

# COVID-19 (Coronavirus Disease)



### COVID-19 Forecasts: Cases

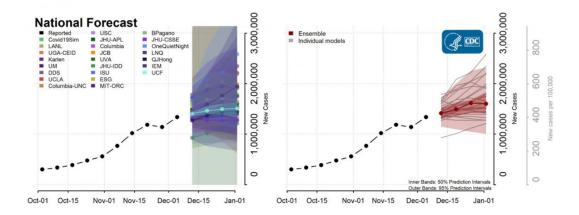
Updated Dec. 9, 2020

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## Interpretation of Forecasts of New Cases

- This week, CDC received forecasts of new reported COVID-19 cases over the next 4 weeks from 30 modeling groups that were included in the ensemble forecasts.
- This week's national ensemble predicts that 1,000,000 to 2,300,000 new cases will likely be reported during the week ending January 2, 2021.
- Over the last several weeks, more reported cases than expected have fallen outside
  of the forecasted prediction intervals. This suggests that current forecast prediction
  intervals may not reflect the full range of future reported case numbers. Forecasts
  for new cases should be interpreted accordingly.

#### **National Forecasts**



- The figure shows the number of new COVID-19 cases reported nationally in the United States each week from October 3 to December 5, 2020 and forecasted new cases over the next 4 weeks, through January 2, 2021.
- Models make various assumptions about the levels of social distancing and other interventions, which may not reflect recent changes in behavior. See model descriptions below for details.

## State & County Forecasts

State-level and county-level forecast figures show observed and forecasted new COVID-19 cases in each location. Each forecast uses a different scale due to differences in the numbers of COVID-19 cases occurring in each jurisdiction. To aid in comparisons between jurisdictions, the ensemble plot for each location has a second axis (in grey) that shows the expected number of cases per 100,000 people.

Download forecasts for states and territories and for counties [PDF – 11 MB] 1

Download all forecast data [CSV – 16 MB]

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

## Forecast Inclusion and Assumptions

The forecasts 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/covid19-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 ...

Intervention assumptions fall into one of three 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 <a> ☐</a> (Model: CovidSim)
  - Johns Hopkins University, Infectious Disease Dynamics Lab ☑ (Model: JHU-IDD)
  - John Burant [ (Model: JCB)
  - University of California, Los Angeles ☐ (Model: UCLA)
- These 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)
  - IEM ☑ (Model: IEM)
  - 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)

Johns Hopkins University, University of North Carolina, and Google (Model: JHU-UNC-Google)
- Karlen Working Group ☑ (Model: Karlen)
- LockNQuay ☑ (Model: LNQ)
<ul> <li>Los Alamos National Laboratory  (Model: LANL)</li> </ul>
<ul> <li>Massachusetts Institute of Technology, Operations Research Center  (Model: MIT-ORC)</li> </ul>
<ul> <li>OneQuietNight ☑ (Model: OneQuietNight)</li> </ul>
<ul> <li>Pandemic Central  (Model: PandemicCentral)</li> </ul>
- Qi-Jun Hong ☑ (Model: QJHong)
- Robert Walraven ☑ (Model: ESG)
<ul> <li>University of California, Santa Barbara [ (Model: UCSB)</li> </ul>
<ul> <li>University of Central Florida ☑ (Model: UCF)</li> </ul>
<ul> <li>University of Georgia Center for the Ecology of Infectious Diseases Forecasting Working Group  (Model: UGA-CEID)</li> </ul>
<ul> <li>University of Massachusetts, Amherst  (Model: UMass)</li> </ul>
- University of Michigan ☑ (Model: UM)
<ul> <li>University of Southern California  (Model: USC)</li> </ul>
- Wadhwani Al 🖸 (Model: Wadhwani)
<ul> <li>The University of Virginia (Model UVA) model makes both assumptions, combining different models.</li> </ul>
<sup>1</sup> 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: Cases
FAQ: COVID-19 Data and Surveillance
CDC COVID Data Tracker

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

COVID-19 Mathematical Modeling