

## Community-Based Approaches to Cardiovascular Health Interventions in Vulnerable Populations

The following is a synopsis of “Community-Based Cardiovascular Health Interventions in Vulnerable Populations: A Systematic Review,” published in the *Journal of Cardiovascular Nursing* in July 2014.



### What is already known on this topic?

The leading cause of death for U.S. adults is cardiovascular disease (CVD). Although many groups of Americans are experiencing improvements in cardiovascular health, “vulnerable populations” are not. Vulnerable populations include the economically disadvantaged, racial and ethnic minorities, the uninsured, low-income children, the elderly, and individuals with chronic conditions. These groups also experience disparities related to CVD risk factors, such as obesity, hypertension, smoking, and sedentary lifestyles.

For many years, researchers and communities have supported the use of community engagement as a component of successful interventions. However, few studies have incorporated community-based interventions addressing differences in cardiovascular health across a wide range of vulnerable populations.

### What is added by this article?

The authors conducted a systematic review that exclusively includes community-focused interventions, such as faith- and school-based programs, in addition to encompassing many vulnerable low-income populations. Of the 32 studies that

met eligibility criteria for the analysis, vulnerable populations studied included Asian/Asian American, African/African American, Latino/Hispanic American, low-income individuals, and populations from socially disadvantaged neighborhoods, rural settings, or neighborhoods with higher mortality rates than surrounding communities.

The analysis revealed that education was the most frequently used intervention, although almost half of interventions involved multiple approaches. Less frequently used interventions included community improvements, meditation, health care provider training, food provision, and story-telling. Interventions led by health care providers were the most frequent, the duration of follow-up was most often 2 to 12 months, and community settings most frequently included clinics and homes. Researchers found that studies including body mass index as an outcome measure may be more effective for men, whereas studies including physical activity may be more effective for women. Among the 20 studies in the review that tested blood pressure outcomes, 13 did not require eligible patients' blood pressure to be elevated ( $\geq 140/90$  mmHg) at baseline. The authors identified significant reductions in systolic blood pressure in 8 (62%) of the 13 studies.

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## What are the implications of these findings?

Blood pressure interventions were considered to be the most promising; however, and these efforts did not appear to be more effective for one group over another. In contrast, behavior change interventions were the most challenging. Future research studies should consider study durations longer than 12 months and specifically target vulnerable populations, such as the homeless or military veterans.

An improved study design could take a closer look at the potential impact of the comprehensive assessments

among the vulnerable groups; the assessments may be more effective for those belonging to vulnerable populations. None of the physical activity studies reviewed by the researchers included randomized controlled trials (RCTs). Therefore, researchers also should consider RCT designs around physical activity and exercise to further contribute to the literature. Considering the authors identified few studies that focused on integration, moving forward, the identified successful interventions should be integrated into larger health systems and policies that affect cardiovascular health and other chronic disease risk factors and diseases.

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## Resources

Centers for Disease Control and Prevention  
*Interactive Atlas of Heart Disease and Stroke*  
<http://nccd.cdc.gov/DHDSPAtlas>

U.S. Department of Health and Human Services  
*National Partnership for Action to End Health Disparities*  
<http://minorityhealth.hhs.gov/npa>

American Heart Association  
*What Is Heart Disease?*  
[www.heart.org/HEARTORG/Conditions/Conditions\\_UCM\\_001087\\_SubHomePage.jsp](http://www.heart.org/HEARTORG/Conditions/Conditions_UCM_001087_SubHomePage.jsp)

## Citation

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*The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.*

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