Cardiovascular diseases account for a significant portion of deaths and healthcare costs in the United States. Women from ethnic minorities and rural areas carry a disproportionately higher burden of cardiovascular morbidity and mortality. Many factors contribute to this persistent disparity: a comparatively low level of awareness especially among the at-risk populations, increased prevalence of cardiovascular risks linked to the obesity epidemic, and inconsistent levels of screening and treatment of cardiovascular risks. Cultural and social factors that influence lifestyle and behavior also have significant cardiovascular health consequences and contribute to the disparity. Any intervention to address health disparities should include a community-based component that incorporates education at the lay level, as well as the healthcare provider level. We describe a community education initiative to increase awareness and knowledge about heart disease in women and a community-academic collaborative project to improve diabetes and cardiovascular outcome. These programs have been successfully initiated in the Mississippi Delta, a location with some of the highest cardiovascular mortality (especially among the African American women) as well as limited healthcare infrastructure, low socioeconomic levels, and low literacy rates.

Addressing Disparities in Cardiovascular Risk Through Community-Based Interventions

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Cardiovascular disease (CVD) is the number one killer of adults in the United States today. Significant risk factors for CVD include diabetes, obesity, physical inactivity, tobacco use, hyperlipidemia, and hypertension. Estimated population prevalence rates for these cardiovascular risk factors for US men and women are summarized in Table 1. Metabolic syndrome, which involves abdominal obesity, hypertriglycerideremia, low high-density lipoprotein cholesterol, high blood pressure, and hyperglycemia, increases risk of mortality in general and especially in people with pre-existing CVD and diabetes. Although several of these risk factors have biological and genetic bases, the role of lifestyle and personal behavior must be underscored in cardiovascular disease.

Disparities in cardiovascular risk factors are pervasive in this country, as has been shown in national surveys through both self-report and objective measurement. These disparities exist based on sex, ethnicity, education level, socioeconomic status, and geographic location. In general, African Americans, Hispanics/Mexican Americans, persons of low socioeconomic status, those with less than a high school education, and persons living in the southeastern United States and Appalachia are the groups most adversely affected when it comes to cardiovascular health. African American women, especially those living in the Southeast, bear the highest CVD burden with regard to specific risk factors, such as obesity, diabetes, and physical inactivity.

Heart disease is the number one killer of women in the United States; it affects women in every age group. While the mortality trends from heart disease for men have declined over time, they remain unchanged for women. Heart disease accounts for 41.3% of all female deaths, which is more than all types of cancers combined. In 2002, the number of short hospital stays for congestive heart failure and stroke in women exceeded those for men. Although women and men experience similar CVD symptoms, the weighting of factors and prevalence may differ, and women can experience an atypical presentation of cardiac symptoms. For example, diabetes is a more powerful risk factor for CVD, and increasing age confers greater risk, particularly after menopause, in women compared to men. The relative risk of cardiovascular disease associated with metabolic syndrome is also higher in women. Biological differences between the sexes are still not yet adequately studied or fully understood, which contributes to the observed sex disparities as well.

The influence of ethnicity on cardiovascular morbidity and mortality began to be elucidated with the Atherosclerosis Risk in Communities study, a multicenter, population-based study of heart disease. The findings from this study and others have demonstrated that mortality from CVD at all ages is highest among African Americans. African Americans are also more likely to experience two or more cardiovascular risk factors, develop high blood pressure earlier in life, and have higher average blood pressures (compared to Caucasians). In fact, the prevalence of high blood pressure in African Americans in the United States is among the highest documented worldwide. Among Mexican Americans and African Americans, the risk of diabetes is twice that for non-Hispanic Whites.