

# Socioeconomic factors found to adversely affect most heart failure patients

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A majority of Americans suffering from heart failure face substantial socioeconomic challenges, researchers at UT Southwestern Medical Center found.

The study, published in [\*The American Journal of Cardiology\*](#), revealed that 8 in 10 ambulatory [heart failure patients](#) are adversely affected by two or more social determinants of health (SDOH). These are nonmedical factors—such as economic insecurity, lack of access to care, or difficult living conditions—that can influence health outcomes. Racial and ethnic minorities, as well as those with low incomes, are disproportionately affected.

This is the first study to determine the national prevalence of adverse SDOH in heart failure patients and builds upon similar research at UT Southwestern involving its patients.

"Heart failure is a chronic medical condition that requires close follow-up, long-term medication use, and lifestyle change, but adverse SDOH are common barriers to optimal management," said study leader Andrew Sumarsono, M.D., M.P.H., Assistant Professor of Internal Medicine in the Division of Hospital Medicine at UT Southwestern. "Our research shows that adverse SDOH are exceedingly common in the heart failure population in the U.S. and that they tend to impact minority groups more significantly. Developing targeted social interventions to address these adverse SDOH can likely help improve heart failure care on a population level.

To better understand the prevalence of adverse SDOH in heart failure patients, UTSW researchers aggregated publicly available data from the 1999 to 2018 National Health and Nutrition Examination Surveys, which collected information from a cross-section of U.S. residents. Based on the design of the survey, the UTSW team was able to use weighting procedures so that its findings could be applied to the entire U.S. population.

The team identified individuals with a self-reported history of heart failure and analyzed data by race, ethnicity, and characteristics related to

SDOH as outlined by the American Heart Association, including socioeconomic position (income, education, [unemployment rates](#)); access to care (uninsurance rates, no routine place for care); environment (food insecurity, household crowding); and health status (sleep deprivation, physical activity levels, and disabilities).

In all, 1,906 individuals were identified in the survey. They represent an estimated 5.25 million patients in the United States with a history of heart failure. About 81.4% of heart failure patients from the survey reported negative effects from two or more SDOH factors.

Those with lower household incomes reported much higher rates of adverse SDOH than respondents with [higher incomes](#), and significant ethnic/[racial differences](#) in SDOH reporting were found in education, uninsurance, food security, household crowding, and sleep deprivation.

For example, [food insecurity](#) was twice as prevalent among Black and Hispanic respondents compared with white patients, and minority patients reported much higher rates of household crowding (11 times greater among Hispanic respondents, and four times greater among Black respondents).

"Millions of Americans suffer from [heart failure](#), where the [heart muscle](#) is weakened and can't pump blood properly," said Lajjaben Patel, M.B.B.S., a postdoctoral researcher in UTSW's Cardiometabolic Research Unit, who served as first author of the study. "When they have access to proper care and support, however, they can successfully manage their condition. The next step in our research is to identify which social determinants have the greatest impact on clinical outcomes and test specific interventions to determine their benefit."

Also contributing to this study from UTSW was Nidhish Lokesh, B.S., a fourth-year medical school student.

**More information:** Lajjaben Patel et al, Prevalence of Social Determinants Among US Residents With Heart Failure by Race/Ethnicity and Household Income, *The American Journal of Cardiology* (2023). [DOI: 10.1016/j.amjcard.2023.03.017](https://doi.org/10.1016/j.amjcard.2023.03.017)

Provided by UT Southwestern Medical Center

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