COVID-19 outcomes not consistently explained by race, social vulnerability

April 14 2022, by Phil Ciciora

Credit: Unsplash/CC0 Public Domain

The COVID-19 pandemic has afforded researchers a unique lens through which to study racial inequities in health care delivery and outcomes in the U.S. And according to a paper co-written by a

University of Illinois Urbana-Champaign political scientist who's an expert in data-driven social research, the racial health disparities experienced by minorities in the U.S. during the early months of the initial outbreak should be of concern for everyone.

New research not only provides valuable insights into the differential contributions of race, ethnicity and social determinants of health to COVID-19 outcomes, but also emphasizes that all racial groups experienced the full brunt of the pandemic—albeit in different ways and to varying degrees, said Wendy K. Tam Cho, a professor of political science, statistics, math, computer science, Asian American studies and law at Illinois.

"The big takeaway is that the racial health disparities that we see in the COVID-19 data are really a concern not just for minority populations in the U.S. but for everyone," she said. "Pandemics highlight that our society is highly interconnected, so poor health outcomes for any group will have repercussions for the health of the general population."

To further understand the racial health disparity dynamics during the COVID-19 pandemic, Cho and co-author David G. Hwang, of the University of California, San Francisco School of Medicine, investigated the demographics of COVID-19 test positivity, hospitalization and death in the San Francisco Bay Area.

The researchers analyzed the electronic health records of patients within the University of California San Francisco Health system, a large multi-hospital, multi-clinic academic health care system in demographically diverse Northern California, for individuals who underwent COVID-19 testing from February-December 2020, a period chosen to avoid confounding effects from vaccines.

The relative decoupling of race, ethnicity and socioeconomic status in

the Bay Area presented a unique opportunity to unravel the complex interrelationship between race, ethnicity and other social determinants of health on observed outcomes for COVID-19, Cho said.

"The Asian community in the Bay Area is especially diverse, encompassing a wide range in ancestry, culture, religion, language, immigration status, educational attainment and socioeconomic status, making the data especially interesting," she said.

Cho and Hwang found that every racial/ethnic group has been impacted by the pandemic, though in different ways. For example, Black and Hispanic individuals tested positive at the highest rates, but Asian individuals experienced the highest hospitalization and death rates. At the same time, Hispanic persons suffered the greatest number of potential years of life lost and, by extension, experienced disproportionate mortality impact from COVID-19. The white population was the largest, so while their death rate was not the highest, they still tallied many deaths.

"It's not surprising that Black and Hispanic individuals tested positive at higher rates, as this has been found repeatedly throughout the pandemic across the U.S. and reported on by many journalists," Cho said. "But I was surprised at how poorly the Asian population fared in terms of hospitalizations and deaths, with rates in excess of twice that of the white population. I was also surprised that while the Hispanic death rates were not especially high, the age of death for Hispanic patients was significantly younger than it was for any of the other groups."

While it is important to identify broad patterns in health outcomes at the national level, Cho said alleviating inequality must occur through specific and intentional measures that are locally and contextually relevant.

"There's a saying that all politics is local. In the same vein, health has strong relationships to local conditions," she said. "That involves considering the sociodemographic attributes of the region and structural aspects such as housing stock, educational opportunities, employment characteristics, transportation networks, access to health care, historical evolution of neighborhoods and experience of systemic racism.

"The Bay Area has many very poor neighborhoods and many extremely wealthy neighborhoods. Accordingly, a comprehensive understanding of the impact of COVID-19 on racial and ethnic groups in the U.S. must include the study of regions and subpopulations that differ substantially in makeup from the U.S. as a whole—not only to better understand race-specific causation factors, but also to formulate data-driven strategies and policies to ameliorate racial disparities in health outcomes."

The paper was published in the *Journal of Racial and Ethnic Health Disparities*.

study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.