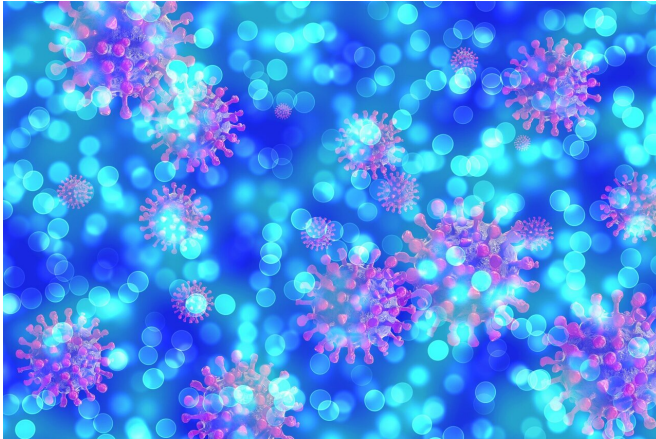


Forecast: 125,000 fewer US COVID deaths if 50% initiate vaccination by March 1

29 January 2021

From the report:



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A [new report](#) combining forecasting and expert prediction data, predicts that 125,000 lives could be saved by the end of 2021 if 50% or more of the U.S. population initiated COVID vaccination by March 1, 2021.

"[Meta and consensus forecast of COVID-19 targets](#)," developed by Thomas McAndrew, a computational scientist and faculty member at Lehigh University's College of Health, and colleagues, incorporates data from experts and trained forecasters, combining their predictions into a single consensus forecast. In addition McAndrew and his team produce a metaforecast, which is a combination of an ensemble of computational models and their consensus forecast.

In addition to predictions related to the impact of vaccinations, the report includes forecasting analyses on a variety of U.S. COVID-related issues, including number of cases, hospitalizations and deaths and the prevalence of the B.1.1.7 variant, which first emerged in the United Kingdom but is believed to be spreading rapidly in the U.S.

- 125,000 fewer deaths predicted by end of 2021 if greater than or equal to 50% of U.S. population initiates vaccination by March 1, 2021:** McAndrew finds that if greater than or equal to 50% of the U.S. population initiates vaccination by March 1, 2021 the consensus median prediction of the cumulative number of deaths by Dec. 31, 2021 is 520,000. In contrast, if less than 50% of the U.S. population initiates vaccination the consensus median [prediction](#) is 645,000. A consensus of subject matter experts and trained forecasters predict 125,000 (difference between two medians above) fewer deaths due to COVID-19 if at least 50% of the population was vaccinated by March 1, 2021 and highlights the importance of increasing the rate of vaccinations throughout the U.S.
- Predicted increases in hospitalizations, cases and deaths:** The team finds that a consensus of experts and trained forecasters predicts, for the week beginning Jan 24th and ending Jan 30th, an increase in the number of pediatric and adult hospital admissions (median = 132,500), increase in the number of new confirmed cases of COVID-19 (median = 1,700,000), and an increase in the number of new deaths due to COVID-19 (median = 22,400).
- Predicted increase in B.1.1.7 variant prevalence:** The report shows that a consensus of subject matter experts and trained forecasters predict 87% of US samples sent for genomic sequencing in the first two weeks of Feb. that have an S-gene dropout (present in all B.1.1.7 samples) will be identified as the B.1.1.7 variant. Currently, according to McAndrew, approximately 22% of samples are being identified as the B.1.1.7 variant.

McAndrew's approach to forecasting is different from the traditional approach, he says. Rather than build a [computational model](#) to predict cases, deaths, and hospitalizations due to COVID, he asks experts and trained forecasters to predict these targets and combines their predictions into a single consensus forecast.

In addition he produces a metaforecast: a combination of an ensemble of computational models and the [consensus](#) forecast.

"The idea is to combine computational models with human judgment to make more accurate predictions of the US outbreak," says McAndrew.

Provided by Lehigh University

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