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Dr. Fauci now says Covid death rate 0.6%

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# What Changing Death Rates Tell Us About COVID-19

By Nick Tate



Sept. 1, 2020 -- From the beginning of the coronavirus pandemic, estimates of COVID-19's death rate have been all over the map. They have ranged from less than 1% to as much as 25% in some countries.

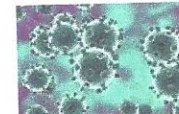
Even Anthony Fauci, MD, the nation's chief infectious disease specialist, has gone back and forth on his assessments over time. Early on, Fauci's estimates ranged from COVID-19's death rate being about the same as that of influenza to being 10 times more lethal than the seasonal flu.

Coronavirus in Context: Lessons Learned from 5 Million Confirmed Cases

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# Coronavirus in Context: Lessons Learned from 5 Million Confirmed Cases

WebMD's Chief Medical Officer, John Whyte, speaks with William Schaffner, MD, Professor of Preventive Medicine in the Department of Health Policy, Vanderbilt University School of Medicine, about the U.S. reaching 5 million confirmed cases, the urgency of following safety guidelines, and his optimism for a vaccine.



ABOUT



Fauci and other public health experts have since put the COVID-19 death rate at about 0.6% → six times that of a typical flu season -- which is the latest CDC projection.

*Now, 0.6% COVID death rate*

This has led some mainstream media outlets to report that the coronavirus mortality rate is falling. But that's not true.

The truth is that the bouncing ball of mortality projections has more to do with the inconsistent quality of the data from medical surveillance around the world. Some nations are frankly better at this than others, so variations by country have been significant.

The good news: COVID-19 hasn't proven to be as deadly as first feared, when some early projections suggested as many as one in four infected people would die.

The bad: Even though the virus is killing a small percentage of infected people, it still adds up to a large number of deaths. As of Aug. 31, the virus had infected more than 25 million worldwide and killed 847,000. In the U.S., there are more than 6 million confirmed cases and more than 183,000 deaths.

"It looks like now that the fatality rate of a person who gets infected with this, on average, is around six times that of the seasonal flu -- so around the 0.6 [percent]



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“So, it’s a small percentage of the world’s population that is susceptible to this virus,” says Adalja, an emerging infectious disease specialist with the Johns Hopkins University Center for Health Security. “But that’s still a big number. And I think that’s exactly what some of us thought at the very beginning; it just took some time to get enough of a picture of the infections to be able to know that.”

The science of biostatistics gathering and differences in terminology have played a role as well.

Another factor: This is the first global health crisis to emerge when instant access to information (good and bad) -- from 24-hour television news and internet reports -- has influenced the response to a pandemic.

In addition, election-year politics have played an enormous role in communicating the risk of COVID-19. Democrats and Republicans alike -- including President Donald Trump and former Vice President Joe Biden, the Democratic presidential nominee - - have cited conflicting information to bolster their campaigns.

But the most significant factor in the changing numbers has to do with new and better information doctors and public health specialists have gathered over the past 8 months -- data that have led to updates and more accurate reassessments over time.

Remember, we’re dealing with a new and emerging virus. And the information has changed as we’ve learned more.

For instance, in the early days, authorities

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occurred -- something epidemiologists who study emerging diseases call "severity bias."

This is good news, Adalja notes, because it means the virus is not mutating and becoming more lethal over time, which would have made developing treatments and a vaccine far more difficult.

"It's not that the disease is changing, it's that we're getting a better picture of the extent of infection," explains Adalja, who is also a practicing infectious disease doctor. "From the very beginning, we had severity bias, where we were only seeing a fraction of those cases, which is going to increase the fatality rate."

In other words: More testing and tracking, including people with mild symptoms, have led to a drop in the early death rate projections, because the data are more accurate.

So, where do we stand today? Here's what we know, according to the latest analyses from the World Health Organization (WHO), the CDC, Johns Hopkins, and other expert sources consulted for this report.

### Infection Fatality Ratio

You've probably heard a variety of phrases to describe the COVID-19 death rate. But the most important assessment is what's called the "infection fatality ratio," or IFR. The IFR is the basis of the estimate that the COVID-19 death rate is six times that of a typical seasonal flu year.

The IFR is one of two measures used to determine how many infected people die

from the disease. It is an estimate of the



diagnoses. Because it is impossible to test everyone, scientists and statisticians create an estimate based on antibody testing of a sample of the total population.



The second measure is what's called the "case fatality ratio," or CFR, which estimates this proportion of deaths among identified and confirmed cases and is usually established only after a pandemic has ended by analyzing death records and laboratory-confirmed cases from hospitals and other sources.

“

### **In general, what you want to know is: What are your chances of dying if you get infected with this?**

Amesh A. Adalja, MD, Johns Hopkins University Center for Health Security

”

These two measures are sometimes confused, in part because some specialists will use similar but more generic terms, like "case fatality rates," "death rates," "fatality rates" and "mortality rates."

The IFR can give you a better sense of the death rate during an ongoing pandemic, while the CFR is what is typically done once a pandemic ends.

The CFR will eventually reflect people infected today who are still alive but may end up dying later. By comparison, the IFR is a snapshot of where we are today, based on the number of people who have been infected and have died by any given date.

"They're all related concepts, there are some nuances to them," Adalja says. "But in general, what you want to know is: What are



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At this stage of the pandemic, most estimates have been based on cases detected through surveillance and calculated using methods that vary wildly country-to-country. That's why we've seen fatality estimates ranging from less than 0.1% to over 25%.

As Adalja noted, the levels of infection and transmission of COVID-19 were underestimated at first, making the death rate seem higher than it is. That's because many infected people were not diagnosed, didn't have symptoms, or didn't seek medical care, so they remained under the radar.

Trying to get a handle on the IFR has also been challenging because countries have varying ways to define COVID-19 cases. The WHO has made some progress in pushing uniform IFR measures to be applied worldwide and, over time, a more accurate picture has emerged.

### High-Risk Groups

Another complicating factor: The IFR is an average, not a one-size-fits-all projection of the death risk for COVID-19. If you're over the age of 60, your risk will be much higher. If you're under 20, it's going to be very low. And for those with a preexisting condition, the virus is much more life-threatening.

Gideon Meyerowitz-Katz, an epidemiologist with the University of Wollongong in Australia, says the biggest changes in death risk estimates that have emerged over time have had more to do with variations based on these factors than anything else.

"Broadly speaking, the numbers haven't been changing all that much on the IFR ...



even then putting out numbers that are very similar to what we're seeing today. What we have done, though, is confirm these with massive studies of tens and hundreds of thousands of people.”



But he says ongoing studies have spotlighted how age and other risk factors are major predictors of whether an infected person will survive.

“With our most recent meta-analysis, we can actually explain a huge amount of the variation in COVID-19 deaths quite easily,” he notes.

In crunching the numbers, Meyerowitz-Katz has found that children have a very low risk of death -- about five out of every 100,000 children infected have died. But this rises to 60 of 100,000 by age 40; 680 of 100,000 by age 60; and 8,000 of 100,000 by age 80.



**The bottom line is simple: COVID-19 is a scary disease that kills a lot of the people that it infects.**

Gideon Meyerowitz-Katz, epidemiologist, University of Wollongong, Australia



These age-related differences are behind the variations in COVID-19 death rates across the country.

“We found that up to 90% of the differences in death rates was due to the age breakdown of people who got infected,” Meyerowitz-Katz says. “For example, Utah and Georgia had lower death rates than Indiana and New York, because in those places, fewer elderly people got infected as a proportion, and thus the overall death rates were lower.”



Studies have found that people with [heart disease](#), obesity, [diabetes](#), cancer, [asthma](#), respiratory conditions, [immune deficiency disorders](#), and other [preexisting conditions](#) face higher risks from COVID-19. CDC research has also found that minorities are more vulnerable, mostly due to multiple conditions worsened by socioeconomic factors and health care inequities.

Outside the United States, access to quality hospital care is playing a role in the virus's fatality rate. If you are in a place that has advanced clinical care and doctors trained to use mechanical [ventilators](#), you're more likely to survive.

Another way to look at it is to compare overall COVID-19 deaths to other leading causes of death. In the U.S., the virus has infected more than 6 million Americans, and more than 183,000 have died from the disease. It is on track to be the third leading [cause of death](#) this year, behind heart disease and cancer and ahead of accidents, chronic lung diseases and stroke.

"I think the bottom line is simple: COVID-19 is a scary disease that kills a lot of the people that it infects," Meyerowitz-Katz says.

"Perhaps just as worrying, there are indications now that the disease may leave even those people who survive with lifelong issues, although this evidence is very preliminary."

### **Risk Perception vs. Reality**

Beyond all the science and statistical analyses, it's important to keep in mind that most of us are not scientists who can grasp

and understand the nuances of risk analysis



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David Ropeik, a retired Harvard University instructor who specializes in risk perception, notes that the average person isn't very good at distinguishing big risks from trivial threats.



Often, we fear most the things we can't control, even if they don't pose the greatest threats.

"Our fear of the disease was so intense that it wiped everything else off our risk radar screens in March and April and May, and it has now been counterbalanced by the anxiety produced by not having control over our lives," says Ropeik, author of *How Risky Is It, Really? Why Our Fears Don't Always Match the Facts*.

"And the disease itself has been seen more and more through political lenses by some, rather than just looking at the evidence objectively, [so] the public's behaviors have shifted -- more going out, travel, public gatherings, reopenings. We're weighing the risk of COVID vs. the risk of not controlling our own lives. And when we feel like we're not in control, we get more worried. So, people are pressing for more 'return to normal' government policy."

Coronavirus in Context: Making Sense of All the Data

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WebMD's Chief Medical Officer, John Whyte, speaks with F. Perry Wilson, MD, MSc, Assistant Professor of Medicine, Yale University School of Medicine



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Of course, none of those things is driven by the COVID-19 death projections, but they clearly have an impact on government actions, political posturing, and response from the corporate world that deals with retail, travel, entertainment, and tourism.

“Unfortunately, some governments setting those policies seem to react to them in real time, rather with the necessary foresight,” he says. “What’s happening now [will] burst into a spike in cases and deaths a month or two later.”

To Adalja, this is the most troubling lesson of COVID-19: We didn’t act aggressively at the start. Instead, government officials in the United States -- from the very top down -- merely reacted as the pandemic unfolded.

“What we’ve seen is we’re so unprepared for pandemics that even a 0.6% fatality ratio is enough to cause complete havoc ... and basically disrupted the entire world and [led] to hundreds of thousands of deaths,” he says.

“And we continue to make the same mistakes over and over again, and that’s why we continue to have uncontrolled spread of COVID-19 in many parts of the United States,” he says.

For Meyerowitz-Katz, TV news coverage and social media have not helped. “I could write a compendium on my issues with the news alone,” he says. “But suffice to say that the central, core idea of the media -- which is to report new interesting things -- often jibes poorly with scientific research, where most findings are not really that surprising, given



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Even so, Adalja does see a silver lining. In addition to reporting the daily COVID-19 death tally, the media reports have helped reveal how the pandemic has touched virtually everyone and disrupted almost every life in the U.S. and around the world.



“So, there is more understanding by the general public and by policymakers that it’s much better to get this right in the preparation phase than to have to deal with what we’ve just dealt with ... with shutdowns and stay-at-home orders,” he says.

*Correction: An earlier version of the story had an incorrect timeline on death rate estimates provided by Dr. Fauci and misstated numbers on causes of death.*

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