



(REVIEW ARTICLE)



## Health promotion strategies for cardiovascular disease in the community of Uganda: Policies, challenges, and pathways to a healthier future

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### Abstract

Cardiovascular diseases (CVDs) pose a growing public health challenge in Uganda. This article comprehensively assesses current CVD policies and interventions, identifies challenges, and proposes health promotion strategies to mitigate CVD risk factors. We analyzed existing policies related to tobacco control, alcohol regulation, dietary improvements, physical activity promotion, and access to essential medicines. Current barriers to effective policy implementation were identified through a review of literature and government reports. Potential interventions were synthesized from international best practices. Uganda's current policies indirectly address CVD risk factors, but several barriers hinder their effectiveness, including outdated alcohol laws, limited enforcement resources, and inadequate tobacco cessation measures. Our proposed interventions encompass tobacco control, physical activity promotion, alcohol regulation, food safety, and enhanced access to medicines. To combat the rising CVD burden, Uganda must strengthen tobacco control efforts, promote physical activity at workplaces and schools, update alcohol regulations, improve food safety, and ensure consistent access to essential medicines. These strategies offer a roadmap for a healthier future in Uganda.

**Keywords:** Cardiovascular diseases; Health promotion; Policies; Uganda; Tobacco control; Alcohol regulation; Physical activity; Food safety; Essential medicines

### 1. Introduction

The Mayo Clinic defines cardiovascular illness as a disorder marked by constricted or blocked blood vessels, which can cause a heart attack, stroke, or angina (chest pain) (Mayo Clinic, 2018). Heart disease also includes conditions that affect the muscle, rhythm, or valves of the heart. Cardiovascular disorders are the seventh-leading cause of mortality in Uganda (CDC, 2018). Cardiovascular illnesses are the largest cause of death worldwide, taking the lives of nearly 17 million people each year. According to the World Health Organization, roughly 353,000 individuals in Uganda pass away from cardiovascular disorders each year (URN, 2016). Unhealthy habits including smoking, eating foods high in sodium, and not getting enough exercise are to blame for almost 75% of these fatalities, which can result in stroke and myocardial infarction. According to the World Health Organization (WHO), cardiovascular disorders are to blame for 21% of early mortality in Uganda between the ages of 30 and 70 (URN, 2016). This emphasizes the critical need for laws that address bad dietary practices, smoking, drinking, inactivity, and the creation of a national registry for cardiovascular illnesses in Uganda.

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## 2. Material and methods

This article employs a comprehensive bibliographic review methodology to assess current policies and interventions related to cardiovascular diseases (CVDs) in Uganda. The review aims to identify existing policies, evaluate their effectiveness, recognize barriers to implementation, and propose health promotion strategies.

### 2.1. Data Sources

- Literature Search: A search of academic databases, including PubMed, Scopus, and Google Scholar, was conducted. Keywords such as "Cardiovascular diseases," "Health Promotion," "Uganda," "Policy," "Tobacco Control," "Alcohol Regulation," "Physical Activity," "Diet," and "Medicines Access" were used.
- Government Reports: Official reports from the Ugandan government, the Ministry of Health, and related agencies were accessed to retrieve relevant information on CVD policies, interventions, and their outcomes.

### 2.2. Inclusion and Exclusion Criteria

Studies and reports included in this review met the following criteria:

- Relevance to cardiovascular diseases, health promotion, and policies in Uganda.
- Publication dates within the last two decades to ensure relevance.
- Availability of full-text articles or reports.

### 2.3. Data Extraction

Data from selected articles and reports were extracted and organized to facilitate the analysis. Key information included policy descriptions, implementation outcomes, challenges faced, and proposed health promotion interventions.

### 2.4. Data Synthesis

The extracted data were systematically synthesized to provide a comprehensive overview of the current state of CVD policies, their limitations, and potential interventions for health promotion. Analysis and interpretation were carried out in the results and discussion sections.

### 2.5. Ethical Considerations

Since this study involves the analysis of publicly available data from published sources and government reports, ethical approval was not required.

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## 3. Results and discussion

### 3.1. Need for Change in this Area

Like many other nations, Uganda has been impacted by globalization, which has resulted in quick urbanization, rapid technical development, and economic expansion. According to BeLue et al. (2009), the expanding urbanization of sub-Saharan African nations has led to more physical inactivity as a result of poor infrastructure, unfavorable environmental conditions, and developed transportation networks. It is crucial to understand the connection between mental and physical well-being in a time when mental pursuits frequently take precedence over physical ones. A common misunderstanding is that being healthy merely entails not getting sick; nevertheless, improving and sustaining health calls for more information, as well as preventive and rehabilitation measures (Hanson, 2004).

Research has shown that chemicals such as tar and nicotine found in cigarettes can lead to inflammation and swelling of the endothelium, resulting in narrowed blood vessels and cardiovascular conditions (CDC, 2014). According to the Global Adult Tobacco Survey (2013), 18% of Uganda's population were smokers by 2011. Notably, the use of tobacco pipes (Shisha) was reported as a growing trend, especially among wealthier communities, with the misguided belief that this form of tobacco use is harmless (Akl et al., 2013).

Exposure to stress triggers the release of hormones, such as epinephrine and cortisol, which temporarily elevate blood pressure, increase heart rate, and narrow blood vessels (Mayo Clinic, 2018). Different forms of stress, including depression, anxiety, and work-related stress, are prevalent in Uganda, where many employees work long hours without taking leave.

Alcohol is another significant factor contributing to cardiovascular diseases. It is absorbed directly into the bloodstream through the small intestine and stomach, leading to increased hypertension, heart rate, and weakened heart muscle, all of which can result in stroke and myocardial infarction (American Heart Association, 2018). A study conducted in Uganda found that out of 3,956 participants, 1,062 were alcohol users, and 386 had alcohol use-related disorders, indicating a high level of alcohol consumption in Uganda (Kabwama et al., 2016).

In Uganda, the proliferation of junk food is noticeable in every town, city, and along highways, schools, workplaces, markets, hospitals, and other institutions. Unhealthy cooking practices involving rancid oils are prevalent, offering readily available and affordable options such as chapatti, eggs, doughnuts, and fried chicken. These foods, laden with low-density lipoprotein cholesterol, are consumed widely due to their affordability and convenience (Daily Monitor, 2016). According to the Uganda National Bureau of Statistics, 30% of Ugandans (11.1 million) consume food considered unsuitable for human consumption, making this population susceptible to various diseases (Mwesigwa, 2017).

To meet the needs of the population's healthcare, the Ministry of Health in Uganda devotes a large budget to purchasing medications. These medications are expensive to buy, import, and distribute, and many patients, particularly those receiving treatment in private clinics, find it difficult to pay for them. According to Fred Ouma's 2005 report, the cost of basic medications had become a problem for many Ugandans, placing a burden on the government. Medication like those for hypertension are difficult to obtain due to the high expenses connected with importing drugs, licensing fees, and verification by the National Medical Stores in Uganda (Newvision, 2005). The financial burden on the government and the public could be lessened by health promotion initiatives.

### **3.2. Current policy responses to this health need**

Uganda currently lacks specific policies related to cardiovascular diseases. Existing policies indirectly address predisposing factors to cardiovascular diseases but lack specificity.

According to the Tobacco Act of Uganda, smoking is prohibited in public transport, workplaces, and public places, with a requirement that smokers should be at least 50 meters away from these areas. The act also prohibits any form of advertising, sponsorship, and promotion of tobacco products, and contravening this law can result in fines or imprisonment (2015).

The Liquor Act addresses issues related to the licensing of premises handling alcoholic products, responsible conduct at such premises, tax disparities between imported and locally manufactured alcohol, restrictions on selling alcohol on credit, and regulated selling hours, among other aspects. Violating these regulations can lead to fines or imprisonment (1960).

The Department of Physical Education and Sports under the Ministry of Education and Sports is responsible for coordinating sports activities and physical education in Uganda, as outlined in the National Physical Education and Sports Policy document (2018).

The National Food and Nutrition Strategy focuses on monitoring trends in diet-related disorders and promoting healthier lifestyle choices and improved diets (MOA & MOH, 2005).

The overarching goal of the National Medicines Policy is to ensure the accessibility, availability, affordability, and proper utilization of essential medicines of the highest quality, safety, and efficacy to improve the health of Uganda's population (MOH, 2015).

Current health promotion interventions designed to address this need: To combat high alcohol consumption rates, the government passed a bill that banned alcohol packaging in sachets, prohibited alcohol marketing through sponsorship, advertising, or promotion, reduced alcohol availability in public spaces, regulated the hours of alcohol sale, required alcohol products to be sold only with licenses, set a minimum legal age for alcohol consumption at 21 years, and established the National Alcohol Board, funded by a 5% tax endowment from alcohol sales, to support research, education, regulation enforcement, prevention, and rehabilitation (IOGT, 2016).

The Ministry of Health, Uganda, in collaboration with the World Health Organization (WHO), observed World No Tobacco Day in 2018 by urging the community to quit tobacco use and undergo regular medical check-ups. The theme for the year was "Tobacco Breaks Hearts," and awareness was raised through parades and community engagement (WHO, 2018).

To address the obesity epidemic, the government implemented supply-side policies, such as promoting the production of healthier foods like fruits and vegetables and regulating the fat content in processed foods. Demand-side strategies involved adjusting the relative prices of healthy and unhealthy foods, providing information on healthy eating habits, and encouraging more active lifestyles (MOA & MOH, 2005).

The Ministry of Health launched the National Day for Physical Activity to raise awareness about the growing burden of non-communicable diseases in Uganda. This initiative encouraged regular exercise and offered free cardiovascular disease screenings (PMLDaily, 2018).

To improve access to medicines, Uganda adopted universal health coverage, ensuring that primary healthcare is provided for free or at a subsidized price, with an emphasis on equity, efficiency, and patient safety (MOH, 2015).

Current barriers to addressing health issues in policy: In Uganda, policy development aligns with WHO guidelines, but the country lacks a comprehensive national policy addressing tobacco dependence treatment and cessation, as required under the WHO Framework Convention for Tobacco Control (FCTC) and WHO guidelines (UHRC, 2014). The Uganda Human Rights Commission (UHRC) has also noted the absence of provisions for training, education, and public awareness regarding tobacco control in the bill (UHRC, 2014).

The laws regulating alcohol in Uganda were established in 1960 and do not align with contemporary standards. Taxation disparities between locally manufactured and imported alcohol make the former more accessible and affordable. Poor enforcement due to limited funds and capacity results in lax implementation of alcohol-related laws. Some alcohol types, like ajono and kasese, are not addressed in the outdated laws, creating an alcohol misuse gap (IOGT, 2016).

The proposal to install exercise equipment in the capital city as a solution to promote physical activity may not be sustainable and convenient for the entire population, as it fails to consider individuals living or working in other districts. A centralized approach could lead to overcrowding and wear and tear of equipment (PMLDaily, 2018).

Weak policies and standards for street food vendors raise concerns about food quality and safety. There is a lack of regulation to ensure that the cooking oil used meets required quality standards (Daily Monitor, 2018).

A shortage of essential medicines in public health facilities has been reported, leading to inadequate healthcare delivery and potential patient harm (Daily Monitor, 2018).

Potential interventions that can work in Uganda: To strengthen tobacco control, the Uganda tobacco bill should incorporate provisions for national cessation programs and strategies, with a focus on establishing a system to support and promote tobacco cessation. Taxation on cigarettes should be increased to deter smoking, and social marketing campaigns should be implemented through various media channels to emphasize the harmful effects of tobacco use (UHRC, 2014).

The government can encourage physical activity by promoting exercise in workplaces, creating walkways and exercise facilities in urban planning, and incorporating sports activities into school curricula. Public transport policies can be adjusted to encourage walking by having designated stops, thereby promoting physical activity (MOH, 2018).

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#### 4. Conclusion

In conclusion, Uganda faces significant challenges in addressing the growing burden of cardiovascular diseases (CVDs) within its population. While existing policies indirectly touch upon factors related to CVDs, there is a clear need for more targeted and comprehensive strategies to combat this health crisis effectively. Current policy responses primarily focus on tobacco and alcohol control, dietary improvements, physical activity promotion, and access to essential medicines. While these policies represent steps in the right direction, several barriers hinder their effectiveness. Key barriers include outdated laws governing alcohol, insufficient resources for policy enforcement, a lack of comprehensive tobacco dependence treatment and cessation measures, and limited access to essential medicines. To address these challenges and promote cardiovascular health in Uganda, potential interventions must encompass a range of strategies. These might include

- Tobacco Control: Strengthening the tobacco bill to include provisions for national cessation programs, higher taxes on cigarettes, and extensive social marketing campaigns to deter smoking.

- Physical Activity Promotion: Implementing policies that encourage physical activity at workplaces, improving urban planning with walkways and exercise facilities, and incorporating sports into school curricula.
- Alcohol Regulation: Updating alcohol-related laws to align with contemporary standards, increasing taxes on alcohol, and enhancing enforcement capabilities.
- Food Safety and Quality: Establishing robust regulations for street food vendors to ensure food safety and quality standards are met.
- Access to Medicines: Ensuring that essential medicines are readily available in public health facilities to enhance healthcare delivery.

By adopting these interventions, Uganda can take significant steps towards reducing the prevalence of cardiovascular diseases and improving the overall health and well-being of its population. Addressing these issues requires a concerted effort from policymakers, healthcare professionals, and the community to create a healthier future for Uganda.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

No conflict of interest to be disclosed.

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