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Les déterminants de la santé et le long chemin vers l'équité

An analysis of possible solutions

Combating health inequities through holistic thinking and frugal innovation

De Tania Séverin

This paper discusses pervading health inequities globally, using cardiovascular diseases (CVDs) and malaria as illustrations. By examining these disparities, it highlights existing barriers to health equity and suggests a few possible solutions to bridge these gaps, with a focus on defragmenting health policies and reconnecting them to other public policies.



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Health inequities remain a global concern. The life expectancy gap between the poorest and richest countries amounts to 18.1-years¹. And even within countries, massive disparities persist: in 2012, a fascinating mapping of life expectancy along the London Tube network showed discrepancies in life expectancy of more than 20 years: it amounted to 75 years around Star Lane in contrast to 96 years around Oxford Circus². Wherever we look, the more vulnerable remain the more affected. Globally, a low socio-economic status remains one of the main predictors of poor health and shorter life expectancy. Vulnerable groups are systematically disproportionately affected. This applies everywhere and across health conditions, be they infectious or non-communicable.

At first sight, cardiovascular disease (CVD) and malaria may not have much in common. They have different aetiologies, risk factors, prevention strategies, and treatment protocols. Moreover, they often affect different demographic groups. Yet both have in common the fact that they cause a daunting disease burden. In 2021, cardiovascular disease claimed 20.5 million lives³: more people die from CVD worldwide than from any other cause. As for malaria, there were an estimated 247 million cases in 2021, with an daunting cost to both individuals and governments. And both have in common the fact that they affect the most vulnerable most. Malaria disproportionately affects individuals in the WHO African Region, which was home to about 95% of all malaria cases and 96% of deaths in 2021⁴.

In these countries, individuals with a disadvantaged socio-economic background are more susceptible to infection. And within underprivileged communities, the poorest children have a greater likelihood of contracting malaria compared to slightly better-off children. Similar observations hold true for CVD, which is often wrongly believed to be a disease of the affluent. In reality, in low- and middle-income countries, a disproportionate 40% of CVD deaths occur prematurely, compared to just 19% in high-income countries^{5,6}. And within national borders, individuals with a lower socio-economic status are more affected because they are more likely to be exposed to lifestyle, environmental and metabolic risk factors^{7,8} and to adopt less healthy behaviours. Finally, even though there has been substantial progress in the fight against both conditions in the past decades, progress is now stalling, pointing to the need to develop and implement new, more holistic approaches.



Spraying a house to protect residents from malaria. Photo: USAID Ethiopia/flickr.com; CC BY 4.0 Deed

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Delving deeper into inequities: Barriers to equity

Globally, barriers to equity are multi-faceted. Lack of awareness, which prevents individuals from adopting healthy behaviours, or to seek care whenever necessary, is one. Social norms and beliefs sometimes also stay in the way of optimal health seeking behaviours. Further, unequal access to care is another major barrier to equity: currently, large parts of the global population who need care do not receive adequate treatment⁹ due to fragmented service delivery, to geographical barriers, time constraints or issues related to availability and/or affordability¹⁰⁻¹².

However, the specific barrier we wish to highlight in this paper is the issue of disconnects and fragmentation that runs through health systems as well as through cooperation and development programmes:

How can a health professional deliver supplies to an isolated community if there aren't any navigable roads? How can an individual relay health information to a medical professional when there is limited internet connectivity? How can someone adopt a balanced diet while residing in

an area known as a ‘food desert’? How can children be educated to wash their hands and maintain oral hygiene if there is insufficient access to clean water? How can we mitigate the risk of malaria when lack of drainage results in stagnating water bodies near where people live and gather, or when poor housing lets mosquitoes enter homes too easily? How can a person who suffers a cardiac arrest receive timely treatment when the nearest health facility is hours away and may not have adequate equipment and medications? How can people benefit from health advisories if there’s a lack of local language translation? How can communities anticipate and manage vector-borne diseases when public policies fail to consider changing weather patterns due to climate change? How can cardiovascular health risks associated with extreme heat events be mitigated if urban planning doesn’t provide for green spaces and cooling centres? Such disconnects that run through public policies stand as one of the primary underlying factors causing inequities in health and healthcare access.

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Kibagare Slum in Nairobi, Kenya. Photo: Ninara/flickr.com; CC BY 4.0 Deed

Disconnected programmes which fail to take a holistic approach and to tackle the root causes of ill-health represent a major hurdle towards health equity. In this regard, the recent Dispatch on Switzerland’s International Cooperation 2025-2028 is quite telling. While it underscores both health (under human development) and climate and environment as core strategic

focuses, it fails to highlight their interconnections. As a result, it overlooks the necessity for a holistic approach towards projects encompassing environmental and health dimensions, particularly those concerning the prevention of climate change-induced diseases¹³.

The dispatch also earmarks water management and sanitation as a distinct objective but misses the pivotal role they play in promoting community health, particularly for the most vulnerable populations. Numerous studies have documented the association between access to uncontaminated drinking water, enhanced sanitation, and reduced risk of water-borne and vector-borne diseases, including malaria, particularly in children under five^{14,15}. Yet, this dispatch does not forge the link between water-sanitation initiatives and broader health programmes. This omission may inadvertently steer towards isolated vertical interventions, rather than integrated cross-cutting programmes, which could yield substantial benefits at marginal additional cost.

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Breaking down barriers to equity

Yet solutions do exist. First and foremost, they include defragmenting and reconnecting approaches to health, healthcare, cooperation and development by promoting both interprofessional and intersectoral or multisectoral collaborations¹⁶. To combat health inequities, a holistic, collaborative approach is necessary. It includes breaking-down silos across health professions, reinforcing links between the NCDs and the infectious disease communities, as well as reaching out to other professions such as educators, urban planners and environmental scientists, and developing and deploying all-encompassing policies and programmes.

For example, health programmes can be merged with education programmes: integrating health topics into educational curricula can lay the foundation for a health-aware generation. In the context of malaria, achieving higher educational levels can serve as a protective measure against the disease by enhancing awareness and encouraging the uptake of prevention services. School attendance offers children the chance to learn about behaviours that mitigate the risk of

malaria, and in turn, being malaria-free fosters consistent school participation, creating a virtuous cycle. In the longer term, education attainment is correlated with improved job prospects, better housing conditions, and enhanced healthcare accessibility¹⁷.

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Another example may be the merger of health and climate change programmes. As climate patterns change, vectors like mosquitoes might migrate to new areas, bringing diseases like malaria or dengue with them. By merging health and climate programs, better surveillance, and vector control methods can be developed¹³. And climate change mitigation programmes that aim to reduce urban heat islands (e.g., by planting trees or creating green spaces) can benefit those at risk of CVD by reducing heat stress.

Defragmentation towards greater equity is also about strengthening health systems¹⁸. By fostering comprehensive strategies that can simultaneously improve infrastructure, supply chain, human resources, and data systems, we can enhance healthcare delivery across all settings, including in underserved areas and communities¹⁹. Similarly, equipping community health workers (CHWs) with the tools and the support they need to deliver primary care services is also a possible path to defragment care in resource-limited settings. While the mainstay of CHWs has traditionally revolved around maternal and child health or infectious diseases, it is essential, from an equity standpoint, to expand their training to encompass management and referral mechanisms for non-communicable diseases, including CVDs. Similarly, emphasizing the establishment of point-of-care testing sites capable of catering to both infectious conditions such as malaria or HIV, and non-communicable diseases like hypertension, diabetes, and dyslipidaemia – all risk factors for CVDs – underscores a commitment to a more equitable and integrated approach to health.

Finally, in the face of constrained resources, adequate use of technology and frugal innovations—grounded in simplicity, affordability, and efficiency—can be transformative in reaching out to vulnerable and underserved communities. Provided that modern communication means are available and functional, telemedicine can provide a lifeline for communities remote from health facilities. Web-based and mobile health applications can democratize health information and foster patient empowerment – many have been successfully tested with CVD patients²⁰. Other technologies, such as drones, have been successfully used to deliver aerial spraying to kill mosquito larvae, identify mosquito larvae sites²¹ and deliver drugs, vaccines and even external defibrillators^{21,22}. Such technologies, if adequately implemented, can play a pivotal role in bridging the health inequity gap.

Conclusion

The intricacies of health inequities, as exemplified through the lenses of CVDs and malaria, shed light on the broader challenges global health faces. Addressing these requires a blend of systemic changes, collaborative efforts, and innovative approaches. As the global community marches towards a more equitable future, it is imperative to ensure that health policy is defragmented and reconnected to other public policies, so that health, a fundamental human right, finally becomes accessible to all.

References

1. World Health Organization. Uneven access to health services drives life expectancy gaps: WHO. <https://www.who.int/news/item/04-04-2019-uneven-access-to-health-services-drives-life-expectancy-gaps-who>. Published 2019.
2. Featured Graphic. Lives on the Line: Mapping Life Expectancy along the London Tube Network. *Environment and Planning A: Economy and Space*. 2012;44(7):1525-1528.
3. World Heart Federation. *World Heart Report 2023: Confronting the World's Number One Killer*. Geneva, Switzerland 2023.
4. World Health Organization. Malaria. <https://www.who.int/news-room/fact-sheets/detail/malaria>. Published 2023. Accessed 17 October, 2023.
5. Prabhakaran D, Anand S, Watkins D, et al. Cardiovascular, respiratory, and related disorders: key messages from Disease Control Priorities, 3rd edition. *Lancet*. 2018;391(10126):1224-1236.
6. Anand S, Bradshaw C, Prabhakaran D. Prevention and management of CVD in LMICs: why do ethnicity, culture, and context matter? *BMC Med*. 2020;18(1):7.
7. The World Heart Federation, Severin T, Champagne B, et al. *World Heart Vision 2030: Driving policy change*. Geneva, Switzerland, 2022.
8. Kreamsoulas C, Anand SS. The impact of social determinants on cardiovascular disease. *Can J Cardiol*. 2010;26 Suppl C(Suppl C):8c-13c.
9. Chow CK, Nguyen TN, Marschner S, et al. Availability and affordability of medicines and cardiovascular outcomes in 21 high-income, middle-income and low-income countries. *BMJ Glob Health*. 2020;5(11).
10. Chow CK, Ramasundarahettige C, Hu W, et al. Availability and affordability of essential medicines for diabetes across high-income, middle-income, and low-income countries: a prospective epidemiological study. *Lancet Diabetes Endocrinol*. 2018;6(10):798-808.

11. Attaei MW, Khatib R, McKee M, et al. Availability and affordability of blood pressure-lowering medicines and the effect on blood pressure control in high-income, middle-income, and low-income countries: an analysis of the PURE study data. *Lancet Public Health*. 2017;2(9):e411-e419.

12. Khatib R, McKee M, Shannon H, et al. Availability and affordability of cardiovascular disease medicines and their effect on use in high-income, middle-income, and low-income countries: an analysis of the PURE study data. *Lancet*. 2016;387(10013):61-69.

13. Samarasekera U. Climate change and malaria: predictions becoming reality. *Lancet*. 2023;402(10399):361-362.

14. World Health Organization. *Guidelines for malaria vector control*. Geneva, Switzerland 2019.

15. RBM Partnership to End Malaria. *Multisectoral Action Guide to End Malaria*. Geneva, Switzerland 2021.

16. Roll Back Malaria Partnership / UNDP. *Multisectoral Action Framework for Malaria*. 2013.

17. World Health Organization. *State of inequality: HIV, tuberculosis and malaria*. Geneva, Switzerland 2021.

18. Alliance for Health Policy and Systems Research W. *Systems thinking for health systems strengthening*. 2009.

19. Hetzel MW, Awor P, Tshetu A, et al. Pre-referral rectal artesunate: no cure for unhealthy systems. *Lancet Infect Dis*. 2023;23(6):e213-e217.

20. Tromp J, Jindal D, Redfern J, et al. World Heart Federation Roadmap for Digital Health in Cardiology. *Glob Heart*. 2022;17(1):61.

21. Chibi M, Wasswa W, Ngongoni C, Baba E, Kalu A. Leveraging innovation technologies to respond to malaria: a systematized literature review of emerging technologies. *Malaria Journal*. 2023;22(1):40.

22. Schierbeck S, Svensson L, Claesson A. Use of a Drone-Delivered Automated External Defibrillator in an Out-of-Hospital Cardiac Arrest. *N Engl J Med*. 2022;386(20):1953-1954.



Tania Séverin, MA, MPH, PMP, Executive Secretary, Swiss Malaria Group. Tania has a background in both multilingual/intercultural communication and public health. She has previously worked with various health organizations and scientific societies on topics such as continuing medical education, global health advocacy and policy, strategy development and general management. She has joined the Swiss Malaria Group as Executive Secretary in May 2023. Email

Kontakt

Deutschschweiz

Medicus Mundi Schweiz
Murbacherstrasse 34
CH-4056 Basel
Tel. +41 61 383 18 10
info@medicusmundi.ch

Suisse romande

Route de Ferney 150
CP 2100
CH-1211 Genève 2
Tél. +41 22 920 08 08
contact@medicusmundi.ch

Coordonnées bancaires

Basler Kantonalbank, Aeschen, 4002 Basel
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