital Content 3: Outline of the Small for Gestational Age (SGA) infants, Blantyre, Malawi**

**HIV+ HIV- HIV+ HIV- HIV+ HIV- HIV+ HIV-**

**N=15 N=17 N=58 N=92 N=11 N=4 N=21 N=13**

\* SGA: Small for gestational age: <10th percentile of reference population

\*\* Proportionate SGA: Ponderal index >2·25; Disproportionate SGA: Ponderal index <2·25

\*\*\* Very SGA: <3rd percentile of reference population