

# Supplemental Text 5:

## Socioeconomic bias in influenza surveillance

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### Models fit using ZIP Code level ILINet data.

| Surveillance Data Sources | Poverty Quartile                 |              |              |                                   | Aggregate |
|---------------------------|----------------------------------|--------------|--------------|-----------------------------------|-----------|
|                           | 1st quartile<br>(lowest poverty) | 2nd quartile | 3rd quartile | 4th quartile<br>(highest poverty) |           |
| ILI                       | 1.63                             | 1.87         | 2.80         | 3.14                              | 2.11      |
| Biosense                  | 1.63                             | 2.12         | 2.83         | 3.99                              | 2.52      |
| GFT                       | 1.28                             | 1.70         | 2.78         | 3.43                              | 2.00      |
| ILI + Biosense            | 1.72                             | 1.77         | 2.42         | 3.41                              | 1.94      |
| ILI + GFT                 | 1.47                             | 1.71         | 2.42         | 2.59                              | 1.66      |
| Biosense + GFT            | 1.34                             | 1.97         | 2.75         | 3.80                              | 2.35      |
| ILI + Biosense + GFT      | 1.34                             | 1.70         | 2.27         | 3.31                              | 1.56      |

**Table 1.** Out-of-sample (leave-one-out) root mean-squared error (ORMSE) for each Poisson generalized additive model with ZIP Code level data from ILINet as a possible predictor. Values are normalized by the population size of each ZIP Code quartile and then multiplied by  $10^6$  to obtain ORMSE per one million residents. The rightmost column gives aggregate ORMSE across all ZIP Codes in the six county area. The quartiles contained: [0-8) (1st quartile), [8-12) (2nd quartile), [12-21) (3rd quartile), and  $> 21$  (4th quartile) percent of residents below the poverty line.