

Higher COVID-19 mortality among Black patients linked to unequal hospital quality

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The COVID-19 death rate for Black patients would be 10 percent lower if they had access to the same hospitals as white patients, a new study shows. Researchers from the Perelman School of Medicine at the University of Pennsylvania and OptumLabs, part of UnitedHealth Group, analyzed data from tens of thousands of hospitalized COVID-19 patients and found that Black patients died at higher rates than white patients. But the study, published today in *JAMA Network Open*, determined that didn't have to be the case if more Black patients were able to get care at different hospitals.

"Our study reveals that Black patients have worse outcomes largely because they tend to go to worse-performing hospitals," said the study's first author, David Asch, MD, the executive director of Penn Medicine's Center for Health Care Innovation. "Because patients tend to go to hospitals near where they live, these new findings tell a story of racial residential segregation and reflect our country's racial history that has been highlighted by the pandemic."

For many years, housing segregation was explicitly

practiced in the United States. "Redlining," a term for the systematic refusal of home financing in majority Black neighborhoods, resulted in the economic stagnation of communities and limitations of upward mobility among the people who live in them. Redlining has cast a long shadow into the decades since it was explicitly made illegal: a recent study showed that three of every four redlined neighborhoods still experience economic hardship, which often includes a lack of access to social resources—including medical care.

Recently, Asch and fellow researchers published another study showing the interwoven nature of where patients get care and whether they survive hospitalization with COVID-19. The study showed that the one factor most explaining differences in hospital [mortality](#) rates was the level of virus in a hospital's surrounding community: If there were high COVID-19 case rates in the community, [hospital mortality rates](#) were worse.

In the present study, the researchers continued to examine [hospital](#)-level differences by examining 10 months of de-identified hospitalization data from more than 44,000 Medicare patients from 1,188 hospitals across 41 states and the District of Columbia. Roughly 33,500 patients were white and nearly 11,000 were Black. Examining inpatient mortality rate in the 30 days after admission for each group and including those discharged to hospice care, the researchers show that the overall mortality for [white patients](#) was approximately 12.9 percent and 13.5 percent for Black patients.

Increased mortality among Black patients was partly explained by lower income levels and more comorbid illness in those populations. However, the authors wrote in their paper that "even if statistical adjustment for patient characteristics explains racial differences in outcome, it does not excuse them if those factors are disproportionately represented in Black populations as a result of racist forces."

Rachel Werner, MD, Ph.D., executive director of Penn's Leonard Davis Institute of Health Economics and a study co-author, notes that this is not the only issue.

Provided by Perelman School of Medicine at the University of Pennsylvania

"People often assume that Black-white differences in mortality are due to higher rates of chronic health conditions among Black individuals," she said. "But time and time again, research has shown that where Black patients get their care is much more important and that if you account for where people are hospitalized, differences in mortality vanish."

As a final step, the researchers ran simulations modeling what would happen if the Black patients in the cohort had instead been admitted to the same hospitals as the white patients, and in the same proportion. The mortality rate among Black patients dropped from 13.5 percent to 12.2, a single percentage point drop that translated to the overall mortality risk declining by a tenth.

"Our analyses tell us that if Black patients went to the same hospitals white patients do and in the same proportions, we would see equal outcomes," said Nazmul Islam, Ph.D., a statistician at OptumLabs who co-authored the study.

While they didn't explicitly track where each patient lived, Asch said that the study provides an index for how residential segregation policies—such as the now illegal loan refusal policies known as "redlining"—continue to affect people of color's access to social services like health care.

"It's intolerable that we live in a society where Black patients are more likely to go to hospitals where death is also more likely," said Asch. "Centuries of racism got us to this level of residential segregation, but a step we can take today is to change policies so that all hospitals are not so dependent on local resources to maintain their quality. COVID-19 has provided a lens through which we can see how much more we must travel to reach justice."

More information: *JAMA Network Open* (2021).
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