The Impact of Cardiovascular Disease on Economic Loss

Fátima Marinho[1,2]

Vital Strategies Brazil,[1] *Nova Iorque – USA*

Universidade Federal de Minas Gerais (UFMG),[2] *Belo Horizonte, MG – Brazil*

Short Editorial related to the article: Estimated Loss of Productivity Attributed to Cardiovascular Diseases in South America

Cardiovascular diseases (CVD) are a public health concern that impacts the population's health and economy. It is the leading cause of death globally.[1] In Brazil, CVD has been the leading cause of death, with Ischemic Heart Disease and Stroke as the most common causes, except during the pandemic years (2020-2021) when COVID-19 was the first cause of death for men and women.[2]

What is the impact on productive work and the economy? How can cardiovascular disease and its loss of health in the population be prevented?

CVD significantly impacts work productivity, resulting in $147 billion in lost productivity in the US annually.[3] Individuals with high cardiovascular risk experience more work loss hours and higher indirect costs compared to those without cardiovascular events. In Australia, research on preventing coronary heart disease for ten years revealed that it would save many lives and nearly USD 15 billion in gross domestic product (GDP).[4] In the European Union,[5] CVD has also had a significant impact, with estimated costs on productivity losses making up □48 billion (17%).

In South America, where the impact of CVD is particularly pronounced, efforts to quantify the economic consequences of these diseases have been limited. The study by Bandeira et al.[6] provides a valuable contribution to addressing this gap by estimating the years of productive life lost (YPLL) and associated economic costs of premature mortality from CVD in 2019.

It is important to note that there are some limitations to using data related to cardiovascular disease (CVD), which is crucial for public health policies. Not all countries have reliable data on cardiovascular disease mortality. Among 156 countries, only 70% of deaths were registered, and out of these, only 52% had medically certified causes.[7] This makes it necessary to rely on estimates of causes of death.

The research conducted by Bandeira et al.[6] utilizes data from the Global Burden of Disease Study 2019, which is a widely used and comprehensive database. The study aims to estimate the disease burden of cardiovascular disease (CVD) in South America. It provides valuable insights into the economic impact of CVD in the region by utilizing a proxy of the human capital approach for monetary calculations of productivity loss and has uncovered some significant findings.

In 2019, South America saw 754,324 deaths attributed to CVD, which resulted in an associated YPLL totaling 2,040,973. The total permanent productivity loss was estimated at approximately US$3.7 billion in purchasing power parity. This amount is equivalent to 0.11% of the GDP. These figures highlight the enormous economic burden that CVD imposes on the region. Therefore, targeted interventions and policies are necessary to address this issue.

The importance of accurately measuring the burden of disease cannot be overstated. It is worth noting the challenges and limitations associated with estimating the burden of disease. Variability in data quality and availability across countries can affect the accuracy and comparability of estimates. Despite these challenges, the study by Bandeira et al.[6] demonstrates the robustness of its findings across different scenarios, providing confidence in the validity of the results. This underscores the importance of investing in data collection and analysis infrastructure to improve the accuracy and reliability of the burden of disease estimates.

In conclusion, Bandeira et al.[6] study highlights the urgent need for action to address the economic impact of CVD in South America. By accurately measuring the burden of disease and understanding its economic consequences, policymakers can develop targeted strategies to reduce the impact of CVD on individuals, communities, and healthcare systems.[7] It is essential to prioritize prevention, early detection, and treatment of CVD to improve health outcomes and reduce the economic burden of these diseases in South America.

Regular physical activity can help reduce healthcare costs and improve worker productivity. By preventing CVD through lifestyle changes and managing medical conditions, we can enjoy a better life and annual savings. Employers can also contribute by providing a heart-healthy working environment. Preventing heart disease can result in significant gains in GDP and increased productivity.

Reducing social disparities through investment can significantly promote heart health, prevent family suffering, limit productivity loss, and reduce morbidity. Inequalities are the primary determinants of health loss. Promoting equality will have a positive impact on health. Better economic and educational outcomes for households enhance health. Chronic ill health and non-communicable diseases reduce the income status of households, and low socioeconomic status leads to these conditions.[8,9]

Keywords

Cardiovascular Diseases/mortality; Public Health Policy/economics; Cost Efficiency Analysis.

Mailing Address: Fátima Marinho •
Universidade Federal de Minas Gerais – Av. Prof. Alfredo Balena, 190. Postal Code 31270-901, Belo Horizonte, MG – Brazil
E-mail: mfmsouza@gmail.com
Manuscript received March 15, 2024, revised manuscript March 20, 2024, accepted March 20, 2024

DOI: https://doi.org/10.36660/abc.20240175i

References

1. Roth G, Mensah G, Fuster V. The Global Burden of Cardiovascular Diseases and Risks: A Compass for Global Action. J Am Coll Cardiol. 2020 Dec, 76 (25) 2980–1. doi: 10.1016/j.jacc.2020.11.021
2. Oliveira GM, Brant L C, Polanczyk CA, Malta DC, Biolo A, Nascimento BR, et al. Cardiovascular Statistics – Brazil 2023. In SciELO Preprints. doi:10.1590/SciELOPreprints.7707
3. Song X, Quek RG, Gandra SR, Cappell KA, Fowler R, Cong Z. Productivity loss and indirect costs associated with cardiovascular events and related clinical procedures. BMC Health Serv Res. 2015 Jun 25; 15:245. doi: 10.1186/s12913-015-0925-x
4. Savira F, Wang BH, Kompa AR, Ademi Z, Owen AJ, Liew D, et al. The impact of coronary heart disease prevention on work productivity: a 10-year analysis. Eur J Prev Cardiol. 2020. doi: 10.1093/eurjpc/zwaa037.
5. Fernandez RL, Attaei MW, Gray A, Torbica A, Maggioni AP, Huculeci R, et al. Economic burden of cardiovascular diseases in the European Union: a population-based cost study. Eur Heart J. 2023 Dec 1;44(45):4752-4767. doi:10.1093/eurheartj/ehad583.
6. Bandeira TF, Mosegui GB, Vianna CM, Gil AJ. Estimativa de Produtividade Perdida Atribuída a Doenças Cardiovasculares na América do Sul. Arq Bras Cardiol. 2024; 121(3): e20230521. doi:10.36660/abc.20230521
7. Adair T, Mikkelsen L, Hooper J, Badr A, Lopez AD. Assessing the policy utility of routine mortality statistics: a global classification of countries. Bull World Health Organ. 2023 Dec 1;101(12):777-85. doi: 10.2471/BLT.22.289036
8. Niessen LW, Mohan D, Akuoku JK, Mirelman AJ, Ahmed S, Koehlmoos TP, et al. Tackling socioeconomic inequalities and non-communicable diseases in low-income and middle-income countries under the Sustainable Development agenda. Lancet. 2018;391(10134):2036-46. doi: 10.1016/S0140-6736(18)30482-3
9. Malta DC, Duncan BB, Barros MB, Katikireddi SV, Souza FM, Silva AG, et al. Fiscal austerity measures hamper noncommunicable disease control goals in Brazil. Ciênc Saúde Colet. 2018;23(10):3115-22. doi: 10.1590/1413-812320182310.25222018