Heart disease, stroke more deadly in 'socially vulnerable' counties

December 3 2020, by Laura Williamson

Your chances of dying from heart disease or stroke are higher if you live

in a county considered socially vulnerable due to factors such as poverty, crowded housing and poor access to transportation, new research shows.

"The findings confirm what we might have imagined—that social and place-based factors play a key role in cardiovascular mortality," said lead investigator Dr. Quentin R. Youmans, a cardiology fellow at Northwestern Medicine in Chicago. "Moving forward, we have to focus on those social determinants of health just as much as we have to focus on therapeutics and other prevention measures."

Researchers looked at death rates from heart disease and stroke from 1999-2018 for 2,766 counties, representing 95% of counties across the United States. They also looked at each county's social vulnerability index, a measure created by the Centers for Disease Control and Prevention using 15 census variables, such as income, minority status, housing type, age and access to a car. The index was created to identify communities vulnerable to external stresses on human health caused by natural disasters or infectious disease outbreaks.

The findings showed a high social vulnerability index score steadily tracked with a higher death rate for cardiovascular diseases during the past two decades. More than 1 in 3 U.S. counties had both high heart disease and stroke death rates and high social vulnerability scores. Those counties were clustered in the South and Midwest.

The study was recently presented at the American Heart Association's virtual Scientific Sessions. The research is considered preliminary until published in a peer-reviewed journal.

"Social vulnerability scores can help us identify those counties at higher risk so we can begin to look at where to make changes on a more individual level," Youmans said. "We need to identify specific social components that may put people at higher risk for cardiovascular

mortality."

Deaths from heart disease have been declining in the United States for decades thanks to advances in prevention and treatment. But heart disease remains the nation's leading cause of death, affecting some groups more than others. Black people, for example, are more likely than their white, Hispanic and Asian or Pacific Islander counterparts to die of heart disease, according to CDC data. A growing body of research shows factors such as employment status, income, educational status and neighborhood play a role.

"As much as we've been working to address these health disparities that are related to social factors, that gap has remained across all of these years," said April Carson, associate professor of epidemiology at the University of Alabama at Birmingham and associate dean for diversity, equity and inclusion. "It's a reminder of the importance of effectively addressing these social factors to improve people's health."

Special attention should be paid to counties in the Southeast, where social vulnerability scores were some of the highest, she said.

"Maybe that's where we make additional public health infrastructure investments to really help people in those areas. We have to create a culture of health that goes beyond clinicians and health care practices, find more innovative ways of reaching people," said Carson, who was not involved in the new research but recently co-authored an AHA presidential advisory about the impact of structural racism on health disparities.

Health programs working through community gathering points such as barbershops and churches have been shown to be effective at reducing risk factors for heart disease and stroke and could be expanded, she said. For example, a program in Los Angeles County significantly lowered

blood pressure levels for Black men by allowing barbershop patrons to work with an on-site pharmacist to have their blood pressure measured and treated if it was high.

Youmans agreed community-based programs should be part of the solution. "Now that we've identified geographic targets, these are the areas where we might be able to implement community-based programs that use multidimensional teams to implement health programs or to make changes to health policies that can reduce cardiovascular mortality."