

# Social, financial factors critical to assessing cardiovascular risk

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Certain markers of a person's financial and social status, known as social determinants of health, offer valuable information about a person's potential risk of heart disease but are often overlooked, according to research presented at the American College of Cardiology's Annual Scientific Session Together with World Congress of Cardiology (ACC.20/WCC).

Two studies examined how social determinants such as [food security](#), [financial stability](#) and access to [health care](#) can play a defining role in a person's risk of [heart](#) disease. Considering these factors as part of medical records and decision-making could help address health disparities, researchers said.

"We are very focused on addressing certain cardiovascular risk factors, but we forget about factors such as food, housing and financial security that often play a major role in the development of cardiovascular disease," said Tarang Parekh, MBBS, an assistant researcher in the Department of Health Administration and Policy at George Mason University and lead author of one of the studies. "We are not investing enough to address

these issues. We [must] start addressing patients' problems from a broader perspective in order to better reduce the toll of cardiovascular diseases."

Parekh and colleagues analyzed 2017 data from more than 400,000 U.S. adults in the Behavioral Risk Factor Surveillance System, a large phone-based survey that has been conducted annually for more than 35 years. Nearly 1 in 10 of the survey respondents reported having at least one form of heart disease. The researchers examined how respondents' perceptions of their levels of food, housing and financial security related to their likelihood of having various forms of heart disease, including heart attack, stroke, coronary artery disease and congestive heart disease.

After adjusting for demographic factors, socioeconomic status and known heart disease risk factors, Parekh and his colleagues found several social factors to be independently associated with an increased risk of heart disease. Food and housing insecurity increased the odds of heart disease by more than 50%, while health care access hardship increased the odds by 47%. People with a high degree of financial insecurity (those who said they frequently felt stressed about having enough money to pay their rent or mortgage) were more than twice as likely to have heart disease as those who considered themselves financially secure.

While the study does not show cause and effect, Parekh said there are several possible reasons for the associations. Food insecurity (frequently feeling worried about having enough money to buy nutritious meals) could make it difficult to maintain a heart-healthy diet, he said, while financial or housing insecurity can lead to stress that can trigger physiological effects that contribute to heart [disease](#). Suboptimal access to health care can cause people to delay screening or care until a cardiovascular problem is more advanced and harder to control.

Recognizing these challenges, he said, many health systems are reaching out beyond their clinic walls to connect patients with community resources to reduce barriers to accessing health care, food and housing.

"Recently, health care systems have been considering adding questions relevant to social determinants of health to electronic health records, which would be a really good step," Parekh said. "In addition, some physicians have started asking questions about the challenges patients may be facing in terms of food, housing and finances and collaborating with non-profit [and community] organizations to address these issues in addition to other [cardiovascular risk factors](#) a patient has."

The study is limited by the potential for bias in sample selection and its reliance on self-reporting by participants, Parekh said. The researchers plan to further investigate the timing of [heart disease](#) development to shed more light on its relationship with social and financial factors.

### **Redefining risk scores**

A separate study focused on the modeling tools doctors commonly use to gauge a patient's cardiovascular risk. Researchers found that current risk prediction models, which do not incorporate details about income, education level, housing status or food insecurity, likely underestimate the cardiovascular risk faced by patients in minority groups and those with low income. Because doctors use risk scores to guide treatment decisions, the study authors said this shortcoming could contribute to [health](#) disparities.

"If we systematically underpredict risk, we will systematically undertreat," said Gmerice Hammond, MD, cardiology fellow at Washington University School of Medicine and the study's lead author. "Our study is the first to show that if you bring a robust panel of social determinant factors into the risk models, you may actually be able to improve clinical risk prediction."

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