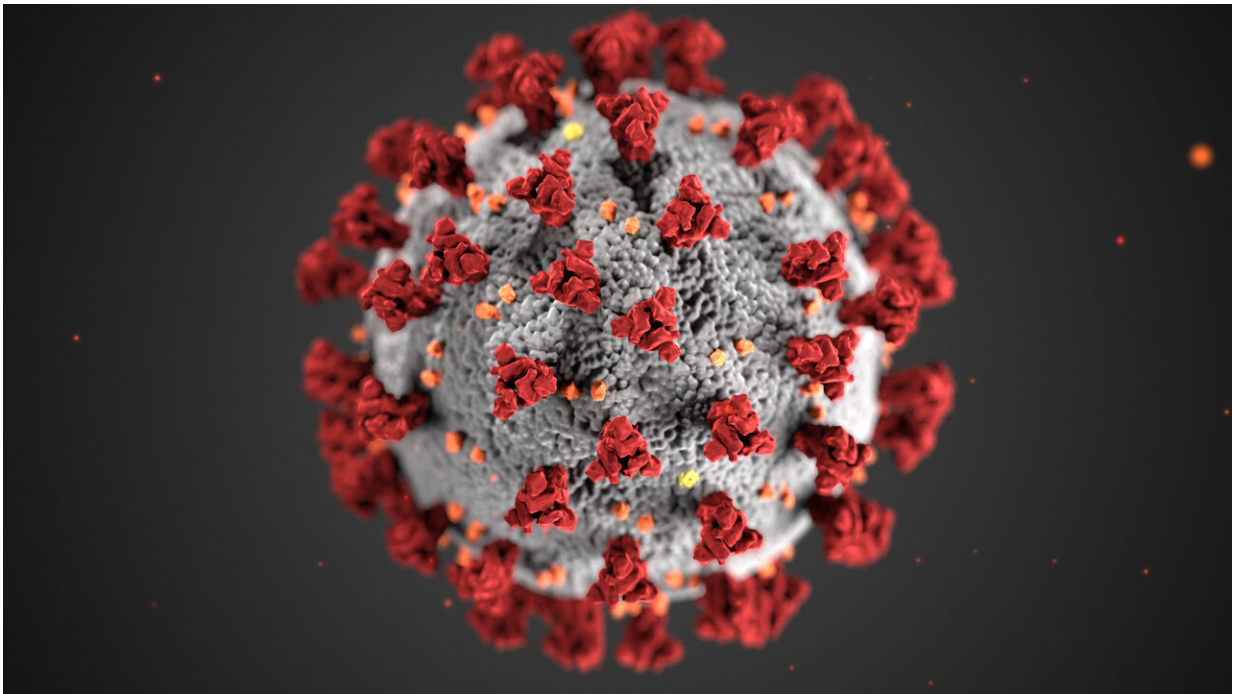


# A new way to accurately estimate COVID-19 death toll

April 30 2020, by Todd Bates

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This illustration shows a coronavirus. A novel coronavirus, SARS-CoV-2, causes coronavirus disease 2019 (COVID-19). Credit: U.S. Centers for Disease Control and Prevention

A Rutgers engineer has created a mathematical model that accurately estimates the death toll linked to the COVID-19 pandemic in the United States and could be used around the world.

"Based on data available on April 28, the model showed that the COVID-19 pandemic might be over in the United States, meaning no more American deaths, by around late June 2020," said Hoang Pham, a distinguished professor in the Department of Industrial and Systems Engineering in the School of Engineering at Rutgers University-New Brunswick. "But if testing and contact tracing strategies, social-distancing policies, reopening of community strategies or stay-at-home policies change significantly in the coming days and weeks, the predicted [death](#) toll will also change."

The model, detailed in a study published in the journal *Mathematics*, predicted the death toll would eventually reach about 68,120 in the United States as a result of the SARS-CoV-2 coronavirus that causes COVID-19. That's based on data available on April 28, and there was high confidence (99 percent) the expected [death toll](#) would be between 66,055 and 70,304.

The model's estimates and predictions closely match reported death totals. As of April 29, more than 58,000 Americans had succumbed to COVID-19, according to the [Johns Hopkins University COVID-19 Tracking Map](#).

The next steps include applying the model to global COVID-19 death [data](#) as well as to other nations such as Italy and Spain, both of which have experienced thousands of deaths due to COVID-19. The model could also be used to evaluate population mortality and the spread of other diseases.

**More information:** Hoang Pham, On Estimating the Number of Deaths Related to Covid-19, *Mathematics* (2020). [DOI: 10.3390/math8050655](#)

Provided by Rutgers University

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