COVID-19’s unequal impact tied to another inequality—of income

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The inequitable burdens of COVID-19 have been well-documented. Now, an analysis of county-level health data shows that high levels of income inequality are associated with poor outcomes. Income inequality matters, and its presence has had harsh consequences on the health of communities across the United States.

The same high incidence rates of COVID-19 generally seen among Black and Hispanic communities can be seen in communities with high income inequality even if the area’s Black or Hispanic populations are relatively small, says a study published in *JAMA Network Open*.

“A higher level of Black or Hispanic composition in a county is associated with a higher COVID-19 incidence and mortality; a higher level of economic inequality is also associated with a higher level of incidence and mortality,” the study states. “More generally, the study suggests that high levels of income inequality may harm population health irrespective of racial/ethnic composition.”

The study was conducted by sociologists Tim F. Liao, PhD, and Fernando De Maio, PhD, of the University of Illinois at Urbana-Champaign and DePaul University, respectively.

“We’re finding significant and profound associations between how unequal our communities are and how healthy our communities are,” De Maio, director of research and data use for the AMA Center for Health Equity, said in an interview.

Another study comparing all-cause mortality rates and inequities between Black and white populations across the 30 biggest U.S. cities written by De Maio and researchers at the Sinai Urban Health Institute also was published the same day in *JAMA Network Open*.

Learn more with the AMA about how, when put in context, data can help expose and fix health inequities.
Deep local data dive

Liao and De Maio examined cumulative COVID-19 incidence and mortality rates for the first 200 days of the pandemic, starting from Jan. 22, 2020, the date of the first confirmed case in the U.S., to Aug. 8. They then studied how those numbers may have been influenced by the racial and ethnic composition, economic inequality, and political characteristics of 3,141 of the nation’s 3,142 counties (a county in New Mexico lacked income inequality data and was not included).

“Many studies have concluded that COVID-19 has revealed the fault lines of inequality in the United States,” the authors wrote. “This study expands that picture by illustrating how county-level income inequality matters, in itself and through its interaction with racial/ethnic composition to systematically disadvantage Black and Hispanic communities.”

The one state-level political factor for which an association was found at the county level was Medicaid-expansion status. Counties in Medicaid-expansion states had “sizeable reductions” in COVID-19 incidence rates, Liao and De Maio found.

Throughout the COVID-19 pandemic, the AMA is curating critical health equity resources from across the web to examine the structural issues that contribute to and could exacerbate already existing inequities.

How unequal incomes affect health

Income inequality affects health via two pathways, they wrote. One is that income inequality is associated with a breakdown of public infrastructure -- including public education, transportation and health care. The other is a psychosocial pathway where inequality literally “gets under the skin to affect bodily systems” that become weathered by constant stress, the study says.

The study has practical implications for the design of COVID-19 surveillance systems. If government and public health officials are to get the coronavirus under control, they need to target the places that are most affected—and income inequality data will help identify those places.

And there are implications beyond COVID-19, they argued.

“The overall positive associations found in this study suggest that, with health equity as a stated goal of the United States, real progress on this front will likely only come with a dedicated commitment to dismantling structural racism and economic inequality—particularly racialized economic inequality,” Liao and De Maio wrote.


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It’s critical for physicians to understand that “their patients are influenced by community conditions in very important ways,” De Maio said. “It’s not just about genes, biology and behavior of an individual. ... It’s also about the community and the place that person lives, and the history that they and their families have been exposed to for generations.”

Learn more about the health equity education on the AMA Ed Hub™ featuring CME from the AMA’s Center for Health Equity and curated education from collaborating organizations. To earn CME on the AMA’s “Prioritizing Equity” video, visit the course page on AMA Ed Hub™.


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