

Supplemental Tables

Table S1. Association between rate of influenza-like illness and household covariates among household contacts under age five

| Covariate | ILI episodes | Follow up time (days) | Rate per 1000 days | Rate Ratio |
|---------------------------------|--------------|-----------------------|--------------------|-------------------|
| Maternal education level | | | | |
| No Education | 1,802 | 712,363 | 2.53 | 1.00 (REF) |
| Any Primary | 987 | 402,338 | 2.45 | 0.97 (0.90, 1.05) |
| Any Secondary | 217 | 109,717 | 1.98 | 0.78 (0.68, 0.90) |
| Household Size | | | | |
| Small | 454 | 183,105 | 2.48 | 1.00 (REF) |
| Medium | 654 | 248,975 | 2.63 | 1.06 (0.94, 1.19) |
| Large | 1,894 | 791,569 | 2.39 | 0.97 (0.87, 1.07) |
| Household Crowding | | | | |
| Low | 790 | 309,818 | 2.55 | 1.00 (REF) |
| Medium | 1,456 | 584,288 | 2.49 | 0.98 (0.90, 1.07) |
| High | 760 | 330,312 | 2.30 | 0.90 (0.82, 0.99) |
| Socioeconomic Status | | | | |
| Lowest 25% | 627 | 226,892 | 2.76 | 1.00 (REF) |
| Middle 50% | 1,547 | 611,960 | 2.53 | 0.91 (0.83, 1.00) |
| Highest 25% | 832 | 385,566 | 2.16 | 0.78 (0.70, 0.87) |

Table S2. Association between rate of laboratory-confirmed H1N1 influenza and household covariates among household contacts under age five.

| Covariate | Laboratory confirmed H1N1 | Follow up time (days) | Rate per 1000 days | Rate Ratio |
|---------------------------------|---------------------------|-----------------------|--------------------|-------------------|
| Maternal education level | | | | |
| No Education | 52 | 712,363 | 0.07 | 1.00 (REF) |
| Any Primary | 32 | 402,338 | 0.08 | 1.09 (0.70, 1.69) |
| Any Secondary | 5 | 109,717 | 0.05 | 0.62 (0.25, 1.56) |
| Household Size | | | | |
| Small | 11 | 183,874 | 0.06 | 1.00 (REF) |
| Medium | 18 | 248,975 | 0.07 | 1.21 (0.57, 2.55) |
| Large | 60 | 791,569 | 0.08 | 1.27 (0.67, 2.41) |
| Household Crowding | | | | |
| Low | 27 | 309,818 | 0.09 | 1.00 (REF) |
| Medium | 49 | 584,288 | 0.08 | 0.96 (0.60, 1.54) |
| High | 13 | 330,312 | 0.04 | 0.45 (0.23, 0.87) |
| Socioeconomic Status | | | | |
| Lowest 25% | 23 | 226,892 | 0.10 | 1.00 (REF) |
| Middle 50% | 50 | 611,960 | 0.08 | 0.81 (0.49, 1.32) |
| Highest 25% | 16 | 385,566 | 0.04 | 0.41 (0.22, 0.77) |

Table S3. Assessment for effect modification of association between vaccination status and laboratory-confirmed influenza among household contacts under age five by covariates of interest

| Covariate | Vaccine | Laboratory Confirmed Influenza (N) | Follow up time (days) | Rate per 1000 days | Rate Ratio | p-value EMM |
|---------------------------------|---------------|------------------------------------|-----------------------|--------------------|-------------------|-------------|
| Household Crowding | | | | | | |
| Low | Influenza | 42 | 154,050 | 0.27 | 0.92 (0.61, 1.40) | |
| | Meningococcal | 46 | 155,768 | 0.29 | 1.00 (REF) | |
| Medium | Influenza | 66 | 286,460 | 0.23 | 1.01 (0.72, 1.42) | 0.53 |
| | Meningococcal | 68 | 297,828 | 0.23 | 1.00 (REF) | |
| High | Influenza | 24 | 176,140 | 0.14 | 0.70 (0.41, 1.20) | |
| | Meningococcal | 30 | 154,172 | 0.19 | 1.00 (REF) | |
| Socioeconomic Status | | | | | | |
| Highest 25% | Influenza | 26 | 190,364 | 0.14 | 0.74 (0.45, 1.23) | |
| | Meningococcal | 36 | 195,202 | 0.18 | 1.00 (REF) | |
| Medium 50% | Influenza | 72 | 313,917 | 0.23 | 0.89 (0.62, 1.22) | 0.51 |
| | Meningococcal | 77 | 298,043 | 0.26 | 1.00 (REF) | |
| Lowest 25% | Influenza | 34 | 112,369 | 0.30 | 1.12 (0.69, 1.82) | |
| | Meningococcal | 31 | 114,523 | 0.27 | 1.00 (REF) | |
| Maternal Education Level | | | | | | |
| No Education | Influenza | 81 | 356,408 | 0.23 | 1.01 (0.74, 1.38) | |
| | Meningococcal | 80 | 355,955 | 0.22 | 1.00 (REF) | |
| Any Primary | Influenza | 42 | 200,404 | 0.21 | 0.73 (0.49, 1.08) | 0.49 |
| | Meningococcal | 58 | 201,934 | 0.29 | 1.0 (ref) | |
| Any Secondary | Influenza | 9 | 59,838 | 0.15 | 1.25 (0.44, 3.5) | |
| | Meningococcal | 6 | 49,879 | 0.12 | 1.0 (ref) | |

EMM: Effect measure modification

Table S4. Assessment for effect modification of association between vaccination status and influenza-like illness among household contacts under age five by covariates of interest

| Covariate | Vaccine | Influenza-like illness (N) | Follow up time (days) | Rate per 1000 days | Rate Ratio | p-value EMM |
|---------------------------------|---------------|----------------------------|-----------------------|--------------------|-------------------|-------------|
| Household Crowding | | | | | | |
| Low | Influenza | 366 | 154,050 | 2.38 | 0.87 (0.76, 1.00) | |
| | Meningococcal | 424 | 155,768 | 2.72 | 1.00 (REF) | |
| Medium | Influenza | 689 | 286,460 | 2.41 | 0.93 (0.84, 1.03) | 0.01 |
| | Meningococcal | 767 | 297,828 | 2.58 | 1.00 (REF) | |
| High | Influenza | 432 | 176,140 | 2.45 | 1.15 (0.99, 1.33) | |
| | Meningococcal | 328 | 154,172 | 2.13 | 1.00 (REF) | |
| Socioeconomic Status | | | | | | |
| Highest 25% | Influenza | 374 | 190,364 | 1.96 | 0.84 (0.73, 0.96) | |
| | Meningococcal | 458 | 195,202 | 2.35 | 1.00 (REF) | |
| Medium 50% | Influenza | 782 | 313,917 | 2.49 | 0.97 (0.88, 1.07) | 0.01 |
| | Meningococcal | 765 | 298,043 | 2.57 | 1.00 (REF) | |
| Lowest 25% | Influenza | 331 | 112,369 | 2.95 | 1.14 (0.97, 1.33) | |
| | Meningococcal | 296 | 114,523 | 2.58 | 1.00 (REF) | |
| Maternal Education Level | | | | | | |
| No Education | Influenza | 927 | 356,408 | 2.60 | 1.06 (0.96, 1.16) | |
| | Meningococcal | 875 | 355,955 | 2.46 | 1.00 (REF) | |
| Any Primary | Influenza | 448 | 200,404 | 2.23 | 0.84 (0.74, 0.95) | 0.01 |
| | Meningococcal | 539 | 201,934 | 2.67 | 1.00 (REF) | |
| Any Secondary | Influenza | 112 | 59,838 | 1.87 | 0.89 (0.68, 1.16) | |
| | Meningococcal | 105 | 49,879 | 2.10 | 1.00 (REF) | |

EMM: Effect measure modification