

# Rural-urban divide compounds racial disparities in COVID-19 deaths, study finds

April 16 2021, by Molly Rosbach

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While Black, Hispanic, Latino, Indigenous, Asian and Pacific Islander people are more likely to die of COVID-19 than white people nationwide, a recent study from Oregon State University found the risk was even greater for racial and ethnic minority groups living in rural areas compared with urban areas.

To address the disparities, researchers say the health care response to COVID-19, including the vaccine rollout, needs to allocate additional resources to rural areas that have been hardest hit, especially those where [minority](#) populations are concentrated.

Earlier studies throughout the U.S. have shown that social determinants of health like poverty, access to reliable health care, chronic health conditions and type of occupation contribute to increased risk of COVID-19 infection and fatality for racial and ethnic minorities.

But living in a [rural area](#) on top of being a member of a racial minority group acts as a "double whammy," said Kwadwo Boakye, co-author on the study and a doctoral student focusing on epidemiology in OSU's College of Public Health and Human Sciences.

"It would not be ideal to say that 'rural versus urban' is a standalone thing. It has to be intertwined with the racial and ethnic disparity as well," to account for the disparate risk levels, Boakye said.

The study, published in the *Journal of Racial and Ethnic Health Disparities* While Black, Hispanic, Latino, Indigenous, Asian and Pacific Islander people are more likely to die of COVID-19 than [white people](#) nationwide, a recent study from Oregon State University found the risk was even greater for racial and [ethnic minority](#) groups living in rural areas compared with [urban areas](#).

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The study, published in the *Journal of Racial and Ethnic Health Disparities*, examined case fatality ratios during the period of Jan. 1 through Dec. 18, 2020. Researchers found that in that time, people living in "mostly rural" and "completely rural" counties who contracted COVID-19 were 15-26% and 15-24%, respectively, more likely to die from it than people in "mostly urban" counties who contracted the virus.

When researchers broke the results down by race, they found that the more rural a county was, as determined by census data, the higher the case-fatality ratio was for minority groups, especially for Black, Hispanic and Latino people. American Indian and Asian/Pacific Islander people also saw an increased case-fatality ratio in more rural counties.

In rural areas around the country, researchers noted that counties with larger percentages of Black, Hispanic/Latino and Asian/Pacific Islander people had clusters of higher COVID-19 case fatality.

"Generally, minorities are on the lower end of the spectrum for socioeconomic status. This may result in a need for them to work in occupations where they're in contact with a lot of other people, which puts them in more circumstances that are more prone to the spread of

the virus," Boakye said.

In rural areas, most blue collar jobs are in agriculture, which means workers can't work from the safety of home during a pandemic, he said.

This study highlighted the impact that socioeconomic disparities and structural racism have had on health outcomes for racial and ethnic minorities over the decades, Boakye said.

"We are seeing with the COVID pandemic that minorities are at a larger risk of getting the disease, and also have a higher risk of mortality from the disease compared to other ethnic groups," he said.

"Compare living in a rural area, where you don't have a state-of-the-art medical facility with plenty of ventilators, to someone who is living in the city, who has access to all those facilities. We need health care facilities in these rural areas," Boakye said. "Policies should prioritize rural health and the adequate distribution of health resources to meet the needs of the minority populations, especially the distribution of COVID-19 vaccinations."

The researchers added that they were limited by the census data available; if they had been able to parse the numbers on an individual level, rather than aggregate, they could have obtained more specific results., examined case fatality ratios during the period of Jan. 1 through Dec. 18, 2020. Researchers found that in that time, people living in "mostly rural" and "completely rural" counties who contracted COVID-19 were 15-26% and 15-24%, respectively, more likely to die from it than people in "mostly urban" counties who contracted the virus.

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**More information:** Ayodeji E. Iyanda et al. Racial/Ethnic Heterogeneity and Rural-Urban Disparity of COVID-19 Case Fatality Ratio in the USA: a Negative Binomial and GIS-Based Analysis, *Journal of Racial and Ethnic Health Disparities* (2021). [DOI: 10.1007/s40615-021-01006-7](https://doi.org/10.1007/s40615-021-01006-7)

Provided by Oregon State University

Citation: Rural-urban divide compounds racial disparities in COVID-19 deaths, study finds (2021, April 16) retrieved 11 May 2024 from <https://medicalxpress.com/news/2021-04-rural-urban-compounds-racial-disparities-covid-.html>

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