Influenza (Flu)

# Forecasts of Flu Hospital Admissions
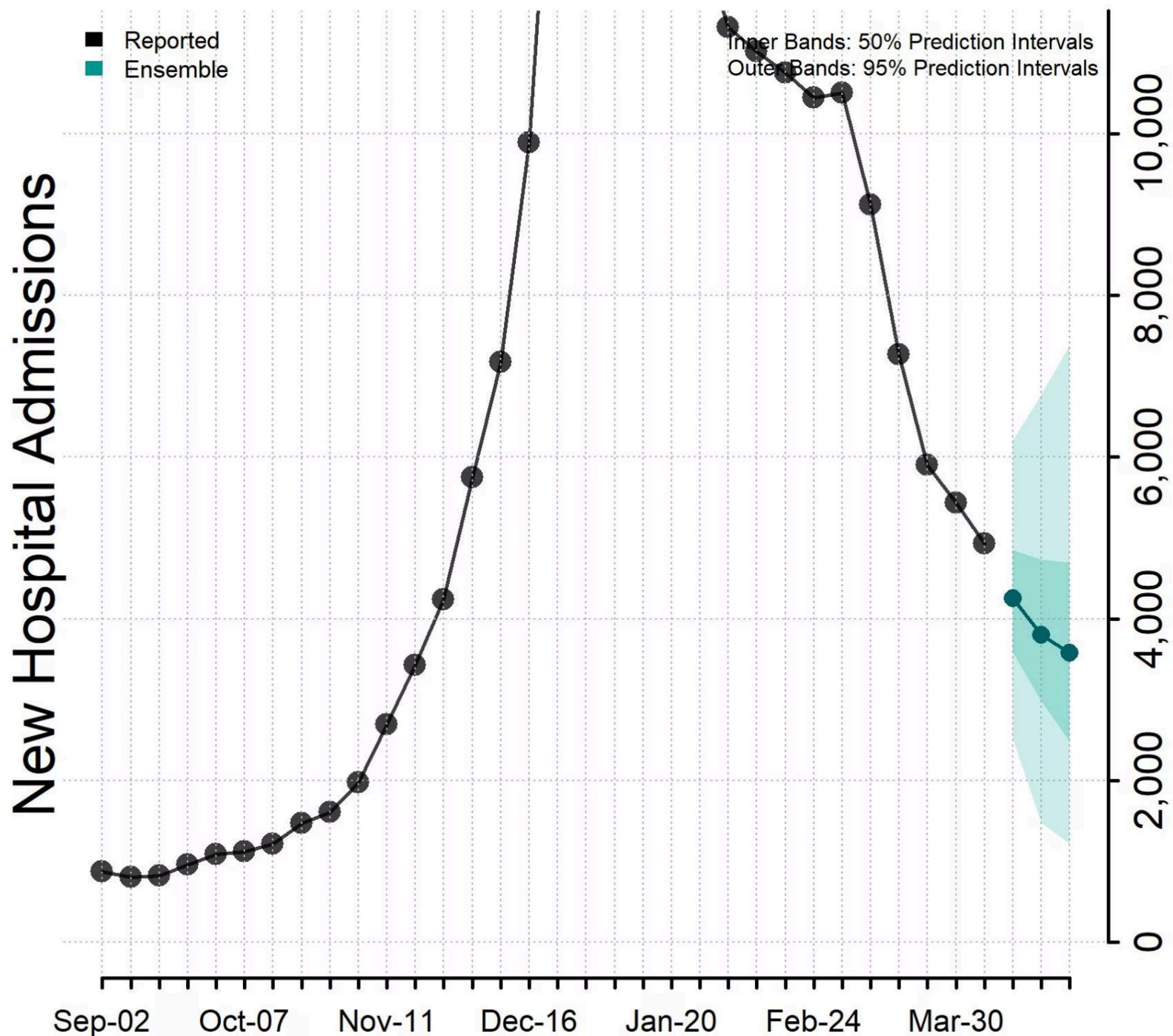Updated April 15, 2024

## Reported and forecasted new influenza hospital admissions as of April 10, 2024.

### 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 decrease nationally, with **1,200 to 7,400** laboratory confirmed influenza hospital admissions likely reported in the week ending April 27, 2024.

- This week, 23 modeling groups contributed 27 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 April 6 and forecasted new influenza hospital admissions per week for this week and the next 2 weeks, through April 27. Hospitals are required to report daily laboratory-confirmed influenza hospitalizations to the National Healthcare Safety Network (NHSN). See COVID-19 Guidance for Hospital Reporting and FAQs [658 KB, 52 pages] for additional details on this guidance.

# National Forecast



Reported / Ensemble

Inner Bands: 50% Prediction Intervals
Outer Bands: 95% Prediction Intervals

New Hospital Admissions

Sep-02   Oct-07   Nov-11   Dec-16   Jan-20   Feb-24   Mar-30

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  [930 KB, 14 pages]

Download all forecast data  [XLS – 375 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)
- Iowa State Niemi Research Lab [↗] (Model: Nonlinear ASG Hierarchical)
- Los Alamos National Lab and Northern Arizona University [↗] (Model: LosAlamos_NAU-CModel_Flu)
- LU Computational Uncertainty Lab [↗] (Model: Chimera)
- MOBS Lab at Northeastern [↗] (Model: MOBS-GLEAM_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)
- The Center for Systems Science and Engineering at Johns Hopkins University [↗] (Model: CSSE Ensemble)
- 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 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)

Last Reviewed: April 15, 2024