



Coronavirus Disease 2019 (COVID-19)

COVID-19 Forecasts: Deaths

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Updated Sept. 24, 2020

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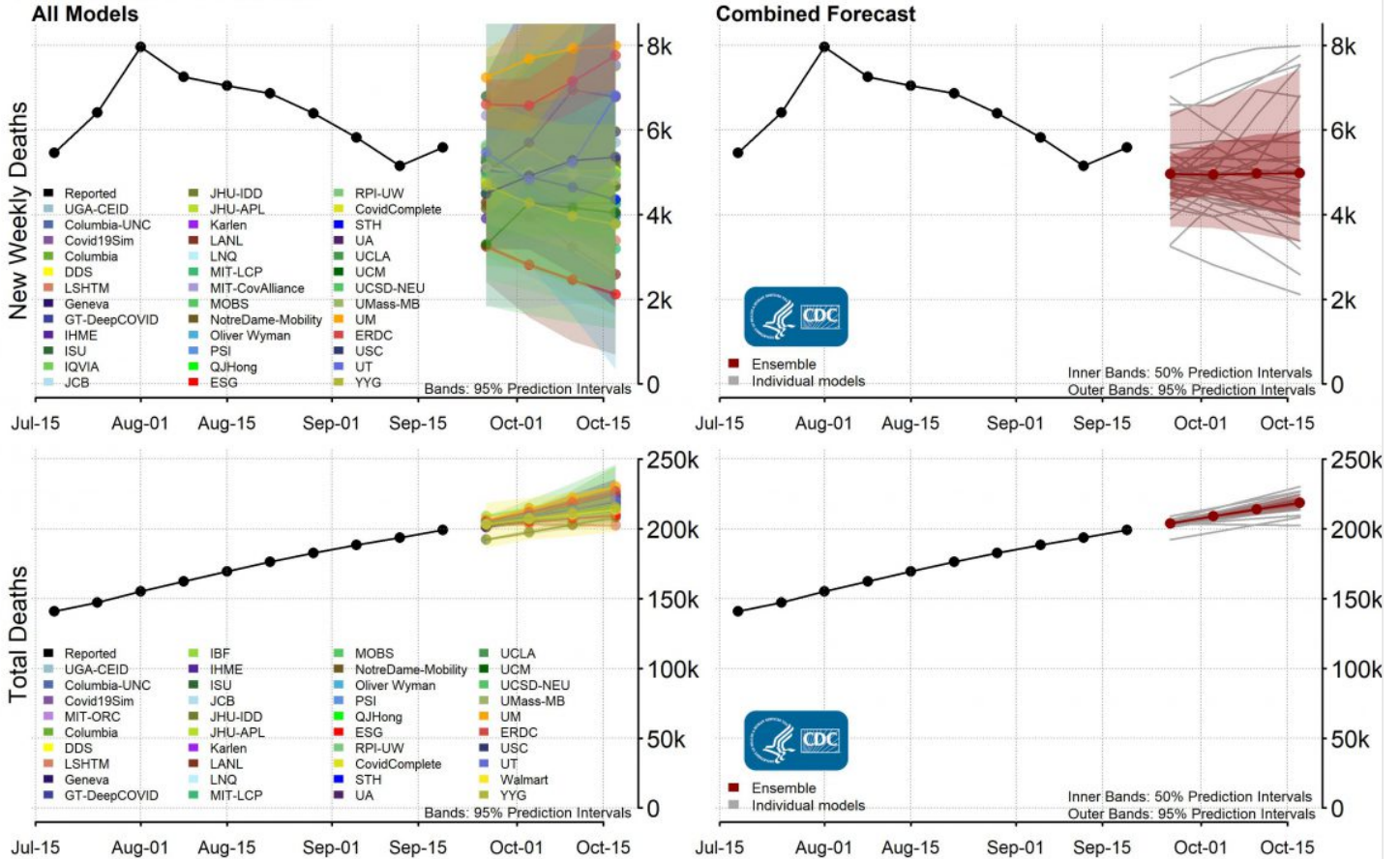
Observed and forecasted new and total reported COVID-19 deaths as of September 21, 2020.

Interpretation of Forecasts of New and Total Deaths

- This week CDC received forecasts of national COVID-19 deaths over the next 4 weeks from 41 modeling groups. Of the 41 groups, 36 provided forecasts for both new and total deaths, three groups forecasted total deaths only, and two forecasted new deaths only.
- This week's national [ensemble forecast](#) indicates an uncertain trend in new COVID-19 deaths reported over the next four weeks and predicts that 3,400 to 7,400 new deaths will likely be reported during the week ending October 17, 2020. The national ensemble predicts that a total of 214,000 to 226,000 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 may decrease in 5 jurisdictions and increase in one jurisdiction, 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

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 July 18 through September 19 and forecasted new deaths over the next four weeks, through October 17.
- The bottom row of the figure shows the number of total COVID-19 deaths in the United States each week from July 18 through September 19 and the forecasted number of total COVID-19 deaths over the next four weeks, through October 17.
- Models make various assumptions about the levels of social distancing and other interventions, which may not reflect recent changes in behavior.

State Forecasts

This week, 42 modeling groups submitted a forecast for new or total deaths in at least one state or territory. Plots of these 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](#) [29 pages]¹

[Download forecast data](#) [1 sheet]

Additional forecast data and information on forecast submission are available at the [COVID-19 Forecasting Hub](#).



Forecasts on COVID Data Tracker

View interactive visualizations of current and past cumulative 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 Assumptions

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)
 - [Google and Harvard School of Public Health](#) (Model: Google-HSPH)
 - [Institute of Health Metrics and Evaluation](#) (Model: IHME)
 - [John Burant](#) (Model: JCB)
 - [Johns Hopkins University, Infectious Disease Dynamics Lab](#) (Model: JHU-IDD)
 - [Notre Dame University](#) (Model: NotreDame-FRED)
 - [Predictive Science Inc.](#) (Model: PSI)
 - [University of California, Los Angeles](#) (Model: UCLA)
 - [Youyang Gu \(COVID-Projections\)](#) (Model: YYG)
- These modeling groups assume that existing social distancing measures will continue through the projected four-week time period:
 - [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)
 - [Institute for Business Forecasting](#) (Model: IBF)
 - [Iowa State University](#) (Model: ISU)

- [IQVIA Analytics Center of Excellence](#)  (Model: IQVIA)
- [Johns Hopkins University Applied Physics Lab](#)  (Model: JHU-APL)
- [Karlen Working Group](#)  (Model: Karlen)
- [LockNQuay](#)  (Model: LNQ)
- [London School of Hygiene and Tropical Medicine](#)  (Model: LSHTM)
- [Los Alamos National Laboratory](#)  (Model: LANL)
- [Massachusetts Institute of Technology, COVID-19 Policy Alliance](#)  (Model: MIT-CovAlliance)
- [Massachusetts Institute of Technology, Laboratory for Computational Physiology](#)  (Model: MIT-LRC)
- [Massachusetts Institute of Technology, Operations Research Center](#)  (Model: MIT-ORC)
- [Northeastern University, Laboratory for the Modeling of Biological and Socio-technical Systems](#)  (Model: MOBS)
- [Notre Dame University](#)  (Model: NotreDame-Mobility)
- [Oliver Wyman](#)  (Model: Oliver Wyman)
- [Qi-Jun Hong](#)  (Model: QJHong)
- [Rensselaer Polytechnic Institute and University of Washington](#)  (Model: RPI-UW)
- [Robert Walraven](#)  (Model: ESG)
- [Steve Horstman](#)  (Model: STH)
- [Steve McConnell](#)  (Model: CovidComplete)
- [US Army Engineer Research and Development Center](#)   (Model: ERDC)
- [University of Arizona](#)  (Model: UA)
- [University of California, Merced](#)  (Model: UCM)
- [University of California, San Diego and Northeastern University](#)  (Model: UCSD-NEU)
- [University of Geneva/Swiss Data Science Center \(one-week ahead forecasts only\)](#)  (Model: Geneva)
- [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)
- [University of Texas, Austin](#)  (Model: UT)
- [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.](#) 

Last Updated Sept. 24, 2020

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