COVID-19 Forecasts: Deaths

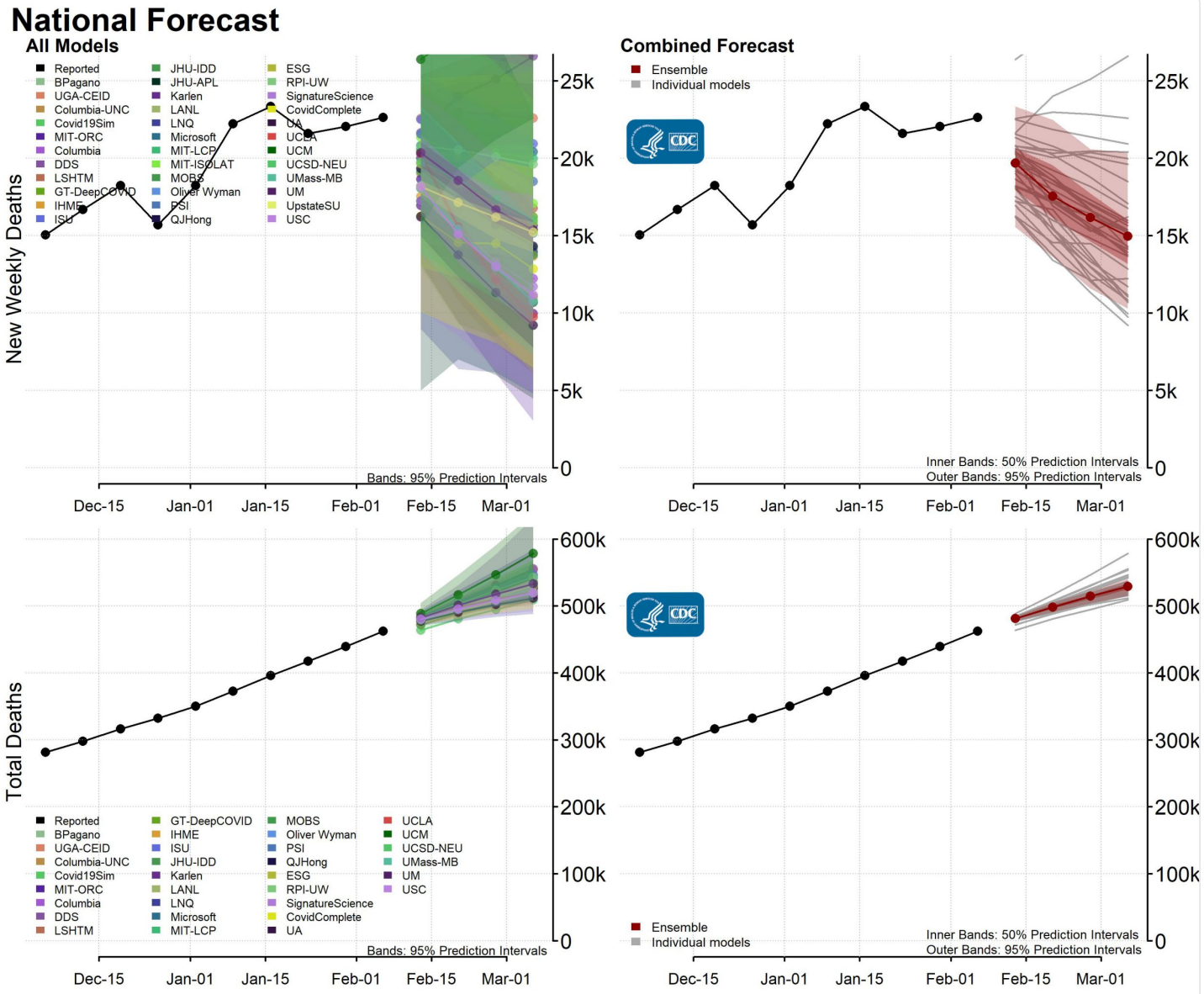
Updated Feb. 10, 2021 Print

Observed and forecasted new and total reported COVID-19 deaths as of February 8, 2021.

Interpretation of Forecasts of New and Total Deaths

- This week, ensemble forecasts of COVID-19 deaths over the next 4 weeks included forecasts from 40 modeling groups, each of which contributed a forecast for new or total deaths for at least one jurisdiction.
- This week's national ensemble forecast predicts that the number of newly reported COVID-19 deaths will likely decrease over the next 4 weeks, with 10,300 to 20,400 new deaths likely reported in the week ending March 6, 2021. The national ensemble predicts that a total of 515,000 to 540,000 COVID-19 deaths will be reported by this date.
- The state- and territory-level ensemble forecasts predict that over the next 4 weeks, the number of newly reported deaths per week will likely decrease in 30 jurisdictions, which are indicated in the forecast plots below. Trends in numbers of future reported deaths are uncertain or predicted to remain stable in the other states and territories.

National Forecast



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- The top row of the figure shows the number of new COVID-19 deaths reported in the United States each week from December 5 through February 6 and forecasted new deaths over the next 4 weeks, through March 6.
- The bottom row of the figure shows the number of total COVID-19 deaths in the United States each week from December 5 through February 6 and the forecasted number of total COVID-19 deaths over the next 4 weeks, through March 6.
- Models make various assumptions about the levels of social distancing and other interventions, which may not reflect recent changes in behavior.

Download national forecast data [XLS – 33 KB]

State Forecasts

Plots of individual state forecasts, each state-level ensemble forecast, and the underlying data can be downloaded below. Each state forecast figure uses a different scale, due to differences in the number of COVID-19 deaths between states.

Download state forecasts [2MB, 29 pages] [1]

Download forecast data [CSV – 1 MB]

Additional forecast data and information on forecast submission are available at the COVID-19 Forecast Hub.

Forecasts on COVID Data Tracker

View interactive visualizations of current and past cumulative and weekly COVID-19 death forecasts for the U.S. states and territories. Also, find maps and charts tracking cases, deaths, and trends of COVID-19 in the U.S.

Ensemble Forecast

An "ensemble" forecast combines each of the independently developed forecasts into one aggregate forecast to improve prediction over the next 4 weeks. Both national- and state-level ensemble forecasts are developed for predicting new and total COVID-19 deaths reported each week for the next 4 weeks. Ensemble Forecasts of Coronavirus Disease 2019 (COVID-19) in the U.S. describes its accuracy in short-term predictions and its usefulness as a real-time tool to help guide policy and planning.

Forecast Inclusion and Assumptions

The forecast included in the ensembles are displayed below. Forecasts are included when they meet a set of submission and data quality requirements, further described here: https://github.com/reichlab/covid-19-forecast-hub#ensemble-model.

The forecasts make different assumptions about social distancing measures. Information about individual models is available here: https://github.com/cdcepi/COVID-19-Forecasts/blob/master/COVID-19_Forecast_Model_Descriptions.md. The list below includes all models that submitted a national- or state-level forecast.

Forecasts fall into one of two categories:

- These modeling groups make assumptions about how levels of social distancing will change in the future:
  - Columbia University (Model: Columbia)
  - Covid-19 Simulator Consortium (Model: Covid19Sim)
  - Georgia Institute of Technology, Center for Health and Humanitarian Systems (Model: GT-CHHS)
  - Google and Harvard School of Public Health (Model: Google-HSPH)
  - Institute for Health Metrics and Evaluation (Model: IHME)
  - Johns Hopkins University, Infectious Disease Dynamics Lab (Model: JHU-IDD)
  - Predictive Science Inc. (Model: PSI)
  - University of California, Los Angeles (Model: UCLA)
- These modeling groups assume that existing social distancing measures will continue through the projected 4-week time period:

- Bob Pagano (Model: BPagano)
- Carnegie Mellon Delphi Group (Model: CMU)
- Columbia University and University of North Carolina (Model: Columbia-UNC)
- Discrete Dynamical Systems (Model: DDS)
- Georgia Institute of Technology, College of Computing (Model: GT-DeepCOVID)
- Iowa State University (Model: ISU)
- Johns Hopkins University Applied Physics Lab (Model: JHU-APL)
- Johns Hopkins University, Center for Systems Science and Engineering (Model: JHU-CSSE)
- Karlen Working Group (Model: Karlen)
- London School of Hygiene and Tropical Medicine (Model: LSHTM)
- LockNQuay (Model: LNQ)
- Los Alamos National Laboratory (Model: LANL)
- Massachusetts Institute of Technology, Institute for Data, Systems, and Society (Model: MIT-ISOLAT)
- Massachusetts Institute of Technology, Laboratory of Computational Physiology (Model: MIT-LCP)
- Massachusetts Institute of Technology, Operations Research Center (Model: MIT-ORC)
- Microsoft AI (Model: Microsoft)
- Northeastern University, Laboratory for the Modeling of Biological and Socio-technical Systems (Model: MOBS)
- Oliver Wyman (Model: Oliver Wyman)
- Qi-Jun Hong (Model: QJHong)
- Rensselaer Polytechnic Institute and University of Washington (Model: RPI-UW)
- Robert Walraven (Model: ESG)
- Signature Science (Model: SignatureScience)
- Steve McConnell (Model: CovidComplete)
- State University of New York, Upstate Medical University and Syracuse University (Model: UpstateSU)
- University of Arizona (Model: UA)
- University of California, Merced (Model: UCM)
- University of California, San Diego and Northeastern University (Model: UCSD-NEU)
- University of Georgia, Center for the Ecology of Infectious Disease (Model: UGA-CEID)
- University of Massachusetts, Amherst (Models: UMass-MB and Ensemble)
- University of Michigan (Model: UM)
- University of Southern California (Model: USC)
- Walmart Labs Data Science Team (Model: Walmart)

[1] The full range of the prediction intervals is not visible for all state plots. Please see the forecast data for the full range of state-specific prediction intervals.

Additional Resources:

Previous COVID-19 Forecasts: Deaths

FAQ: COVID-19 Data and Surveillance

CDC COVID Data Tracker

COVID-19 Mathematical Modeling

Ensemble Forecasts of Coronavirus Disease 2019 (COVID-19) in the U.S.

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Content source: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases