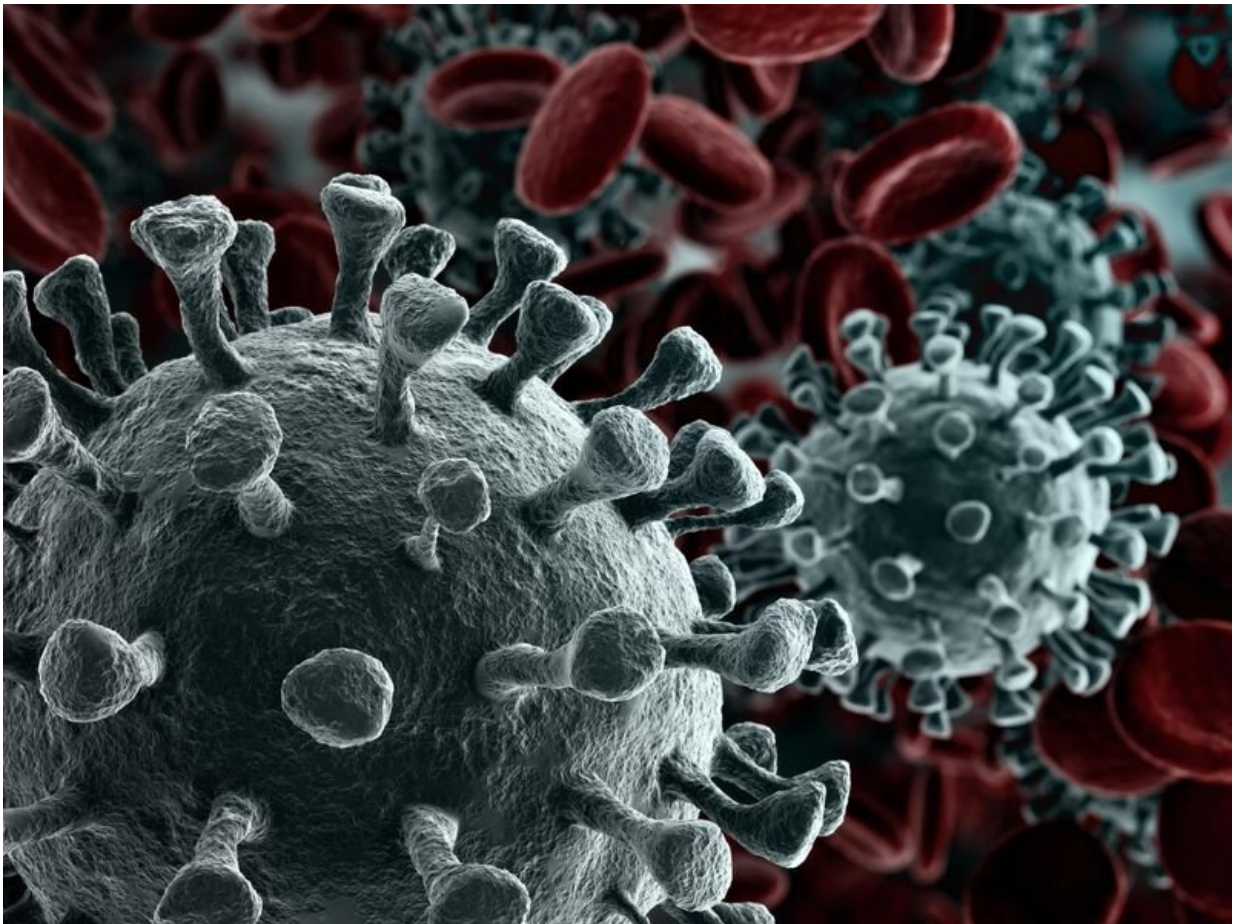


# Pandemic's two-year global death toll may be close to 15 million

December 15 2022, by Dennis Thompson

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Almost 15 million people likely died as a result of the COVID-19

pandemic in 2020 and 2021, nearly three times more than previously reported, a new World Health Organization study estimates.

The researchers said the COVID-19 pandemic caused about 4.5 million more deaths than would have been expected in 2020, and 10.4 million more in 2021, according to the report published online Dec. 14 in the journal *Nature*.

By comparison, [heart disease](#) was the leading worldwide cause of death in 2019 with nearly 9 million deaths.

Based on these numbers, "we would expect COVID-19 to be among the leading causes of death in 2020 and the leading cause of death in 2021," the study authors concluded.

India, Russia, Indonesia, the United States, Brazil and Mexico suffered the most estimated deaths due to COVID-19 in 2020 and 2021, according to the new analysis.

India alone accounted for 4.7 million deaths during the two-year period, making it by far the country hardest hit during the pandemic, the researchers said.

More than one-third of all COVID-related deaths occurred in Southeast Asia, with nearly 6 million excess deaths, and "that was primarily due to India," said senior researcher [Jonathan Wakefield](#), a professor of biostatistics with the University of Washington, in Seattle.

"There was a devastating outbreak in 2021 in India, and so there was a huge number of excess deaths," Wakefield said.

Russia had nearly 1.1 million excess deaths in 2020 and 2021, followed by Indonesia (1 million) and the United States (932,000), the report

stated.

The Americas and the European regions suffered the next most pandemic deaths after Southeast Asia, each with around 3.2 million excess deaths, Wakefield said.

All told, four out of five excess COVID-19 deaths during those two years occurred in either Southeast Asia, the Americas or Europe, the results showed.

Knowing exactly how many people have died during the pandemic has been an ongoing struggle for officials and researchers.

"I think every single person with knowledge would agree that the reported numbers are far lower than the real numbers," [Dr. Aaron Glatt](#), chair of infectious diseases with Mount Sinai South Nassau in New York City, said commenting on the new study. "It's absolutely correct that there are many, many deaths that are underreported due to COVID."

Tests for COVID weren't available early in the pandemic, and some parts of the globe never gained full access to proper testing, Wakefield and Glatt said.

"People died without having a definitive diagnosis of COVID, even if that was suspected," Glatt said.

In addition, the accuracy of death records varies widely between countries, and that accuracy became even worse as COVID-19 pressed [health systems](#) to the breaking point, Wakefield said.

"When systems are breaking down, it's much harder to detail why people actually died because there's other things going on that you need to deal with. Also, some countries were underreporting the number of deaths for

political reasons because, as you know, it's a huge political issue, how many people died and whether those deaths could have been avoided," he added.

"We will never know how many people died in the pandemic in many countries, because the data will never arrive," Wakefield continued.

To create a more detailed estimate of the pandemic's toll, the researchers examined the global excess mortality caused by the COVID-19 pandemic—"the number of deaths that occurred minus what you would have expected if the pandemic hadn't occurred," Wakefield explained.

The team created a complex computer model to calculate the number of deaths that would have been expected had the pandemic not occurred, as well as a more accurate account of the COVID-related deaths that did occur.

Their analysis concluded that COVID-19 was responsible for about 14.8 million excess deaths globally in 2020 and 2021.

Previously, 5.4 million deaths had been reported due to COVID-19 during the worst two years of the pandemic.

The researchers estimated that 0.06% more deaths than expected occurred in 2020 due to COVID-19, and that rate more than doubled to 0.13% in 2021.

Those percentages don't sound that high, but they outstrip the documented excess mortality rates of the influenza pandemics of 1957, 1968 and 2009 (estimated at 0.04%, 0.03% and 0.005%, respectively), the study authors noted.

On the other hand, the 1918 influenza pandemic was "magnitudes

higher, with an estimated 1% per capita excess mortality rate, or 75 million global excess deaths when adjusted to the 2020 population," the researchers reported.

COVID-19 deaths officially reported in the United States weren't far off from the excess death estimates that the researchers calculated, Glatt noted.

"We had better testing capabilities, not at the beginning but ultimately, and we were testing every single patient who came into the hospital for COVID," Glatt said. "I think the United States figures are probably much more accurate than figures from other countries."

On the other hand, some countries fell very wide off the mark in tracking COVID's toll.

Peru is the extreme example, with researchers estimating it probably endured twice as many COVID-related deaths than it reported.

Ecuador and Bolivia also drastically undercounted their COVID-19 death count, with about 50% more excess deaths occurring in those countries than initially reported, the study findings showed.

"Peru, Ecuador and Bolivia all had really, really devastating outbreaks," Wakefield said.

These estimates show that nations around the world need to do a better job tracking causes of [death](#), particularly in a [pandemic](#), he concluded.

"Until we know the size of the problem with more accuracy, we're not going to be able to deal with it in the way that we should do," Wakefield said.

**More information:** William Msemburi et al, The WHO estimates of excess mortality associated with the COVID-19 pandemic, *Nature* (2022). [DOI: 10.1038/s41586-022-05522-2](https://doi.org/10.1038/s41586-022-05522-2)

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Citation: Pandemic's two-year global death toll may be close to 15 million (2022, December 15) retrieved 1 February 2023 from <https://medicalxpress.com/news/2022-12-pandemic-two-year-global-death-toll.html>

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