Race Initiative Report on Cardiovascular Diseases

Executive Summary

Among both men and women of all racial and ethnic groups, cardiovascular diseases (CVD), primarily coronary heart disease and stroke, are our nation's leading killer. Approximately 960,000 Americans die each year of CVD accounting for more than 40% of all deaths. Every day, more than 2,600 Americans die of CVD, an average of one death ever 33 seconds. These diseases are the leading causes of death and disability among Americans aged 35–64 each year. In addition, the rate of premature deaths due to CVD are greater among racial and ethnic minorities. The annual national economic impact of CVD nationwide as measured in health care expenditures, medications, and lost productivity due to disability and death is estimated at $274 billion.

Coronary Heart Disease

Deaths rates of coronary heart disease vary widely in different racial and ethnic groups; the highest death rates are among African Americans, followed by whites, American Indian/Alaska Natives, Hispanics, and Asian/Pacific Islanders.[1] Coronary heart disease accounts for 32.4% of deaths among African American men and 41.6% of deaths among African American women.[1] In 1995, death rates due to coronary heart disease were 330.9 per 100,000 population for African American men (49% higher than for white men) and 213.2 per 100,000 for African American women (67% higher than for white women). Among American Indian/Alaska Natives, coronary heart disease accounted for 26.0% of deaths among men and 28.4% of deaths among women. It accounted for more than one-third of deaths among Asian/Pacific Islanders. Approximately one of four deaths among Hispanic men (25.4%) and one of three deaths among Hispanic women (34.0%) were due to coronary heart disease.[1]

In addition to the high mortality rates, coronary heart disease is a highly prevalent condition; 6.9% of African Americans and 5.6% of Mexican Americans have coronary heart disease. It is estimated that 2.6% of African American men; 5.2% of African American women; 3.4% of Mexican American men and 4.6% of Mexican American women have angina.[2] Nationally representative estimates for the prevalence of coronary heart disease and angina are currently not available for American Indian/Alaska Natives and Asian/Pacific Islanders.

Stroke

Stroke is the third leading cause of death and the leading cause of severe disability in the United States.[1] In 1998, the direct and indirect costs associated with stroke were estimated at $43.3 billion.[2] There are substantial differences in stroke mortality rates across the different racial and ethnic groups. Stroke mortality rates are highest among African Americans followed by Asian/Pacific Islanders, whites, American Indian/Alaska Natives and Hispanics.[1] Mortality rates among African American men are 97% higher than among white men and rates among African American women are 71% higher than among white women. In younger age groups (<65 years), the disparities between African Americans and whites are even more pronounced.[3] Prevalence estimates indicate that 1.8% of African American men, 2.5% of African American women, 1.1% of Mexican American men and 0.8% of Mexican American women have suffered a stroke.[2]

Nationally representative estimates for prevalent stroke are not available for American Indian/Alaska Natives and Asian/Pacific Islanders.

Heart Failure

The number of persons living with heart failure is increasing and heart failure is currently the leading cause for hospitalization among Medicare beneficiaries. The economic costs associated with heart failure are also substantial, $20.2 billion in 1998.[2] Death rates from heart failure in 1995 were 8.8 per 100,000 population among African American men (31% higher than for white men) and 7.1 per 100,000 population among African American women (32% higher than for white women). An estimated 3.2% of African American men and 2.8% of African American women have heart failure.[2] The estimated rate of new or recurrent heart failure events for African American men aged 65–74 years is 21.1 per 1000 population; for ages 75–84 it is 52.0 per 1000 and for 85 and older it is 66.7 per 1000. For African American women the rates are 18.9, 33.5 and 48.4 respectively. Mortality data and prevalence estimates for other racial/ethnic groups for heart failure are currently not available.

Risk Factors and Needed Research

The six major modifiable risk factors for CVD are high blood pressure, cigarette smoking, high blood cholesterol, overweight, physical inactivity, and diabetes mellitus. The greatest potential for reducing heart disease and stroke morbidity, disability, and mortality appears to be in the prevention of the development of these risk factors. Eliminating disparities in health attributable to cardiovascular disease is contingent on successful efforts to prevent the initiation of current risk factors and the effective treatment for those with a risk factor. Moreover, these efforts will have to succeed at an unprecedented scale. Research confirms that among all racial and ethnic groups, risk behaviors, such as, consuming fatty food, having a sedentary lifestyle, and smoking, learned during childhood, adolescence, and in young adulthood, play a critical role in the development of CVD.

Interventions to mediate high risk behaviors, whether initiated in the early years or later, but continued into adulthood, are effective in reducing the risks for CVD. Despite this knowledge, racial and ethnic minorities remain at higher risk of developing and dying from CVD. Research is needed to determine effective methods of reaching racial and ethnic minorities to facilitate behavioral changes for the prevention of CVD. Future research should examine the effectiveness of multiple interventions in various racial and ethnic groups to determine the responsiveness of various groups to these interventions. Likewise, the examination of interventions by gender, age, and socioeconomic status (SES) is equally important because, along with race and ethnicity, each is a significant indicator of risk and imposes diverse influences on the ability to affect behavior change through intervention strategies. The conflux of individual, sociocultural, and societal influences cannot be ignored. Indeed, additional studies examining racial and ethnic disparities in health should include measures of SES.

The literature also points to insufficient research on the delivery vehicles, (i.e., television, radio, newspapers, and other media), necessary for introducing health interventions. Even though we live in an information-laden environment with ever increasing numbers of communication technologies, we lack the research to help us determine the appropriate channels for health interventions. Studies that explore cognitive and behavioral consequences of different

information channels (e.g., public television or radio) indicate that interventions that relied solely on television produced the fewest significant behavioral changes, whereas interventions that relied solely on print media produced the most behavioral changes. However, different media reach different segments of the population. These results suggest that program planners should use a combination of media channels to maximize outcomes for various groups in a population.

Another recommendation is to use a combination of two mutually reinforcing approaches to influence positive lifestyle change: a populationwide approach and a targeted subgroup approach. For example, the populationwide approach incorporates broad public appeal strategies that focus on the individual and society. Although it may increase the awareness of the public and create an environment for a healthier lifestyle, populationwide approaches may not have much impact on high risk subgroups. The targeted subgroup approach, on the other hand, specifically develops intervention strategies for high risk populations. Each high risk group receives a tailored community-based intervention, uniquely developed for its demographic, physiologic, and sociocultural characteristics. However, the effectiveness of this approach is limited because more than 50% of coronary heart disease cases occur among persons who are not considered to be at high risk. Because they are not targeted, they may incorrectly believe themselves to be at no risk. It is important, therefore, to consider the two approaches as complementary strategies to lessen disparities in risk factors.

Successful Interventions

Some of the more successful interventions have taken place in schools, health care settings, workplace, and churches. For example, a review of 16 studies of primary prevention tactics (e.g., students not at high risk of CVD) identified several examples of success in modifying risk factors, such as smoking and physical inactivity, and in improving cognitive outcomes. However, physiologic outcomes (such as blood pressure and adiposity) were not consistently modified. Most of the studies took place at elementary schools and included significant numbers of at least one racial/ethnic minority group. Interventions included a classroom health education component and modified food service (reducing salt and/or fat content) or physical education (i.e., sports skills or aerobic fitness) programs.[4]

Results from a number of intervention studies in health care settings showed modest effectiveness in changing patient behavior. Educational programs to improve prevention practices were most effective when combined with strategies such as office reminders (e.g., notes, call-backs), feedback, practice guidelines, and involvement of multidisciplinary health teams. Improvements in smoking cessation rates and blood cholesterol levels were observed. Preliminary results indicate that religious organizations may provide an excellent avenue for changing behaviors in populations at risk of CVD. Results of several recent studies suggest that partnerships between public health groups and religious organizations offer many advantages. The availability of important resources plus the opportunity to integrate simultaneously all aspects of spiritual health provide compelling reasons for a church-based health partnership. In addition, religious organizations often include entire families and neighborhoods. With such a strong social support network in place, programs and interventions that encourage healthy behaviors are more likely to be sustained.

A review of studies conducted at the workplace suggests that interventions can be successful when provided as a comprehensive, ongoing program targeting high risk individuals rather than low intensity interventions for every worker. Worksite-based intervention studies conducted as early as the late 1970s indicate that individualized, cardiovascular risk reduction counseling for high risk employees within the context of comprehensive programming may be the critical component of an effective worksite intervention. Review of the literature suggests that the worksite offers advantages similar to a religious organization in conducting interventions: convenience and low cost of repeated contact and support from intact social networks.

Health Care Delivery

While the decline in cardiovascular disease mortality attributable to risk factor reduction has been a major achievement in the latter part of the twentieth century, particularly for hypertension, advances in treatment of established cardiovascular diseases have also been essential.[5] Yet most studies of clinical interventions have demonstrated significant disparities in the use of clinical interventions known to be effective for members of racial and ethnic minorities. Growing interest in accountability for health care delivery and the increased numbers of Americans enrolled in managed care arrangements, including medicaid and medicare beneficiaries, offer new opportunities for assuring that disparities in secondary prevention and treatment can be addressed. Meeting this challenge will require health care organizations to collect data on race/ethnicity that can be linked to quality measurement efforts.

Recommendations

To reduce racial and ethnic disparities in CVD, data and intervention strategies should be modified and new programs should be implemented that have the following elements:

Data Needs

- ***The description of the burden of cardiovascular disease, (mortality, morbidity, behavioral health risk factors, and clinical interventions), among racial and ethnic subgroups.***
- ***An assessment of the impact of socioeconomic status and wealth, stress, and racism on cardiovascular disease morbidity and mortality.***
- ***The creation of a community equity index that measures housing values; voter registration patterns; availability of local health care; per pupil expenditures; EMS response times and other measures as appropriate, and examining the index effect on cardiovascular disease morbidity and mortality.***

Intervention Needs

- ***Community involvement (tribal leaders, CBOs, state and local health officials, federal and national health leaders) is a necessary component of any successful partnership.***
- ***Emphasize the importance of primary, secondary and tertiary prevention and clinical wellness in addition to clinical treatment, trials and protocols.***
- ***The current network of partners should be expanded and broadened to include collaborations with minority organizations, trade unions, HMO's, local government agencies including commerce and other government agencies such as the Department***

of Housing and Urban Development and the Department of Transportation.

- ***Funding should be expanded and diversified across national, regional, and community-based organizations as well as states and territories.***
- ***Reports of quality improvement efforts related to cardiovascular disease should include information about the race and ethnicity of individuals assessed.***
- ***The development, testing, and implementation of behavioral health interventions is needed to accompany cardiovascular disease treatment.***

References

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