ECONOMIST IMPACT

Tackling cardiovascular disease:

a health and economic imperative for emerging markets

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Executive summary—changing CVD policy to save lives and achieve economic potential

Cardiovascular disease impacts lives and hinders progress and development

Cardiovascular disease (CVD) kills an estimated 17.9m people a year and accounts for over **a third of premature deaths globally**.[1,2] CVD affects individual health, quality of life and wellbeing, as well as causing profound individual and societal economic impacts. In addition, non-communicable diseases (NCDs) such as CVD are a major risk in terms of global GDP, both in the short and long term.[3] The **cumulative global economic losses of NCDs, of which CVD is a major example, are estimated to reach US$47trn by 2030** (around 75% of 2010 global GDP).[4] This impact arises from the loss of productive workforce through premature death, absenteeism, limited workforce participation due to disability, and costs levelled at employers by increased healthcare spending and insurance premiums. The impact on current and potential economic growth and development for individuals and societies make **tackling CVD a development issue**, not just a health issue.

In this paper we focus on the impact of CVD in nine emerging markets—Brazil, China, Egypt, Mexico, the Philippines, Saudi Arabia, India,

South Africa and the United Arab Emirates. All nine have seen sustained growth but face potential CVD-driven risks to their future development.[5]

Identifying barriers and solutions

Globally, it is well known how to combat rising CVD rates and associated costs. The conditions in which we are born, grow, work and live influence health—positively or negatively, and solutions must address these factors. The World Health Organisation (WHO) has identified "best buy" interventions to prevent and manage NCDs, each delivering US$3-US$12 of savings for every US$1 invested.[6,7] Focusing on interventions targeting CVD risk factors and early detection and management could return economic benefits worth US$25m based on investment of US$8m.[8] Despite this compelling case, change can be hard-won. The main culprits are siloed working, ad hoc decision-making and inequalities in access to care.

Calls to action on CVD in emerging markets

The changes that policymakers can enact to ensure a resilient health system—for NCDs and beyond:

Advocate for a strong primary health system. Strive for universal health coverage, effective primary health infrastructure and integrated care.

Recognise that the causes of and solutions to NCDs are not solely a "health" issue. **Engage stakeholders from outside of the health sector** to create good living conditions for a thriving population.

Gather the evidence needed to implement effective policy measures-we know what works. Find **evidence for return on investment** interventions-particularly from countries with similar challenges-and **prioritise NCD funding** to suit local needs.

Involve the right, diverse, mix of stakeholders. Shape policy interventions with a wide range of stakeholders. Actively involve and use civil society groups and those who have lived experience, to learn from others wherever possible.

Source: Economist Impact analysis.

About the research

Tackling cardiovascular disease: a health and economic imperative for emerging markets is an Economist Impact report, supported by Viatris, exploring the impact of cardiovascular disease (CVD)—and non-communicable diseases (NCDs) more broadly—on individuals, societies, economic growth and development potential in emerging markets.

This report covers the rising burden and impact of CVD in nine emerging markets (Brazil, China, Egypt, Mexico, the Philippines, Saudi Arabia, India, South Africa and the United Arab Emirates), and examines what the future may hold if preventative actions are taken today. It incorporates leading insights from an expert panel discussion, literature review and in-depth interviews, and frames key findings and actionable takeaways around policy opportunities and successful initiatives.

We wish to extend our thanks to the following experts for their time and insight (listed alphabetically):

- **Luke Allen**—senior researcher, University of Oxford
- **Mark Barone**—founder, Intersectoral Forum of NCCs/NCDs in Brazil (ForumCCNTs)
- **Dhwani Babla**—Columbia University; global health associate, Health Finance Institute; board member, Lupus Ontario; steering committee member, Women in Global Health
- **Zulfiqar Bhutta**—founding director, Aga Khan University Center of Excellence in Women and Child Health and the Institute for Global Child Health & Development; co-director, Centre for Global Child Health, Hospital for Sick Children (SickKids)
- **Agnes Binagwaho**—paediatrician; co-founder and former vice-chancellor, University of Global Health Equity
- **Orajitt Bumrungskulswat**—assistant secretary general, Heart to Heart Foundation; director, Bureau of Public and Private Participation, National Health Security Office
- **Ibtihal Fadhil**—chair, Eastern Mediterranean NCD Alliance; former regional adviser NCDs, World Health Organisation (WHO) Eastern Mediterranean Regional Office
- **Fatima Lorenzo**—founder/past president Philippine Alliance of Patient Organizations; co-founder Kythe Foundation, Inc; executive director Hospice Philippines; patient advocate
- **Cristina Parsons Perez**—capacity development director, NCD Alliance
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CVD is a leading cause of preventable deaths

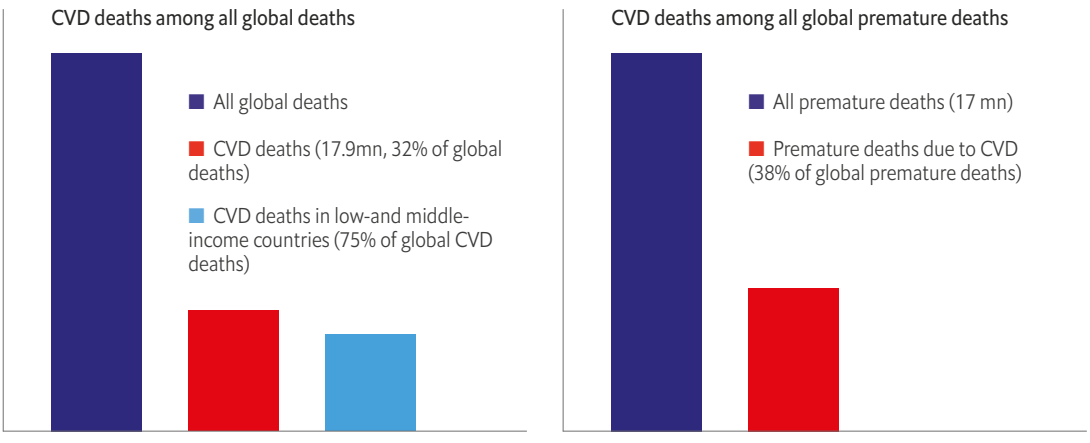
CVD accounts for 32% of all global deaths.[2] Yet the impact of CVD is not evenly distributed with 77% of these deaths occurring in low- and middle-income countries (LMICs, Figure 1).[2] CVD also accounts for 38% of all global premature deaths (Figure 1).[2]

When it comes to country-level impacts of CVD, countries to some extent become victims of their developmental success. Improved socio-economic ecosystems and access to goods and services, including healthcare, reduce infant mortality and extend average lifespan, but also lead to behavioural changes (physical inactivity, changes in diet) and environmental changes (urbanisation, reduced air quality) that have detrimental effects.[9-11]

Given the link between CVD rates and social and economic development, this report focuses on a global cross-section of nine emerging markets that have experienced sustained growth and stability in recent decades:[5]

- Brazil
- China
- Egypt
- Mexico
- the Philippines
- Saudi Arabia
- India
- South Africa
- United Arab Emirates

Figure 1. The global burden of CVD, 2019



Source: World Health Organisation (WHO).[2]

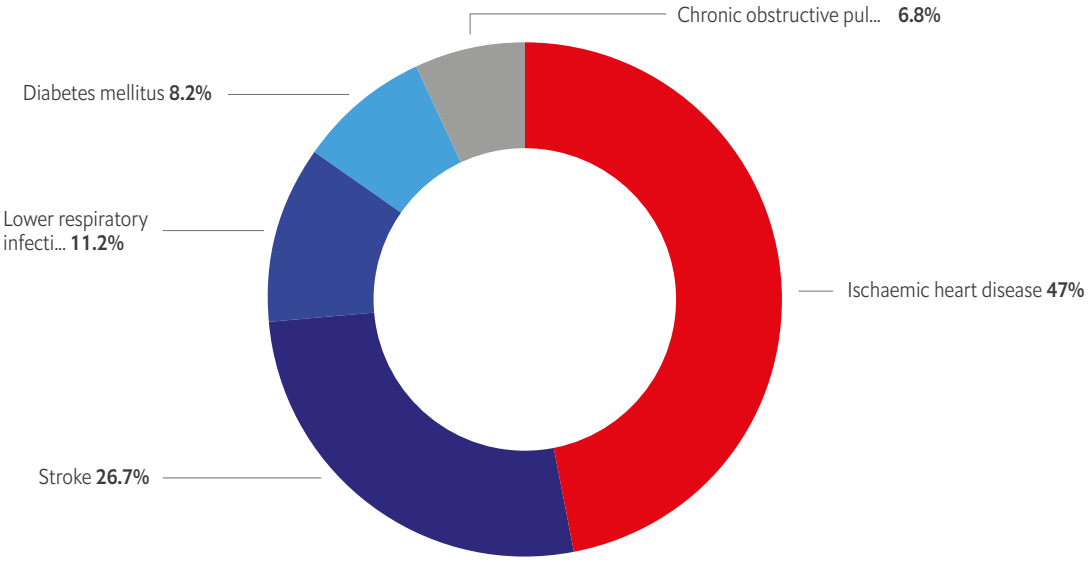
Although all nine are deemed emerging markets, their income levels range from low to high. Selecting countries spanning a range of income levels allows us to explore how CVD could impact on social and economic development in a range of different settings. Across the nine countries, ischaemic heart disease (or coronary heart disease), stroke and diabetes account for 81.9% of deaths (Figure 2).

CVD is influenced positively and negatively by the **conditions in which people are born, grow, work, live and age.** These include income and social protection, education, employment and working conditions, food security, housing, commercial activities, and the social inclusivity of the living environment.[10,13]

Accessible and affordable health services are not guaranteed.[14,15] Further, not all health systems are set up to respond to CVD. For example, most early detection and management of CVD takes place in primary care, making a robust and accessible primary care system a must to drive down CVD deaths.[16] There is often uneven geographic distribution of primary and specialist healthcare services within countries, with facilities concentrated in urban centres, leaving large parts of the population un- or under-served.

Globally, **action on CVD has slowed.** There are rarely enough resources to go around, and policy and financial commitments to programmes—particularly health promotion and prevention—are lacking and losing traction. High-level political commitment at a national and international level is needed to accelerate **cross-sector collaboration** for the prevention and control of CVD.[17]

Figure 2. Leading causes of death in selected emerging markets (based on average deaths per 100,000 population, 2019)



Source: World Health Organisation (WHO).[12]
Note. Average deaths per 100,000 population across selected emerging markets: Brazil, China, Egypt, India, Mexico, Philippines, Saudi Arabia, South Africa and UAE.

CVD negatively impacts economic growth and potential in emerging markets

"If we do nothing, in the long term, there is a loss of human capital."

Zulfiqar Bhutta—founding director, Aga Khan University Center of Excellence in Women and Child Health

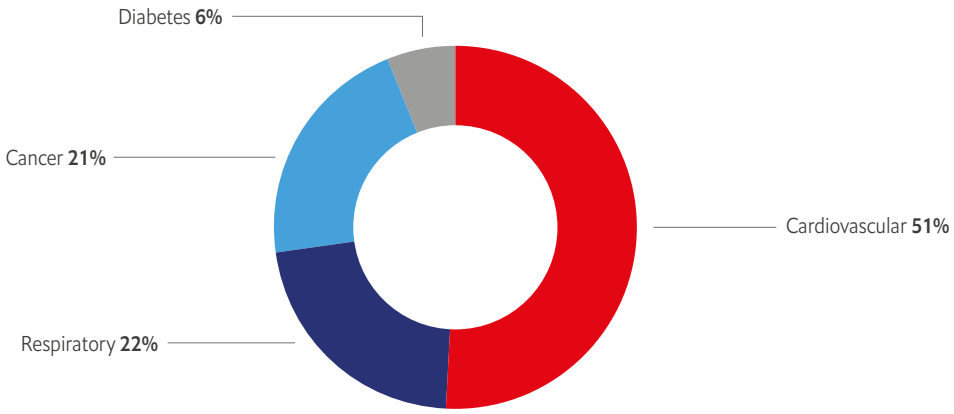
Rising rates of CVD can hold back the economic growth of emerging markets and prevent countries from achieving their potential. Therefore, CVD should not be viewed solely as a "health issue", but also as a **"development issue"**.

Workforce woes

The workforce of the future is at risk if we do not tackle CVD. Many emerging markets have large youth populations, but CVD rates continue to rise among adolescents and children and such diseases are poorly controlled in such countries, a loss of people, output and productivity will follow, driven by premature death, absenteeism, limited workforce participation due to disability, and costs to employers from increased healthcare spending and insurance premiums. This can **stifle countries' economic and broader development.**[18]

Around 1.2m (13%) of all NCD-related deaths occur in people under 20.[19] It is estimated that the annual economic losses as a result of early deaths amount to almost US$500bn in LMICs, equivalent to 4% of their annual economic output.[19] **CVDs are responsible for over half of the lost output in LMICs** (Figure 3).[8]

Figure 3. Lost output from NCDs in LMICs by disease type, 2011-25



Source: NCD Alliance.[8]

"It took a pandemic for many countries to notice. But adverse childhood exposure to domestic issues, social deprivation and NCD risk factors have a profound effect on human capital, as well as their ability to function as a citizen and enter the workforce."

Zulfiqar Bhutta—founding director, Aga Khan University Center of Excellence in Women and Child Health

NCD services for children and adolescents are not well-developed in many countries, meaning that children and young people lack access to services to prevent, detect and treat CVD. This leaves them vulnerable to acute complications, disability and premature death.

Individual setbacks

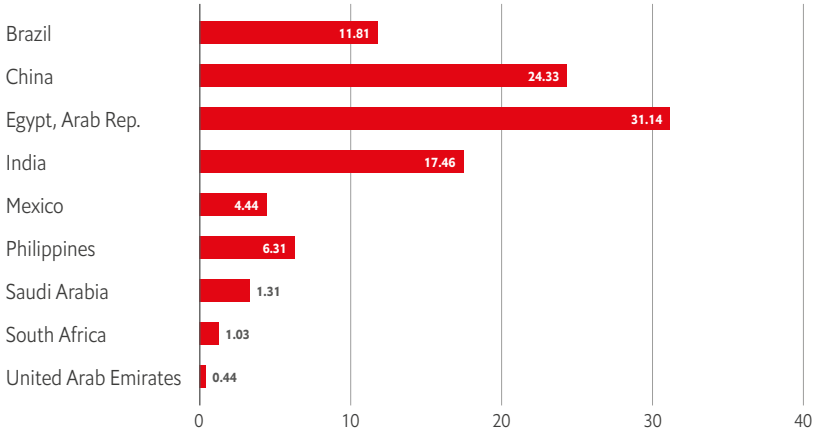
The growing CVD burden could also push millions of people into poverty. Depending on the maturity of the specific country's health system, those living in emerging markets may have limited access to health insurance, exposing them to high personal costs for care. The proportion of people who spend more than 10% of their household budget on health varies greatly, affecting almost 12% of people in Brazil, over 31% in Egypt and only 0.44% in the UAE (Figure 4).[14] One contributing factor could be the high level of universal health coverage in the UAE, the highest among the countries analysed (see Figure 10).[20] There is also still a significant minority of people—around 6% in China, Egypt and India—of people spending over 25% of household budget on healthcare.[15]

Indirect costs to individuals are caused by job losses, reduced productivity and increased demand for care from family members. In India, people with diabetes reported a 21% reduction of their personal income, with caregivers also reporting loss of income.[21] In South Africa, NCDs have been shown to disproportionately impact the employment status of women, furthering gender inequalities.[22]

The opportunity cost of not doing enough to tackle CVD

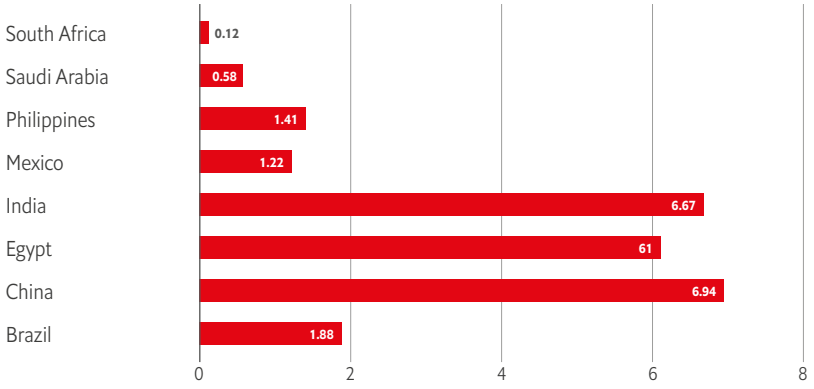
In its Global Risks 2024 report, the World Economic Forum lists chronic health conditions such as CVD as a major risk in terms of global GDP, both in the short-term (2 years) and long-term (10 years).[3] The **cumulative global economic losses of NCDs are estimated to reach US$47trn by 2030**, equivalent to around 75% of 2010 global GDP).[4]

Figure 4. Percentage of the population spending more than 10% of their household budget on health



Source: World Bank.[14]

Figure 5. Percentage of the population spending more than 25% of total household budget on health



Source: Our World in Data.[15]

CVD is expensive to treat, and exponentially more so in the advanced stages. There is also an opportunity cost, given that the rising costs of treating CVD reduce the public sector's capacity to invest in other areas such as health promotion, disease prevention, education, development and the broader economy of countries.[23] Treating CVD at an advanced stage, once the individual has developed complications and possibly has multiple conditions, is driving much of the economic burden and premature deaths in emerging markets. **Most premature CVD deaths, and a large amount of the illness associated with CVD, are preventable and avoidable.**[24]

BOX 1

The economic impact of NCDs and CVD in selected emerging markets

- **In the Philippines the impact of NCDs is an estimated 4.8% of national GDP, based on 2017 data; this is likely to rise in line with increasing incidence and prevalence.[25]**
- **Projections suggest that the economic burden of diabetes in China will surpass GDP growth in 2020-30, highlighting the urgent need for prevention and early intervention to prevent complications.[26]**
- **The cost of managing CVD in Brazil increased by 17% between 2010 and 2015, driven by increasing disease incidence.[27]**

Tackling CVD provides a good return on investment

"Progress on NCDs is very hard unless a country is stable and you can get them to recognise the value of the investment."

Ibtihal Fadhil—chair, Eastern Mediterranean NCD Alliance

Through targeted prevention, detection and early management practices, it is possible to control the rising prevalence and cost of CVD.

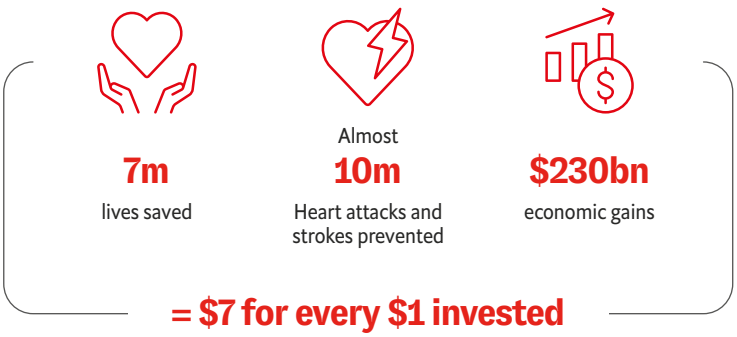
Known levers: the WHO "best buys" and return on investment in CVD prevention and management

The WHO has extensively studied the impact of national clinical and policy responses to NCDs, in terms of reducing risk factors, incidence and prevalence rates, for its "best buys", a range of health and overarching policy-based, NCD-focused interventions chosen to deliver a strong return on investment (Figures 6 and 7).

Most of the WHO "best buys" focus on modes of **prevention**, particularly of CVD, such as increasing health taxes, restricting marketing and sales of harmful products, information, and education. But they also include **management of early disease**, including interventions to manage hypertension to prevent more serious disease and complications.[8] Overall, implementing the "best buys" targeting CVD risk factors and early detection/management could, based on an investment of US$8m, return a projected economic benefit of US$25m (Figure 7).

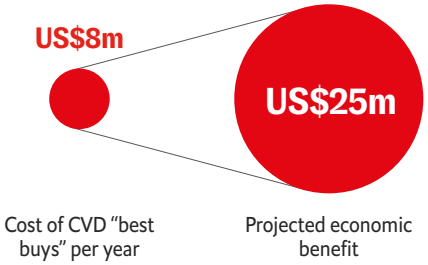
Figure 6. The WHO "best buys"—the investment case[28]

Investing in WHO Best Buys for NCDs now, means that by 2030:



Source: World Health Organisation (WHO).[28]

Figure 7. Average annual cost versus economic benefit of implementing "best buy" interventions for CVD, 2011-25



Source: World Health Organisation (WHO).[8]

"Policy successes underline the importance of regulation and taxation in the prevention space and make a clear case for investing in NCDs."

Cristina Parsons Perez—capacity development director, NCD Alliance

The "best buys" relating to CVD show particularly good return on investment of between US$3 and US$12 for every US$1 invested.[28] The return on investment varies depending on the intervention type. For example, there is a return of investment of US$11.93 per US$1 invested for reducing salt in the diet and US$8.32 per US$1 for interventions that reduce alcohol consumption.[7] Offering a lower, but still positive, return on investment are interventions that focus on the management of CVD and diabetes, at US$3.12 for every US$1 spent.[7]

By implementing upstream interventions that focus on prevention and early detection, emerging markets can maximise population impact and reduce costs.[29]

Policy successes

The rise in CVD can further be controlled through policy and regulation targeting risk factors. This approach can be used to introduce taxes, remove subsidies, mandate warnings and ban the marketing of health-harming substances. It can also improve access to medical treatments and safe spaces, such as those free of harmful pollutants like second-hand smoke.

Examples of such policies have been implemented around the globe:

- **Argentina** introduced a salt reduction programme, "Menos Sal, Mas Vida" (Less Salt, More Life), that established an upper limit on the sodium content of 18 types of food. This has resulted in a significant reduction in sodium intake and is expected to save tens of thousands of people from heart attacks, stroke and death.[30,31]
- **Thailand** introduced an Act entitled ThaiHealth, which implemented surcharges of 2% on alcohol and tobacco sales, reportedly leading to a 25% drop in tobacco sales and US$120m in taxes acquired per year.[32,33]
- **In Mexico,** an excise tax on sugary drinks was implemented in 2014. Findings from a 2019 study projected that the tax would prevent 239,000 cases of obesity, of which 39% would be in children. The study concluded that the tax is likely to be a cost-saving intervention and that the economic benefit could be nearly doubled if the rate is increased from 1 to 2 pesos per litre of drink.[34] At present, data on the impact on obesity are lacking, but there is evidence of changes in buying patterns.
- Food advertising on television has been identified as a contributor to childhood obesity.[35] **In Chile,** the Food Labelling and Advertising Law attempts to curb child obesity via school food sales, front-of-package warning labels, and marketing restrictions for qualifying foods and drinks. An evaluation focused on pre-school children and adolescents found that exposure to unhealthy food advertising decreased by an average of 44% and 58% respectively.[35]
- **South Africa** introduced a 10% tax, the Health Promotion Levy, on sugary drinks in 2016. This has resulted in a reduction in purchases of carbonated drinks of 29% and greater reductions in purchases among those from lower socioeconomic groups.[36,37]

BOX 2

The return on investment of CVD "best buys"

Reducing the mortality rate for ischaemic heart disease and stroke by 10% would reduce economic losses in LMICs by an estimated US$25bn per year, which is three times greater than the investment needed for the "best buy" measures to achieve these results (Figure 10). One of the reasons investing in the "best buys" has such an impact on CVD is because the majority of tackle risk factors that contribute to CVD, including alcohol and tobacco use, healthy diets, physical activity, and early CVD management.[8]

Whereas several emerging markets have introduced taxation policies that can contribute to the response to CVD, others lack broader overall policy to guide action on NCDs and their common risk factors. Knowing the feasible and cost-effective interventions that exist to reduce the burden and impact of CVD has meant that **we can track national implementation of actions linked to interventions targeting NCDs (including CVD) to benchmark and monitor countries' progress** (Appendix 1).[38] This tracking highlights where challenges remain and where efforts should be targeted. Certain policies—such as restricting marketing to children—are widely adopted by our selected emerging markets, whereas others—such as the restriction on physical availability of alcohol—are less well implemented (Appendix 1). The process of policy development is also an important consideration and having **public involvement**, particularly from those with **lived experience of CVD**, is key.[39]

Management of early disease—the importance of primary healthcare

After prevention, the next best thing is early detection and management. An example of a WHO "best buy" intervention for early detection and management of CVD is drug therapy and counselling for people at higher risk of developing heart attacks and strokes.[8] Globally, ageing populations mean that healthcare systems need to adapt and adjust to rising demands for healthcare, with an effective primary care system an essential part of this.[40] **Investment in CVD through early detection and treatment could prevent at least one-third of global deaths attributed to NCDs**—including CVD—dramatically reducing the impact of these diseases on individuals and countries.[16,41]

There is limited human resource in health, particularly for primary care physicians, with **only two in five countries worldwide meeting the WHO minimum recommended physician to population ratio of 1:1,000**, including some emerging markets (Figure 8).[42]

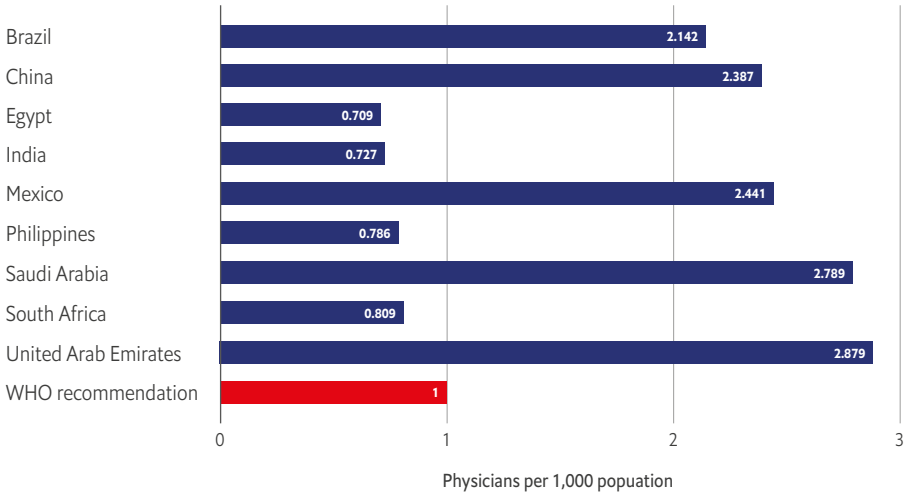
Four of the nine countries we've focused on fall below the WHO minimum recommendation: Egypt, India, the Philippines and South Africa. However, countries that appear to be above the WHO threshold may, in fact, also fall short, as the data include both general and specialist physicians and are likely to be an overestimate. Such national-level figures also do not take into account the geographic distribution of healthcare professionals, who are often concentrated in urban centres, which may leave large parts of the population un- or under-served.

Not only is there limited human resource, but continuing medical education (CME) of healthcare workers remains costly and rare in low-resource settings.[43] CME programmes improve staff knowledge, skills, retention and practice, enabling the workforce to evolve and respond better to patient needs, leading to better health and care outcomes.[44] One way to address the deficit in CME could be to develop healthcare education collaborations between emerging markets and countries with more mature health systems. These partnerships need to be genuinely collaborative and meet the needs and resources of emerging markets to ensure sustainability—through "train the trainer" approaches, for example.[43]

Beyond the obvious need for more staff in primary health systems, things can be done to minimise the harmful effects of lack of resource. Early intervention is vital, reducing the need for specialist treatment.

Early detection and treatment can often be managed by nurses and allied medical professionals, which limits the need for physician involvement and is cost-saving. Such "task-shifting" helps health systems to address healthcare worker shortages by reallocating human resources—for example, by expanding the roles of pharmacists and nurses to support physicians in primary care (see Box 3).[42] However, caution should be taken, as task-shifting in Sub Saharan Africa was found to impact health workers' sense of agency.[46] Use of technology

Figure 8. Physicians per 1,000 population in selected emerging markets



Source: World Bank, 2024.[45]
Note. Data points varied between countries and have been simplified for this chart: Brazil 2021, China 2020, Egypt 2019, India 2020, Mexico 2020, Philippines 2021, Saudi Arabia 2021, South Africa 2021, United Arab Emirates 2020.

in clinical decision-making tools is another way to address health needs in resource-limited settings—for example, digital assessment and treatment guides are used in South Africa (see Box 4). A further approach is to consider "primary care networks", which are collaborations between healthcare facilities, with the potential to improve efficiency, quality and outcomes in resource-limited settings (see Box 5).[47]

A further strategy is to make use of existing healthcare "touchpoints" for additional services—for example, by integrating NCD screening into other services such as a covid-19 vaccination programme—saving costs and ensuring every contact with medical services counts (see Box 6).

BOX 3

Task-shifting in CVD—understanding how to make it work[48,49]

There is a global workforce shortage in healthcare, with the WHO estimating that 60% of the world has insufficient skilled health workers.[48] The higher wages offered in high-income countries makes this global issue more acute in emerging markets; the worst affected regions are Africa and South-East Asia.[48]

Task-shifting is a way to address this shortage, as tasks typically undertaken by highly skilled healthcare workers (typically doctors) that are in short supply, can be taken on by trained non-physician health workers (NPHWs) such as community health workers and nurses.[48] A review of eight randomised controlled trials assessing task-shifting for hypertension in LMICs found that NPHWs were well-received by service users. The main barriers were system factors such as restrictions on prescribing and access to medication.[48] The tasks shifted to NPHWs included screening and monitoring, referral to physicians for diagnosis and management, lifestyle education and case management to ensure adherence to medications and appointments.[48]

BOX 4

Implementing a digital clinical support tool in South Africa[50]

A study carried out in South Africa looked at the feasibility of implementing a digital clinical support tool, the Practical Approach to Care Kit (PACK). In its standard original form, PACK is a printed algorithmic tool used across South Africa and globally that provides guidance to aid clinicians with delivering evidence-based medicine in primary care. However, the printed guidance quickly becomes out of date. Use of an electronic version would allow crucial updates to be implemented and disseminated automatically and could improve user experience.
The study found that there was potential for the digital version to improve quality of care by systematising comprehensive and thorough clinical examinations and medical history. Feedback from a pilot scheme was overwhelmingly positive. However, there are important considerations, including the provision of technology such as tablets, training for users and security protocols.

BOX 5

Integrated networks of care in Brazil allow smoother transitions between services[51]

In Brazil, networks of care have emerged as a solution for integrating health services, improving resilience and responding in a more effective way to the complex health needs of the ageing population. These networks serve the population in a specific geographical area. Care is centred around the individual, family and community, and integrates maternal and perinatal networks. Health facilities are linked through a single mission, common goals and co-operative action that allow comprehensive and joined-up care.

BOX 6

Integrating diabetes screening into existing vaccine programmes in South Africa[52]

Health facilities in Johannesburg trialled integrating type 2 diabetes and hypertension screening into the covid-19 vaccination campaign. Participants received covid tests, blood glucose checks, blood pressure assessments and physical measurements. Those with elevated blood glucose or blood pressure results were referred for further diagnostic tests. Over 1,300 people were screened and 7.8% of all participants were identified as potential new diabetes or hypertension diagnoses, demonstrating that even brief healthcare interactions can aid identification of previously undiagnosed NCDs. The integration of NCD screening into routine healthcare visits can be a particularly valuable strategy in resource-constrained settings to identify CVD, which often goes undetected until the condition is serious.

In emerging markets, improvements to primary healthcare to support early detection and treatment of CVD could the reduce likelihood of complications, expensive treatment and death. An additional annual spend of US$0.[84] per person in NCD-focused primary healthcare could save 7m lives.[7] **The reduction in early mortality and productivity gains could result in economic gains of US$230bn.**[7]

Opportunities for preventing CVD occur throughout the life course and the best chance for prevention is to intervene as early as possible, with primary healthcare being central to this. Policies, plans and services for preventing CVD should **start with maternal health and preconception**, and continue through to infant care, feeding and health promotion into childhood and adolescence, followed by promoting a healthy work environment, healthy ageing and care for CVD into older adulthood.[53]

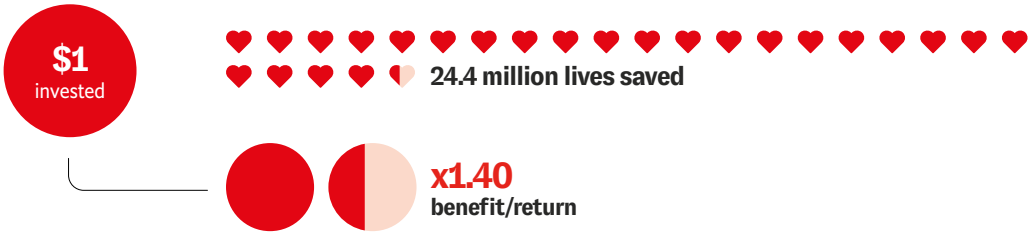
Universal health coverage—investment in prevention

Investing in universal health coverage (UHC) remains a key component of a sustainable response to CVD and NCDs. According to the WHO, **investments in expanding UHC over the next five years will result in 24.4m lives saved and a return on investment of US$1.40 for every dollar invested** (Figure 9).[54]

Many effective CVD interventions, including early detection and treatment, can be administered in primary care settings, covered by UHC. If delivered early enough, these interventions can help to ensure that people remain in a mild disease state for longer, reducing the need for expensive treatments, as well as limiting complications, poor outcomes and CVD deaths.[9]

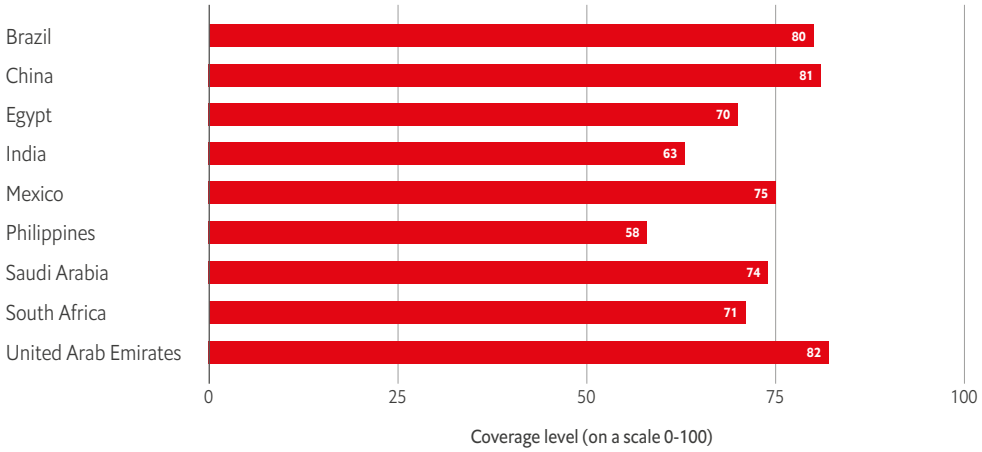
Although prevention is crucial, there is also a fundamental need to ensure effective and accessible treatment for those who are living with CVD. Constraints, such as medicine and equipment shortages, limited human resources and capacity, and suboptimal quality of care can hinder emerging markets' ability to effectively manage CVD.[55] Digital health interventions have the potential to bridge the gap; however, the vast majority of digital interventions for CVD management are in high-income countries and mostly hospital based.[55] In order to facilitate uptake, digital health interventions should be integrated within local health systems and need to be supported by political commitment. In addition, particular attention should be given to disadvantaged populations with limited capacity to use digital tools—through co-design, for example. Disadvantaged populations, including those in rural settings, have the potential to gain the greatest benefit.[55]

Figure 9. Return on investment in UHC[54]



Source: World Health Organisation (WHO).[54]

Figure 10. Universal health care coverage in selected emerging markets



Source: World Health Organisation (WHO).[20]

Although the investment case for UHC is compelling, there remain gaps in coverage. For example, the experts that we consulted during this research told us that access to treatment in emerging markets can be limited by geography and inadequate medical supplies. Among the countries included in this study, the Philippines and India have particularly low rates of coverage, but even in countries with high UHC coverage such as Brazil, the experts we spoke to noted that there is geographical inequality in terms of access to and quality of services (Figure 10).

Crucially, while UHC is based on broad principles, good practices and strategic direction, it is important to recognise that there is no "one size fits all" approach. Each country must choose its own path and pace based on the country context and needs. Countries should be mindful that UHC happens in tangible and appropriately paced increments, and can be accelerated by sustained political commitment; smart investments; continuous monitoring, learning and evaluation; and adaptation to changes.[56]

Funding is not the biggest issue. The biggest challenge globally is a lack of administrative coordination within health ministries (Figure 11).[57] Other issues that are deemed more challenging than funding include "common public health challenges", such as demographic shifts and epidemiological challenges, and a lack and limited use of integrated health worker data. The design of a benefits package and the prioritisation of this package across the population are also important factors, as are managerial inefficiencies in insurance schemes (Figure 11).[57]

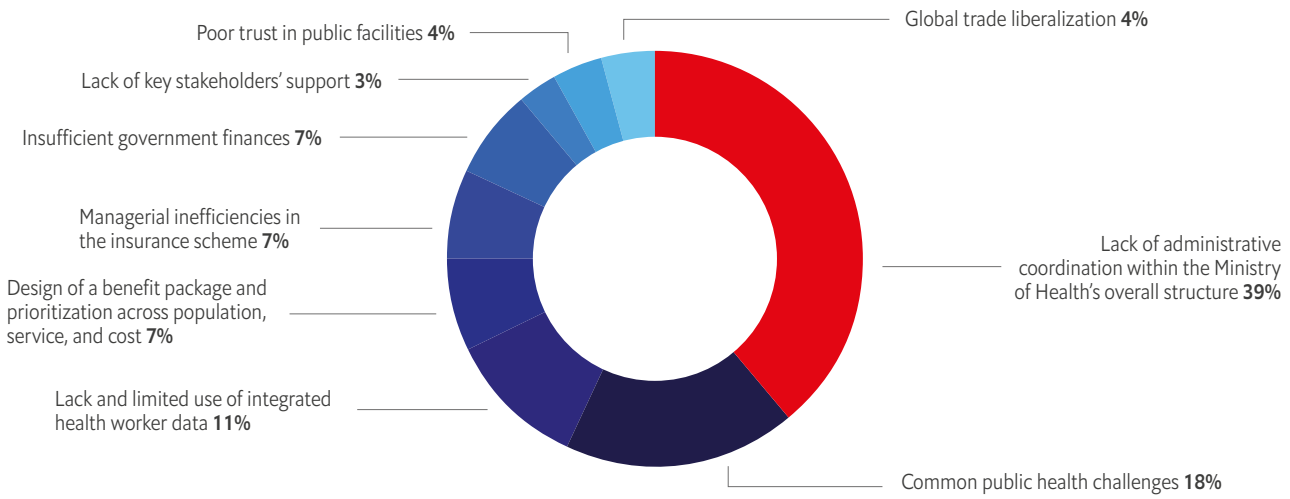
Setting priorities—deciding how to spend limited funds

Tackling CVD is not simply about more money; it is also about ensuring that the funds that are available are allocated to maximise population benefit and return on investment. There are a number of tools that national and local **policymakers and planners** can use to set priorities and allocate funds (Boxes 7 and 8).

"Universal health coverage is key to strengthening health systems more broadly, as well as [being] a key component of the NCD response."

Mark Barone— founder, Intersectoral Forum of NCCs/NCDs in Brazil (ForumCCNTs)

Figure 11. Key challenges in implementing UHC



Source: Challenges to Achieving Universal Health Coverage Throughout the World: A Systematic Review.[57]

BOX 7

The WHO OneHealth tool[58]

Already used in many countries, the OneHealth Tool aims to help planners realise the health system resources needed to implement a national strategic health plan (for example, how many doctors and nurses are required), the cost of the plan over the coming years (and how that compares with the funding available), and the health impact.[59]

The OneHealth Tool was used in the Philippines to aid the national health insurers in decision-making to expand benefit packages through cost-effective analyses. Reflections on the process demonstrated the need for a systematic and transparent priority-setting process, and that defining a health benefits package should be a continuous, rather than one-off process.[58]

BOX 8

CVD return on investment tool for commissioners

Public Health England has developed a CVD ROI [return on investment] tool to support local and national planners to decide which CVD interventions are most likely to work and reduce costs to the health system.[23] It shows how heart problems and strokes could be prevented and how much health service resource could be freed up with improved detection and treatment of high-risk conditions such as high blood pressure, atrial fibrillation and high cholesterol.[60]

Poorly managed CVD threatens SDG target 3.4

The growing burden of CVD threatens the achievement of target 3.4 of the UN Sustainable Development Goals (SDGs)—to "reduce premature deaths from NCDs by one-third by 2030 through prevention and treatment".[61] **The majority of countries are not on track to achieve SDG target 3.4**, but research suggests that aligning with and building on the WHO "best buys" can form the backbone of change to achieve the goal by 2030.[62]

The WHO recommends that for LMICs, including emerging markets, to achieve SDG 3.4, health ministries should allocate around 20% of the budget to high-priority NCD interventions.[63] Implementing the most efficient interventions in each region of the world would go a long way to achieving SDG target 3.4.[63] This would require an average of US$18bn in annual spending in 2023-30 to avert 39m deaths in LMICs and achieve an average cost saving of US$2.7trn (US$390 per capita) over those seven years. In this scenario, **the economic benefits of investing in NCDs outweigh the costs by nineteen to one.**[63,64]

Given the high prevalence of CVD and the fact that ischaemic heart disease and stroke are the biggest causes of NCD mortality in nearly every country, **prioritising CVD in NCD policy should see the greatest return on investment in the short term,** owing to the relatively quick intervention effects.[63]

What is stopping countries getting effective CVD policy into action?

"It takes a village to progress with NCDs, we can't do it alone and if we continue working in silos."

Fatima Lorenzo—founder/past president Philippine Alliance of Patient Organizations

The benefits of CVD interventions are clear—clinically and politically, there is sufficient evidence of what works. **Still, change is slow and hard-won.**

The WHO and the OECD have estimated that **a fifth of total health spending is wasted.**[65,66] This waste is far more serious in LMICs, where disease burden is higher and a relatively small spend on health can have a huge impact, if spent wisely.[17]

The experts consulted during this research highlighted some **key barriers and solutions for tackling CVD.**

The challenge: lack of government support driven by the long tail of return on investment

Stakeholder buy-in is the most important aspect. To win it requires knowing how to "market" these policy interventions to government leaders. The short-termism of politics, linked to factors such as electoral cycles, can be a barrier to change. It can be difficult to convince politicians to implement changes for which the benefits may only be seen in years to come.

"It's key for governments to understand that there are tried and tested policies with clear return on investment."

Cristina Parsons Perez—capacity development director, NCD Alliance

For example, taxes and bans on risky behaviours associated with NCDs reduce consumption but their impact on CVD prevalence is not clear and they can be unpopular with the voting public.[67] Potentially unpopular policies without a guaranteed impact on disease prevalence may be difficult to make the case to implement.

It is estimated that **at least 3bn people in the world cannot afford a healthy diet** because a healthy diet costs around five times more than a diet that only meets energy needs through starchy staples.[30,68] To facilitate behaviour change in this case requires supportive action such as subsidies on healthy foods, rather than negative measures like taxation.

The solution: political champions

Political buy-in can make or break policy. The experts that we consulted during this research were clear that the effective actions and solutions are well known, but political champions are needed to advocate for their cause.

The experts we spoke to emphasised that political champions in emerging markets should

"What we need are political champions to show the work that they're doing."

Cristina Parsons Perez—capacity development director, NCD Alliance

be well-versed in the complexity of the diseases and risk factors affecting their community, and should be able to bring specified targets and strategies to the table.[69]

The challenge: prioritising policy action using evidence

Often, the investment case needs to be made to policymakers and civil society stakeholders. But one of the challenges of the WHO "best buys" for effective NCD and CVD intervention is that much of the supporting evidence comes from richer countries. Of course, one size does not fit all.

Solution 1: collecting local data to make the case and guide action

Data can help politicians filter through these options. Experts we consulted described how the Brazilian government has partnered with organisations to use data to better study the impact of type 1 diabetes. The data showed, for example, that people with type 1 diabetes in Brazil lose 33 years of healthy life compared to the country's general population.[19]

Solution 2: investment appeal that goes beyond the economic

NCDs are a development issue that is part economic and part social. Experts agreed that case studies are incredibly useful for decision-makers, particularly examples from countries with similar challenges who have implemented effective changes for their populations. When making the case for investment, framing the issue as a human story can be a powerful tool.

"Lack of data is a good excuse for a lack of political will and action."

Shubash Shander Ganapathy—public health researcher, Ministry of Health, Malaysia

Experts suggest that when all else fails, those advocating for policy change should capitalise on regional competitiveness or the achievements of similar emerging markets. The pressure of what other governments manage to do for their populations pushes an underserved population to ask for it too.

Solution 3: activate the voice of civil society

A lot can change when patients start to demand their right to health and healthcare. This is why experts say that more civil society action is needed around CVD in many emerging markets. Such action has been exemplified by other health and social movements, such as those linked to HIV, TB and disability. Experts say that there has been a marked absence of the voices of those affected to date, but that change is becoming apparent.

Change also needs to be aligned around NCDs in general, not just specific diseases. People often have multiple, related NCDs (comorbidities) that share risk factors, but tend to think narrowly about individual diseases. If done well, the voice of different NCD groups within these emerging markets will be louder than the sum of their parts, and difficult for policymakers to ignore.

A challenge and a solution: covid-19's silver lining

Across the globe CVD and NCD services were adversely affected by the covid-19 pandemic. A lot of resources were pushed into the response—for example, the redeployment of staff shut down many diagnostic services and many people were not able to get their usual treatment or consultations.

The covid-19 pandemic resulted in poor management and worsening of NCD conditions, highlighting the need for integrated care across NCDs, instead of silo-based care.[70] Integrated care, as defined by the WHO, is the

"Now we have the numbers to make the case for change. It is important that countries collaborate with each other and that every country collects its own data."

Mark Barone—founder, Intersectoral Forum of NCCs/NCDs in Brazil (ForumCCNTs)

management and delivery of health services so that people can receive a continuum of preventive and curative services according to needs over time and across different levels and sites of care.[71] The pandemic highlighted how essential it is to integrate care across different levels—community, primary and secondary care—so that people receive efficient and effective care and do not get overlooked.[72]

Digital tools, notably **telehealth, were adopted and adapted for delivery of services and care** with successful results; this can be capitalised on moving forward (Box 9). The role of telemedicine is amplified, particularly among populations living in remote or underserved areas, where physical healthcare provision is limited or inadequate and where follow-up care is critical.[73]

In fact, as our expert panel told us, **the covid-19 pandemic brought the issue of NCDs and the whole health agenda to the surface.** It highlighted that investing in CVD and broader NCD prevention has the benefit of improving the overall population health, making people more resilient to health emergencies such as pandemics, as well as preventing CVD and other NCDs. Emerging markets, like many countries, saw some helpful, pandemic-driven changes. It is important that stakeholders and civil society ensure that those gains are maintained, and do not slip back to pre-pandemic patterns.

BOX 9

The evolution of telemedicine in China during the covid-19 pandemic[74]

Prior to the pandemic, health professionals in China delivered regular educational public lectures filled with health-related recommendations on healthy lifestyle, management of chronic diseases, prevention of disease and other topics. The pandemic put a stop to these lectures and created an urgent need for health services to reconnect with patients. This gap was filled through the launch of online visual contact events, with viewers able to ask questions that could be immediately answered. One event on prevention and treatment of hypertension attracted over 700,000 viewers from across the country.

"Now we have the numbers to make the case for change. It is important that countries collaborate with each other and that every country collects its own data."

Mark Barone—founder, Intersectoral Forum of NCCs/NCDs in Brazil (ForumCCNTs)

Calls to action: making change happen

There are clear changes that policymakers can enact to ensure resilient health systems for CVD and beyond. These include:

ADVOCATING FOR UNIVERSAL HEALTH COVERAGE UNDERPINNED BY A STRONG PRIMARY HEALTH SYSTEM

- UHC and a strong primary health infrastructure are central to the prevention, early detection and management of CVD.
- UHC and primary health infrastructure can also support the overall improvement of population health.
- Strengthening primary care and creating a healthier population makes individuals and health systems more resilient to major shocks.

RECOGNISING THAT THE SOLUTIONS—JUST LIKE THE CAUSES—OF CVD ARE NOT SOLELY A "HEALTH" ISSUE

- Policymakers should **engage relevant stakeholders from within and outside of the health sector,** such as those focused on environment, urban planning, transport and development, to reflect the multisectoral contributors to CVD.
- Focus on prevention to ensure that CVD and broader NCD policies address areas where there is the greatest potential return on investment. For example, **tackling upstream, non-health factors** that can help to prevent CVD (housing, education and social capital), rather than just dealing with the downstream effects of CVD in the health system.

GATHERING THE EVIDENCE NEEDED TO IMPLEMENT EFFECTIVE INTERVENTIONS—THE SOLUTIONS ARE WELL KNOWN

- Governments need to **gather data to understand the impact of CVD** in their countries. This includes understanding the number of people affected, and the clinical and economic outcomes—including estimates of the impact of CVD on economic development. Countries cannot prepare for something that they do not fully understand.
- **Policymakers must also prioritise NCD funding to reflect local health, economic and social needs—for example, reflecting the prevalence of CVD**—and invest it wisely in interventions with a solid evidence base. Focus external donor funding on NCDs as much as other priority areas and consider primary healthcare investments that have spillover benefits for CVD, NCDs and other areas of health.
- Find or create an ongoing body of evidence of **return on investment** from domestic sources and in similar countries or markets. The more evidence, the better.
- Once interventions are in place, **monitor impact** to enable continuous improvement and guide future investment. Surveillance of changing health, social and economic trends, as well as nutrition, transport and climate change factors, is needed to identify opportunities to develop and refine policy. For example, if food prices go up, subsidising fresh, healthy foods may avert a population from switching to cheaper processed foods.

MAKING IT HAPPEN BY INVOLVING THE RIGHT, DIVERSE, MIX OF PEOPLE

- Governments should shape policy interventions and build out capacity through collaboration with a **wide range of non-health stakeholders** (such as those whose focus lies in food and transport), to reflect the complex and intersectional nature of the drivers and responses to CVD.
- **Civil society involvement** is needed across health, and CVD is no exception. With conditions as common yet complex as CVD, the approach to care should be "no decision about me, without me", meaning that **people with lived experience** should be meaningfully involved in policymaking throughout the process. An active civil society can play an invaluable role in supporting national and regional CVD policy, as well as broader NCD policy setting and formulation.
- **Learn from others** through conversations with policymakers, politicians and advocacy groups in other countries. Utilise resources and support from organisations such as the WHO.

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Appendix 1

WHO Progress Monitor for NCD indicators in selected emerging economy countries

WHO NCD Progress Monitor 2022	Brazil	China	Egypt	India	Mexico	Philippines	Saudi Arabia	South Africa	UAE
1. National NCD targets	●	●	●	●	●	●	●	●	●
2. Mortality data	●	●	●	●	●	●	●	●	●
3. Risk factor surveys	●	●	●	●	●	●	●	●	●
4. National integrated NCD policy/strategy/action plan	●	●	●	●	●	●	●	●	●
5. Tobacco demand-reduction measures:									
5a. increased excise taxes and prices	●	●	●	●	●	●	●	●	●
5b. smoke-free policies	●	●	●	●	●	●	●	●	●
5c. large graphic health warnings/plain packaging	●	●	●	●	●	●	●	●	●
5d. bans on advertising, promotion and sponsorship	●	●	●	●	●	●	●	●	●
5e. mass media campaigns	●	●	●	●	●	●	●	●	●
6. Harmful use of alcohol reduction measures:									
6a. restrictions on physical availability	●	●	●	●	●	●	●	●	●
6b. advertising bans or comprehensive restrictions	●	●	●	*	●	●	●	●	●
6c. increased excise taxes	●	●	●	*	●	●	●	●	●
7. Unhealthy diet reduction measures:									
7a. salt/sodium policies	●	●	●	●	●	●	●	●	●
7b. saturated fatty acids and trans-fats policies	●	●	●	●	●	●	●	●	●
7c. marketing to children restrictions	●	●	●	●	●	●	●	●	●
7d. marketing of breast-milk substitutes restrictions	●	●	●	●	●	●	●	●	●
8. Public education and awareness campaign on physical activity	●	●	●	●	●	●	●	●	●
9. Guidelines for management of cancer, CVD, diabetes and CRD	●	●	●	●	●	●	●	●	●
10. Drug therapy/counselling to prevent heart attacks and strokes	●	●	*	*	●	●	●	*	●

● Met ● Partially met ● Not met * Unclear or did not respond

Appendix 2

The main cardiovascular diseases

CVD includes a wide range of disorders that affect the heart and blood vessels, and are often caused by a combination of factors.[2,11] These conditions include:

- **ischaemic heart disease** (or coronary heart disease)—a disease related to the blood vessels supplying the heart;
- **cerebrovascular disease**—a disease related to the blood vessels supplying the brain;
- **peripheral arterial disease**—a disease related to blood vessels supplying the arms and legs;
- **rheumatic heart disease**—damage to the heart muscle and valves from rheumatic fever caused by streptococcal bacteria;
- **congenital heart disease**—birth defects that affect normal development and functioning of the heart; and
- **deep vein thrombosis and pulmonary embolism**—blood clots in the leg veins which can dislodge and move to the heart and lungs.

Heart attacks and strokes are usually sudden events, mainly caused by blockages preventing blood flow to the heart or brain. Often, such blockages occur due to build-up of fatty deposits inside blood vessels.

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