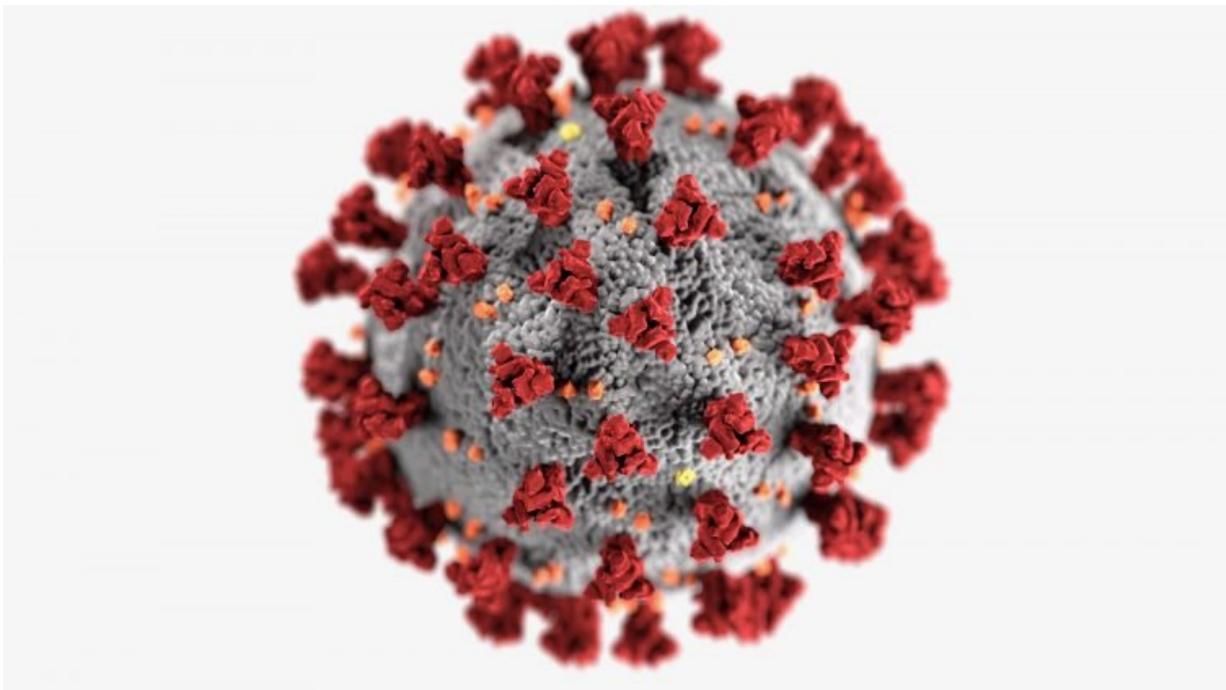


COVID-19: Study reports 'staggering' death rate in US among those infected who show symptoms

May 18 2020, by Jake Ellison



This illustration, created at the Centers for Disease Control and Prevention, reveals ultrastructural morphology exhibited by coronaviruses.

Is COVID-19 more deadly than the flu?

It's a lot more deadly, concludes a new study by the University of

Washington published May 7 in the journal *Health Affairs*. The study's results also project a grim future if the U.S. doesn't put up a strong fight against the spread of the virus.

The national rate of death among people infected with the novel coronavirus—SARS-CoV-2—that causes COVID-19 and who show symptoms is 1.3%, the study found. The comparable rate of death for the seasonal flu is 0.1%.

"COVID-19 infection is deadlier than flu—we can put that debate to rest," said study author Anirban Basu, professor of health economics and Stergachis Family Endowed Director of the CHOICE Institute at the UW School of Pharmacy.

The School of Pharmacy and Basu have developed a website that explores the infection and [fatality](#) rates by U.S. counties for people with symptoms. For this study, 116 counties in 33 states had COVID-19 data that fit Basu's robust criteria for inclusion in the analysis. The site's projections will be updated as new data becomes available, Basu said.

Basu stresses that this website is not a forecasting tool—it does not predict what will happen in the future. Rather, it uses the estimated death rate among symptomatic COVID-19 cases to project what is happening currently in these communities, such as what are the likely numbers for total infections and symptomatic cases. The tool will also detail how the daily incidence of infections changes.

In the state of Washington, for example, the county-specific fatality estimates ranged from 0.5% to 3.6%. King County at 3.6% is the highest among all 116 U.S. counties studied. Among the state's other counties that could be included in this analysis were Chelan County at 2.3%, Island County at 2.2% and Spokane County at 2%.

The COVID-19 death rate, the study adds, means that if the same number of people in the U.S. are infected by the end of the year as were infected with the influenza virus—roughly 35.5 million in 2018-2019—then nearly 500,000 people will die of COVID-19.

However, the novel [coronavirus](#) is more infectious than the influenza virus, Basu noted. So, a conservative estimate of 20% of the U.S. population becoming infected by the end of the year—with the [current trends](#) in social distancing and health care supply continuing, while accounting for those infected who will recover asymptotically—could result in the number of deaths climbing to between 350,000 and 1.2 million.

"This is a staggering number, which can only be brought down with sound public health measures," Basu said.

To build county-by-county models that could more accurately show how deadly the pandemic is, Basu used publicly reported data on the total COVID-19 cases and deaths. Realizing that both of these reported quantities likely are undercounts and change over time, Basu looked at the trends in the ratio of these two numbers, or the reported "[case fatality rates](#)," to more accurately reflect how deadly the virus is among those who fall sick because of it.

"Our hope is that our study results can help inform local and national policies that will save lives in the future," said Basu. "Ultimately, we want this work to advance the health of people around the world."

Basu also noted that the model should not be viewed as the "last word" on estimating the COVID-19 fatality rate, but as one of several methods used to measure the impact of the virus.

"The infection fatality ratio estimate is itself dynamic in nature," Basu

said. "The overall estimate can both increase or decrease in the future, depending on the demographics where the infections will be spreading. It is possible, as the infection spreads to more rural counties of the country, the overall [infection](#) fatality rate will increase due to the lack of access to necessary health care delivery."

More information: Anirban Basu, Estimating The Infection Fatality Rate Among Symptomatic COVID-19 Cases In The United States, *Health Affairs* (2020). [DOI: 10.1377/hlthaff.2020.00455](https://doi.org/10.1377/hlthaff.2020.00455)

Provided by University of Washington

Citation: COVID-19: Study reports 'staggering' death rate in US among those infected who show symptoms (2020, May 18) retrieved 7 May 2024 from <https://medicalxpress.com/news/2020-05-covid-staggering-death-infected-symptoms.html>

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