Centers for Disease Control and Prevention CDC 24/7: Saving Lives, Protecting People™

COVID-19







COVID-19 Forecasts: Hospitalizations

Updated Jan. 13, 2021 Print

Interpretation of Forecasts of New Hospitalizations

- This week, CDC received forecasts of daily, new reported COVID-19 hospital admissions over the next 4 weeks from 12 modeling groups that were included in the ensemble forecasts.
- This week's national ensemble predicts a likely increase in number of daily new confirmed COVID-19 hospital admissions, with 14,000 to 25,000 new confirmed COVID-19 hospital admissions reported February 8, 2021.
- The state- and territory-level ensemble forecasts predict that over the next 4 weeks, the number of daily confirmed COVID-19 hospital admissions will likely increase in 8 jurisdictions and decrease in 4 jurisdictions, which are indicated in the forecast plots below. Trends in numbers of future reported hospital admissions are uncertain or predicted to remain stable in the other states and territories.
- In previous weeks, all submitted forecasts were displayed, even if they were not included in the ensemble forecasts. Starting this week, only forecasts meeting a set of inclusion criteria are shown for jurisdictions with ensemble forecasts. Further details are available here: https://covid19forecasthub.org/doc/ensemble/ 1.

National Forecasts

National Forecast



- The figure shows the number of new confirmed COVID-19 hospital admissions reported nationally in the United States each day from November 3, 2020 to January 4, 2021 and the predicted number of new COVID-19 hospital admissions per day for the next 4 weeks, for January 11, 2021 through February 8, 2021.
- The forecasts make different assumptions about hospitalization rates and levels of social distancing and other interventions and use different methods to estimate the number of new hospital admissions. See model descriptions below for details.

Download national forecast data 🖉 [XLSX – 22 KB]

State Forecasts

State-level forecasts show the predicted number of new COVID-19 hospital admissions per day for the next 4 weeks by state. Each state uses a different scale, due to differences in the number of new COVID-19 hospital admissions per day in each state.

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Download state forecasts 📙 [2 MB, 14 pages] <sup>1</sup>
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Download all forecast data 💵 [CSV, 1 MB]

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

Forecast Assumptions

The forecasts make different assumptions about social distancing measures and use different methods and data sets to estimate the number of new hospital admissions. Additional individual models details are available here; https://github.com/cdcepi/COVID-19-Forecasts/blob/master/COVID-19_Forecast_Model_Descriptions.md

Reported daily new hospital admissions can vary due to variable staffing and inconsistent reporting patterns within the week. Thus, daily variations in the reported numbers and the forecasts may not fully represent the true number of confirmed COVID-19 hospital admissions in each jurisdiction on a specific day. Additional information on use of HHS-reported hospital admissions for COVID-19 forecasts is available here: https://github.com/reichlab/covid19-forecast-hub/blob/master/data-processed/README.md#hospitalizations

Social distancing is incorporated into the forecasts in two different ways:

- 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)
 - Johns Hopkins University, Infectious Disease Dynamics Lab 🗹 (Model: JHU-IDD)
 - University of California, Los Angeles 🗹 (Model: UCLA)
- These modeling groups assume that existing social distancing measures in each

jurisdiction will continue through the projected 4-week time period:

- Georgia Institute of Technology, College of Computing, [2] (Model: GT-DeepCOVID)
- Google and Harvard School of Public Health 🖸 (Model: Google-HSPH)
- Johns Hopkins University, Applied Physics Lab 🗹 (Model: JHU-APL)
- Karlen Working Group 🗹 (Model: Karlen)
- Los Alamos National Laboratory 🗹 (Model: LANL)
- Northeastern University, Laboratory for the Modeling of Biological and Sociotechnical System
 (Model: MOBS)
- <u>University of California, Santa Barbara</u> 🗹 (Model: UCSB)
- University of Southern California 🗹 (Model: USC)

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: Hospitalizations
FAQ: COVID-19 Data and Surveillance
CDC COVID Data Tracker
COVID-19 Mathematical Modeling

Last Updated Jan. 13, 2021 Content source: National Center for Immunization and Respiratory Diseases (NCIRD), Division of Viral Diseases