**Supplemental Digital Content 2. Correlates of susceptibility for measles and rubella among HIV-infected treatment-naïve children and children receiving ART in Zambia**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **HIV-infected treatment-naïve children** | | | **HIV-infected children receiving ART** | | |
| **Characteristics at study enrollment** | **Susceptible** | **Non-Susceptible** | **Prevalence Ratio (95% CI)** | **Susceptible** | **Non-Susceptible** | **Prevalence Ratio (95% CI)** |
| **MEASLES (N)** | 38 | 106 |  | 36 | 92 |  |
| Sex: n (%) |  |  |  |  |  |  |
| Male | 19 (50.0) | 46 (43.4) | 1.0 | 18 (50.0) | 50 (54.4) | 1.0 |
| Female | 19 (50.0) | 60 (56.6) | 0.83 (0.47, 1.42) | 18 (50.0) | 42 (45.6) | 1.13 (0.65, 1.97) |
| CD4+ T-cell count: n (%) |  |  |  |  |  |  |
| <200 | 7 (20.6) | 12 (12.9) | 1.36 (0.67, 2.74) | 7 (20.6) | 19 (21.6) | 0.67 (0.30, 1.51) |
| 200-349 | 3 (8.8) | 10 (10.8) | 0.85 (0.29, 2.46) | 7 (20.6) | 25 (28.4) | 0.61 (0.28, 1.33) |
| 350-499 | 5 (14.7) | 20 (21.5) | 0.74 (0.31, 1.76) | 6 (17.7) | 19 (21.6) | 0.67 (0.30, 1.51) |
| ≥500 | 19 (55.9) | 51 (54.8) | 1.0 | 14 (41.2) | 25 (28.4) | 1.0 |
| Missing | 4 | 13 |  | 2 | 4 |  |
| WAZ: n (%) |  |  |  |  |  |  |
| < -3.0 | 7 (30.4) | 15 (21.1) | 2.18 (0.87, 5.46) | 3 (11.5) | 16 (24.6) | 0.61 (0.19, 1.90) |
| -3.0 to -2.0 | 9 (39.1) | 15 (21.1) | 2.57 (1.09, 6.06) | 10 (38.5) | 12 (18.5) | 1.75 (0.91, 3.36) |
| > -2.0 | 7 (30.4) | 41 (57.8) | 1.0 | 13 (50.0) | 37 (56.9) | 1.0 |
| Missing (n) | 15 | 35 |  | 10 | 27 |  |
| HAZ: n (%) |  |  |  |  |  |  |
| < -3.0 | 13 (36.1) | 18 (17.3) | 1.68 (0.94, 3.01) | 11 (17.4) | 26 (36.6) | 0.44 (0.15, 1.23) |
| -3.0 to -2.0 | 6 (16.7) | 35 (33.7) | 0.59 (0.25, 1.36) | 8 (34.8) | 20 (28.2) | 0.94 (0.44, 2.00) |
| > -2.0 | 17 (47.2) | 51 (49.0) | 1.0 | 11 (47.8) | 25 (35.2) | 1.0 |
| Missing | 2 | 2 |  | 6 | 21 |  |
| Median age (IQR) | 8.7 (6.7, 11.4) | 8.2 (6.3, 10.6) | 1.03 (0.94, 1.13) | 8.2 (5.8, 9.6) | 7.8 (6.0, 10.9) | 0.97 (0.88, 1.06) |
| WHO stage: n (%) |  |  |  |  |  |  |
| 1 or 2 | 24 (70.6) | 69 (71.9) | 1.0 | 5 (27.8) | 22 (41.5) | 1.0 |
| 3 or 4 | 10 (29.4) | 27 (28.1) | 1.05 (0.56, 1.97) | 13 (79.2) | 31 (58.5) | 1.60 (0.64, 3.98) |
| Missing | 4 | 10 |  | 18 | 38 |  |
|  |  |  |  |  |  |  |
| **RUBELLA (N)** | 84 | 60 |  | 65 | 63 |  |
| Sex: n (%) |  |  |  |  |  |  |
| Male | 39 (46.4) | 26 (43.3) | 1.0 | 35 (53.9) | 33 (52.4) | 1.0 |
| Female | 45 (53.6) | 34 (56.7) | 0.95 (0.72, 1.25) | 30 (46.1) | 30 (47.6) | 0.97 (0.69, 1.37) |
| CD4+ T-cell count: n (%) |  |  |  |  |  |  |
| <200 | 11 (14.9) | 8 (15.1) | 0.92 (0.60, 1.41) | 12 (19.1) | 14 (23.7) | 0.67 (0.42, 1.06) |
| 200-349 | 7 (9.5) | 6 (11.3) | 0.86 (0.50, 1.46) | 10 (15.9) | 22 (37.3) | 0.45 (0.26, 0.79) |
| 350-499 | 12 (16.2) | 13 (24.5) | 0.76 (0.49, 1.19) | 14 (22.2) | 11 (18.6) | 0.81 (0.54, 1.06) |
| ≥500 | 44 (59.5) | 26 (49.1) | 1.0 | 27 (42.9) | 12 (20.3) | 1.0 |
| Missing | 10 | 7 |  | 2 | 4 |  |
| WAZ: n (%) |  |  |  |  |  |  |
| < -3.0 | 18 (28.6) | 4 (12.9) | 1.27 (0.95, 1.69) | 12 (23.9) | 7 (18.0) | 1.26 (0.81, 1.96) |
| -3.0 to -2.0 | 14 (22.2) | 10 (32.3) | 0.90 (0.61, 1.34) | 15 (28.9) | 7 (18.0) | 1.36 (0.92, 2.03) |
| > -2.0 | 31 (49.2) | 17 (54.8) | 1.0 | 25 (48.1) | 25 (64.1) | 1.0 |
| Missing | 21 | 29 |  | 13 | 24 |  |
| HAZ: n (%) |  |  |  |  |  |  |
| < -3.0 | 20 (24.7) | 11 (18.6) | 1.15 (0.83, 1.62) | 19 (34.6) | 11 (28.2) | 1.29 (0.84, 1.97) |
| -3.0 to -2.0 | 23 (28.4) | 18 (30.5) | 1.00 (0.71, 1.42) | 18 (32.7) | 10 (25.6) | 1.27 (0.83, 1.94) |
| > -2.0 | 38 (46.9) | 30 (50.9) | 1.0 | 18 (32.7) | 18 (46.2) | 1.0 |
| Missing | 3 | 1 |  | 10 | 24 |  |
| Median age (IQR) | 7.4 (6.1, 9.8) | 9.6 (7.1, 11.9) | 0.92 (0.87, 0.98) | 7.2 (5.5, 9.2) | 8.6 (6.7, 11.6) | 0.91 (0.85, 0.98) |
| WHO stage: n (%) |  |  |  |  |  |  |
| 1 or 2 | 51 (67.1) | 42 (77.8) | 1.0 | 11 (28.2) | 16 (50.0) | 1.0 |
| 3 or 4 | 25 (32.9) | 12 (22.2) | 1.23 (0.92, 1.65) | 28 (71.8) | 16 (50.0) | 1.56 (0.94, 2.59) |
| Missing | 8 | 6 |  | 5 | 31 |  |

HAZ: height-for-age z-score; IQR: interquartile range; WAZ: weight-for-age z-score; WHO: World Health Organization