International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2023: 6.902

Community-Driven Policies to Improve Cardiovascular Health

Dheeraj Chilamakuri

BDS, MHA, PMP, Driven Policies to Improve Cardiovascular Health

Running Title: *Community-Driven Policies*

Abstract: ***Cardiovascular diseases (CVD) remain the leading cause of mortality in the United States, disproportionately affecting socioeconomically disadvantaged communities. This paper explores community-driven policies aimed at reducing CVD by addressing key social determinants such as education, socioeconomic disparities, food accessibility, and housing inequities. It evaluates existing public health initiatives and proposes targeted strategies, including the deployment of community health workers, expansion of affordable housing, and promotion of healthier food environments to mitigate CVD risk factors. The analysis highlights the economic and social benefits of these policies, emphasizing their potential to lower healthcare costs and improve public health outcomes. By integrating systemic policy reforms and community engagement, this study advocates for a multifaceted approach to combating cardiovascular diseases and reducing health disparities.***

Keywords: Cardiovascular Diseases (CVD), Community-Driven Policies, Health Disparities, Social Determinants of Health, Food Deserts and nutrition Equity, Housing Inequities, and Public Health, Socioeconomic Disparities in Healthcare, Community Health Workers and Health Literacy, Public Health Policy and prevention Strategies, Economic Burden of Cardiovascular Diseases.

1. Introduction

The cardiovascular system consists of the heart, blood, and blood vessels. Its primary function is to carry oxygen and nutrients to all body parts and deoxygenated blood back to the lungs. Due to our lifestyle, food habits, genetics, and congenital and iatrogenic causes, we develop cardiovascular disease, which severely impedes our quality of life. According to the National Institute of Health (NIH), cardiovascular diseases (CVD) can refer to many conditions that affect the heart and blood vessels (NIH, n.d). Common types of CVD include Coronary Heart Disease, Stroke, Heart Failure, and Hypertension. (Roger et al., 2020)

Cardiovascular disease is the leading cause of death in the United States of America among men and women of all racial and ethnic groups. (Diaz et al., 2021). Every 36 seconds, a person dies in the U.S. with CVD; approximately 659,000 people die of CVD every year. The U.S. spent $363 billion on healthcare and lost productivity due to death (CDC, 2022). The AHA defined CVH in 2010, depicting ideal CVH as the shortfall of clinically manifest CVD, no smoking, and perfect blood pressure levels, blood sugar, body weight, diet, blood cholesterol, and physical activity.

Individuals with perfect CVH display lower paces of subclinical CVD and a lower risk of CVD (Roger et al., 2020). Unfortunately, ideal CVH is uncommon: Fewer than 1% of U.S. grown-ups have ideal levels of every one of the seven metrics, just 5% have six metrics in the best reach, and just 13% have five metrics in the ideal range. Young adults are bound to meet more substantial quantities of ideal metrics than grown-ups. Around half of U.S. youth, 12 to 19 years old (48%) meet 3 or 4 models for ideal CVH, and ≈47% meet 5 or 6 measures; public information is restricted or lacking out and out for younger ages (Lloyd-Jones et al., 2010).

Recent data propose an easing back of decreases in coronary passing rates and developing quantities of hospitalizations for intense and persistent signs of CVD, like heart attack and atrial fibrillation. It has become evident that numerous CVDs with extreme results in adulthood have their beginnings during childhood. Tragically, there are upsetting patterns of increasing severe obesity and expanding pervasiveness of hypertension and type 2 diabetes mellitus in the pediatric populace. These patterns will probably bring about future expansions in the weight of CVD and stroke among grown-ups, including a pattern for occasions to happen at more young ages. The country must add a significant new exertion in the upcoming ten years, expanding on the additions to date on the off chance that we are to halt a rising tide of CVD occasions. The aging populace and continuous wrong degrees of unhealthy ways of behaving (dietary unevenness, actual latency, smoking) and harmful gamble factors (unfavorable blood lipids, hypertension, diabetes, obesity) (Lloyd-Jones et al., 2010). Considering these, we need to develop national policies to decrease CVD.

Goals of the Policies

We need to reduce the CVD in the country to improve the quality of life and reduce the avoidable burden on the already strained health system. Healthcare costs are skyrocketing, and our overreliance on treatment rather than prevention worsens the problem. CVD has reached an epidemic stage, and the forecasts used to predict the trends are not favorable either. In order to reduce CVD, we need to target the causal factors and develop policies to eliminate or minimize the effect of these factors. The goals of these policies are:

Education

Educate the people living in the underserved and poor neighborhoods as these conditions significantly affect the prevalence of CVD. “Neighborhood characteristics, ranging from air pollution exposure to residential segregation, have been found to be related to cardiovascular health (CVH) and stroke risk (Xiao & Graham, 2019).

Improving the Socioeconomic Status

Four markers give an overview of a person's Socioeconomic Status. They are income level, environmental factors, educational attainment, and employment status (Schultz et al., 2018). We can argue that many more factors must be considered as markers to understand a person's Socioeconomic Status. Still, these factors are traditionally collected and efficiently collected, and a wide variety of literature is available for us to understand these factors. It is also necessary to know that no individual marker can help us predict CVD prevalence.

Reducing Food Deserts

Food Deserts are areas where people with low wages and poor access to healthy foods live. Currently, 23.5 million people live in these U.S. food Deserts (Kelli et al., 2019). Promoting healthy foods in these food deserts can help us reduce the incidence of CVD in low-income areas.

Improving Housing

People with poor living conditions, homelessness, and housing instability have poor physical and mental health outcomes. "Epidemiological data suggest that homeless adults experience 60% to 70% higher rates of cardiovascular events compared with the general population" (Sims et al., 2020). People who have housing issues face higher chances of getting CVD than people who do not have the housing issue.

Policy Proposals

The U.S. implemented many health policies to prevent CVD but fell short of arresting the CVD epidemic. Despite the numerous policies made since the 1950s, the practice has lingered long behind (HHS, 2010). Surveys have recently shown that specialists and patients have not complied with treatment rules for optional counteraction. Although very much upheld and itemized strategies for forestalling heart illness and stroke have for some time been accessible, the activities suggested in these approaches have generally not been followed (Roger et al., 2020). To prevent loss of life and improve health outcomes of CVD patients, we need to develop four policies.

Spread awareness about CVD – An Educational Policy.

When discussing education policy to increase awareness about CVD, we need to consider multiple aspects. These aspects include whom we need to educate, what topics we need to educate, and how we need to educate. When a person gets CVD, to deal with it, multiple people get involved. These include the patient, the care team to help manage the CVD and the patient's family. Patients with heart disease have needs in different components of their lives that require non-stop health care, which the current healthcare experiences issues fulfilling (Gomes et al., 2021). When a person gets CVD, restoration of everyday life generally relies upon health literacy, adherence to recovery programs, and the patient's active participation in their therapeutic regime. Abilities and capacity improvement, conduct, and way of life-changing are challenging given the mind-boggling treatment systems.

In certain conditions, to control the disease, the patient must strictly adhere to a long-lasting therapeutic plan, and the patient and the patient's family must be compliant with the requirements (Gomes et al., 2021). Educating people remains essential in achieving this because it promote Self-care and help patients lead a good quality of life. Cardiac patients experience issues in distinguishing and overseeing signs and side effects connected with heart disease, sticking to treatment, and performing daily exercises (Gomes et al., 2021). Consequently, taking care of oneself is principal since it affects conduct change by expanding information, evolving perspectives, and creating abilities. Schooling objectives remember cardiac patients' investment in decision-making for deep-rooted proceeding with care, mindfulness raising, and practical execution.

When we need to spread education at the community level, we must use Community Health Workers as they can reach and support individuals in various communities by going to their homes (AHA, 2018). Community Health Workers are the frontline public health workers who are very trusted. This trust enables them to liaise with the community and policymakers. We can utilize the Health Care Workers to spread awareness about the impact of physical activity on reducing the chances of getting CVD and reducing or eliminating tobacco use on CVD. We can spread awareness about eating healthy foods and lowering the risk of CVD. It is also necessary to understand that many people know they need to buy good foods and eat healthy to be healthy. Still, at the end of the day, they simply cannot afford to do so because of various socioeconomic disparities.

Reducing the wealth gap by improving health policies to improve socioeconomic status.

It is normal to find out if rising pay holes may be related to broadening health and life span gaps among wealthy and unfortunate Americans. This affiliation is bidirectional: If somebody is poor, they have a more significant probability of having persistent sicknesses like diabetes and cardiovascular disease, and related complexities (Hamad et al., 2020). Disease additionally confines monetary security, particularly inside networks of variety. One strange yet profoundly powerful way to tend to health and financial aberrations in the United States is to close the racial and ethnic abundance hole in our general public by further developing health. We should contend that such strategy arrangements should explicitly focus on chronic disease prevention and management.

Minorities face higher rates of diabetes, heart disease, stroke, and obesity than whites. On account of diabetes, the chance of being diagnosed is 77% higher for African Americans and 66% higher among Hispanics than whites (Davari et al., 2019). Asian Americans, Pacific Islanders, and Native Hawaiians are twice at risk of developing diabetes than the populace by and large (Davari et al., 2019). Along with higher chances of chronic disease, lower compensation and lacking insurance among minorities enormously restrict their access to treatment and frequently drives them to work while sick. Even when inflation-adjusted, pay for all middle class and poor Americans has declined throughout recent years. As minorities make up the bulk of the lower income levels, there is a developing pay gap among racially and ethnically different families and white families.

We need more inclusive approaches to focus on the

disproportionate impact of chronic diseases on minority communities. No matter how much we try to reduce the pay gap between different racial and ethnic groups, no real change can be seen if we do not include the management of chronic diseases. There is vast literature supporting the association between socioeconomic factors and CVD. We can utilize clinical interventions to reduce the traditional risk factors by reducing the mortality rate. Still, we cannot eliminate the socioeconomic disparities without addressing the main risk factors such as poverty and education. These social conditions are cumulatively called the fundamental cause of the disease (Link & Phelan, 1995).

Rossen L et al. (2016) theorized at least three interrelated pathways to explain socioeconomic factors' association with CVD (Rossen et al., 2016). The pathways are:

a) Greater Psychosocial Stressor – because of the constant stress, we have elevated levels of catecholamines and cortisol, causing biological changes and deterioration of health.
b) Limited educational and economic opportunities – lacking these opportunities impedes the population from accessing good food, health awareness, safe neighborhoods, and lack of physical activities.
c) Social norms – peer influence plays a significant role in maintaining a better lifestyle and reducing CVD chances.

When we try to reduce the economic gap between different racial and ethnic groups, we can develop people's socioeconomic status, thereby reducing CVD. We can bring different policies to invest in education to improve access to education and the quality of education to better the children's lives, thereby trying to break the cycle. The federal government can also help the middle class develop assets by providing savings credits or retirement accounts to encourage people to save and bring them above the poverty line. We can also try to end residential segregation by working with peer influence to improve people's lives.

Improving Diets by eliminating food deserts

Much research has been done to understand the relationship between diets and diseases.

Even after publishing many resources linking the benefits of having good food or nutrition, we still fail to follow the guidelines. According to the 2015 report published by the U.S. Dietary Guidelines Committee, 80% of the American population doesn't eat the recommended whole grains, 90% of the Americans do not eat the recommended fruits or vegetables, and 70% of Americans.

Consume more saturated fats, and 90% of Americans consume too much added sugar (Dietary Guidelines Advisory Committee, 2015). We can relate this poor diet quality to socioeconomic status as the evidence projects that lower socioeconomic status is directly associated with inferior food quality.

"The U.S. Department of Agriculture considers a census tract to be a food desert if it is low income (poverty rate greater than or equal to 20% or median family income at 80% or lower of the area median family income) and at least one-third of tract residents live more than 1 mile away (or 10 miles away in the case of rural areas) from a supermarket or large grocery store" (Block & Subramanian, 2015). Eliminating the food deserts can improve diets as healthier foods are accessible. It is not necessarily correct that we can provide great healthy foods, and people will come and get them. We need to provide education about why these more nutritious foods are more important than consuming food with low nutritional values and empty calories. Another important factor we need to consider is that the cost of healthy foods is much higher than the food we can purchase at a fast-food restaurant. Suppose we are trying to change the dietary habits of low-income people. In that case, it is of utmost importance to ensure that healthier foods like fruits and vegetables are affordable and, if possible, make them cheaper than fast-food restaurants.

Studies were conducted to understand the behaviors of people living in food deserts to understand if providing access to good foods will change their behaviors. Quasi-experimental studies were conducted in food deserts in New York and Pennsylvania. New supermarkets were built in food desert areas to make them no longer food deserts. They performed the study by comparing the food habits of people who had access to the new supermarket and people still living in food deserts. Unfortunately, no significant difference was recorded (Block & Subramanian, 2015). An interesting point the authors found in their study is that the supermarkets had one-half to Three-quarters more low-nutrition food than healthy foods like fruits and vegetables. The supermarkets usually advertise these unhealthy foods when compared to healthy foods. They even keep these foods at the supermarket entrance to entice the shoppers to buy them. Considering these patterns, we must develop strategies to improve people's dietary habits from the base level.

Starting school nutrition programs are a great way to help children eat better from early stages to stop or reverse childhood obesity and type-2 diabetes in children (Block & Subramanian, 2015). Many countries started these programs and had a reasonable success rate in controlling these rates. A study was conducted in four low-income Massachusetts urban school districts and found a 23% increase in fruit consumption and a 16% increase in vegetable consumption (Cohen et al., 2014). This study concluded that the student's overall diet quality improved. It might also be beneficial to change the food assistance programs. The U.S. utilizes a Supplemental Nutrition Assistance Program, popularly called SNAP, to help Americans in need. If we can leverage the SNAP program to incentivize buying fresh fruits and vegetables, restricting certain foods could generate health benefits for low-income people (Mozaffarian et al., 2018).

Housing Disparities Reduction to Improve Cardiovascular Health

We have literature on Cardiovascular Health disparities shaped by many factors across racial/ethnic and socioeconomic groups. The underserved population often reports greater stress levels associated with inequalities in risk factors such as hypertension and obesity. Living conditions remain an essential determining factor in health. Housing conditions like stability, affordability, and quality also greatly contribute to health disparities and significantly

affect CVD. Housing instability like homelessness and housing insecurity is associated with poor physical health and great mental stress. People with housing instability face 60 to 70% higher CVD rates when compared to the populace without housing instability (Sims et al., 2020). Other significant risk factors of CVD like hypertension, diabetes, and smoking are all seen in higher percentages compared to the populace not having housing instability issues.

Few studies were done to understand the chronic stress caused by the neighborhoods and their effect on peoples' Cardiovascular Health or its risk factors like hypertension across different racial and ethnic groups. These studies concluded that perceived discrimination and neighborhood-level stressors were positively related to hypertension (Xiao & Graham, 2019). When looking at the housing quality, we need to study the air quality of the neighborhoods. It was found that residential segregation was associated with varying amounts of air pollution (Xiao & Graham, 2019).

Underlying adjustments to living conditions and awareness about well-being, including quality food stores, physical activity conditions, and neighborhood security, will upgrade Cardiovascular Health. Social projects might support networks and reinforce connections among people locally to boost psychosocial well-being and social cohesion. A good betterment of these primary and psychosocial determinants of Cardiovascular Health, alongside behavioral modification and health awareness, will effectively impact population-level change. Incorporating different elements, for example, good food stores, physical activity conditions, and social variables, as seen in segregation and social cohesion, into the literature can assist with widening helpful ways to prevent and treat CVD (Xiao & Graham, 2019). These factors influence all people of different races distinctively, and it proposes that one solution won't help all individuals similarly. All things considered, a multi-modal approach tending to both primary and psychosocial issues would be more assertive in changing the Cardiovascular Health of people in different communities.

It is a well-known fact that housing costs are rising faster than incomes leading to much higher financial stress. To increase housing affordability, we need to work with policymakers to help build less expensive homes. Local governments should step in to reduce the barriers that limit building low-cost, compact housing on unused lands. Both the state and federal governments can step in to provide housing subsidies. Building more affordable housing will, over time, reduce housing costs. There is one more major problem that is often overlooked. People with criminal backgrounds or eviction on their credit history suffer from a reduced chance of getting housing.

The federal and state government should invest in fair-chance housing projects to help these people who have a tough time getting housing.

Policy Analyses

Educational policy analysis

When we talk about educating people about CVD, we only think of doctors talking to their patients and giving them advice on how CVD patient needs to manage their lifestyle in the future to remain healthy and alive. In this equation, we forget other players that need to be educated. The players include the patient attendants like the family, peers, and the care team. We need to recognize these individuals and their understanding of CVD and ensure that we provide the most updated knowledge to each of these players based on their capacity.

The patient's family should be involved when educating the patient about CVD. The benefits of this include (Beauchamp et al., 2022):

a) Reduction in depression,
b) Increase in knowledge,
c) Improved physical activity
d) Decrease anxiety,
e) Improve self-efficacy,
f) Improve health-behaviors,
g) Reduced readmissions,
h) Help in sticking to the therapeutic regimen.

It is fascinating to learn that much research on CVD focused primarily on men (Adreak et al., 2021). CVD research had great strides but very few for women's cardiovascular health. This disparity in knowledge had to gaps in women's care which directly contribute to the morbidity and mortality of women with CVD (Adreak et al., 2021). We must invest in the training of the care team in the unique gender-specific training courses for CVD based on rigorously developed scientifically-backed medicine. We need to mandate clinical training and continuing medical education so that the care team can have up-to-date knowledge about the management differences relevant to the prevention and management of women with CVD. Investing in disseminating newly developed guidelines, developing novel protocols for identifying at-risk patients, and developing support tools is also necessary.

As mentioned earlier, we must utilize community health workers to spread awareness about CVD. They are well trusted, and their unique ability to reach the at-risk people in their homes make them a much more important tool to mitigate CVD in the early stages. Strong evidence suggests that using community health workers in a care team model can improve hypertension and cholesterol in a community (AHA, 2018). Adequate evidence shows that community health workers can increase reporting of health behaviors (smoking cessation, physical activity, and dietary patterns) in clients at expanded risk for CVD. Few investigations recommend that drawing in community health laborers works on suitable utilization of healthcare benefits and diminishes grimness and mortality connected with CVD. Community health workers can help decrease health disparities and morbidity and mortality rates (AHA, 2018).

Reducing wealth gap policy analysis

In their study, Abdallah S et al. (2020) found that CVD decreased dramatically among the wealthiest 20% of the American population while the rest, 80%, are still at the same risk level (Abdalla et al., 2020). The relationship between pay and wellbeing is unequivocal; people with higher income have lower morbidity and mortality across all well-being indicators, life span, and death rates. This

affiliation is driven mainly by the healthy assets managed by higher pay, such as admittance to medical care, better ability to pay prescription expenses, better housing conditions, and better food. Accordingly, it isn't business as usual that well-being information proposes that individuals with the most assets in the United States are aggregating more well-being. However, those with low income are abandoned in medical care (Abdalla et al., 2020).

When COVID-19 hit, the minority households were hit harder and faced more financial emergencies as they had even fewer financial resources. This further increased the wealth gap between the top 20% of the earners and the rest 80% of the earners. In light of this, the current Biden administration proposed bold policies to help families to recover from this crisis and help reduce the gap. The America Rescue Plan enacted by the Biden administration provided some financial help to low-income people, and this helped some. The Biden administration also passed the American Jobs Plan to help create more jobs for people, stabilize wages and improve the country's economy.

These are all significant policies to enact, but at the same time, we need people to have sustainability. Creating jobs is essential, but the jobs created should provide enough value to those working those jobs to be happy and not be stressed. In recent times, we see a great need for people to work at different levels, and this is evident from all the help wanted boards posted on the doors of different businesses around the country. These signs show that people are not willing to work any job as they are providing value to their lives.

The federal government should have increased access to a retirement savings fund for all minorities. Many people working in the corporate world have access to retirement savings, but not most people work in these jobs. We can argue that the government provides Roth IRA accounts and IRA accounts for people to save for retirement. Still, at the same time, one needs to question how many people actually have knowledge of these systems. Even when we invest in these accounts, no one matches the money we are trying to save. Very few people have the knowledge and interest to actually watch the markets understand them and make wise investment choices to increase their wealth. This is all the more reason the federal government should step in and help the minorities start a retirement fund and help grow their wealth.

Another policy that the federal and state governments should enact is investing in education. As mentioned earlier, we cannot simply throw money at problems to fix them; we need to make people sustainable. Sustainability starts from having a good education and helping people gain knowledge so that everyone can make intelligent decisions. We often see in the news about the conditions of the schools and how bad they are getting. It will be wise to invest in schools in the minority areas to improve them, which directly helps the children studying in these schools have a better future. Providing scholarships or financial assistance for people to pursue higher education after high school can also support development.

Eliminating Food Deserts

As of late, public health authorities have prescribed further developing the retail food climate to make healthier foods more available among underserved populaces. This is one of the many strategies enacted to support people and their families in establishing good eating habits, improving physical fitness, and preventing obesity. To execute this strategy, state governments have established legislation to draw in supermarkets and stores to underserved areas and improve the quality of the foods sold at little corner stores (all in all alluded to as "healthier food retail legislation" in this record) (CDC, n.d). Along with these drives' advantages, the underserved areas might also gain monetary advantages, including job creation and local area-wide improvement. For example, supermarkets and stores and retail food outlets can act as starting points for different sorts of business improvement. They may increase retail movement, employment, and property values in encompassing areas.

The U.S. has an excellent policy called the SNAP policy, and it is a great tool to improve the dietary habits of people living below the poverty line. The policy is excellent, but we need to analyze how it is beneficial to the participants. For the whole country to support the program, it is vital to show that it is cost-effective and improves people's dietary habits, thereby reducing the risk of getting CVD (Mozaffarian et al., 2018). It might be beneficial to actually place restrictions on buying certain foods with the SNAP program. There are restrictions placed on purchasing alcohol and tobacco using the SNAP program, so a similar expansion of limitations on certain foods might help people deviate from unhealthy foods. Simulation models have shown that if we place restrictions on buying sugar-sweetened foods, we can save around $3000 per quality-adjusted life- year, clearly showing us the cost-saving benefits. These restrictions can also modestly reduce CVD and diabetes (Block & Subramanian, 2015).

School nutrition programs are a great way to help children get more nutritious foods. These programs are especially beneficial for children to have access to healthy food and thereby improve the health of these children. We can also use these programs as an educational opportunity to teach children the importance of eating more nutritious foods than unhealthy foods.

Improving Housing

Poor housing quality has been related to various physical and psychological conditions.

Likewise, poor health and health issues were also associated with residential overcrowding among adults and children. Yet, we have little significant awareness of the effect of poor housing quality on cardiovascular health (Sims et al., 2020). Quality determinants of a housing unit, like mold, lead, improper A.C. units, and unfortunate air quality (tobacco smoke), structural deterioration have been related to bad psychological health. Broken down and decayed housing can prompt expanded chances of falls and wounds; nonworking smoke alarms or defective electric frameworks can prompt blackouts and fires, increasing the chance of injury and even death.

Low-income housing, including public housing, is frequently of low quality because the homes might be older and need maintenance, which is often not done. The federal and state governments have to step in to build affordable housing for people in desperate need. The federal government has programs like the housing voucher program to support people in desperate need of support, but these programs are severely underfunded. The current program supports 2.3 million people, but when house rents are outpacing inflation, and 23% of U.S renters spend more than 50% of their housing income (Sims et al., 2020), we need the government to step in and support more programs.

As mentioned earlier, the current affordable housing units are in bad shape, and there is a great need to build affordable housing. The problem is there are too many restrictions which were explained earlier. If the governments can step in, lift some restrictions, and help shift the construction of single-family homes to group homes or condominiums, then they can be rented out and are much cheaper to rent than single-family homes. It should also be noted that building multi- family homes can bring in more growth opportunities.

Policy Strategies

When we lay out a benchmark and needs are resolved based on state-level information, the beginning spot for creating mediation approaches is strategy systems for population-based prevention. The essential population approach can be founded on setting policies, incentives, and guidelines, particularly those connected with food, farming, and tobacco. We can improve administrative oversight to limit tobacco sales; guidelines on tobacco and food marketing, developing subsidies to improve farming; and methodologies to make fast urbanization more helpful for health. Administrative change should typically be steady relative to the potential effect and cost**.**

Public communications with significant select strategy changes can improve the adequacy of the approaches, which can assist with establishing a climate wherein more designated programs in health frameworks and networks can succeed. Indeed, even without an ideal arrangement, a stand-alone, well-developed, independent population-level health communications endeavor can be viable in influencing population conduct change. Contingent upon the legislative framework inside a country, policies with coordinated communication and health training efforts can happen to the degree at national or local. Implementing policies is not sufficient. There should be mechanisms in place to monitor the implemented policies. We must evaluate the effectiveness of these policies regularly to ensure their effectiveness and, if required, update these policies.

2. Conclusion

Many factors can cause CVD, and it is tough to fight all of these factors to improve public health. The difficulties stem from many challenges like the limited resources available to invest in population-wide policies, as these policies often are neglected. At the same time, acute care for treating heart disease takes precedence. The competition between preventive services and acute care is unfair and causes a moral dilemma for policymakers. The policymakers should try to balance these two and spread it across the spectrum from prevention to palliative care.

The goals of the policies mentioned in the paper, like the CVD education improvement, reducing wealth gaps, and other goals, are discussed commonly by the policymakers, but the implementation of policies to reach these goals is often not robustly developed. We also have to take into consideration that reducing the wealth gap in the country takes a lot. It is evident during the pandemic that the Rich gets Richer and the poor get poorer. It will take some hard measures by the government to intervene and bring in policies to bring the people out of poverty or reduce the wealth gap. It is best to focus on lowering costs so that even low-income people can live decent lives.

Food deserts are an important area on which we need to focus our energy. It is crucial because the national obesity rate is increasing, and the people living in food deserts are adding to this trend because of the lack of availability of healthy foods. Even if healthy foods are available, they cannot afford them because of the rising costs. The government is providing food stamps for people to buy more nutritious foods, but if people live in food deserts, they can only afford unhealthy foods, which again causes them to become obese. All in all, the government should prioritize helping the poor in obtaining nutritious foods instead of just providing food stamps. If we start providing healthy foods, then we can also educate the people in the process.

References

[1] Abdalla, S. M., Yu, S., & Galea, S. (2020). Trends in Cardiovascular Disease Prevalence by Income Level in the United States. *JAMA Netw Open*, *3*(9), e2018150. https://doi.org/10.1001/jamanetworkopen.2020.18150

[2] Adreak, N., Srivaratharajah, K., Mullen, K. A., Pike, A., Mackay, M. H., Comber, L., & Abramson, B. L. (2021). Incorporating a Women's Cardiovascular Health Curriculum Into Medical Education. *CJC Open*, *3*(12 Suppl), S187-S191. https://doi.org/10.1016/j.cjco.2021.09.020

[3] AHA. (2018). *The Importance of Community Health Workers for CVD Prevention and Treatment Guidance to AHA Staff*. https://www.heart.org/-/media/Files/About-Us/Policy-Research/Policy-Positions/Access-to-Healthcare/Community-Health-Workers--Policy-Brief--July-2018.pdf

[4] Beauchamp, A., Talevski, J., Niebauer, J., Gutenberg, J., Kefalianos, E., Mayr, B., Sareban, M., & Kulnik, S. T. (2022). Health literacy interventions for secondary prevention of coronary artery disease: a scoping review. *Open Heart*, *9*(1). https://doi.org/10.1136/openhrt-2021-001895

[5] Block, J. P., & Subramanian, S. V. (2015). Moving Beyond "Food Deserts": Reorienting United States Policies to Reduce Disparities in Diet Quality. *PLoS Med*, *12*(12), e1001914. https://doi.org/10.1371/journal.pmed.1001914

[6] CDC. (2022). *Heart Disease Facts*. Retrieved February 7 from https://www.cdc.gov/heartdisease/facts.htm

[7] CDC. (n.d). *State Initiatives Supporting Healthier Food Retail: An Overview of the National Landscape*.

https://www.cdc.gov/obesity/downloads/healthier_food_retail.pdf

[8] Davari, M., Maracy, M. R., & Khorasani, E. (2019). Socioeconomic status, cardiac risk factors, and cardiovascular disease: A novel approach to determination of this association. *ARYA Atheroscler*, *15*(6), 260-266. https://doi.org/10.22122/arya.v15i6.1595

[9] Diaz, C. L., Shah, N. S., Lloyd-Jones, D. M., & Khan, S. S. (2021). State of the Nation's Cardiovascular Health and Targeting Health Equity in the United States: A Narrative Review. *JAMA Cardiol*, *6*(8), 963-970. https://doi.org/10.1001/jamacardio.2021.1137

[10] Gomes, L., Liebana-Presa, C., Araujo, B., Marques, F., & Fernandez-Martinez, E. (2021). Heart Disease, Now What? Improving Quality of Life through Education. *Int J Environ Res Public Health*, *18*(6). https://doi.org/10.3390/ijerph18063077

[11] Hamad, R., Penko, J., Kazi, D. S., Coxson, P., Guzman, D., Wei, P. C., Mason, A., Wang, E. A., Goldman, L., Fiscella, K., & Bibbins-Domingo, K. (2020). Association of Low Socioeconomic Status With Premature Coronary Heart Disease in U.S. Adults. *JAMA Cardiol*, *5*(8), 899-908. https://doi.org/10.1001/jamacardio.2020.1458

[12] HHS. (2010). *A Public Health Action Plan to Prevent Heart Disease and Stroke*. https://www.cdc.gov/dhdsp/action_plan/pdfs/action_plan_full.pdf

[13] Kelli, H. M., Kim, J. H., Samman Tahhan, A., Liu, C., Ko, Y. A., Hammadah, M., Sullivan, S., Sandesara, P., Alkhoder, A. A., Choudhary, F. K., Gafeer, M. M., Patel, K., Qadir, S., Lewis, T. T., Vaccarino, V., Sperling, L. S., & Quyyumi, A. A. (2019). Living in Food Deserts and Adverse Cardiovascular Outcomes in Patients With Cardiovascular Disease. *J Am Heart Assoc*, *8*(4), e010694. https://doi.org/10.1161/JAHA.118.010694

[14] Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *J Health Soc Behav*, *Spec No*, 80-94. https://www.ncbi.nlm.nih.gov/pubmed/7560851

[15] Lloyd-Jones, D. M., Hong, Y., Labarthe, D., Mozaffarian, D., Appel, L. J., Van Horn, L., Greenlund, K., Daniels, S., Nichol, G., Tomaselli, G. F., Arnett, D. K., Fonarow, G. C., Ho,

[16] P. M., Lauer, M. S., Masoudi, F. A., Robertson, R. M., Roger, V., Schwamm, L. H., Sorlie, P., . . . Statistics, C. (2010). Defining and setting national goals for cardiovascular health promotion and disease reduction: the American Heart Association's strategic Impact Goal through 2020 and beyond. *Circulation*, *121*(4), 586-613. https://doi.org/10.1161/CIRCULATIONAHA.109.192703

[17] Mozaffarian, D., Liu, J., Sy, S., Huang, Y., Rehm, C., Lee, Y., Wilde, P., Abrahams-Gessel, S., de Souza Veiga Jardim, T., Gaziano, T., & Micha, R. (2018). Cost-effectiveness of financial incentives and disincentives for improving food purchases and health through the U.S. Supplemental Nutrition Assistance Program (SNAP): A microsimulation study. *PLoS Med*, *15*(10), e1002661. https://doi.org/10.1371/journal.pmed.1002661

[18] NIH. (n.d). *NCI Dictionaries - cardiovascular disease*. Retrieved 07/09/2022 from https://www.cancer.gov/publications/dictionaries/cancer-terms/def/cardiovascular-disease

[19] Roger, V. L., Sidney, S., Fairchild, A. L., Howard, V. J., Labarthe, D. R., Shay, C. M., Tiner, A. C., Whitsel, L. P., Rosamond, W. D., & American Heart Association Advocacy Coordinating, C. (2020). Recommendations for Cardiovascular Health and Disease Surveillance for 2030 and Beyond: A Policy Statement From the American Heart Association. *Circulation*, *141*(9), e104-e119. https://doi.org/10.1161/CIR.0000000000000756

[20] Rossen, L. M., Khan, D., & Schoendorf, K. C. (2016). Mapping Geographic Variation in Infant Mortality and Related Black-White Disparities in the U.S. *Epidemiology*, *27*(5), 690-696. https://doi.org/10.1097/EDE.0000000000000509

[21] Schultz, W. M., Kelli, H. M., Lisko, J. C., Varghese, T., Shen, J., Sandesara, P., Quyyumi, A. A., Taylor, H. A., Gulati, M., Harold, J. G., Mieres, J. H., Ferdinand, K. C., Mensah, G. A., & Sperling, L. S. (2018). Socioeconomic Status and Cardiovascular Outcomes: Challenges and Interventions. *Circulation*, *137*(20), 2166-2178. https://doi.org/10.1161/CIRCULATIONAHA.117.029652

[22] Sims, M., Kershaw, K. N., Breathett, K., Jackson, E. A., Lewis, L. M., Mujahid, M. S., Suglia, S. F., American Heart Association Council on, E., Prevention, Council on Quality of, C., & Outcomes, R. (2020). Importance of Housing and Cardiovascular Health and Well-Being: A Scientific Statement From the American Heart Association. *Circ Cardiovasc Qual Outcomes*, *13*(8), e000089. https://doi.org/10.1161/HCQ.0000000000000089

[23] Xiao, Y. K., & Graham, G. (2019). Where we live: The impact of neighborhoods and community factors on cardiovascular health in the United States. *Clin Cardiol*, *42*(1), 184-189. https://doi.org/10.1002/clc.23107