We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900
Open access books available

185,000
International authors and editors

200M
Downloads

Our authors are among the

154
Countries delivered to

TOP 1%
most cited scientists

12.2%
Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Chapter

Poverty Is Not Poverty: The Reality on the Ground Including the Rural-Urban Divide and How We Can Turn the Tide on NCDs

Janet Michel and Marcel Tanner

Abstract

Cardiovascular diseases (CVDs) tend to occur in younger sub-Saharan African (SSA) populations, about 20 years earlier as compared to high income countries (HIC). Weak health systems and infrastructure, scarce cardiac professionals, skewed budget away from non-communicable diseases (NCD), high treatment costs and reduced access to health care. On top of that, hypertension diagnosis, treatment and control are low, less than 40%, less than 35% and 10-20% respectively. SSA has 23% of the worlds rheumatic disease, while 80% of CVD deaths occur in low to middle income countries. Poverty is not poverty. The rural–urban divide is one reality that has to be acknowledged among others, particularly in Africa. Being poor, while owning land and having the possibility to grow crops and rear livestock, goats and chickens, is different from being an unemployed young man or young woman, renting one room, in a crowded township with dilapidated infrastructure, intermittent or untreated water and surrounded by leaking sewers. Understanding the dynamics in different contexts is important for us to identify and address the different challenges affecting health in general, and heart health of people in these contexts in particular. For example, the detection, treatment and control rates of hypertension are higher in semi-urban as compared to rural areas. Detection rates for both men and women are suboptimal particularly in rural areas. Diet, sedentary life, loneliness and stress, insecure environments rather and unsafe places to walk are issues more common in urban settings. The conditions in which people are born, live, grow and work affect their health. The rural conditions are very different from the urban ones. The quality of air, access and types of food, stress levels, isolation, loneliness and fear not to mention violence, vary. All these factors affect heart health in one way or the other. Addressing heart health issues therefore ought to be context specific. The burdens might be treble or more for some -economically, environmentally (climate change, political instability), socially and historically-apartheid and colonialism.

Keywords: land ownership, traditional foods, environment, spirituality, social or relationship poverty, time poverty, economic poverty, insects, wild vegetables, forms of poverty, health as an asset

1. Introduction

1.1 Defining poverty

Poverty is defined as a state of being inferior in quality or insufficient in amount [1]. Poverty is also defined as not having socially acceptable material possessions or money [2]. The second definition raises the question of who defines what is socially acceptable. Absolute poverty on the other hand is defined as a complete lack of means to meet basic needs like food, clothing and shelter [2]. Relative poverty is defined as an inability of a person to meet a minimum level of living standards compared to others in the same time and place, taking into account context (society or country) [3]. Context matters and it matters a lot [3]. It is imperative to note that none of the above definitions explicitly mentions that a lack of access to education or health care services is poverty. The very means that take a person out of poverty are not mentioned when defining poverty. In most African contexts, one has to be healthy first and foremost, before gaining access to education, and access or entitlement to land.

2. Universal health coverage (UHC)

Billions world-wide live in squalid conditions of disease, hunger and desperation-a state of pandemic poverty [4]. Poverty eradication has become a buzz word but commitment to addressing systemic causes of poverty is lacking [4]. The inextricable link between poor health, poverty and development is well documented [5]. Hunger can lead to poor health, social unrest, conflict and displacement [5]. The decision to migrate itself is not easy and many illegal migrants face challenges to access health care in transit and even years after settling [6].

UHC is defined as ensuring that everyone has access to health care services of high quality without suffering financial impoverishment. The services range from health promotion, prevention, treatment, rehabilitative and palliative care [7–9]. Good health allows children to access school and learn and adults to be productive and earn. UHC, good health therefore is a determinant for people to escape poverty.

2.1 Health the foundation block in eradicating poverty

We reckon, it is imperative for societies and governments to identify health as a tool and resource against poverty that needs to be protected and guarded. Poverty is defined by the United Nations as a violation of human dignity through not having choices and opportunities. It includes not having basic capacity to participate effectively in a society, not having enough food, clothing, not having access to education or health care, not having land, a job or access to credit facilities [10]. Health, the very condition that defines whether we can attend school or till the

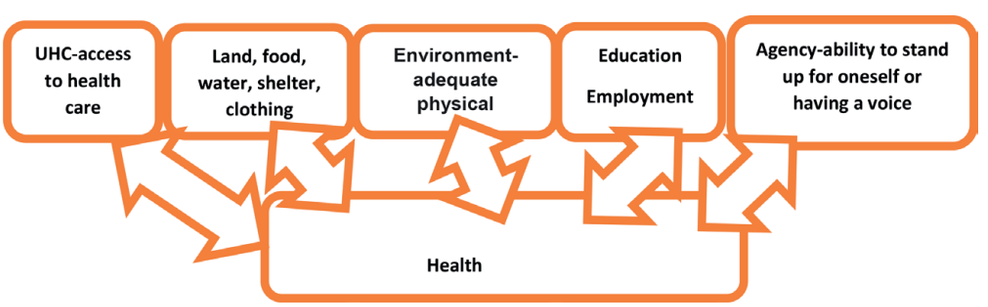


Figure 1.
What health unlocks.

land, is not emphasised enough in the definitions of poverty. Having land but being in poor health or having access to education but being in poor health is a form of poverty. Health, is therefore the basic block in life which gives one access to education, work, food, clothes and shelter. From a public health perspective, health ought to be identified as a basic block that is essential for the eradication of poverty. One prerequisite to accessing everything else in life though seems to be health**.** Health poverty affects all the other domains. See **Figure 1** above.

3. Forms of poverty

Poverty may include social, economic and political elements as seen above [11]. An unemployed young person, who has migrated to a foreign land, leaving behind friends and family, and now illegally living in a crowded township room, might be socially, economically and health poor all at once.

4. Strategies used to address poverty

How best to help the poor is a longstanding debate [12–17]. Governments and other organisations try to reduce economic poverty by a) providing basic needs to people who are unable to earn a sufficient income like the child grant in South Africa. Barriers are corruption, a dwindling tax base in a society that is driven by the informal sector and ultimately sustainability. Less than half of South Africas' rather population eligible for work is formally employed [18].

4.1 Start by protecting the physically healthy and making them aware of their wealth-health

The physically healthy, the very assets of our economies, are currently not sufficiently being made aware of their wealth-health, and neither are they supported sufficiently to value their own health nor are they protected from environmental pollution, water pollution, unsanitary conditions, and the lack of access to health care services. Many black South Africans live in crowded squalor illegally and with no or limited access to land.

5. Time poverty

Many public health facilities are overcrowded. Someone who needs to be seen by a doctor has to calculate many hours of waiting. Many people are forced to take a day or two from work making them time impoverished. Additional hours are also lost daily during the commute to and fro the work, leaving them both time and economically poor [18].

5.1 Sickness strips one of agency making one unable to stand up for oneself or have a voice

Poverty exposes one to violence, since it renders one powerless and excluded from society, living in marginal or fragile environments, with limited access to clean water or sanitation [10]. One can have access to education but being hungry will affect outcomes [12]. Children can be sent to school in poor health, suffering from e.g. anaemia, bilharzia or worms and this will affect outcomes [12]. So, health is a fundamental building block.

6. Conditions in which we are conceived, born, grow, live and work affect our health

24 years since independence apartheid in South Africa has persisted in an economic form [18]. Many families live in airless hovels constructed using splintered boards and metal sheets [18]. Post-apartheid, land is still largely in the hands of the white elites with most black South Africans still living in the townships [18] and one needs political ties to survive and thrive in business [18], closing this door to many.

Health is determined by the conditions in which we are born, grow, live and work [19]. We take this a step further and say health is determined by the conditions in which we are **conceived**, born, grow, live, work etc. One South African domestic worker said;

> *"Our children are being born in the same situation I was born" [18] - Credit Jao Silvia, New York Times.*

In rural settings, people often have land, are surrounded with friends and neighbours, have time, have spiritual groups usually and the environment is less crowded and less filthy. Many have access to seasonally available fruit and vegetables. In the urban setting, many blacks have no access to land, live in crowded unsanitary, unsafe environments and neighbourhoods, isolated and often cannot practice spirituality, and many live from hand to mouth-informal sector. The usual diets are high in carbohydrates and saturated fats.

7. Conditions in which most south Africans live

The impact of former apartheid policies on the health system have been documented and these inequalities have grown along class rather than racial lines recently [20] and these issues still have effects on children being conceived under these conditions to date. The well to do have access to quality health care services from the private health sector, while 80 percent access health care from the overburdened public health sector [21]. Rapid urbanisation is also partly to blame for the increase in coronary heart and artery disease and metabolic disorders [22]. Some people moved from a shack during apartheid to another shack [18] post-apartheid. The living conditions have not changed much. Several hours a day are spent commuting [18] to places of work making them time poor. A foetus conceived while mum is in poor health, malnourished etc., will be affected by these conditions even later on in life -health consequences. The health of the mother affects the heath of the baby. A healthy mum is predictive of a healthy infant. This might sound like chicken egg debate, which was first-and health is the chicken.

8. Access to land

No land no collateral [18], is another glaring issue in South Africa. Many South Africans have no access to land. Investment in ensuring that people have access to land, ensuring safe water supplies through digging more wells, boreholes and improving sanitation- the very conditions that promote people to be and stay healthy is fundamental. Land ownership is one instrument that is pivotal in addressing both rural and urban poverty [16]. In good health people can then access education, employment etc.

> *"We never dismantled apartheid. The patterns of enrichment and impoverishment are still the same." Ayabonga Cawe, former economist Oxfam [18].*

9. Fossil fuel, sedentary life unsafe places

Causes of cardio vascular diseases (CVDs) in SA are high BP, smoking, drinking, poor eating habits, obesity and lack of physical activity [22, 23] and psychosocial stress (depression, anxiety, hostility) [24]. Cardiovascular risk factors disproportionately affect the socio-economically disadvantaged [25] and we can speculate how this comes about.

People use fire for cooking, breathing in fumes, barefoot they walk on ground littered with broken glass, needles, tins and daily they exchange armed robbery updates [18]. Is this conducive for health? Police frequently descend on these informal settlements tearing down these shacks without warning [18]. In some settlements human waste forms puddles [18]. While in some predominantly white areas toilets are stocked with soap, toilt paper, staffed with janitors and security guards [18], many townships are ghettos of isolation [18]. Diet, sedentary life, loneliness and stress and how people deal with it e.g., drinking and smoking are prevalent issues in townships. People often do not know where to get the next meal and the insecure environments prevents physical activities like walking forcing people to take taxis home or to school (no safe places to walk). Attending worship is also affected by these unsafe places. Some services are in the evening. Spirituality has been proven to give meaning and purpose to stressful life events leading to more positive emotions like well-being, happiness, optimism and fewer negative emotions. The psychological benefits of spirituality affect immune, inflammatory, endocrine and even autonomic functions. These unsafe contexts further deprive people of these benefits further affecting heart health [24].

9.1 How do people get diseases in theses contexts?

- Living in filthy overcrowded and unsanitary conditions
- Lack of food
- Lack of knowledge- leading to exposures
- Having knowledge but no options e.g., forced to scavenge from dump sites

9.2 How are the sick further affected in these contexts?

- Lack of financial means to buy drugs, pay for transport, lack of knowledge to eat healthy (ongoing care and regular checks) and the condition gets worse.
- Living conditions, not safe to exercise, or walk, limited access to clean water and sanitation
- No means to follow recommendations made by medical staff (medical education to change) e.g., Eat broccoli when you cannot afford this or live-in rural areas where such foods do not exist-unrealistic recommendations by medical personnel that do not take context into account
- People get medicine and are sent back to the very environment that caused the disease, leaving the stressors unaddressed e.g. the crime ridden township that caused disease.

How to destress, a different approach that includes preventive and promotive health is needed. There is a direct link between stress and heart health. High emotional stress, isolation and loneliness have been linked to atrial and ventricular arrhythmias [24].

10. Causes of heart diseases in SA

Causes of CVD in SSA are hypertension, cardiomyopathy, rheumatic heart disease and congenital heart disease [26]. One multicentre study on PHC in SA revealed that primary care is dominated by NCDs and the most common diagnosis and reason to attend PHC being hypertension and HIV ranking third [25]. Death rates from non-communicable diseases in SA now exceed those of TB and HIV combined [25] and cardiovascular diseases are leading the NCDs. Obesity (68% of women and 31% of men) is another culprit [25]. The high burden of HIV directs most health care spending towards antiretroviral treatment, limiting funds for NCDs particularly in primary health care setting.

10.1 Neglected causes of cardiovascular diseases and their causes

Neglected CVDs in SSA are endomyocardial fibrosis, congenital heart diseases, and rheumatic heart disease [26]. Rheumatic fever affects children in low resource settings where poverty is rife, overcrowding and poor sanitary conditions and limited access to health care services. Rhematic heart disease can be prevented by preventing streptococcal infections or treating them early when they occur [27].

Congenital heart disease: Genes and environmental factors are associated with congenital heart diseases. Maternal health is critical particularly during the first trimester [28]. New-born heart health is affected by maternal health during pregnancy and the environmental conditions in which the mother lives. Causes of endomyocardial fibrosis are virus infections and toxic insults among others [29, 30]. See **Table 1** below.

It is important to point out that social determinants of health are alluded to in the national development plan 2030 [31]. The realisation and implementation of these policies however, remain a challenge.

Condition	Cause	Available interventions
Congenital heart disease	Genes and environmental factors	Preventive Promotive Curative-medical and surgical treatment Rehabilitative
Endomyocardial fibrosis	Virus infections and toxic insults	Preventive Promotive Curative-treatment Rehabilitative
Rheumatic heart disease	Poverty, overcrowding, poor sanitary conditions and limited access to health care services	Preventive Promotive Curative-treatment with antibiotics Rehabilitative

Table 1.
Neglected causes of cardiovascular diseases and their causes.

11. South African plans to decrease NCD related premature mortality

SA has plans to decrease NCD related premature mortality by 25% by end of 2020. This includes population and individual based strategies.

11.1 Population based strategies to prevent NCDs

- Legislation for reduction of sodium in processed foods [32]
- Taxation of sugar sweetened beverages [32] and alcohol
- Tightening of anti-tobacco regulations [25]

11.2. Individual level strategies (crucial)

- Detection, treatment and control of cardiovascular disease risk [25]
- Emphasis -assertive treatment, targeting antihypertensive and statin treatment guidelines [25]
- Training of nurses (lest we forget) on correct measurement and aggressive management of NCDs, active detection, prevention, control of cardio-vascular diseases to avert expenses on hospitalizations [25].

12. Public health lip service?

Both the population based and individual based strategies above, are focussing mainly on treatment rather than prevention. Why wait for the population to fall sick? Simple, cost effective and culturally adapted behaviour and educational interventions rather needed (**Figure 2**) [23].

Health of the population should be protected- a central tenet of public health. The health care in SA is hospicentric rather than preventive and promotive. Only 10% of health expenditure is spent on promotive health? The system seems to foster the idea that people should get ill first before being assisted.

Step 1: Health is an asset -acknowledgement and identification of that).

Step 2: Health needs to be preserved.

Step 3: Health gives us access to everything else in the society, education, jobs, security etc.



Figure 2.
We are waiting for people to fall sick as depicted below.

13. If I am healthy, I am rich (health rich)

Making people aware that being healthy is an asset can go a long way. In the HIV context too, little money is spent on preventive strategies. Some young people are not aware that being healthy, HIV negative is an asset worthy to be protected. Some seem not afraid of HIV saying if they get it, they will get onto treatment. The value of health as an asset seems not widely and explicitly valued?

The environments in which many South Africans live are characterised by land poverty, environmental poverty, social or relational poverty, economic poverty, political poverty (lack of voice for some) and spiritual poverty, all of which lead to health poverty including cardiovascular health issues. See **Table 2** below.

Forms of poverty	Effects
Environmental poverty	Causes stress, toxic exposures, violence
Time poverty	Causes stress, loss of income
Spiritual poverty	Causes stress and hopelessness
Land poverty	Limits access to loans, one cannot grow own food
Social or relational poverty	Causes loneliness
Economic poverty	Reduces access to food and basics including health care
Political poverty	Lack of voice, stress
Health poverty	Decreases access to land, education, jobs, relationships, spirituality and increases health complications

Table 2.
How do these factors affect heart health?

14. Interconnectedness of the different forms of poverty

The interconnectedness of the different forms of poverty and their effect on health ought to be mentioned [33]. Systems thinking is therefore called for if health issues are to be addressed effectively. See **Figure 3** below.

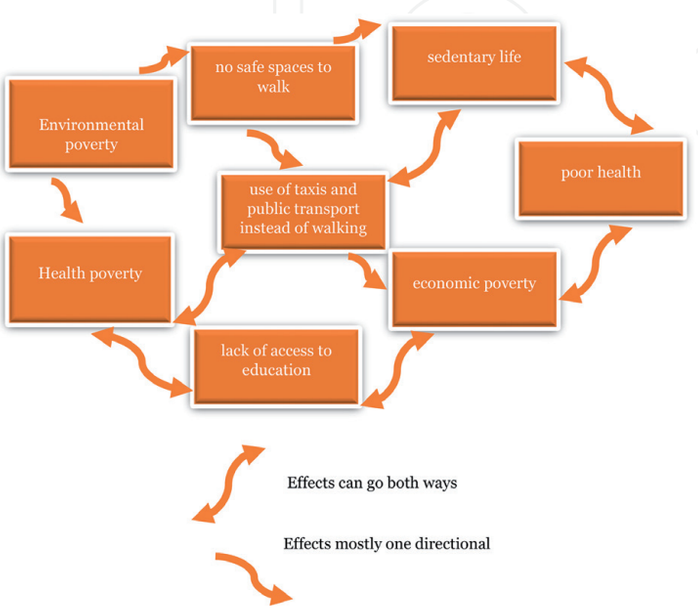


Figure 3.
Interconnectedness and the need for systems thinking.

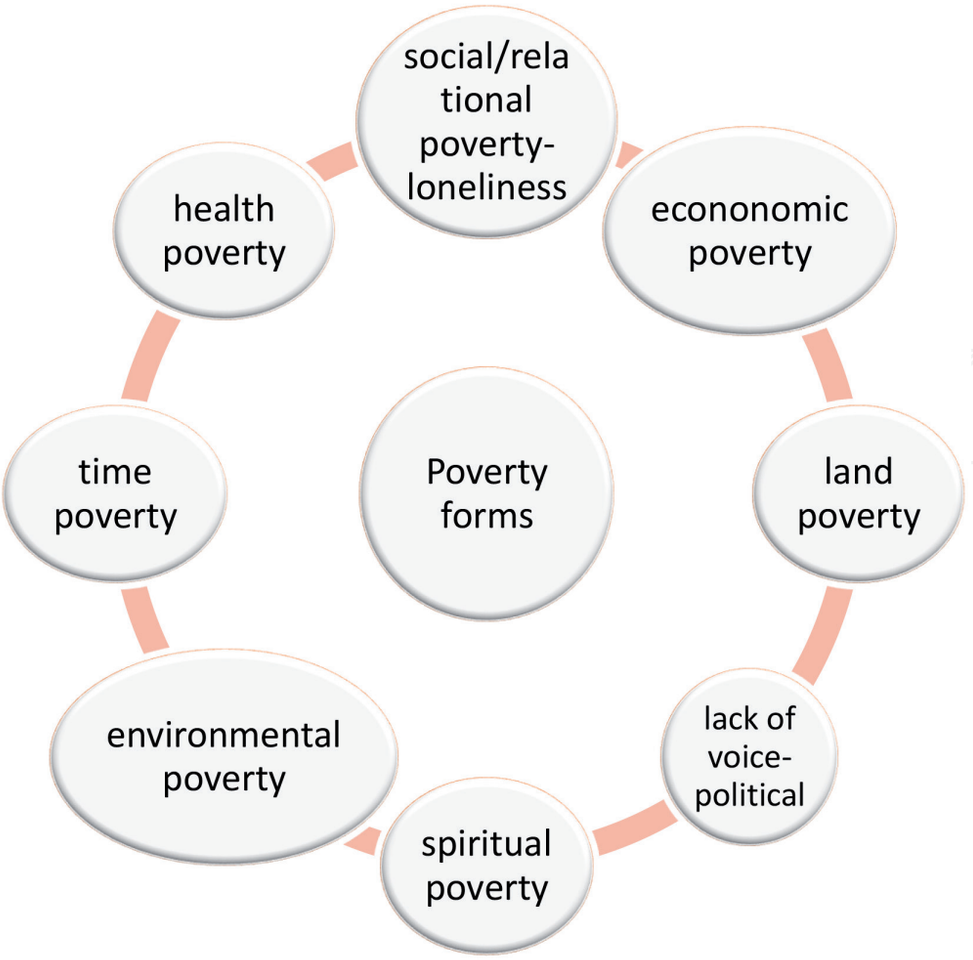


Figure 4.
Forms of poverty.

Figure 4 shows how connected the different forms of poverty are and how they affect health.

15. Adapting current medical interventions and training to reflect context

As depicted above, **Figure 5**, the current interventions work differently for the poor and the rich. The poor often have no choice to change their environment, be it living or working environment, they live in unsafe neighbourhoods where it is unsafe to walk let alone access to a gym. Many church services are held at night. The poor are not safe to attend these spiritual opportunities depriving them of a freely available healing tool-spirituality. They eat what is cheap and this is often high in unsaturated fats, and they often miss check-ups due to transport costs etc.

It is therefore easier for the well to do who get diagnosed with cardiovascular diseases to get back to the optimal health line. The current CVD interventions are pro rich. How can we make them pro poor? Doing so would mean addressing environmental and psychosocial factors and economic and health system factors. Context matters. The training of medical personnel should incorporate locally available nutrition that promotes health without making the poor sink into deeper poverty if they want to stay healthy. The currently recommended healthy diet should be high in fibre, green vegetables, fruit the year round, fish and low

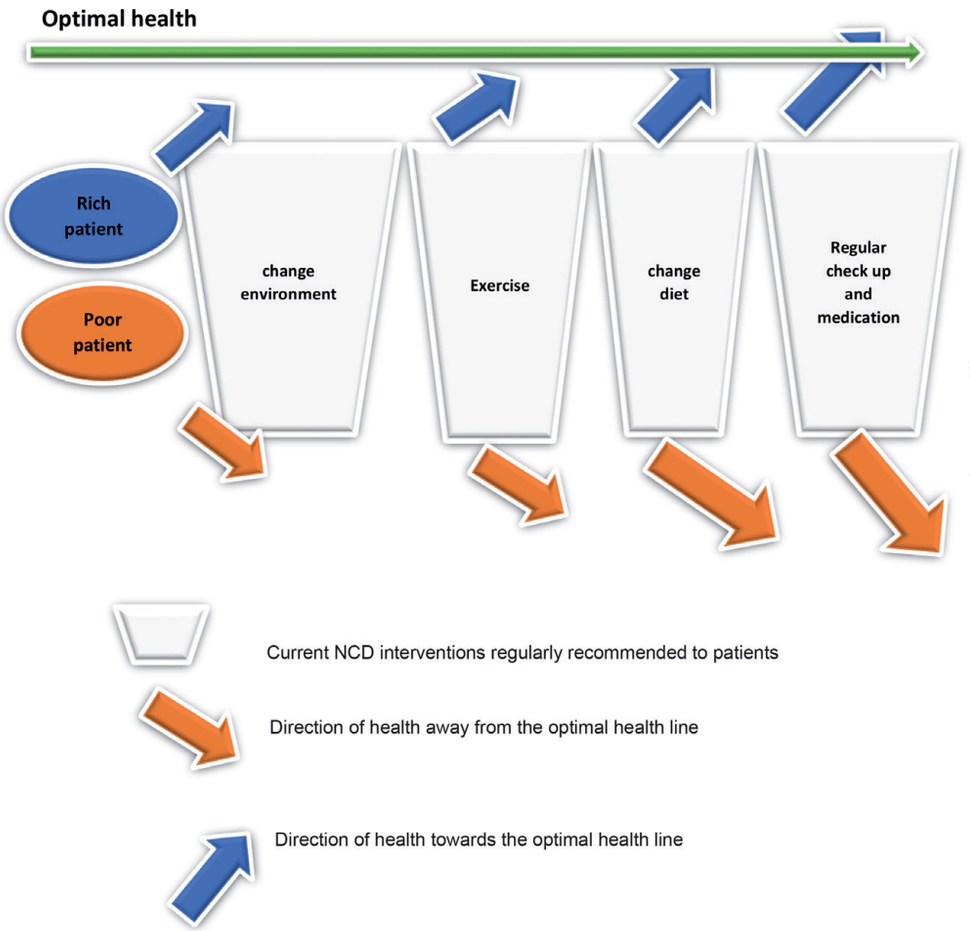


Figure 5.
The current interventions and their effect on health including heart health depending on whether one is rich or poor.

processed foods and fat [24]. Can the average township person afford this? Locally available foods e.g., seasonal fruits, wild vegetables, peanut butter and insects are all good for heart health and should be widely promoted and made easily available.

16. Conclusion

Health is an asset. The conditions in which we are born, grow, live and work affect our health. Countries do not necessarily need wealth to gain health e.g. Sri Lanka had a maternal mortality rate of 2% in the 1930s not comparable to any country today [34]. Sri Lanka reduced maternal mortality to 0.6% today, spending less each year as they learnt what worked and did not work [34]. Similarly, countries in SSA could adapt their approach through first identification of health as asset and then investing in preventive and promotive health while still ensuring efficacy and efficiency of curative services. Addressing the different forms of poverty, utilising a systems thinking lens, could contribute to healthier societies.

DOI: http://dx.doi.org/10.5772/intechopen.95901

IntechOpen

Author details

Janet Michel[1,2*] and Marcel Tanner[2,3]

1 Insel University Hospital, University of Bern, Switzerland

2 Department of Epidemiology and Public Health, Swiss Tropical and Public Health Institute (Swiss TPH), Basel, Switzerland

3 University of Basel, Basel, Switzerland

*Address all correspondence to: janetmichel71@gmail.com

IntechOpen

© 2021 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/3.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. CC BY

References

[1] Poverty definition. From: https: //www.google.com/search?q=poverty+definition&oq =poverty+definition&aqs=chrome.69i57.6680j0j15&sourceid=chrome&ie=UTF-8. Accessed October 9, 2020.

[2] Migration and inclusive societies. UNESCO 2019. From: https://en.unesco.org/themes/fostering-rights-inclusion/migration. Accessed October 9, 2020

[3] Bressers JTA. From public administration to policy networks: Contextual interaction analysis. Rediscovering Public Law Public Adm Comp Policy Anal Tribute Peter Knoepfel 2009:123-142.

[4] Poverty and Development. From: https://www.globalpolicy.org/social-and-economic-policy/poverty-and-development.html. Accessed January 5, 2021

[5] Health, Poverty and Development. From: https://www.globalpolicy.org/social-and-economic-policy/poverty-and-development/health-poverty-and-development Accessed January 5, 2021

[6] Legido-Quigley H, Pocock N, Tan ST, Pajin L, Suphanchaimat R, Wickramage K, et al. Healthcare is not universal if undocumented migrants are excluded. BMJ 2019;366:l4160.

[7] Carrin G, James C, Evans DB. WHO | Achieving universal health coverage: developing the health financing system. WHO 2005. From: http://www.who.int/health_financing/documents/cov-pb_e_05_1-universal_cov/en/. Accessed October 23, 2019.

[8] Universal health coverage (UHC) implementation | Global Health 2035 2018. From: http://globalhealth2035.org/our-work/domestic-health-investments/universal-health-coverage-uhc-implementation. Accessed December 29, 2018.

[9] Kruk ME. Universal health coverage: a policy whose time has come. BMJ 2013;347:f6360.

[10] Gordon D. Indicators of Poverty & Hunger 2005. From: https://www.un.org/esa/socdev/unyin/documents/ydiDavidGordon_poverty.pdf. Accessed 6 January 2020

[11] Ending Poverty 2018. From: https://www.un.org/en/sections/issues-depth/poverty/. Accessed October 9, 2020.

[12] Kristof N. How Can We Help the World's Poor? N Y Times 2009.

[13] Postrel V. The Poverty Puzzle (Published 2006). N Y Times 2006.

[14] Drezner DW. "The End of Poverty": Brother, Can You Spare $195 Billion? N Y Times 2005.

[15] Moyo D, Ferguson N. Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa. Reprint Edition. Farrar, Straus and Giroux; 2009.

[16] Is Aid Killing Africa? Dambisa Moyo talks about Dead Aid on ABC. From: https://www.abc.net.au/foreign/uk---is-aid-killing-africa/1624286. Accessed 6 January 2021

[17] Collier P. The Bottom Billion: Why the Poorest Countries are Failing and What Can Be Done About It: From: https://www.amazon.com/Bottom-Billion-Poorest-Countries-Failing/dp/0195373383. Accessed October 10, 2020.

[18] Goodman PS. End of Apartheid in South Africa? Not in Economic Terms. N Y Times 2017.

[19] Bloomsbury.com. The Health Gap. Bloomsbury Publ n.d. https://www.bloomsbury.com/uk/

the-health-gap-9781408857991/. Accessed June 2, 2019.

[20] Mcintyre D, Mcleod H. The challenges of pursuing private health insurance in low- and middle-income countries: lessons from South Africa. In: Sagan A, Mossialos E, Thomson S, editors. Priv. Health Insur. Hist. Polit. Perform., Cambridge: Cambridge University Press; 2020, p. 377-413.

[21] Socio-economic inequalities in the multiple dimensions of access to healthcare: the case of South Africa. From: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-020-8368-7. Accessed January 5, 2021.

[22] Zuhlke L. Why heart disease is on the rise in South Africa. The Conversation. From: http://theconversation.com/why-heart-disease-is-on-the-rise-in-south-africa-66167. Accessed December 2, 2020.

[23] Cappuccio FP, Miller MA. Cardiovascular disease and hypertension in sub-Saharan Africa: burden, risk and interventions. Intern Emerg Med 2016; 11:299-305.

[24] Lucchese FA, Koenig HG. Religion, spirituality and cardiovascular disease: research, clinical implications, and opportunities in Brazil. Braz J Cardiovasc Surg 2013; 28:103-128.

[25] Schutte AE. Urgency for South Africa to prioritise cardiovascular disease management. Lancet Glob Health 2019;7: e177–e178.

[26] Yuyun MF, Sliwa K, Kengne AP, Mocumbi AO, Bukhman G. Cardiovascular Diseases in Sub-Saharan Africa Compared to High-Income Countries: An Epidemiological Perspective. Glob Heart 2020; 15:15.

[27] Rheumatic Heart Disease. From: https://www.who.int/news-room/fact-sheets/detail/rheumatic-heart-disease. Accessed December 2, 2020.

[28] Stanford Children's Health From: https://www.stanfordchildrens.org/en/topic/default?id=factors-contributing-to-congenital-heart-disease-90-P01788. Accessed December 2, 2020

[29] Liu T, Song D, Dong J, Zhu P, Liu J, Liu W, et al. Current Understanding of the Pathophysiology of Myocardial Fibrosis and Its Quantitative Assessment in Heart Failure. Front Physiol 2017;8.

[30] Tartaglione AM, Venerosi A, Calamandrei G. Early-Life Toxic Insults and Onset of Sporadic Neurodegenerative Diseases—an Overview of Experimental Studies. In: Kostrzewa RM, Archer T, editors. Neurotoxin Model. Brain Disord.-Long Outcomes Behav. Teratol., Cham: Springer International Publishing; 2016, p. 231-264.

[31] National development plan 2030. National Development Plan 2030 Our Future-make it work. 2020. From: https://www.gov.za/documents/national-development-plan-2030-our-future-make-it-work. Accessed 6 January 2021.

[32] World Heart Federation. World Heart Federation 2020. From: https://www.world-heart-federation.org/. Accessed 6 January 2021

[33] Senge PM. The fifth discipline: the art and practice of the learning organization. London: Random House Business Books; 1999.

[34] Saving millions for just a few dollars: cost-effective health measures for poor nations. World Hunger News 2006. From: https://www.worldhunger.org/saving-millions-for-just-a-few-dollars-cost-effective-health-measures-for-poor-nations/. Accessed October 10, 2020.