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Homeless populations at high risk to develop cardiovascular disease

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Among homeless individuals cardiovascular disease remains one of the major causes of death due to challenges in predicting initial risk, limited access to health care and difficulties in long-term management, according to a review published today in the *Journal of the American College of Cardiology*.

In the U.S., roughly 550,000 people are homeless on any given night, and an estimated 2.3 million to 3.5 million people experience homelessness over the course of a year. The median age of the homeless population is 50 years, approximately 60 percent are male and 39 percent are African-American. These demographic groups experience high cardiovascular disease mortality rates, highlighting the need for proper prevention and treatment.

While the prevalence of hypertension and diabetes among homeless individuals is similar to that of the general population, it often goes untreated, leading to worse blood pressure and blood sugar control. Smoking remains the largest contributor to cardiovascular disease mortality in homeless populations, with an estimated 60 percent of ischemic heart disease deaths attributable to tobacco. Although, according to the review, most homeless individuals have a desire to quit smoking, quit rates are only one-fifth the national average.

Homeless populations are more likely to heavily drink and have a history of cocaine use, which have been linked to congestive heart failure, atherosclerosis, heart attack and sudden cardiac death. Twenty-five

percent of homeless people have a chronic mental illness, contributing to cardiovascular disease risk and complicating diagnoses by impacting motivation to seek care.

In this review, researchers note that none of the current cardiovascular disease risk prediction models used in clinical practice have been confirmed in homeless populations, creating a gap in knowledge for the treatment of non-traditional cardiovascular disease risk factors.

"Clinicians need to make a concerted effort to overcome the logistical hurdles to treating and preventing cardiovascular disease in homeless populations," said Stephen W. Hwang, MD, MPH, director of the Centre for Urban Health Solutions of St. Michael's Hospital, and the review's lead author. "Half of homeless individuals don't have access to a consistent source of health care, making follow-up visits and lengthy diagnostic tests a challenge. It's our duty as health care providers to adjust our practices to provide the best possible care for these vulnerable patients."

The authors determined homeless patients are more likely to utilize the emergency department, contributing to a cycle of care focused on immediate needs rather than long-term management. Without health insurance and permanent housing, homeless patients struggle to adhere to medication that requires multiple doses per day.

"We need to apply evidence-based treatment guidelines for patients experiencing homelessness, and cardiologists can work with primary care providers to help achieve this goal." Hwang said.

Recent studies show anywhere from 44 to 89 percent of homeless individuals have cell phones. The review authors suggest that appointment reminders delivered via text message may enhance follow-up visits.

The treatment of homeless patients is made difficult by limited access to care, adherence to medication and commitment to evidence-based treatment. The authors suggest that when a diagnosis of cardiovascular disease is confirmed in a homeless patient, consult with a cardiologist for next steps in the management process and schedule regular follow-up with patients to minimize the risk of loss of care. Practical, patient-centered care can ultimately deliver optimal cardiovascular outcomes.

More information: *Journal of the American College of Cardiology* (2018). DOI: 10.1016/j.jacc.2018.02.077

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