New data helps measure, map poverty’s connection with heart failure deaths
Mariell Jessup, M.D., FAHA; Chief Science and Medical Officer, American Heart Association
Kim Stitzel, M.S., R.D.; SVP, Center for Health Metrics, American Heart Association

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Poverty level is a county’s strongest socioeconomic factor associated with dying from heart failure and coronary heart disease, according to new research in the Journal of the American Heart Association.

In the first study of its kind, researchers evaluated county-level poverty (% living in poverty), education (% people >25 years without a high school diploma), income (median household income), employment (unemployment rates for individuals >16 years) and health insurance status (% uninsured <65 years) in 3,135 counties across the United States from 2010 to 2015. Those five factors were compared with the counties’ mortality rates for heart failure and coronary heart disease, and adjustments were made for age, sex, race, and metro status to limit the possibility that any relationships would be due solely to demographics or rurality. These were the highlights:

- Poverty had the strongest correlation with both heart failure and CHD mortality. But its correlation with heart failure mortality (r=0.48) was significantly stronger than (and independent of) its correlation with CHD mortality (r=0.24).
- The relationship between poverty and heart failure mortality varied by census region. It was strongest in the South and weakest in the Northeast.
- Differences across counties in the prevalence of diabetes and obesity (which are also closely correlated with county-level poverty) explained over half of the association between poverty and heart failure mortality.

The study can’t establish causality because it was cross-sectional in design, but its findings suggest the strength of connections between certain socioeconomic factors and heart failure mortality.

Addressing health disparities by targeting risk factors
Policies that aim to reduce obesity and diabetes could help decrease health disparities in heart failure deaths, particularly in high-poverty areas in the South. Tackling these heart failure risk factors requires attention to behavioral aspects and social determinants, which are highly interrelated. The implications could help shape how healthcare providers counsel patients and how advocacy efforts push for healthy changes in the places people live, work and play.

Type 2 diabetes has become more manageable, thanks to new medications and treatment options, but there is more potential to improve heart health and reduce heart failure deaths. The American Heart Association and the American Diabetes Association partnered to launch Know Diabetes by Heart, which aims to reduce CVD mortality and modify CVD risk factors among these individuals. It will focus on the general population, people with diabetes, health care providers and health systems.

Related Resources:
- Data Visualization: Heart Failure Mortality in the United States (1999-2016)
- Know Diabetes by Heart: A Partnership to Improve Cardiovascular Outcomes in Type 2 Diabetes Mellitus by Eduardo Sanchez and William Cefalu