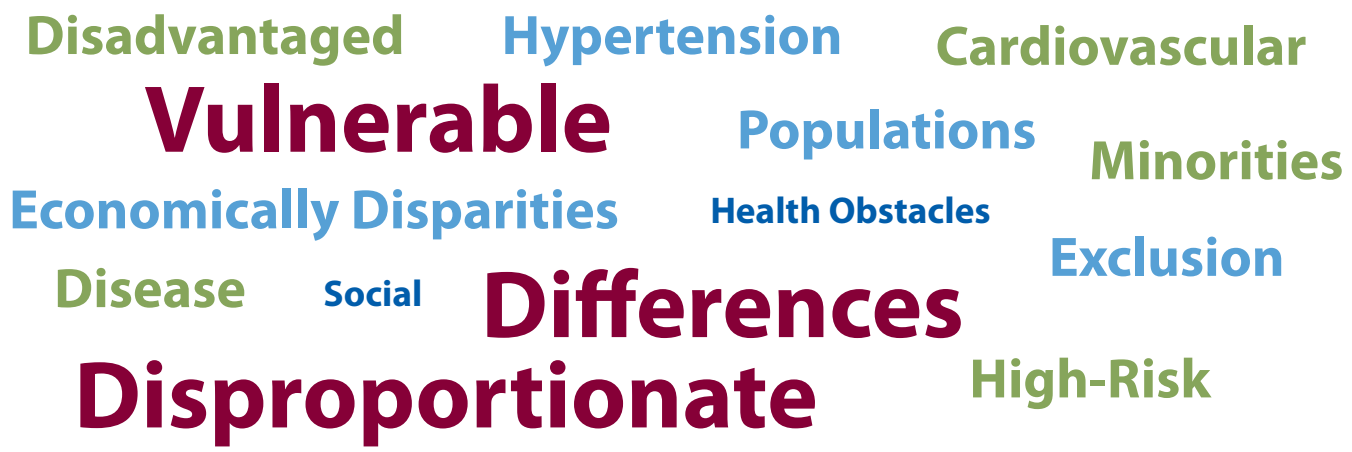
SCIENCE-IN-BRIEF FEATURE

TURNING SCIENCE INTO ACTION

# Understanding Health Disparities in Cardiovascular Disease




**The following is a syntheses of four recent articles on health disparities in cardiovascular disease.**

## What is already known on this topic?

Health disparities refer to the differences between people that can impact how frequently a disease affects a particular group. While some Americans are experiencing improvements in cardiovascular health, others belong to vulnerable populations and experience social or economic obstacles. These obstacles stem from characteristics historically linked to discrimination or exclusion such as race or ethnicity, religion, socioeconomic status, gender, mental health, sexual orientation, or geographic location, and disability status.[1] It is difficult to identify the individual contributions each of the obstacles have on differences in health when there are multiple connections between these factors that may result in disparities.

Although heart disease death rates have declined overall, racial disparities have persisted. Racial and ethnic disparities in cardiovascular disease and CVD risk factors in particular are long-standing and persist throughout one's life. For example, the rate of heart disease—the number one cause of death in the United States—has declined over time for both African Americans and Whites. In 1950, no disparity in rates of death from heart dis¬ease existed between African Americans and Whites. However, as rates of death from heart disease for both groups have steadily declined, since 1980, a gap in rates between the two groups that was not present in 1950 has appeared.[2]

## What is added by these studies?

The selected studies provide a population approach to understanding and intervening health disparities in cardiovascular disease.

Graham[3] provides a review of the current science and evidence of population-level racial and ethnic differences in risk factors for heart disease in the United States. In the case of diabetes, the prevalence of diagnosed diabetes in Mexican-Americans and Puerto Ricans was over twice that of non-Hispanic whites. While challenging to appropriately estimate risk among Asian Americans, smoking is a CVD risk factor particularly high among some Asian subgroups.[3] Lackland [4] addresses how salt sensitivity, BMI, and resistant and refractory hypertension in African Americans are thought to contribute to the differencesin

hypertension compared to their White counterparts. factors with significant racial differences that could affect the disparities in hypertension as well, including:

- social determinants
- access to and cost of care
- fetal/early life origins
- different treatment delivery and response

Lackland[4] also highlights racial disparities in hypertension and hypertension-related outcomes between minority and nonminority groups across the United States and brings attention to the inadequate and insufficient nature of clinical trials and studies focused on high-risk populations.

Walton-Moss and colleagues[5] provide a critical review of community-based cardiovascular disease interventions to improve cardiovascular health behaviors among vulnerable populations. Of the 32 studies that met eligibility criteria for the analysis, many vulnerable populations that were 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. Interventions led by health care providers were the most frequent, and settings most frequently included clinics and homes. Among behavior change interventions, those aimed at decreasing blood pressure were less challenging to carry out compared to others. For example, one study reviewed saw positive outcomes across three separate risk factors: BMI, cholesterol, and blood pressure. [5] The critical review helps build an understanding of the current literature on cardiovascular interventions for vulnerable populations.

Willock and colleagues[6] describe a community health worker (CHW) intervention targeted towards African American women with preliminary evaluation results suggesting that the Learning Circle Training—an interactive group training—may work best for increasing heart health knowledge among experienced CHWs and CHWs who have some prior familiarity in the content area of focus. In this group participation method, learners received a stipend to actively create learning content for themselves and others over a two week time frame for a total of 28 hours. More CHWs reported feeling "very confident" about teaching heart health content to others after receiving the training when comparing the pre and post trainings results (52.6% vs. 66.6%).

*Steinhardt et al. saw pre-post intervention decreases in three heart disease risk factors among participants of a Diabetes Coaching Program: in BMI from 32.8 to 32.1, in total cholesterol from 178 to 163, and in systolic and diastolic blood pressure (SBP: 134 to 124 mm Hg and DBP: 82 to 76 mm Hg). The program was delivered by a health education professor and a Nutritional Sciences PhD candidate, consisted of resilience education and diabetes self-management four times a week, and was followed by eight bi-weekly support group meetings over six month duration.[5]*

## What are the considerations for public health practice?

- **Increased awareness of vulnerable populations' characteristics,** as well as, differences in how often a disease affects them, risk factor burdens, disease progression and treatment are critical to improve health disparities.
- **Better understanding the disparities in CVD risk factors** may help clinicians and public health professionals develop culturally sensitive interventions, prevention programs, and services specifically targeted at risk burdens in impacted vulnerable populations. [3]
- **Community health worker interventions** can support public health efforts to link community members and structural institutions with resources such as health care and social services.
- **Implementation of research through epidemiological studies and clinical trials** focused specifically on the assessment of racial disparities in hypertension to help close the racial disparity gap are needed. [4] Successful interventions should be integrated into larger health systems and/or social policies.

## Additional Resources

Centers for Disease Control and Prevention Promoting Health Equity

http://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/tools/pdf/SDOH-workbook.pdf

Centers for Disease Control and Prevention Social Determinants of Health Maps

http://www.cdc.gov/dhdsp/maps/social_determinants_maps.htm

Kaiser Health News

http://www.kaiserhealthnews.org/Topics/Health-isparities.aspx

## Citations

Articles included in this product were all nominated for Science-in-Brief in 2014, with the exception of the Institute of Medicine Workshop Summary.


1. U.S. Department of Health and Human Services, Healthy People 2020 Draft. 2009, U.S. Government Printing Office.
2. Institute of Medicine (US). How Far Have We Come in Reducing Health Disparities? Progress Since 2000: Workshop Summary. Washington (DC): National Academies Press (US); 2012. 2, What Progress in Reducing Health Disparities Has Been Made?: A Historical Perspective. Available from: http://www.ncbi.nlm.nih.gov/books/NBK114236/
3. Graham, G. Population-based approached to understanding disparities in cardiovascular disease risk in the United States. International Journal of General Medicine. 2014: 7 393-400
4. Lackland, D. Racial Differences in Hypertension: Implications or High Blood Pressure Management. Am J Med Sci. 2014; 348(2):135-138.
5. Walton-Moss B, Samuel L, Nguyen TH, Commodore-Mensah Y, Hayat MJ, Szanton SL. Community-Based Cardiovascular Health Interventions in Vulnerable Populations. Journal of Cardiovascular Nursing. 2014. 29(4): 293-307.
6. Willock, RJ, Mayberry, RM, Yan, F, Daniels, P. Peer Training of Community Health Workers to Improve Heart Health Among African American Women. Health Promotion Practice. 2014. 1-9.


*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.*