

# COVID-19: U.S. life expectancy continued to decrease in 2021, study finds

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An [updated analysis of American COVID-19 deaths](#) throughout 2021 highlights a continued drop in overall life expectancy as well as persistent disparities by race and ethnicity.

Lead author Theresa Andrasfay, a postdoctoral scholar at the University of Southern California Leonard Davis School of Gerontology, and coauthor Noreen Goldman at the Princeton School of Public and International Affairs first examined the pandemic's effect on U.S. [life expectancy](#) in October 2020. Their initial study, published in [Proceedings of the National Academy of Sciences](#) in January 2021, showed that 2020 presented the largest single-year decline in life expectancy in at least 40 years and the lowest life expectancy estimated since 2003.

The updated analysis, published in *PLOS ONE*, indicates that U.S. life expectancy at birth decreased by 2.2 years from 78.8 in 2019 to 76.6 in 2021. The estimated decrease in life expectancy for 2021 is 0.6 years larger than the decrease observed in 2020, Andrasfay said.

"Despite the availability of effective vaccines, life expectancy continued to decline in 2021. Part of this is due to the large number of COVID-19 deaths that occurred in the beginning of 2021, before many individuals were eligible for vaccination," she said. "But even once all adults became eligible for vaccination, many chose not to be vaccinated and even vaccinated individuals were not completely protected against the highly transmissible Delta and Omicron variants."

The study highlighted that significant racial disparities in loss of lifespan have endured throughout the pandemic. Between 2019 and 2021, non-Latino whites lost 2 years on average, while non-Latino Blacks lost 3.5 years and Latinos lost 3.7 years of life expectancy. As noted in Andrasfay and Goldman's previous analyses, Black and Latino Americans have experienced a disproportionate burden of coronavirus infections and deaths, reflecting persistent structural inequalities that heighten risk of exposure to and death from COVID-19. Goldman noted that "although Whites experienced a larger drop in life expectancy between 2020 and 2021 than the Black and Latino populations, resulting in a very modest reduction in racial and [ethnic differences](#), the

disparities in life expectancy loss since the start of the pandemic remain regrettably and unacceptably large."

Although COVID-19 is the primary cause of continued life expectancy reductions in 2021, "increases in other causes of [death](#) relative to pre-pandemic levels contribute to these life expectancy declines," the authors wrote. The pandemic appears to have played a role in the increase of drug overdose deaths in 2020 and 2021, and increased mortality from conditions such as [heart disease](#) or diabetes may be attributable to complications of COVID-19 infections and/or health care shortages and delays.

This week the CDC also released [provisional estimates](#) of life expectancy in 2021. "We did not have access to the same level of detailed data as the CDC, so we arrived at slightly different life expectancy estimates," Andrasfay said. "Despite these differences, our results are largely in agreement in that we find continued life expectancy reductions in 2021 and persistent racial and ethnic disparities."

"COVID-19 mortality has been lower in the first half of 2022 compared to 2021, so if there is a successful booster campaign in the fall and the dominant strains have lower fatality rates than previous variants, it is possible that 2022 life expectancy may improve relative to 2021, though it is unlikely to return to levels seen prior to 2020," she added.

"However, what happens with 2022 life expectancy will ultimately depend on this coming fall and winter."

**More information:** Theresa Andrasfay et al, Reductions in US life expectancy during the COVID-19 pandemic by race and ethnicity: Is 2021 a repetition of 2020?, *PLOS ONE* (2022). [DOI: 10.1371/journal.pone.0272973](#)

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