Influenza (Flu)

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Forecasts of Flu Hospital Admissions
Updated December 22, 2023

Reported and forecasted new influenza hospital admissions as of December 20, 2023.

Interpretation of Forecasts of New Hospital Admissions

- This week's ensemble predicts that the number of new weekly laboratory confirmed influenza hospital admissions will likely increase nationally, with **6,600 to 25,000** laboratory confirmed influenza hospital admissions likely reported in the week ending January 6, 2024.

- This week, 24 modeling groups contributed 29 forecasts that were eligible for inclusion in the ensemble forecasts for at least one jurisdiction. Contributing teams are listed below.

- Ensemble forecasts combine forecasts from diverse models into one forecast. They have been among the most reliable forecasts in performance for previous influenza and COVID-19 forecasting efforts, but even the ensemble forecasts may not reliably predict rapid changes.

- The figure shows the number of new laboratory confirmed influenza hospital admissions reported in the United States each week from September 1 through December 16 and forecasted new influenza hospital admissions per week for this week and the next 2 weeks, through January 6. Hospitals are required to report daily laboratory-confirmed influenza hospitalizations to HHS Protect. See COVID-19 Guidance for Hospital Reporting and FAQs [680 KB, 52 pages] for additional details on this guidance.

National Forecast
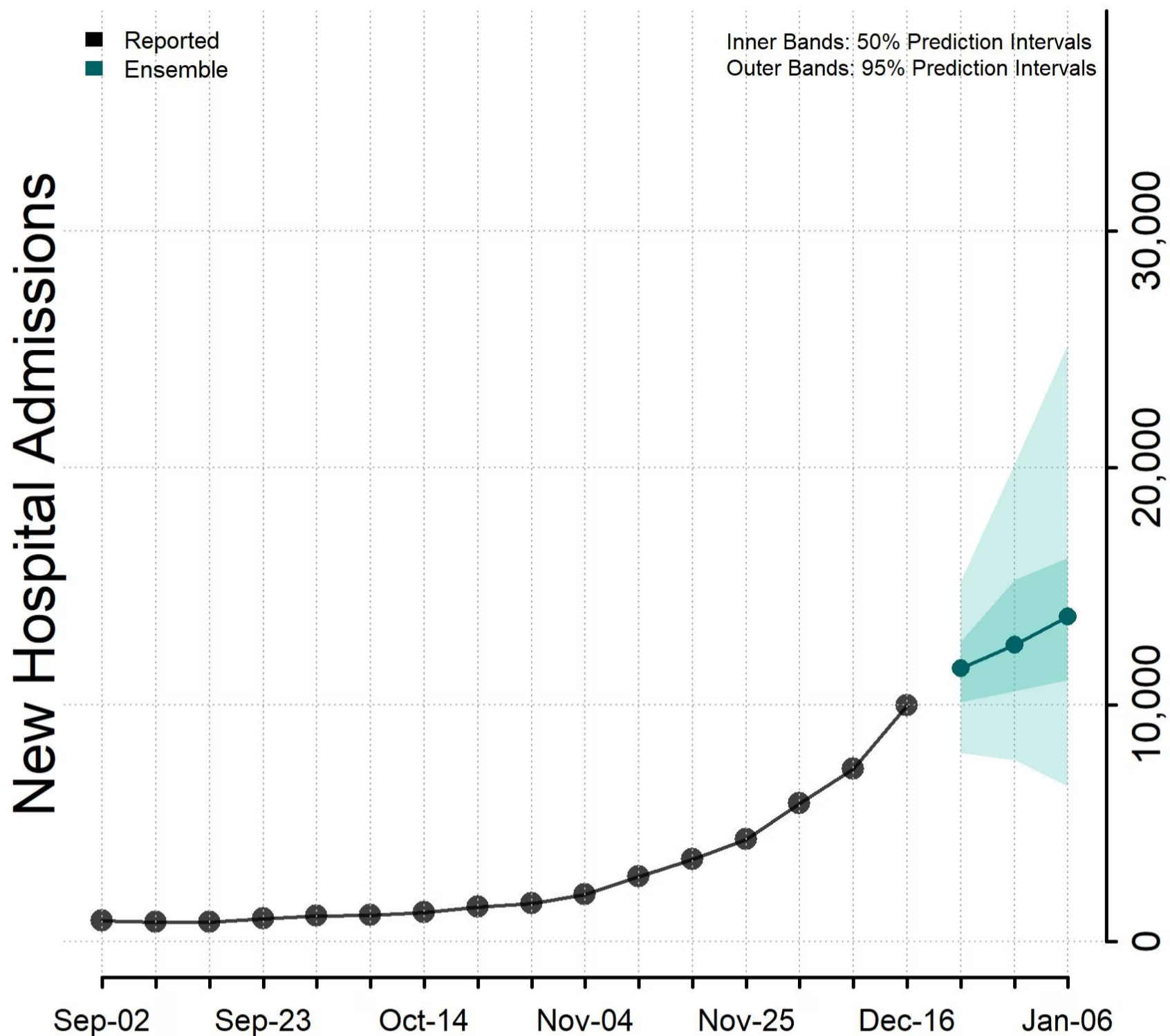
Download all national data   [XLS – 10 KB]

State Forecasts

State-level forecasts show the predicted number of new laboratory confirmed influenza hospital admissions per week for this week and the next 2 weeks by state. Each state forecast figure uses a different scale due to differences in the number of new influenza hospital admissions per week between states and only forecasts included in the ensemble are shown. Plots of the state-level ensemble forecasts and the underlying data can be downloaded below.

Download state forecasts   [801 KB, 14 pages]

Download all forecast data   [XLS – 390 KB]

Additional forecast data and information about submitting forecasts are available at https://github.com/cdcepi/FluSight-forecast-hub ☑ .

Contributing Teams and Models

- California Department of Public Health (CADPH) ☑ (Model: FluCAT)
- Carnegie Mellon Delphi Group ☑ (Model: CMU-TimeSeries)
- Center for Forecasting and Outbreak Analytics (CFA/CDC); renewal model team (Model: cfa-flu-epidemia-light)

- Center for Forecasting and Outbreak Analytics (CFA/CDC); SEIR model team (Model: flu-mechanistic)
- CEPH Lab at Indiana University ↗ (Model: Rtrend_fluH)
- Columbia University ↗ (Model: CU-ensemble)
- Fogarty International Center, National Institutes of Health (NIH) ↗ (Model: Flu_ARIMA)
- Georgia Institute of Technology ↗ (Model: GT-FluFNP)
- Los Alamos National Lab and Northern Arizona University ↗ (Model: LosAlamos_NAU-CModel_Flu)
- LU Computational Uncertainty Lab ↗ (Model: Chimera)
- MIGHTE ↗ (Model: Nsemble)
- MOBS Lab at Northeastern ↗ (Model: MOBS-GLEAM_FLUH)
- Northeastern University & University of California San Diego ↗ (Model: GLEAM_AI_FLUH)
- Norwegian Institute of Public Health – Fjordhest ↗ (Model: fjordhest-ensemble)
- Predictive Science Inc ↗ (Model: PSI-PROF)
- Signature Science ↗ (Model: SigSci-CREG)
- Signature Science ↗ (Model: SigSci-TSENS)
- Srivastava Group ↗ (Model: SGroup-RandomForest)
- Stevens Institute of Technology ↗ (Model: Gradient Boosting Regressors)
- UNC Infectious Disease Dynamics ↗ (Model: InfluPaint)
- University of Georgia Center for the Ecology of Infectious Diseases Forecasting Working Group ↗ (Model: Copycat)
- University of Georgia Center for the Ecology of Infectious Diseases Forecasting Working Group ↗ (Model: INFLAenza)
- University of Guelph Dynamics Training Lab ↗ (Model: Composite Curve)
- University of Guelph Dynamics Training Lab ↗ (Model: GRYPHON)
- University of Massachusetts-Amherst ↗ (Model: UMass-trends_ensemble)
- University of Massachusetts-Amherst ↗ (Model: flusion)
- University of Michigan, Computer Science and Engineering ↗ (Model: DeepOutbreak)
- University of Virginia, Biocomplexity Institute ↗ (Model: UVAFluX-Ensemble)
- Virginia Tech, Sanghani Center for Artificial Intelligence and Data Analytics ↗ (Model: Ensemble Model)

Last Reviewed: December 22, 2023