

New study finds racial disparities in COVID-19-related deaths exist beyond income differences

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While data and news reports show that Black and Hispanic communities are disproportionately affected by the 2019 Coronavirus Disease (COVID-19) pandemic, the role that neighborhood income plays in COVID-19 deaths is less clear. New analyses by a team of researchers at NYU Grossman School of Medicine examine the interplay between race/ethnicity and income on COVID-19 cases and related deaths in 10 major U.S. cities. The researchers found that non-white counties had higher cumulative incidences and deaths compared to predominantly white counties—and this was true for both low-income and high-income communities.

The findings—recently published online in *JAMA Network Open*—suggest that [racial disparities](#) in COVID-19 cases and deaths exist beyond what can be explained by differences in poverty rates. The researchers found that even among communities with higher median income, predominantly non-white communities still bore a

greater burden of the virus—almost three times the incidence and deaths—compared to neighborhoods that identified as majority white. Yet income also plays an important contributing role. Indeed, the starkest racial/ethnic contrast between majority non-white and predominantly white counties was found when restricted to [low-income](#) counties only, where residents from predominantly non-white communities died from COVID-19 at nine times the rate as those living in predominantly white counties.

"While we expected to see greater numbers of COVID-19 cases and deaths in predominantly non-white, low-income communities, we were surprised that this relationship still held even after we accounted for [poverty rates](#)," said Samrachana Adhikari, Ph.D., assistant professor, Department of Population Health, NYU Grossman School of Medicine, and lead author of the study. "Given our findings, we believe that structural racism may explain these racial disparities in number of cases and deaths noted in Black counties."

How the Study was Conducted

Using publicly available data from the 2018 U.S. Census Small Areas Income and Poverty Estimates program, the Centers for Disease Control, and state health departments, the researchers examined cumulative COVID-19 cases and deaths per 100,000 across 158 urban counties (accounting for 64 percent of confirmed COVID-19 cases) spanning 10 large U.S. cities: New York City, Boston, New Orleans, Detroit, Los Angeles, Atlanta, Miami, Chicago, Philadelphia, and Seattle. Using the [census data](#), the team linked median income and proportion of non-white residents in each county and used statistical analysis to identify differences in cumulative incidents and [death](#), and their association with neighborhood race/ethnicity and poverty levels. All data analyzed included

COVID-19 cases and deaths observed through May 10, 2020.

"We have known for decades that racism kills. Racism is a public health issue which has been implicated in the racial gap in mortality and in health outcomes," says Gbenga Ogedegbe, MD, MPH, professor of Population Health and Medicine at NYU Langone and one of the study's co-authors.

"Because the differences in COVID-19 cases and mortality cannot be explained by poverty alone, our findings give credence to our hypothesis that structural racism underlies the disproportionately higher rates of COVID-19 infections and alarmingly high rates of deaths in predominantly Black communities. The fact that non-white residents died from the virus at higher rates than white residents in both wealthier and poorer communities should be a major alarm bell to policymakers at the national and local government levels, academic medical centers, and the country at large," says Ogedegbe.

One of the study's limitations, according to Adhikari, is that it covers only large metropolitan areas and that the data analyzed are aggregated at the county level. More granular data at the individual level, as well as a breakdown of residents by race and ethnicity, would provide greater insight into the drivers of this troubling association, as well as expose most affected neighborhoods in need of more robust public health interventions, says Adhikari.

More information: Samrachana Adhikari. Assessment of Community-Level Disparities in Coronavirus Disease 2019 (COVID-19) Infections and Deaths in Large US Metropolitan Areas. *JAMA Netw Open*. 2020;3(7):e2016938. DOI: [10.1001/jamanetworkopen.2020.16938](https://doi.org/10.1001/jamanetworkopen.2020.16938)

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