Supplemental Table 1: Multivariable Predictors of seroconversion to >1:40 among participants with titers of each antigen <1:40 at baseline.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Beta | Standard Error | Adj R2 | p |
| A/H1N1-A/Brisbane |
|  | ccIIV4 (n=17) |  |  |  | -0.13 | 0.76 |
|  |  | Baseline HAI | 0.15 | 0.15 |  | 0.31 |
|  |  | Age | -0.01 | 0.04 |  | 0.89 |
|  |  | Vaccinated prior year | 0.04 | 0.34 |  | 0.90 |
|  | LAIV4 (n=19) |  |  |  | 0.27 | 0.05 |
|  |  | Baseline HAI | 0.02 | 0.10 |  | 0.83 |
|  |  | Age | -0.03 | 0.03 |  | 0.42 |
|  |  | Vaccinated prior year | 0.46 | 0.29 |  | 0.13 |
| A/H3N2-A/Kansas Egg Grown Virus |
|  | ccIIV4 (n=15) |  |  |  | 0.16 | 0.19 |
|  |  | Baseline HAI | -0.22 | 0.13 |  | 0.12 |
|  |  | Age | -0.05 | 0.04 |  | 0.19 |
|  |  | Vaccinated prior year | -0.41 | 0.25 |  | 0.14 |
|  | LAIV4 (n=15) |  |  |  | **0.37** | **<0.05** |
|  |  | Baseline HAI | -0.03 | 0.21 |  | 0.88 |
|  |  | Age | -0.16 | 0.08 |  | 0.06 |
|  |  | Vaccinated prior year | 0.37 | 0.40 |  | 0.37 |
| A/H3N2-A/Kansas Cell Grown Virus |  |  |  |  |
|  | ccIIV4 (n=28) |  |  |  | 0.16 | 0.07 |
|  |  | Baseline HAI | 0.04 | 0.10 |  | 0.67 |
|  |  | Age | -0.04 | 0.02 |  | 0.07 |
|  |  | Vaccinated prior year | -0.48 | 0.21 |  | 0.03 |
|  | LAIV4 (n=17) |  |  |  | -0.01 | 0.46 |
|  |  | Baseline HAI | -0.08 | 0.12 |  | 0.55 |
|  |  | Age | -0.05 | 0.04 |  | 0.28 |
|  |  | Vaccinated prior year | -0.54 | 0.34 |  | 0.13 |
| B/Victoria-B/Colorado |
|  | ccIIV4 (n=25) |  |  |  | **0.48** | **<0.001** |
|  |  | Baseline HAI | 0.02 | 0.09 |  | 0.81 |
|  |  | Age | -0.01 | 0.02 |  | 0.64 |
|  |  | Vaccinated prior year | -0.82 | 0.19 |  | **<0.001** |
|  | LAIV4 (n=26) |  |  |  | -0.10 | 0.84 |
|  |  | Baseline HAI | 0.03 | 0.10 |  | 0.81 |
|  |  | Age | -0.02 | 0.03 |  | 0.42 |
|  |  | Vaccinated prior year | -0.20 | 0.28 |  | 0.48 |
| B/Yamagata-B/Phuket |
|  | ccIIV4 (n=14)\* |  |  |  | **.** | **.** |
|  |  | Baseline HAI | . | . |  | **.** |
|  |  | Age | . | . |  | . |
|  |  | Vaccinated prior year | . | . |  | . |
|  | LAIV4 (n=14) |  |  |  | 0.06 | 0.33 |
|  |  | Baseline HAI | 0.17 | 0.10 |  | 0.10 |
|  |  | Age | 0.02 | 0.02 |  | 0.42 |
|  |  | Vaccinated prior year | -0.06 | 0.31 |  | 0.86 |

\*All participants in this group seroconverted to >1:40.

Supplemental Table 2: Multivariable Predictors of Mean Fold-Rise in Titer (ccIIV4 n=100 and LAIV4 n=98).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Beta | Standard Error | Adj R2 | p |
| A/H1N1-A/Brisbane |
|  | ccIIV4 |  |  |  | **0.44** | **<0.001** |
|  |  | Baseline HAI | -0.59 | 0.08 |  | **<0.001** |
|  |  | Age | 0.01 | 0.04 |  | 0.87 |
|  |  | Vaccinated prior year | -0.32 | 0.33 |  | 0.31 |
|  | LAIV4 |  |  |  | **0.09** | **0.008** |
|  |  | Baseline HAI | -0.18 | 0.05 |  | **<0.001** |
|  |  | Age | -0.00 | 0.03 |  | 0.97 |
|  |  | Vaccinated prior year | 0.15 | 0.23 |  | 0.49 |
| A/H3N2-A/Kansas Egg Grown Virus |
|  | ccIIV4 |  |  |  | **0.53** | **<0.001** |
|  |  | Baseline HAI | -0.21 | 0.02 |  | **<0.001** |
|  |  | Age | -0.01 | 0.01 |  | 0.57 |
|  |  | Vaccinated prior year | -0.05 | 0.08 |  | 0.56 |
|  | LAIV4 |  |  |  | **0.28** | **<0.001** |
|  |  | Baseline HAI | -0.12 | 0.02 |  | **<0.001** |
|  |  | Age | 0.00 | 0.01 |  | 0.63 |
|  |  | Vaccinated prior year | 0.18 | 0.06 |  | **0.004** |
| A/H3N2-A/Kansas Cell Grown Virus |  |  |  |  |
|  | ccIIV4 |  |  |  | **0.27** | **<0.001** |
|  |  | Baseline HAI | -0.49 | 0.09 |  | **<0.001** |
|  |  | Age | -0.10 | 0.04 |  | 0.02 |
|  |  | Vaccinated prior year | -0.44 | 0.37 |  | 0.23 |
|  | LAIV4 |  |  |  | **0.10** | **0.006** |
|  |  | Baseline HAI | -0.23 | 0.07 |  | **0.002** |
|  |  | Age | -0.05 | 0.03 |  | 0.12 |
|  |  | Vaccinated prior year | -0.06 | 0.25 |  | 0.82 |
| B/Victoria-B/Colorado |
|  | ccIIV4 |  |  |  | **0.45** | **<0.001** |
|  |  | Baseline HAI | -0.46 | 0.07 |  | **<0.001** |
|  |  | Age | -0.06 | 0.03 |  | 0.06 |
|  |  | Vaccinated prior year | -1.21 | 0.29 |  | **<0.001** |
|  | LAIV4 |  |  |  | **0.20** | **<0.001** |
|  |  | Baseline HAI | -0.30 | 0.06 |  | **<0.001** |
|  |  | Age | 0.01 | 0.03 |  | 0.70 |
|  |  | Vaccinated prior year | 0.05 | 0.26 |  | 0.85 |
| B/Yamagata-B/Phuket |
|  | ccIIV4 |  |  |  | **0.66** | **<0.001** |
|  |  | Baseline HAI | -0.75 | 0.06 |  | **<0.001** |
|  |  | Age | -0.03 | 0.03 |  | 0.27 |
|  |  | Vaccinated prior year | -0.53 | 0.24 |  | **0.03** |
|  | LAIV4 |  |  |  | **0.15** | **<0.001** |
|  |  | Baseline HAI | -0.21 | 0.05 |  | **<0.001** |
|  |  | Age | -0.03 | 0.02 |  | 0.20 |
|  |  | Vaccinated prior year | -0.18 | 0.21 |  | 0.39 |