AMWA JOURNAL V39 N4 / 2024

SCIENCE SERIES

Cardiovascular Disease in the Americas: Social Determinants, Public Health Policies, and Recommendations (Part 2)

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ABSTRACT

The purpose of this article is to examine the influence of social determinants of health on the global health problem of cardiovascular disease (CVD), particularly focused on the Americas. CVD, encompassing conditions such as coronary heart disease, heart failure, and cerebral vascular disease, is identified as the leading cause of mortality worldwide, with low- and middle-income countries bearing the brunt of its burden. The article discusses how factors such as economic status, education, physical environment, food supply, substance addiction, and health care accessibility contribute to the prevalence of CVD. Additionally, it explores current public health policies addressing CVD and provides recommendations for enhancing these policies to alleviate the burden of the disease. The recommendations include implementing tobacco control policies, raising the legal age for purchasing tobacco products, and advocating for comprehensive health care services. The article concludes by emphasizing the importance of tailored interventions, evidence-based policies, and evaluation strategies in combating CVD and improving public health outcomes.

PUBLIC HEALTH POLICIES AND CARDIOVASCULAR DISEASE

An effective public health policy assists in creating supportive environments that are important in ensuring that people live in a healthy social, emotional, spiritual, physical, and ecological environment that is safe and enjoyable for the greater community. This is achievable if public health policies are developed and established to improve the determinants of health and the subsequent factors that contribute to the overall health status of the individual and community. Over time, public health policies should be reviewed to assess their impact on health and, if these policies have a negative impact on health, strategies should be implemented to amend and resolve them.[1]

Historical Perspective

Cardiovascular disease (CVD) is a common theme of public health policy. In the Americas, both country-specific strategies and regional approaches have been adapted to maximize the effectiveness of the various policies in tackling the ever-present issue of CVD. During 2007, on a daily average, more than 2,200 Americans died of CVD.[2] Despite this distressing statistic, there has been a notable decline in CVD mortality rates since their peak in the mid-1960s, reflecting sustained progress over decades.[3] This decline, particularly noticeable from 1980 to 2000, is attributed to reductions in major CVD risk factors achieved through the implementation of public policies, education campaigns, and evidence-based medical treatments.[4]

Despite initial optimism for sustainable progress, public policy aimed at addressing CVD encountered a critical challenge in 2020. Mortality rates among adults continued to rise beyond the early years of the COVID-19 pandemic, persisting into 2022 despite the stabilization of the public health emergency. This marked a notable reversal of almost a decade's worth of progress in reducing CVD mortality rates in the United States. Although the exact reasons behind these adverse trends remain unclear, factors such as higher occupational exposure to COVID-19, increased financial instability, heightened stress levels, and reduced access to quality health care during the pandemic likely played significant roles.[5]

Moving forward, CVD policies should prioritize a comprehensive approach addressing traditional risk factors and emerging challenges exacerbated by local or global health crises. This includes enhancing public awareness, ensuring equitable access to preventive services, and strengthening health care infrastructure. These efforts should align with the concerns raised by the American Heart Association regarding projected increases in CVD and associated risk factors in the United States by 2050. High blood pressure prevalence is expected to rise significantly, from 51.2% to 61.0%, leading to over 184 million people diagnosed with CVD, up from 128 million in 2020. CVD, excluding high

ISSN 2163-5315

blood pressure, is expected to increase from 11.3% to 15.0%, affecting 45 million adults, up from 28 million. Stroke cases will nearly double, reaching approximately 20 million adults from 10 million currently. Obesity rates are forecasted to increase from 43.1% to 60.6%, impacting over 180 million individuals. Meanwhile, diabetes prevalence will rise from 16.3% to 26.8%, affecting more than 80 million people.[6]

The United States' Approach

The US Department of Health and Human Services' *A Public Health Action Plan to Prevent Heart Disease and Stroke* employs a comprehensive 6-fold array of intervention approaches to reduce the burden of CVD.[7] The plan includes policy and environmental changes to address the fundamental social and environmental conditions that contribute to the early development of CVD. Additionally, it promotes population-wide behavioral changes to mitigate the effects of adverse social and environmental conditions. Another focus is on detecting and controlling risk factors such as smoking and dietary habits that lead to CVD. The plan also includes emergency care and acute case management for patients, followed by rehabilitation services to help patients regain their quality of life, and concludes with end-of-life care.[7]

Although the Public Health Action Plan to Prevent Heart Disease and Stroke demonstrates considerable strengths with its diverse approaches to managing CVD progression, it falls short in addressing the causes of CVD.[7] This plan lacks a clear strategy to identify and mitigate the root causes of the disease. Additionally, it does not adequately account for the necessity of cultural sensitivity and the demographic differences across the United States, which are crucial for the successful implementation of a population-wide approach.

In response to these shortcomings, the US Department of Health and Human Services has shifted its focus toward effective public health policies aimed at reducing the burden of CVD. This shift is embodied in the Healthy People 2020 strategy. The initiative is dedicated to enhancing future cardiovascular health and quality of life by emphasizing the prevention, detection, and treatment of risk factors associated with CVD.[8]

Reducing CVD Through Tobacco Control Policies

The reduction in cardiovascular risk factors such as tobacco smoking is easily targetable by public policy and poses the greatest population health gain in reducing the burden of CVD. This is evident as the implementation of tobacco control policies has a dramatic impact on the accessibility, promotion, and distribution of tobacco products and can lead to a reduction in overall exposure.[9] Not only is tobacco a leading cause of CVD, tobacco smoking also has a causality link to many other diseases and adverse health effects that contribute to premature mortality rates around the world. For example, since the implementation of comprehensive tobacco control efforts in the United States, it is estimated that 8 million fewer premature deaths related to smoking have occurred. This remarkable achievement underscores the life-saving impact of robust antitobacco policies.[9]

Similarly, in the Americas region, the Pan American Health Organization[9] reports substantial progress following the adoption of the Framework Convention on Tobacco Control. The Americas have made significant strides in implementing various tobacco control measures, such as creating smoke-free environments, mandating graphic health warnings on tobacco products, and banning tobacco advertising, promotion, and sponsorship. The effectiveness of these measures is evident in the continuous decline in CVD mortality rates across all measurable countries in the Americas.[3]

Furthermore, the introduction or increase of taxes on tobacco products has proven to be a highly effective tobacco control intervention. A substantial body of evidence conclusively demonstrates that higher taxes on tobacco products lead to a significant decrease in tobacco consumption. By making tobacco products less affordable, higher taxes discourage initiation, promote cessation, and ultimately contribute to the overall decline in smoking rates and related health issues. This evidence-based strategy is a critical component of comprehensive tobacco control programs, offering a powerful tool to reduce the burden of tobacco-related diseases and deaths.[3,10]

RECOMMENDATIONS FOR ACTION

In the United States, tobacco products are taxed in 2 ways: per unit (ie, per pack of cigarettes) and the ad valorem tax, which is based on a constant fraction of the wholesale or retail price.[11] Therefore, a policy recommendation can be made to call upon the local, state, and federal governments to increase the tax applied to tobacco-related products to discourage the population's continued consumption.

A second policy recommendation is that the legal age for purchasing tobacco-related products be raised to increase the level of difficulty for the adolescent population to obtain tobacco products. By raising the minimum age to purchase tobacco products to 21 years, tobacco sales would decrease by approximately 2% but could have a substantial impact on the prevalence of adolescent tobacco use and dependency by limiting its accessibility,[12] thus potentially reducing future CVD incidences.

A final policy recommendation is a call to action by the Food and Drug Administration in the United States to implement the complete abolition of tobacco product sales.

Cigarettes are addictive by design and termed as a defective product, meaning that they are unreasonably dangerous, because it is the leading cause of death for more than half of its long-term consumers.[13] Not only is the death of millions of people around the world an issue, but tobacco smoking also enforces an enormous financial burden on the economy due to the subsequent health care costs and loss of labor productivity.[13] It is an assumption that if the United States were to implement a complete abolition of tobacco product sales, the remaining countries of the Americas region would in time follow suit.

INSIGHTS FOR HEALTH EDUCATION SPECIALISTS AND PROMOTION PROFESSIONALS

This article offers a wealth of insights that can significantly benefit certified health education specialists (CHES), health education, and health promotion professionals in their efforts to design, implement, and evaluate interventions aimed at controlling or delaying the onset of chronic diseases, with a specific focus on CVD. The following sections highlight the ways in which this research can be instrumental in their respective roles.

Designing Effective Interventions

One critical aspect explored in this article is the substantial impact of social determinants of health on the prevalence of CVD. This understanding is paramount for CHES and health education professionals when devising interventions. Armed with this knowledge, they can tailor their programs to address specific determinants, such as economic factors, education, food supply, substance addiction, and health care accessibility. By targeting these determinants, they can design interventions that are more effective in preventing CVD within the Americas.

As underscored in this research, the prevalence of CVD and its determinants exhibit significant variations across countries and regions. This highlights the necessity for tailored intervention strategies. CHES and health promotion professionals can draw from this article to design interventions that are culturally and regionally appropriate, increasing the likelihood of their success.

Implementing Evidence-Based Interventions

This article provides valuable policy recommendations, particularly in the context of tobacco control, a major contributor to CVD. CHES and health education professionals can leverage these recommendations as a foundation for developing and advocating for policies within their respective regions or communities. The implementation of such policies can significantly contribute to reducing the incidence of CVD by addressing a significant risk factor. This knowledge can guide professionals in implementing effective tobacco control interventions. Strategies like establishing smoke-free environments, promoting graphic health warnings, and advocating for bans on tobacco advertising can be instrumental in reducing tobacco use and its associated health risks.

Evaluating Intervention Success

The tangible impact of tobacco control policies on CVD mortality rates was discussed. CHES and health promotion professionals can use this as a model for evaluating the effectiveness of their interventions. By tracking changes in CVD rates and other relevant health indicators, they can assess the success of their programs. For professionals involved in advocating and implementing policies, this research emphasizes the critical importance of evaluating policy outcomes. By examining the effects of tobacco control policies on CVD mortality, CHES and health promotion specialists can demonstrate the success of their efforts and make necessary refinements to their strategies.

In summary, this article serves as an invaluable resource for CHES and Health Education and Health Promotion professionals by offering comprehensive insights into the social determinants of CVD, the impact of public health policies, and policy recommendations. These insights can guide the design, implementation, and evaluation of interventions aimed at controlling or delaying the onset of chronic diseases. In doing so, they contribute to the improvement of health outcomes and the reduction of health disparities within communities and regions.

CONCLUSIONS

CVD is the leading cause of morbidity and mortality that affects the worldwide population.[14] Currently, CVD accounts for 31% of the overall global deaths; however, as research suggests, low- and middle-income countries have a higher susceptibility to CVD, accounting for 80% of these deaths.[15] The global health problem of CVD is influenced by the social determinants of health such as the economy, physical environment, education, food supply, substance addiction, and the accessibility of appropriate health care services. Therefore, it is a consideration that a multitude of public health policies are necessary for the effective response to the broad burden of CVD among the population of the Americas.

Moreover, the insights provided in this article are invaluable to medical communicators. By understanding the complex interplay of social determinants and CVD, medical communicators can craft more precise, impactful messages that resonate with diverse populations. This information enables them to highlight the importance of tailored interventions and evidence-based policies in combating CVD.

Medical communicators can also leverage these findings to advocate for specific public health policies, such as tobacco control measures, that have proven effective in reducing CVD prevalence.[9] By disseminating this crucial information clearly and persuasively, medical communicators play a vital role in educating the public, influencing health behaviors, and ultimately contributing to improved public health outcomes.

AUTHOR STATEMENT

This study did not require ethical approval as it involved a retrospective analysis of publicly available and anonymized data, with no direct involvement of human subjects.

Author declaration and disclosures: *All individuals listed as authors participated sufficiently in the intellectual content, writing, and data analysis of the manuscript to assume public responsibility for the content therein; that all authors reviewed the final version prior to submission; and that any financial or personal relationships that might bias or be seen to bias their contributions to the work have been disclosed.*

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