

# A Persistent Foe: Reinvigorating the Fight against Cardiovascular Disease in a Changing World

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## INTRODUCTION

For decades, Cardiovascular Disease (CVD) has cast a long shadow over humanity, claiming millions of lives each year. While advancements in medicine have yielded undeniable progress, a recent study published in *The Lancet* paints a disquieting picture.<sup>1</sup> Life expectancy has undoubtedly improved globally,<sup>2</sup> but a concerning stagnation in the decline of CVD mortality since 2009 demands our urgent attention. The study lays bare a fascinating paradox of our time. While it celebrates the undeniable progress in healthcare, it also unveils a hidden challenge. On the one hand, we witness a remarkable decline in mortality rates from previously dominant killers like stroke and lower respiratory infections.<sup>3,4</sup> This translates into a demonstrably extended lifespan for the population. This progress speaks volumes about the positive impact of improved medical treatments and preventative measures. We have developed more effective drugs, honed surgical techniques, and implemented public health initiatives that have demonstrably saved countless lives. However, this very success presents a new set of challenges. As our population ages, we face a surge in chronic health conditions that were previously overshadowed by the more immediate threat of infectious diseases.<sup>5,6</sup> Conditions like heart disease, dementia, and certain cancers, which were once less prevalent due to shorter lifespans, are now becoming more common.<sup>1</sup> This shift necessitates a recalibration of our healthcare focus. While we celebrate the triumphs in extending lifespan, we must also address the growing need for long-term care and management of chronic illnesses. Especially when CVD, encompassing ischemic heart disease, stroke, and other conditions, remain stubbornly entrenched as a leading cause of death worldwide (Figure 1).

Understanding this paradox requires a multifaceted analysis. The study doesn't delve into specifics, but it hints at several possible explanations. One factor could be the limitations of current treatment strategies. While new medications and procedures exist, their effectiveness might be reaching a plateau.<sup>7-9</sup> Perhaps

newer diagnostic tools are needed to identify and address risk factors earlier, or a deeper understanding of the complex biological pathways contributing to CVD is crucial.<sup>10</sup> Another possibility lies in the preventative measures put in place. Public health messaging has undoubtedly raised awareness about diet, exercise, and lifestyle modifications that can mitigate CVD risk.<sup>11,12</sup> However, translating awareness into lasting behaviour change remains a challenge. Social and economic factors like access to healthy food options, affordable exercise facilities, and stress management resources all play a role.<sup>11,12</sup> Unless these underlying determinants of health are addressed, a significant portion of the population will remain vulnerable. Furthermore, the study underscores the importance of recognizing disparities in healthcare access and outcomes.<sup>13-16</sup> Digging into the regional data, and past work suggests that low- and middle-income countries/population often grapple with limited resources and infrastructure to prevent, diagnose, and treat CVD. Closing this gap is critical to truly reduce the global burden of the disease.

The study<sup>1</sup> also opens a door to opportunities. By analysing regional variations in CVD mortality, we can identify pockets of success. Regions that have witnessed a decline in CVD deaths likely have effective prevention and treatment models in place.<sup>17,18</sup> Dissecting these successes to understand the specific public health campaigns, community initiatives, and healthcare access models can inform targeted interventions for areas facing a higher CVD burden. This approach necessitates a global collaborative effort. High-income countries with robust healthcare systems should invest in research partnerships with their less privileged counterparts. Sharing knowledge, best practices, and potentially even facilitating access to essential medications and technologies can make a significant difference. Technology itself offers exciting possibilities. The growing sophistication of telehealth platforms could revolutionize disease management in remote areas.<sup>19,20</sup> Remote monitoring tools and AI-driven diagnostics can facilitate early detection and intervention, while digital health education campaigns can empower people to take charge of their well-being. However, technology is only as good as its implementation. Addressing the digital divide and ensuring equitable access to these tools is paramount.<sup>21,22</sup> Moreover, focusing solely on technology risks neglecting the fundamental role of behaviour change. Public health campaigns that go beyond awareness to create culturally relevant and sustainable behaviour modifications are essential.

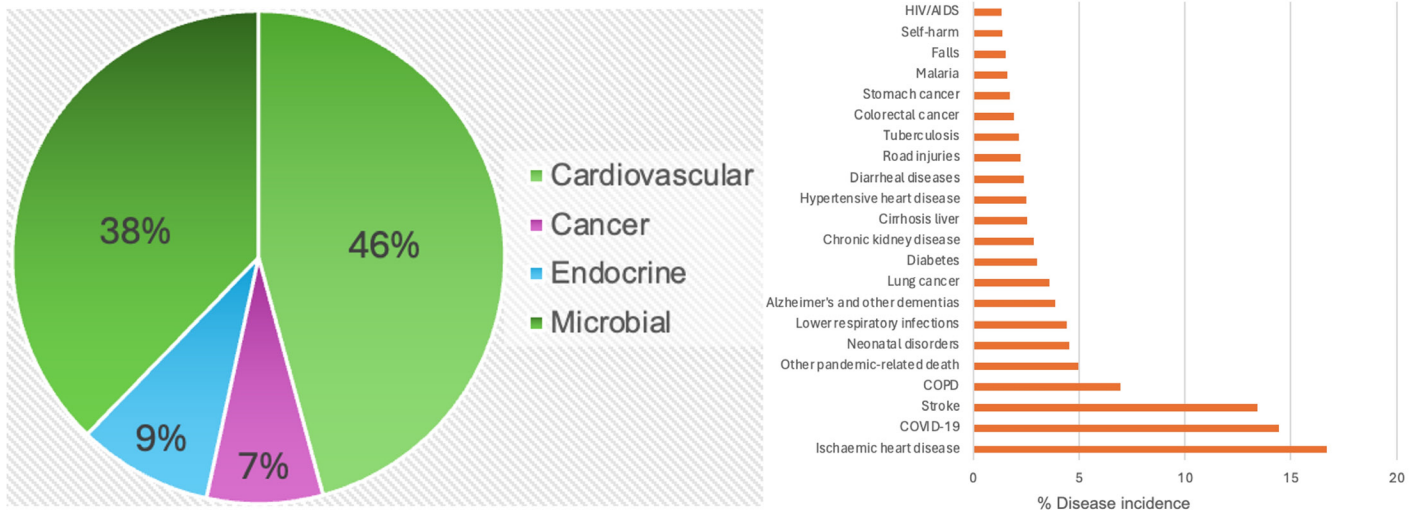


DOI: 10.5530/bems.10.1.5

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**Figure 1:** Leading cause of death worldwide. The bar graph lists the top 22 leading cause of death worldwide. The pie chart shows the categorisation of these leading causes into four groups (Cardiovascular, Cancer, Endocrine and Microbial).

Looking beyond traditional medicine, the study<sup>1</sup> compels us to consider the influence of social and environmental factors on CVD risk. Socioeconomic inequalities, chronic stress, and environmental pollution all contribute to a higher risk of CVD.<sup>16,23,24</sup> Policies aimed at reducing poverty,<sup>25</sup> promoting social mobility,<sup>26</sup> and mitigating environmental damage<sup>27-29</sup> can have a significant indirect impact on cardiovascular health. Finally, the study<sup>1</sup> reminds us that the battle against CVD is multifaceted and requires a multi-pronged approach. While research must continue to refine treatment strategies, delve deeper into the biological underpinnings of the disease, and develop novel preventative measures. Public health campaigns need to focus on behaviour change and address the social determinants of health. Healthcare access must be improved, particularly in low- and middle-income countries/populations. Technology can be a powerful tool, but only if it is implemented equitably and complements, not replaces, social and behavioural interventions.

In conclusion, tackling CVD demands a renewed global commitment. The Lancet study<sup>1</sup> serves as a stark reminder that despite progress, we cannot rest on our laurels. By understanding the limitations of current strategies, acknowledging disparities in healthcare access, and leveraging the power of research, collaboration, and technology, we can reinvigorate our fight against this persistent foe. Our goal should not simply be to extend life expectancy, but to create a world where everyone can live a long, healthy, and fulfilling life free from the shadow of cardiovascular disease.

## CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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**Received:** 10-04-2024;

**Revised:** 15-04-2024;

**Accepted:** 17-04-2024.

**Cite this article:** Kumar AHS. A Persistent Foe: Reinvigorating the Fight against Cardiovascular Disease in a Changing World. *BEMS Reports*. 2024;10(1):21-3.