**Supplemental Digital Content 11:** Associations between enteropathogens and oral rotavirus vaccine immunogenicity among all infants with stool specimens collected in the first 6 months after birth[[1]](#footnote-1)**.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Individual** **pathogen** | **Non seroconverter** | **Seroconverter** | **Risk ratio for seroconversion****(n=205)** | **Seronegative** | **Seropositive** | **Risk ratio for seropositivity****(n=440)** | **Risk difference for GMT****(n=440)** |
| **N (%) with 1+ detections** | **N (%) with 1+ detections** | **Unadjusted**(95% CI) | **Adjusted[[2]](#footnote-2)**(95% CI) | **N (%) with 1+ detections** | **N (%) with 1+ detections** | **Unadjusted**(95% CI) | **Adjusted**(95% CI) | **Unadjusted**(95% CI) | **Adjusted**(95% CI) |
| Campylobacter spp. | 7 (4.3) | 4 (8.9) | 1.77(0.77, 4.08) | **3.31****(1.59, 6.90)** | 21 (6.4) | 7 (6.4) | 1.00(0.52, 1.94) | 1.36(0.73, 2.53) | 1.06(0.21, 5.47)) | 1.81(0.30, 10.9) |
| aEPEC | 14 (8.7) | 3 (6.7) | 0.78(0.20, 3.14) | 0.9(0.23, 3.61) | 30 (9.1) | 9 (8.2) | 0.91(0.48, 1.75) | 0.94(0.49, 1.82) | 0.52(0.12, 2.34) | 0.57(0.13, 2.56) |
| EAEC | 48 (29.8) | 13 (28.9) | 0.96(0.54, 1.72) | 0.88(0.49, 1.59) | 112 (33.9) | 29 (26.4) | 0.76(0.52, 1.11) | 0.74(0.49, 1.12) | 0.61(0.26, 1.47) | 0.57(0.23, 1.43) |
| ETEC | 7 (4.3) | 2 (4.4) | 1.06(0.31, 3.62) | 0.55(0.09, 3.18) | 21 (6.4) | 3 (2.7) | 0.49(0.18, 1.32) | 0.33(0.10, 1.08) | 0.16(0.02, 1.26) | 0.08(0.01, 0.84) |
| Adenovirus 40/41 | 13 (8.1) | 1 (2.2) | 0.29(0.04, 2.36) | 0.26(0.03, 2.08) | 32 (9.7) | 5 (4.5) | 0.52(0.24, 1.14) | 0.48(0.19, 1.23) | 0.23(0.05, 1.13) | 0.27(0.05, 1.46) |
| Astrovirus | 0 (0.0) | 2 (4.4) | -- | -- | 4 (1.2) | 3 (2.7) | 1.73(0.72, 4.19) | 2.02(0.88, 4.66) | 4.63(0.24, 90.5) | 6.34(0.28, 143) |
| Norovirus | 9 (5.6) | 3 (6.7) | 1.11(0.39, 3.20) | 0.87(0.24, 3.13) | 29 (8.8) | 11 (10.0) | 1.11(0.67, 1.85) | 1.09(0.62, 1.92) | 2.10(0.55, 8.08) | 2.30(0.57, 9.24) |
| NPEV | 15 (9.3) | 7 (15.6) | 1.51(0.69, 3.32) | 1.10(0.49, 2.43) | 35 (10.6) | 13 (11.9) | 1.10(0.68, 1.77) | 0.94(0.55, 1.63) | 1.36(0.38, 4.88) | 0.98(0.25, 3.86) |
| Sapovirus | 5 (3.1) | 1 (2.2) | 0.75(0.12, 4.84) | 1.16(0.33, 4.07) | 11 (3.3) | 1 (0.9) | 0.33(0.05, 2.20) | 0.42(0.07, 2.45) | 0.33(0.02, 4.73) | 0.53(0.03, 9.06) |
| Cryptosporidium | 3 (1.9) | 1 (2.2) | 1.18(0.22, 6.50) | 0.86(0.16, 4.61) | 4 (1.2) | 1 (0.9) | 0.79(0.13, 4.69) | 0.8(0.13, 4.66) | 0.28(0.00, 19.3) | 0.30(0.00, 26.2) |
| Giardia | 6 (3.7) | 2 (4.4) | 1.12(0.31, 4.03) | 1.22(0.31, 4.76) | 12 (3.6) | 3 (2.7) | 0.80(0.31, 2.04) | 1.2(0.49, 2.93) | 0.40(0.04, 4.53) | 1.14(0.08, 16.2) |
| **Pathogen** **burden** | **Mean** (SD) | **Mean** (SD**)** | **Unadjusted**(95% CI) | **Adjusted**(95% CI) | **Mean (SD)** | **Mean (SD)** | **Unadjusted**(95% CI) | **Adjusted**(95% CI) | **Unadjusted**(95% CI) | **Adjusted**(95% CI) |
| All pathogens9 | 0.83 (1.01) | 0.93 (0.94) | 1.07(0.84, 1.38) | 1.01(0.78, 1.31) | 0.99 (1.06) | 0.82 (0.89) | 0.88(0.74, 1.03) | 0.88(0.73, 1.06) | 0.73(0.48, 1.10) | 0.76(0.49, 1.18) |
| Bacteria | 0.50 (0.72) | 0.56 (0.76) | 1.08(0.73, 1.59) | 0.99(0.66, 1.50) | 0.60 (0.77) | 0.48 (0.71) | 0.84(0.66, 1.08) | 0.86(0.66, 1.13) | 0.63(0.36, 1.09) | 0.64(0.36, 1.14) |
| Viruses[[3]](#footnote-3) | 0.26 (0.52) | 0.31 (0.51) | 1.12(0.68, 1.85) | 1.07(0.68, 1.69) | 0.34 (0.57) | 0.30 (0.48) | 0.91(0.68, 1.21) | 0.87(0.63, 1.21) | 0.98(0.46, 2.07) | 1.01(0.46, 2.22) |
| Parasites | 0.06 (0.24) | 0.07 (0.25) | 1.07(0.38, 3.01) | 0.93(0.31, 2.84) | 0.05 (0.23) | 0.04 (0.19) | 0.72(0.31, 1.68) | 0.96(0.42, 2.21) | 0.28(0.04, 2.23) | 0.56(0.06, 5.18) |

1. We defined a more liberal window of stool specimen collection as stool collected at any point in the first 6 months of life. [↑](#footnote-ref-1)
2. Adjusted for age, sex, birthweight, season of birth, breastfeeding status, receipt of OPV, maternal MUAC and WASH intervention [↑](#footnote-ref-2)
3. Does not include Sabin viruses and rotavirus

Effect size (95% CI) marked in bold if P-value is significant at the false discovery rate (0.05). Where detections were too few to compute an effect size, marked in table with -- [↑](#footnote-ref-3)