

Table S4

| Model | Relative WIS | % WIS Below Baseline | 1 Wk Coverage | 2 Wk Coverage | 3 Wk Coverage | 4 Wk Coverage | % Cov abv 90 (1 Wk) | % Cov abv 90 (2 Wk) | % Cov abv 90 (3 Wk) | % Cov abv 90 (4 Wk) |
|---------------------------------|--------------|----------------------|---------------|---------------|---------------|---------------|---------------------|---------------------|---------------------|---------------------|
| 2021-2022 | | | | | | | | | | |
| CMU-TimeSeries | 0.78 | 88.46 | 90.17 | 91.45 | 90.60 | 86.54 | 50.00 | 72.22 | 61.11 | 27.78 |
| Flusight-ensemble | 0.83 | 96.15 | 89.32 | 86.11 | 85.15 | 83.33 | 55.56 | 33.33 | 27.78 | 38.89 |
| PSI-DICE | 0.84 | 86.54 | 88.89 | 83.87 | 78.31 | 76.50 | 38.89 | 27.78 | 5.56 | 0.00 |
| UMass-trends_ensemble | 0.91 | 63.46 | 96.15 | 97.65 | 96.90 | 96.15 | 100.00 | 100.00 | 100.00 | 100.00 |
| SGroup-RandomForest | 0.97 | 65.38 | 95.41 | 94.87 | 94.66 | 94.12 | 88.89 | 88.89 | 83.33 | 88.89 |
| CU-ensemble | 0.98 | 59.62 | 79.59 | 80.66 | 76.50 | 71.90 | 16.67 | 11.11 | 0.00 | 0.00 |
| GT-FluFNP | 0.98 | 60.00 | 70.11 | 68.67 | 68.22 | 70.11 | 5.56 | 16.67 | 16.67 | 22.22 |
| CEID-Walk | 0.99 | 59.62 | 82.09 | 83.77 | 81.01 | 81.85 | 37.50 | 37.50 | 31.25 | 37.50 |
| Flusight-baseline | 1.00 | 0.00 | 82.26 | 84.19 | 82.48 | 81.62 | 27.78 | 22.22 | 22.22 | 22.22 |
| SigSci-TSENS | 1.01 | 52.00 | 74.11 | 73.44 | 70.54 | 69.20 | 11.11 | 5.56 | 5.56 | 5.56 |
| IEM_Health-FluProject | 1.02 | 50.00 | 91.45 | 86.54 | 82.59 | 78.21 | 72.22 | 38.89 | 22.22 | 22.22 |
| LUcompUncertLab-TEVA | 1.05 | 38.46 | 84.86 | 85.58 | 86.06 | 86.18 | 25.00 | 18.75 | 25.00 | 31.25 |
| LUcompUncertLab-VAR2_plusCOVID | 1.08 | 50.00 | 76.70 | 74.77 | 73.30 | 70.14 | 17.65 | 5.88 | 5.88 | 5.88 |
| MOBS-GLEAM_FLUH | 1.08 | 36.00 | 71.11 | 65.80 | 59.79 | 56.49 | 0.00 | 0.00 | 0.00 | 0.00 |
| UT_FluCast-Voltaire | 1.14 | 30.77 | 94.73 | 90.96 | 89.13 | 90.42 | 83.33 | 72.22 | 55.56 | 61.11 |
| UVAFluX-Ensemble | 1.14 | 17.31 | 66.05 | 65.51 | 62.58 | 60.95 | 11.11 | 0.00 | 0.00 | 0.00 |
| LUcompUncertLab-VAR2K_plusCOVID | 1.20 | 28.85 | 75.72 | 75.24 | 74.04 | 72.72 | 6.25 | 0.00 | 0.00 | 0.00 |
| SGroup-SIKJalpha | 1.24 | 7.69 | 40.28 | 45.73 | 48.08 | 48.29 | 0.00 | 0.00 | 0.00 | 0.00 |
| LUcompUncertLab-VAR2 | 1.35 | 5.77 | 73.87 | 72.29 | 72.17 | 70.81 | 11.76 | 5.88 | 11.76 | 11.76 |
| LUcompUncertLab-VAR2K | 1.56 | 7.69 | 81.97 | 81.49 | 83.05 | 85.46 | 6.25 | 18.75 | 25.00 | 37.50 |
| LosAlamos_NAU-CModel_Flu | 1.60 | 13.46 | 65.28 | 59.29 | 56.52 | 54.06 | 5.56 | 0.00 | 0.00 | 0.00 |
| GH-Flusight | 1.88 | 3.85 | 18.33 | 12.90 | 11.99 | 10.63 | 0.00 | 0.00 | 0.00 | 0.00 |
| SigSci-CREG | 2.03 | 8.00 | 46.87 | 43.98 | 43.86 | 43.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2022-2023 | | | | | | | | | | |
| MOBS-GLEAM_FLUH | 0.65 | 100.00 | 78.42 | 74.60 | 73.41 | 75.32 | 30.77 | 19.23 | 15.38 | 15.38 |
| CMU-TimeSeries | 0.70 | 94.23 | 84.13 | 84.84 | 84.76 | 84.13 | 50.00 | 57.69 | 65.38 | 65.38 |
| MIGHTE-Nsemble | 0.70 | 100.00 | 83.65 | 81.19 | 78.10 | 72.22 | 56.00 | 52.00 | 60.00 | 52.00 |
| PSI-DICE | 0.71 | 98.08 | 86.09 | 78.18 | 73.22 | 71.60 | 57.69 | 61.54 | 57.69 | 53.85 |
| Flusight-ensemble | 0.74 | 100.00 | 83.14 | 78.18 | 74.70 | 73.59 | 57.69 | 61.54 | 57.69 | 53.85 |
| JHU_IDD-CovidSP | 0.82 | 72.55 | 84.86 | 79.03 | 75.27 | 72.04 | 59.09 | 54.55 | 50.00 | 50.00 |
| UMass-trends_ensemble | 0.83 | 92.31 | 90.01 | 88.24 | 85.21 | 83.65 | 73.08 | 69.23 | 65.38 | 65.38 |
| CU-ensemble | 0.85 | 92.31 | 67.83 | 67.05 | 65.12 | 62.76 | 36.36 | 45.45 | 45.45 | 45.45 |
| SGroup-RandomForest | 0.88 | 92.31 | 88.08 | 81.38 | 78.23 | 76.46 | 68.00 | 64.00 | 64.00 | 60.00 |
| GT-FluFNP | 0.89 | 86.00 | 73.24 | 69.58 | 72.07 | 74.65 | 50.00 | 50.00 | 50.00 | 61.54 |
| UNC_IDD-InflPaint | 0.94 | 70.59 | 71.93 | 70.56 | 71.05 | 71.84 | 55.00 | 40.00 | 55.00 | 50.00 |
| Flusight-baseline | 1.00 | 0.00 | 74.63 | 69.30 | 65.83 | 64.05 | 50.00 | 50.00 | 50.00 | 50.00 |
| UGA_flucast-OKeeffe | 1.02 | 52.94 | 76.31 | 67.69 | 62.75 | 60.39 | 40.00 | 36.00 | 28.00 | 28.00 |
| UVAFluX-Ensemble | 1.03 | 37.25 | 40.87 | 41.25 | 37.03 | 37.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| CEPH-Rtrend_fluH | 1.05 | 50.00 | 70.99 | 75.92 | 74.83 | 73.24 | 34.78 | 39.13 | 47.83 | 34.78 |
| VTSanghani-ExogModel | 1.05 | 40.38 | 63.00 | 58.15 | 55.31 | 55.13 | 0.00 | 0.00 | 0.00 | 4.76 |
| SigSci-TSENS | 1.09 | 12.00 | 71.60 | 68.97 | 67.54 | 65.63 | 46.15 | 46.15 | 46.15 | 50.00 |
| SigSci-CREG | 1.16 | 14.00 | 61.83 | 54.74 | 50.70 | 48.15 | 38.46 | 38.46 | 34.62 | 34.62 |
| ISU_NiemiLab-Flu | 1.25 | 3.85 | 54.81 | 55.19 | 49.42 | 46.35 | 20.00 | 25.00 | 10.00 | 10.00 |

Table S4: % WIS Below Baseline shows the percent of WIS values for each model below the corresponding FluSight-Baseline WIS. The '% Cov abv 90' columns show the percent of weekly 95% coverage values that are greater than or equal to 90% for each model by horizon.