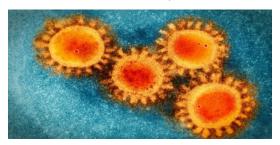
## Mortality Rate for COVID-19 May Be Closer to Influenza

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At a press briefing on Mar. 3, 2020, the director general of the World Health Organization (WHO), Dr. Tedros Ghebreyesus, said, "Globally, about 3.4 percent of reported COVID-19 cases have died." On Mar. 13, *The New York Times* reported that modeling experts from the Centers for Disease Control and Prevention (CDC) were estimating that if no actions are taken to stop the spread of coronavirus in the U.S., worst-case scenario, "between 160 million and 214 million people in the U.S. could be infected over the course of the epidemic" and "as many as 200,000 to 1.7 million people could die." 12 3 4 5

The 3.4 percent mortality rate for COVID-19 and the worst-case scenario predictions by the CDC are in marked contrast to earlier estimates that had placed the mortality rate at around 2.3 percent, a figure that was reached by dividing the number of deaths by the number of confirmed cases of the disease (rather than the number of actual cases of COVID-19, which is unknown).

Other infectious disease experts disagree with the WHO's often quoted 3.4 percent mortality rate, maintaining that it is much lower. Instead of COVID-19 being more 30 times deadly than the annual influenza virus, which has an estimated mortality rate of 0.1 percent, U.S. health officials such as Anthony Fauci, MD of the National Institutes of Health (NIH) believe the mortality rate is closer to one percent, or about 10 times more fatal than seasonal influenza.<sup>8</sup>

The WHO figure does not take into account asymptomatic COVID-19 cases or cases in which symptoms are minimal, said Dr. Fauci. In other words, there are many mild cases of COVID-19 that are not being diagnosed, reported and counted because many of those people are not going to the hospital and are not being tested, diagnosed and reported. So it is difficult to come up with a reasonable estimate for just how lethal COVID-19 really is compared to other infections.

A one percent mortality rate for an infectious disease is still high. However, even that estimate is based on extremely limited data, given that very few people in the U.S.—and in many other countries—have been tested for COVID-19. There also have been problems with the accuracy of lab tests for the virus. "We're very concerned about false positives, just as damning as false negatives" said Bruce Carlson of medical diagnostic market research firm Kalorama Information in New York. 10 11 12 13 14 15

Chief medical officer and epidemiologist Professor Chris Whitty thinks the mortality rate for COVID-19 may end up being less than one percent. "I am reasonably confident **one percent is the upper rate of mortality**," Prof. Whitty said. 16 Prof. Whitty's prediction is consistent with current estimated mortality rates for COVID-19 in countries like South Korea and Germany. In South Korea, the rate has been pegged at 0.6 percent. In Germany, the rate is 0.2 percent, which is particularly interesting since that country has the highest median age in all of Europe and, thus, potentially could be the most vulnerable to the severest impact of the disease. 17 18 19

Germany's rate of 0.2 percent is consistent with the COVID-19 mortality rate around the world, excluding China. Microbiologist Lothar Wieler, PhD, president of the Robert Koch Institute (RKI) in Germany, believes that, ultimately, the rate in China will settle at about 0.2 percent as well.

A study released by China's Center for Disease Control in February estimated the mortality rate of the disease in China, excluding Hubei province, where the city of Wuhan is located, had already dropped to 0.4 percent.  $\frac{18}{20}$ 

In Wuhan, reportedly the epicenter of the COVID-19 outbreak, the mortality rate of the disease is now down to 1.4 percent based on a recent estimate by infectious disease researchers Joseph Wu, PhD and Kathy Leung, PhD of the University of Hong Kong. However, that estimate may be high, according to epidemiologist Jeffrey Shaman, PhD of the Mailman School of Public Health at Columbia University.<sup>21</sup>

"I think there are many more than the [approximately] 70,000" confirmed cases of COVID-19 in Hubei, said Dr. Shaman. If so, the higher number of cases would skew the mortality rate for the disease downward. $\frac{21}{2}$ 

Like other infectious disease experts, Dr. Wieler believes the impact of COVID-19 may ultimately prove to be similar to that of a severe outbreak of influenza.  $\frac{18}{100}$ 

## References:

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