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Cardiovascular Self-Care: Pathways to Equitable Health, Financial Protection and Economic Returns

Policy Paper

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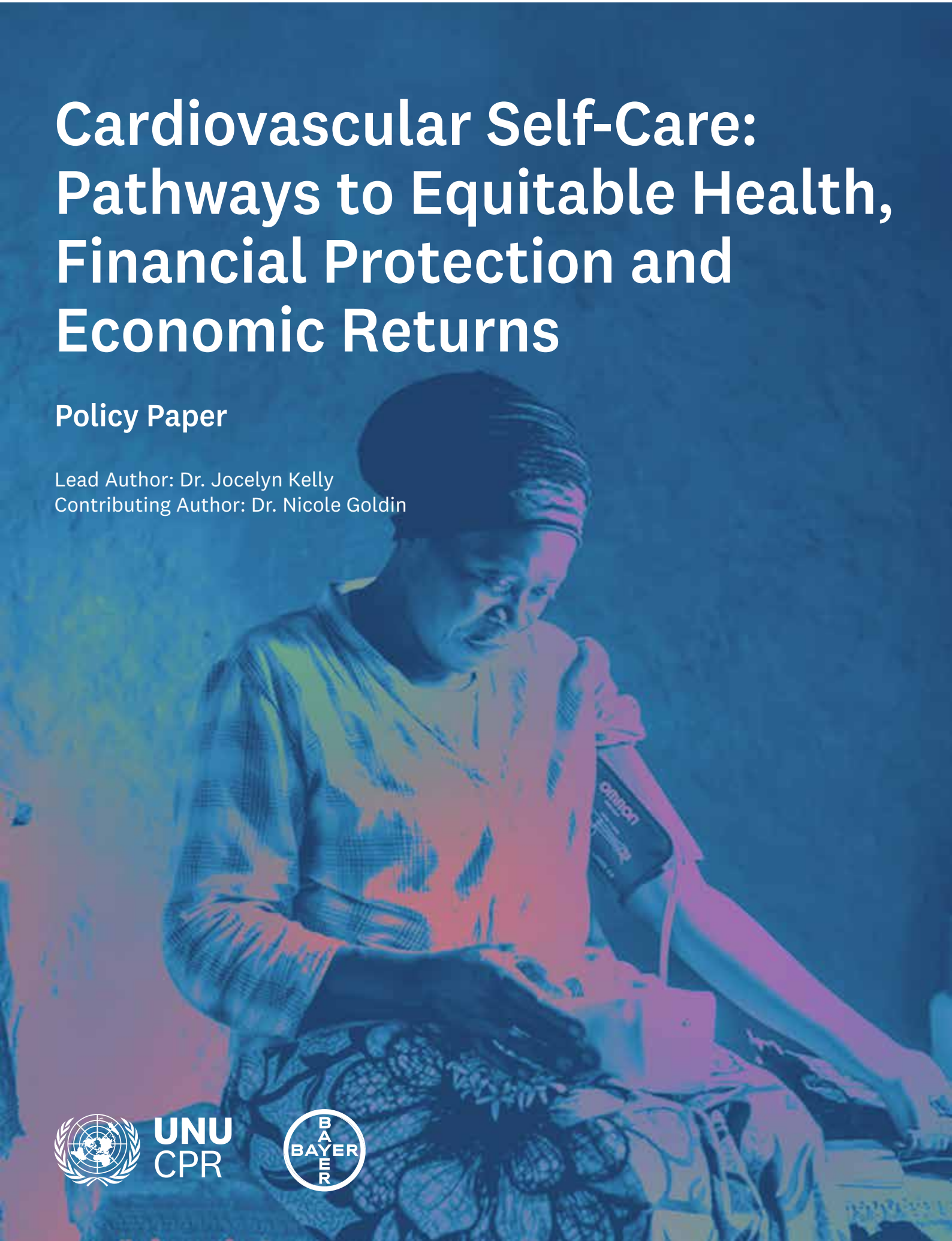

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Bios

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Contents

Acronyms and Abbreviations

ASHA	Accredited Social Health Activist (India)
CCMDD	Central Chronic Medicines Dispensing and Distribution (South Africa)
CHW	Community Health Worker
CVD	Cardiovascular Disease
DALY	Disability-Adjusted Life Year
GDP	Gross Domestic Product
HEARTS	WHO technical package for cardiovascular disease management in primary health care
HIV	Human Immunodeficiency Virus
IHCI	India Hypertension Control Initiative
LDL	Low-Density Lipoprotein
LMIC	Low- and Middle-Income Country
NCD	Noncommunicable Disease
PAHO	Pan American Health Organization
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
QALY	Quality-Adjusted Life Year
SDG	Sustainable Development Goal
TB	Tuberculosis
UHC	Universal Health Coverage
WHO	World Health Organization

1. Introduction: Cardiovascular Disease and Self-Care

Cardiovascular disease (CVD) is the world's leading cause of death and the largest source of both preventable premature mortality and economic loss in low- and middle-income countries (LMICs). In 2023, CVD was responsible for an estimated 19.2 million deaths, up from 13.1 million in 1990. It currently accounts for more disability-adjusted life years (DALYs) than any other disease category. Yet this burden is highly preventable. An estimated 79.6 per cent of CVD DALYs are attributable to modifiable risk factors, including elevated blood pressure, dietary risk and high LDL cholesterol.[1]

This burden is as relevant for economic outcomes as health-related ones. CVD and hypertension are estimated to cost LMICs hundreds of billions of dollars annually in treatment expenditure and lost productivity.[2] At the same time, few leading causes of death are as responsive to intervention that can be administered outside a hospital. That responsiveness translates directly into fiscal return: the World Health Organization (WHO) and United Nations Development Programme estimate that a package of essential noncommunicable disease (NCD) interventions – including hypertension management and cardiovascular risk screening – returns roughly $7 in economic productivity and averted costs for every $1 invested.[3] The Lancet Commission on Investing in Health attributes approximately 11 per cent of recent economic growth in LMICs to mortality reductions alone, with benefit-cost ratios as high as 20 to 1.[4] This is a return that premature cardiovascular death, concentrated in peak earning years, is well positioned to capture. These broader estimates do not quantify returns from cardiovascular self-care specifically; rather, they establish the macroeconomic context in which such interventions should be evaluated.

Looking at CVD through a health and development lens, the global community has made clear commitments to advancing sustainable development and accelerating progress toward Universal Health Coverage (UHC) – self-care is emerging as a highly promising avenue for both. Indeed, UHC is not a social goal separate from economic growth – it is a driver of it. Self-care is one of the delivery mechanisms the WHO identifies for advancing this mandate,

What is Cardiovascular Self-Care?

This paper's working definition for cardiovascular self-care refers to actions people take – independently or with support from families, communities or health workers – to prevent CVD and manage cardiovascular risk or established diseases. These include home monitoring, taking prescribed medicines and health-promoting behaviours, with clinical advice, referral and follow-up when needed.

Self-care is embedded across the three domains in the WHO's HEARTS technical package of interventions. HEARTS is an acronym for the WHO technical package's six modules: Healthy-lifestyle counselling; Evidence-based treatment protocols; Access to essential medicines and technology; Risk-based CVD management; Team-based care; and Systems for monitoring. The interventions include: self-monitoring (blood pressure measurement, glucose monitoring, risk assessment), health-promoting behaviours (diet, physical activity, tobacco avoidance, alcohol moderation), and medication adherence (sustained use of antihypertensive, statin or antiplatelet therapy).

UHC's own pillars of equitable access, efficient delivery and financial protection. One self-care researcher argued that CVD and hypertension are the most strategically important domain in which to advance self-care, pointing to remote blood pressure monitoring (patients tracking their own readings between clinic contacts) as an example of how self-management paired with lifestyle change can bring blood pressure under control within months.[5] CVD sits at the intersection of UHC's three dimensions: population coverage, service coverage and financial protection. Undiagnosed hypertension is a population-coverage failure, whereas untreated hypertension is a service-coverage failure; and the catastrophic spending that follows an acute cardiovascular event is a financial-protection failure. Population-level blood pressure control is a key NCD racer indicator within the WHO's UHC Service Coverage Index,

1 Global Burden of Cardiovascular Diseases and Risks 2023 Collaborators, "Global, regional, and national burden of cardiovascular diseases and risk factors in 204 countries and territories, 1990–2023", *Journal of the American College of Cardiology*, vol. 86, No. 22 (2025).

2 Adrian Gheorghe and others, "The economic burden of cardiovascular disease and hypertension in low- and middle-income countries: a systematic review", *BMC Public Health*, vol. 18, No. 1 (2018).

3 World Health Organization and United Nations Development Programme, *Saving Lives, Spending Less: The Case for NCD Investments* (2023).

4 Dean T. Jamison and others, "Global health 2035: a world converging within a generation", *The Lancet*, vol. 382, No. 9908 (2013).

5 Key informant interview, conducted via Microsoft Teams, 10 June 2026.

and the measure underlying Sustainable Development Goal (SDG) indicator 3.8.1 on coverage of essential health services.[6]

The case for self-care is gaining recognition within both health and fiscal circles. A 2025 report from the G20 and G7 Health and Development Partnership named self-care, alongside wellness and prevention, as a priority investment area.[7] The rationale for investing in CVD prevention has long been recognized, at least in principle. The WHO's Global Action Plan for the prevention and control of NCDs sets a voluntary global target of a 25 per cent relative reduction in the prevalence of raised blood pressure. It also identifies primary prevention as among the most cost-effective health investments available to any government, regardless of income category.[8] This brief is grounded in that foundation and in the 2022 WHO guidelines for self-care.

1.1 The Global Cardiovascular Disease Burden — Concentrated, Not Confined, in Low- and Middle-Income Countries

The potential utility of self-care is global, but the need and economic burden are highest in low-income settings. Cardiovascular burden has fallen faster in high-income settings than in LMICs since 1990, and the gap between them has widened.[9,10] NCDs are conditions that are not transmitted between people, tend to be of long duration and arise from a combination of genetic, physiological, environmental and behavioural factors.[11] CVD is the leading NCD cause of death before the age of 70. Currently, 82 per cent of all premature NCD deaths – deaths between the ages of 30 and 70 – now occur in LMIC settings.[12]

The Prospective Urban Rural Epidemiology study, conducted across 17 countries spanning every World Bank income group, found cardiovascular risk factors – hypertension, diabetes, dyslipidaemia[13] – were lowest in low-income countries, yet rates of major cardiovascular events and case fatality were highest.[14] This suggests that health system response – not risk exposure alone – helped shape outcomes.[15] Supported self-care may help extend the reach of prevention and long-term management, but it cannot substitute for reliable medicines, referral pathways and primary care capacity.[16]

The approaches outlined in the table above are distinct but complementary and all have a role to play in consideration of how self-care becomes actualized. For instance, a community health worker (CHW) who visits a patient at home, teaches home blood pressure monitoring, reviews the readings and refers elevated values combines all three: the home visit is community-based service delivery, the worker's protocol-defined role represents task-sharing ,and the patient's monitoring between visits is self-care.

The fiscal returns of closing this gap could be substantial. In a 2026 study, the McKinsey Health Institute finds LMICs positioned for the highest return of any income group on scaled health investment – roughly six-fold – while low-

6 D. R. Hogan and others, "Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services", *The Lancet Global Health*, vol. 6, No. 2 (2018). See also World Health Organization, "UHC service coverage index (3.8.1)", indicator metadata, Global Health Observatory (12 December 2025). The index currently comprises 14 tracer indicators; the NCD sub-index includes age-standardized prevalence of non-raised blood pressure as its blood pressure-related component; United Nations Statistics Division, "SDG indicator metadata: Indicator 3.8.1—Coverage of essential health services". Available at https://unstats.un.org/sdgs/metadata/files/Metadata-03-08-01.pdf (accessed 10 September 2026).

7 G20 and G7 Health and Development Partnership, *The Health Taxonomy: The Need for a Common Investment Toolkit to Scale up Future Investments in Health* (2025). Available at https://g20healthpartnership.com/wp-content/uploads/2025/06/The-Health-Taxonomy-Report-LONG-DIGITAL-3.pdf. Self-care is named once, in the report's stakeholder-interview findings (chap. III), not within its formal taxonomy structure – an emerging signal rather than an adopted investment category.

8 World Health Organization, *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2030* (2013).

9 This indicates age-standardized rates, which adjusts mortality rates to a common age structure, allowing comparison across populations of different age profiles and separating changes in underlying risk from the effects of population ageing.

10 Global Burden of Cardiovascular Diseases and Risks 2023 Collaborators, "Global, regional, and national burden of cardiovascular diseases and risk factors in 204 countries and territories, 1990–2023" (2025).

11 World Health Organization, "Noncommunicable diseases", fact sheet (25 September 2025). Available at www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases.

12 Ibid.

13 An abnormal amount of lipids (fats), such as cholesterol or triglycerides in the blood.

14 Salim Yusuf and others, "Cardiovascular risk and events in 17 low-, middle-, and high-income countries", *New England Journal of Medicine*, vol. 371, No. 9 (2014).

15 Ibid.

16 Ibid.

income countries, constrained by thinner infrastructure and higher relative implementation costs, see a return under two times.[17] One self-care advisor working across several African countries cautioned that returns, while real, are long-term; self-care requires up-front investment in infrastructure, with savings that may take five to ten years to materialize.[18]

Key Concepts: Self-Care, Task-Sharing and Community-Based Service Delivery

Concept	Working Definition
Self-Care	Actions taken by individuals, families or communities to maintain health, prevent disease and manage illness, with or without support from a health worker.
Task-Sharing	The expansion of the health workers trained and authorized to perform a defined service, allowing responsibility to be shared across a team rather than reserved for a higher-level clinician.
Community-Based Service Delivery	The provision of services in homes or other community settings, including through outreach, mobile services and community-based medicine distribution or collection points, rather than exclusively through fixed health facilities.

2. Tracing Cardiovascular Disease Savings Through Three Pathways

CVD directly illustrates each of the fiscal pathways outlined in the companion paper, *Self-Care Pathways to Universal Health Coverage and Financing Equitable Development*. Improving CVD self-care can result in health system savings; household financial protection; and sustainable economic growth. And each is cumulative rather than additive. For instance, a health system that closes the detection gap also creates the conditions for household savings, and eventually, workforce productivity gains.

The evidence for CVD self-care as both a health and fiscal intervention is strong and growing. In many ways the economic and financial returns are dependent upon the health ones. For example, a randomized lifestyle-focused text messaging trial among patients with coronary heart disease in Sydney, Australia, produced significant reductions in LDL cholesterol, systolic blood pressure and smoking within six months.[19] A meta-analysis of text-message medication-adherence support across chronic diseases found consistent, if modest, improvements in adherence – the single largest reversible driver of poor blood pressure and cholesterol control.[20] And an interactive voice-response and SMS intervention among people with pre-hypertension in Argentina and Peru produced modest but significant improvements in diet and physical activity, with some attenuation of blood pressure progression – evidence that self-care can work before a diagnosis, not only after it.[21]

2.1 Pathway 1 — Health System Savings From Cardiovascular Disease Self-Care

The fiscal rationale for cardiovascular self-care begins with detection. Across Africa and South Asia, most people with hypertension remain undiagnosed, while treatment and control rates remain low because of limited access, medication costs, weak health literacy and inadequate

17 McKinsey Health Institute, *The Health of Nations: Stronger Health, Stronger Economies* (2026).
18 Key informant interview, conducted via Microsoft Teams, 27 July 2026.
19 Clara K. Chow and others, "Effect of lifestyle-focused text messaging on risk factor modification in patients with coronary heart disease: a randomized clinical trial (TEXT ME)", *JAMA*, vol. 314, No. 12 (2015).
20 Jay Thakkar and others, "Mobile telephone text messaging for medication adherence in chronic disease: a meta-analysis", *JAMA Internal Medicine*, vol. 176, No. 3 (2016).
21 Adolfo Rubinstein and others, "Effectiveness of an mHealth intervention to improve the cardiometabolic profile of people with prehypertension in low-resource urban settings in Latin America: a randomised controlled trial", *The Lancet Diabetes and Endocrinology*, vol. 4, No. 1 (2016).

follow-up.[22,23] These barriers fall disproportionately on low-income, rural and female-headed households – the populations community-based screening is best positioned to reach.

Community-based blood pressure screening can close this gap at lower cost than clinic-centred approaches. Improving community-based systems builds cardiovascular self-care into a system function, rather than an individual burden. The WHO HEARTS[24] technical package is a key resource in the global effort to address CVD. Three HEARTS modules bear directly on the conditions for self-care. Firstly, simplified treatment protocols allow non-physician workers to manage hypertension. Second, team-based care guidance allows distribution of tasks across cadres, including CHWs. Thirdly, healthy lifestyle counselling is delivered through brief interventions in routine contact.

The WHO documents that CHW-delivered screening is feasible, cost-effective and scalable when embedded in existing referral and follow-up architecture.[25] Modelling studies support the cost-effectiveness claim specifically. CHW-delivered CVD screening was found to be cost-effective or cost-saving relative to clinic-based screening in South Africa, Mexico and Guatemala.[26] A microsimulation analysis estimated that CHW screening would be cost-effective relative to usual clinic-based screening in South Africa, Mexico and Guatemala; the mobile approach was cost-saving in South Africa. Using a mobile phone screening compared to a normal primary health care screening was cost-saving in South Africa and cost $3.57 and $565 per quality-adjusted life-year (QALY) gained in Mexico and Guatemala respectively. All ratios fell below one times GDP per capita in each country. A paper-based version of the same tool was also cost-effective against usual care, at roughly $47, $195 and $1,890 per QALY in that order, but was dominated by the mobile version. Evidence from Uganda suggests that hypertension care can be integrated into HIV services delivered through existing government-supported clinics at an incremental annual cost of $6.29 per HIV-positive patient, equivalent to 2.1 per cent of the estimated cost of HIV care alone.[27] A modelling analysis across 3,000 African scenarios estimated that adding CHW screening to hypertension treatment through existing HIV-primary care infrastructure would cost $389 per DALY averted, and would be the preferred cost-effective strategy in 62 per cent of settings.[28] A broader review of global cardiovascular prevention strategies also noted that the traditional, specialist-centred model is neither scalable nor equitable in LMIC settings. Instead, distributing detection and management across CHWs, patients and their families is a key path to closing the diagnosis and treatment gap at population scale.[29]

Among upstream interventions, tobacco control shows strong returns, since smoking is among the most powerful and most modifiable risk factors for CVD. The WHO's Global Action Plan for NCDs names tobacco control, reduced harmful alcohol use, physical activity and healthy diets among its "best buy" interventions – those judged to return the greatest health gain per dollar of public investment.

Once CVD is diagnosed, medication adherence carries comparable weight and can result in substantial financial return. A meta-analysis of text-message adherence support across chronic diseases found consistent, if modest, improvements in adherence,[30] whereas the RESOLVE to Save Lives' hypertension-control programmes across

22 Dinesh Neupane and others, "Prevalence of hypertension in member countries of South Asian Association for Regional Cooperation (SAARC): systematic review and meta-analysis", *Medicine*, vol. 93, No. 13 (2014).

23 James Kayima and others, "Hypertension awareness, treatment and control in Africa: a systematic review", *BMC Cardiovascular Disorders*, vol. 13 (2013).

24 HEARTS is an acronym for the WHO technical package's six modules: Healthy-lifestyle counselling; Evidence-based treatment protocols; Access to essential medicines and technology; Risk-based CVD management; Team-based care; and Systems for monitoring. The package was developed under the Global Hearts Initiative, led by the WHO and the US Centers for Disease Control and Prevention, and is addressed to ministries of health and programme managers in resource-limited settings.

25 World Health Organization, *HEARTS: Technical Package for Cardiovascular Disease Management in Primary Health Care* (2020).

26 Thomas Gaziano and others, "Cardiovascular disease screening by community health workers can be cost-effective in low-resource countries", *Health Affairs*, vol. 34, No. 9 (2015).

27 Gaziano and others, "Cardiovascular disease screening by community health workers can be cost-effective in low-resource countries" (2015).

28 Matthew D. Hickey and others, "Cost-effectiveness of leveraging existing HIV primary health systems and community health workers for hypertension screening and treatment in Africa: an individual-based modeling study", *PLOS Medicine*, vol. 22, No. 1 (2025).

29 Karen Yeates and others, "A global perspective on cardiovascular disease in vulnerable populations", *Canadian Journal of Cardiology*, vol. 31, No. 9 (2015).

30 Thakkar and others, "Mobile telephone text messaging for medication adherence in chronic disease" (2016).

Ethiopia, India, Nigeria, Bangladesh and other settings also showed that simplified treatment protocols allow CHWs and nurses, not only physicians, to support patients on therapy.[31] Considering that sustained blood pressure control can prevent up to 40 per cent of strokes,[32] these findings matter financially because avoiding a single stroke hospitalization saves costs that dwarf the investment required to sustain routine hypertension treatment and adherence support.[33] Although costs vary considerably across settings, there are orders of magnitude differences in costs between routine care versus acute response. Community-based hypertension programmes have been delivered for approximately $6–$11 per participant annually, whereas a single acute stroke episode can cost several hundred dollars, before rehabilitation, income loss and family caregiving are included.

These community-based interventions, however, require both a redistribution of clinical tasks and greater support for patients themselves to participate in effective self-care. HEARTS characterizes team-based care as an effective and cost-effective approach to hypertension control, while Resolve to Save Lives describes how trained CHWs and primary care nurses can take on routine tasks such as blood pressure measurement, counselling and follow-up – improving access and allowing physicians to focus on patients who need higher-level care.[34] Task-sharing remains provider-delivered care. Its connection to self-care lies in enabling patients to take medicines consistently, follow recommended lifestyle changes, and where feasible and affordable, monitor their own blood pressure between visits; the WHO recommends self-measurement for appropriate patients.[35] Together, task-sharing and supported self-care can extend the reach of primary care against the backdrop of a global health workforce shortfall that the WHO projects at 11.1 million by 2030.[36]

2.2 Pathway 2 — Financial Security From Cardiovascular Disease Self-Care

Self-care at the household level can create significant savings and financial predictability, both through limiting out-of-pocket expenses and catastrophic medical costs. This has valence not only at the household level, but also for health systems as a whole. Hypertension treatment is inexpensive when managed routinely, with an average cost of roughly $22 per month across LMICs. However non-adherence can convert low, predictable cost into far larger, unpredictable ones. Acute stroke and coronary heart disease care frequently exceed $5,000 per episode.[37] For households already financing most of their own care, that gap between routine and catastrophic cost can be the difference between a manageable household expense and a shock that pushes a family into or deeper into poverty.

Publicly-financed self-care can act directly on household savings to shift CVD care to manageable, routine costs. When governments finance anti-hypertensive medicines, home monitoring and adherence support, household spending is more predictable, manageable and contained. While CVD-specific data remains thin, adjacent NCD evidence supports this claim: a cluster-randomized community-pharmacy diabetes self-management trial in Egypt produced a significant reduction in how much patients spent on medicine.[38]

Additional country-level evidence helps illustrate this. A cross-sectional study of 1,657 recently hospitalized CVD patients across Argentina, China, India and Tanzania found more than half of respondents in three of the four countries experienced catastrophic health spending. This included households having to resort to borrowing or selling assets to cover costs.[39] At nationwide scale, Thailand's Universal

31 RESOLVE to Save Lives, *Hypertension Control Programs in Low- and Middle-Income Countries: Lessons from Scale* (2023).

32 Valery L. Feigin and others, "World Stroke Organization (WSO): global stroke fact sheet 2022", *International Journal of Stroke*, vol. 17, No. 1 (2022).

33 Gheorghe and others, "The economic burden of cardiovascular disease and hypertension in low- and middle-income countries" (2018).

34 World Health Organization, *HEARTS: Technical Package for Cardiovascular Disease Management in Primary Health Care* – Team-based Care (Geneva, 2018); and D. Cazabon and others, "Team-based hypertension management in primary health care" (Resolve to Save Lives, 2021).

35 World Health Organization, *WHO Guideline on Self-Care Interventions for Health and Well-being, 2022 Revision* (Geneva, 2022). Recommendation 33 covers self-measurement of blood pressure for appropriate patients where the technology is affordable.

36 World Health Organization, *Health and Care Workforce: Global Strategy on Human Resources for Health — Workforce 2030. Report by the Director-General*, EB156/15 (2024). The report projects a shortfall of 11.1 million workers by 2030.

37 Gheorghe and others, "The economic burden of cardiovascular disease and hypertension in low- and middle-income countries" (2018).

38 H. Farag Mohamed and others, "A community pharmacy-based intervention in the matrix of type 2 diabetes mellitus outcomes (CPBI-T2DM): a cluster randomised controlled trial", *Clinical Medicine Insights: Endocrinology and Diabetes*, vol. 14 (2021).

39 Mark D. Huffman and others, "A cross-sectional study of the microeconomic impact of cardiovascular disease hospitalization in four low- and middle-income countries", *PLOS ONE*, vol. 6, No. 6 (2011).

Coverage Scheme, which includes CVD, sustained over two decades with zero co-payment, cut the percentage of households that experienced catastrophic health spending from 6.0 to 2.0 per cent.[40] When Thailand's out-of-pocket burden fell, freed household resources measurably shifted into durable goods consumption, a multiplier effect back into the broader economy, not just a household-level relief.[41] Household-level CVD shocks can be enormous. When public financing absorbs them instead, the freed resources have been shown to flow into consumption that ripples through the broader economy.

2.3 Pathway 3 — Opportunity for Sustainable Growth From Cardiovascular Disease Self-Care

The last pathway explores how self-care CVD interventions may contribute indirectly or directly to longer-term sustainable growth outcomes. The Lancet Commission on Investing in Health attributes roughly 11 per cent of recent economic growth in LMICs to mortality reductions, with benefit-cost ratios of 9:1 to 20:1.[42] As noted, premature CVD mortality – defined as deaths between the ages of 30 and 70 – is among the leading causes of preventable death during prime working and caregiving years.[43] Yet decreasing premature CVD death remains paradoxically underfunded given the substantial returns it can yield.

The McKinsey Health Institute attributes 85 per cent of its projected $12.5 trillion annual GDP gain from scaled health investment to labour-force participation – fewer premature deaths, reduced absenteeism and presenteeism, expanded participation among informal caregivers (disproportionately women) and higher lifetime earnings from better early-life health.[44] For CVD, that caregiving channel loops back to key equity considerations that also have implications for household earnings. When a family member's hypertension is managed at home instead of escalating into a disabling stroke, caregiver time can instead go toward paid work, education or other productive activity. The productivity gains from CVD prevention are not limited to averting disability later in life. They also depend on intervening early enough to protect health, earnings and participation across the life course, and can affect both the patient and those in the home who would be doing the care.

The prevention window opens earlier than most prevention programming assumes. A birth cohort followed from infancy to adulthood in urban India found that cardiovascular risk factors – hypertension, obesity, glucose intolerance – build up quickly over the life course, with early adulthood emerging as the window where lifestyle intervention has the best chance of changing a person's lifetime cardiometabolic trajectory.[45] India's broader epidemiological profile illustrates the stakes: CVD burden is rising fast amid urbanization, dietary change and tobacco use, and South Asian populations face elevated ischemic heart disease risk at younger ages and lower Body Mass Index thresholds than European-origin populations.[46]

Digital tools extend self-care's reach. Germany's statutory insurance scheme reimburses prescribed digital therapeutics listed in its Digitale Gesundheitsanwendungen [DiGA; Digital Health Applications, Germany] directory.[47] Evidence on digital support for cardiovascular self-care includes a randomized trial published in 2025 that evaluated PreventiPlaque, a mobile application developed for the study. The app provided daily health tasks and regularly updated ultrasound images of an individual's carotid plaque. Over 12 months, participants assigned to the app showed more favourable changes in a calculated cardiovascular-risk score and self-reported medication adherence relative to usual care in a secondary-prevention

40 Viroj Tangcharoensathien and others, "Financial risk protection of Thailand's universal health coverage: results from series of national household surveys between 1996 and 2015", *International Journal for Equity in Health*, vol. 19, No. 1 (2020).

41 Phatta Kirdruang and Paul Glewwe, "The impact of universal health coverage on households' consumption and savings in Thailand", *Journal of the Asia Pacific Economy*, vol. 23, No. 1 (2018).

42 Jamison and others, "Global health 2035" (2013).

43 World Health Organization, *Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013–2030* (2013).

44 McKinsey Health Institute, *The Health of Nations* (2026).

45 Mark D. Huffman and others, "Incidence of cardiovascular risk factors in an Indian urban cohort: results from the New Delhi Birth Cohort", *Journal of the American College of Cardiology*, vol. 57, No. 17 (2011).

46 Dorairaj Prabhakaran, Panniyammakal Jeemon and Ambuj Roy, "Cardiovascular diseases in India: current epidemiology and future directions", *Circulation*, vol. 133, No. 16 (2016).

47 Linea Schmidt and others, "The three-year evolution of Germany's Digital Therapeutics reimbursement program and its path forward", *npj Digital Medicine*, vol. 7, article 139 (2024).

population with established atherosclerotic disease.[48] But in LMICs, the evidence also points to the importance of choosing the right tools and accounting for the surrounding health system and social context.[49] A review of mobile devices for global cardiovascular risk reduction was clear about the mechanism: a device only works if it is embedded in a "connected care" model with feedback, human follow-up and a coordinated response. Meanwhile, reinforcing this more broadly, a systematic review of mobile health interventions for chronic disease in developing countries found generally positive but heterogeneous effects of voice- and text-message interventions on selected chronic disease outcomes. The review included only nine trials from seven countries, mostly upper-middle-income countries, and none from a low-income country.[50]

Broader modelled evidence from the WHO and the International Telecommunication Union demonstrate potential economic dividends from digital tools that include self-care. They model an additional $0.24 per patient per year in telemedicine, mobile messaging and chatbots as averting roughly 7 million acute events and hospitalizations, saving more than 2 million lives and 5 million life-years, while generating $199 billion in modelled economic benefits over the decade to 2033.[51] However, it is worth noting that this is a global model spanning all four major NCDs and all three modalities, not a cardiovascular self-care estimate.

High-income systems point to what full institutionalization can eventually look like. England's National Health Service committed explicitly to embedding self-care across the health system in its 2025 ten-year health plan. CVD is named as an early priority for the accompanying service frameworks.[52] The plan's own justification is explicitly economic. It sets out to unlock broader economic benefits by helping people back into work, and describes itself as transforming the health service into an engine for economic growth rather than a beneficiary of it.

2.4 Equity as the Accelerator of Savings, Financial Protection and Growth

Household CVD care is, at heart, also an equity consideration. Catastrophic stroke-related expenditure falls hardest on households who are likely already bearing out-of-pocket costs. These are also the same populations least likely to benefit from screening and follow-up care. This highlights the importance of ensuring these interventions reach those traditionally most marginalized from health systems. Publicly incentivized, financed, regulated and inclusively built self-care extends coverage to populations who may avoid health facilities due to stigma, distance, cost or lack of appropriate accommodations. Left to unregulated retail markets these interventions could in fact widen the gaps they are meant to close. Self-care interventions carry significant promise in reaching those the health system often overlooks or doesn't reach. However, these benefits result from thoughtful programming and conscious equity-oriented design and are not an inevitable by-product of self-care programming. It is important to account for differences in literacy, connectivity, mobility and other key considerations by both person and place to yield better health and economic outcomes.

Men, for example, carry the higher burden of cardiovascular death, with much of it being avoidable; they seek care less, screen less and reach diagnosis later. Women, on the other hand, face a mirror problem: under-recognition of CVD when they are in a clinical setting, delayed diagnosis and less or less effective treatment, in part because clinical models built on male-dominant data misread how it presents in women. Here, self-monitoring supplies an opportunity to translate women's symptoms, which may be discounted or disregarded, into data that may lead to diagnosis and treatment. Interventions that expand a woman's control over her own care not only improve her health and quality of life; they also expand her capacity to live more healthy and productive years. Cardiovascular self-care advances optimal returns with equity only when it is designed to

48 Greta Ullrich and others, "Impact of visual presentation of atherosclerotic carotid plaque on cardiovascular risk profile using mHealth technologies", *npj Digital Medicine*, vol. 8, article 41 (2025).

49 Andrea Beratarrechea and others, "The impact of mobile health interventions on chronic disease outcomes in developing countries: a systematic review", *Telemedicine and e-Health*, vol. 20, No. 1 (2014).

50 Beratarrechea and others, "The impact of mobile health interventions on chronic disease outcomes in developing countries" (2014).

51 World Health Organization and International Telecommunication Union, *Going Digital for Noncommunicable Diseases: The Case for Action* (Geneva, 2024). Figures are modelled projections for 2023–2033 covering telemedicine, mobile messaging and health chatbot interventions across all four major noncommunicable disease groups. They are not specific to cardiovascular disease, to self-care, or to low- and middle-income settings, and should be read as an order of magnitude rather than a forecast.

52 United Kingdom, Department of Health and Social Care, *Fit for the Future: 10 Year Health Plan for England* (2025). The plan's own terminology is self-management and patient control rather than self-care.

move the specific population stalled at the specific step where diagnosis and/or treatment is stalled. Gender also shapes the burden of care after a cardiovascular event. The unpaid labour following a disabling cardiovascular event is vastly more likely to be done by women and carries measurable costs of its own. A five-country study across Ghana, India, Mexico, Russia and South Africa found that female caregivers reported significantly worse anxiety and depression outcomes than female non-caregivers.

For persons living with disabilities (PLWD) who comprise at least one in six people worldwide, roughly four-fifths of whom live in LMICs[53] where access to medical care is far more constrained compared to those living without a disability,[54] self-care designed for PLWD can reduce dependence on inaccessible transport and providers. The WHO estimates a return of roughly $10 for every $1 invested in disability-inclusive NCD care.[55] However, self-care tools that assume full vision, dexterity or hearing do not address these barriers; they simply move them from the clinic to the household.

Place-based considerations are also important. Hypertension is among the most common conditions in humanitarian settings, highlighting that geography and context also affect access and equity. Self-monitoring of blood pressure provides particular value in crisis and uncertainty environments; a patient who can track their own blood pressure carries part of their own care with them into a displacement camp or informal living situation. The Médecins Sans Frontières programmes for Syrian refugees in Jordan have shown that self-management works in these settings, but only when paired with reliable medicine supply and a functioning referral point.[56] Researching and expanding CVD self-care to those living in crisis is a critical need, and with forced displacement at record levels, an increasingly unavoidable one.

3. Country Examples: Cardiovascular Disease Self-Care in Practice

Self-care in CVD is growing in practice, including in ways that can inform and expand national self-care integration and public financing, and advance countries along the self-care financing-system maturity spectrum presented in *Self-Care Pathways to Universal Health Coverage and Financing Equitable Development*. South Africa, India, Colombia and Chile are demonstrating elements and evidence of how CVD self-care can be implemented as a publicly incentivized, supported, financed and regulated practice.

3.1 South Africa: Leveraging Existing Health Infrastructure to Extend Hypertension Care

South Africa illustrates both the substantial gaps in CVD treatment and the concrete opportunities for closing those gaps. Doing so could create compounding fiscal gains through health system savings, household financial protections and sustainable economic growth (pathways 1–3). Nationally representative data from 2011–2012 found a hypertension prevalence of 35 per cent among adults. Yet only 51 per cent of that hypertensive population had ever been screened. Of those screened, half were diagnosed. And while 77 per cent of those diagnosed were on treatment, only 52 per cent had their blood pressure under control.[57] Taken together, roughly 91 per cent of South Africa's hypertensive population is unscreened, undiagnosed, untreated or uncontrolled. Parts of this gap may be addressed through existing platforms rather than new specialist systems. Two existing delivery platforms (HIV outreach and community pick-up points for medicine) can be leveraged to extend reach.

The first platform is a ward-based outreach system where teams of six to ten CHWs, supervised by a professional nurse, report to a primary health care facility. These teams can bring hypertension screening and adherence support

53 World Health Organization, *Global Report on Health Equity for Persons with Disabilities* (Geneva, 2022).

54 Ibid., pp. 3 and 24–26.

55 Ibid., executive summary (return-on-investment estimate for disability-inclusive NCD care).

56 Dylan R. J. Collins and others, "Cardiovascular disease risk and prevention amongst Syrian refugees: mixed methods study of Médecins Sans Frontières programme in Jordan", *Conflict and Health*, vol. 11 (2017); and É. Ansbro and others, "Clinical outcomes in a primary-level noncommunicable disease programme for Syrian refugees and the host population in Jordan", *PLOS Medicine*, vol. 18, No. 1 (2021).

57 Kaitlyn M. Berry and others, "Quantifying unmet need for hypertension care in South Africa through a care cascade: evidence from the SANHANES, 2011–2012", *BMJ Global Health*, vol. 2, No. 3 (2017).

into households alongside HIV, Tubercolosis (TB) and maternal and child health services. This system can reach people the clinic-based system never sees.[58]

The second platform is the Central Chronic Medicines Dispensing and Distribution programme, or CCMDD. This programme moves routine medicine collection out of crowded clinics and into community pick-up points and courier delivery. It was built to serve the 5.5 million South Africans on antiretroviral therapy but has since been extended to dispense antihypertensives alongside HIV medicines for patients managing both.[59] A recent sentinel survey of 18 public clinics found that aligning HIV and hypertension visit schedules under CCMDD was feasible without adding extra visits for patients.[60] On the economic side, ward-based screening closes the roughly 49 per cent screening gap that is the single largest source of avoidable downstream cost (pathway 1). CCMDD cuts the transport cost and lost work time that has implications for household finances (pathway 2), especially for patients juggling more than one chronic condition. Because both platforms were built for HIV first and extended to hypertension second, South Africa is a live example of the sustainable growth and productivity argument (pathway 3): South Africa is able to address an additional high-burden disease, CVD, using infrastructure the country had already paid for through their HIV and CCMDD programmes, reaping the productivity dividend and economic gains from that prevention going forward.[61]

This novel outreach model has resulted in steady improvements in CVD care. Among adults with hypertension, diagnosis increased from 19.6 per cent to 24.4 per cent from 2011 to 2017. At the same time, the unmet need for hypertension care fell from 92.9 per cent to 77.9 per cent. While this is notable progress, it still leaves more than three-quarters of people with hypertension without adequate care by the end of the observation window.[62]

It is worth highlighting that these platforms were created with precisely the type of development funds that are increasingly scarce. Both platforms are domestically administered, but both were built on infrastructure originally financed to meet HIV targets. As that infrastructure shifts from an emergency response toward country ownership, and as PEPFAR (United States President's Emergency Plan for AIDS Relief) funding contracts, the gains in CVD treatment are at risk.[63] Folding hypertension self-care into the country's HIV chronic-care platform is a highly cost-effective delivery route. Aligned dispensing across CVD and HIV is modelled below $50 per DALY averted, and hypertension care adds roughly 2 per cent to the cost of treating a patient already in HIV care.[64,65,66] Sustainable gains will depend on domestic financing and reliable service integration.

3.2 India: Improving Cardiovascular Primary Care Efficiency and Reducing Household Costs

India is home to one of the largest populations of people with hypertension globally, and much of this burden remains untreated. In 2018, only 14 per cent of Indians with hypertension had their blood pressure under control.[67] Modelling of a nationwide hypertension control programme found that, at realistic levels of treatment and medication adherence, closing that gap would become cost-saving (not merely cost-neutral) within 20 years.[68] To respond to the pressing need for more effective CVD treatment,

58 Tumelo Assegaai and H. Schneider, "The supervisory relationships of community health workers in primary health care: social network analysis of ward-based outreach teams in Ngaka Modiri Molema District, South Africa", *BMJ Global Health*, vol. 4, No. 6 (2019).

59 Oratile Mokgethi and others, "Aligning HIV treatment and hypertension clinic visits and dispensing as a first step towards service delivery integration in South Africa", *Journal of the International AIDS Society*, vol. 28, No. 7 (2025).

60 Ibid.

61 Marie A. Brault and others, "Leveraging HIV care infrastructures for integrated chronic disease and pandemic management in sub-Saharan Africa", *International Journal of Environmental Research and Public Health*, vol. 18, No. 20 (2021).

62 Mariet Benade and others, "Health systems performance for hypertension control using a cascade of care approach in South Africa, 2011–2017", *PLOS Global Public Health*, vol. 3, No. 9 (2023).

63 Brault and others, "Leveraging HIV care infrastructures for integrated chronic disease and pandemic management in sub-Saharan Africa" (2021).

64 Youngji Jo and others, "Integrated multi-month dispensing for HIV and hypertension in South Africa: a model of epidemiological impact and cost-effectiveness", *Journal of the International AIDS Society*, vol. 28, No. 2 (2025).

65 Hickey and others, "Cost-effectiveness of leveraging existing HIV primary health systems and community health workers for hypertension screening and treatment in Africa" (2025).

66 Starley B. Shade and others, "Costs of integrating hypertension care into HIV care in rural East African clinics", *AIDS*, vol. 35, No. 6 (2021).

67 Hemanshu Das and others, "Cost-effectiveness of improved hypertension management in India through increased treatment coverage and adherence: a mathematical modeling study", *Global Heart*, vol. 16, No. 1 (2021).

68 Ibid.

India launched the three-part India Hypertension Control Initiative (IHCI) in 2017.[69,70] Firstly, IHCI replaces physician discretion with a simplified, standardized drug protocol that can be prescribed by non-specialist staff. Second, it decentralizes prescriptions to primary health centres and sub-centres closer to where patients already live, compared to district hospitals. Finally, IHCI guarantees a free, uninterrupted drug supply so a prescription does not depend on a patient's ability to pay out-of-pocket in any given month. Together these programme elements demonstrate returns via task-shifting and create health system savings; ensuring affordable access to prescriptions safeguards household spending on CVD.

This approach has resulted in savings to households, as outlined in the out-of-pocket savings pathway above. Across nine districts surveyed in 2018–19 and again in 2023–24, the proportion of patients reporting that antihypertensive drugs were always available in government facilities rose from 72 to 81 per cent, and the proportion paying out-of-pocket for hypertension medicines fell from 47 to 9 per cent. Annual medication cost per patient under protocol-based treatment runs at roughly $2 to $4 in India's public sector against $34 to $69 in the private sector. The IHCI model required existing primary care staff, and in some settings, leveraging India's CHW cadre, Accredited Social Health Activists (ASHAs), a workforce of roughly 1 million women originally built for maternal and child health. A trial in Kerala and Andhra Pradesh found that ASHA-led community groups could deliver hypertension education and follow-up with high fidelity, using the same trusted local relationships ASHAs already had.[71]

At the system level, IHCI expanded hypertension care largely by reorganizing services within India's existing primary care system, including instituting standardized treatment protocols, reliable medicine supplies, task-sharing and decentralized follow-up. In economic terms, these reforms can increase the treatment capacity of the existing public sector workforce without requiring a significant expansion in staffing or facilities. The same reforms may also reduce patients' travel and out-of-pocket costs, while preventing cardiovascular events that are expensive for both households and the health system.

IHCI's district-level results mirror a larger national trend in India. The out-of-pocket share of India's total health expenditure fell from 64.2 to 39.4 per cent between 2013 and 2021. India's 2018 flagship health reform extended publicly-funded insurance for hospital admissions to roughly 500 million people, covering the poorest 40 per cent of the population, while leaving outpatient care outside its scope. However, much of household health spending occurs not on hospitalization but on medicines, diagnostics and transport – costs that taken together account for half of India's out-of-pocket expenditure. Hypertension self-care helps address that gap. IHCI's free drug model reaches the everyday, high-frequency spending that catastrophic hospitalization insurance was not designed to address.[72]

The IHCI results point to health system efficiency and household financial protection. Standard treatment protocols and task-sharing help existing primary care teams treat more people with hypertension, while free medicines and care closer to home reduce patients' spending on treatment and travel. These benefits may begin soon after services are reorganized. Much of the broader economic value of better blood pressure control, however, may accrue over a longer period as treatment averts cardiovascular events, disability, premature mortality and the productivity losses associated with illness and early death. More evidence is needed to measure those gains directly.[73]

3.3 Colombia and Chile: Building Self-Care into Publicly-Financed Hypertension Services

Chile and Colombia offer two telling country examples of how adopting the same regional delivery model can vary based on the institutional starting point. These examples illustrate that the economic potential of self-care is determined not only by the intervention itself, but by the financing and delivery architecture into which it is embedded. Both countries are early adopters of the Pan American Health Organization (PAHO)'s 'HEARTS in

69 Run by the Ministry of Health and Family Welfare and the Indian Council of Medical Research with the WHO and Resolve to Save Lives as technical partners.

70 Prabhdeep Kaur and others, "Changing patterns in health-seeking behaviour and prescription practices for treatment of hypertension in nine districts – insights from India Hypertension Control Initiative, 2018-19 and 2023-24", *BMC Public Health*, vol. 25, article 3621 (2025).

71 Michaela A. Riddell and others, "ASHA-led community-based groups to support control of hypertension in rural India are feasible and potentially scalable", *Frontiers in Medicine*, vol. 8, article 771822 (2021).

72 India, Ministry of Health and Family Welfare, National Health Systems Resource Centre, *National Health Accounts Estimates for India, 2021-22* (2024).

73 A number of caveats are worth noting here. IHCI's results come from a subset of districts where implementation started first. These same districts were chosen because state governments were ready to implement the programme quickly. Scaling can vary sharply from state to state, where administrative capacity and political may vary.

the Americas' initiative, the standardized hypertension treatment protocol introduced in Section 2.1. The first of PAHO's six HEARTS modules is healthy lifestyle counselling, used in implementing countries to build patients' self-management and self-care skills. PAHO now runs a patient self-measurement course supplying a home blood pressure guide, a validated device listing and a printable seven-day log.[74] The initiative's own regional quality framework names home blood pressure monitoring and family involvement as self-care interventions that improve hypertension care.[75]

The two countries highlight different capacities and health system approaches. Chile brought decades of chronic disease infrastructure to the effort, while Colombia layered the protocol onto an insurance system still working to convert near-universal coverage on paper into routine hypertension care in practice. In Chile, decades of financial protection have held catastrophic health spending to about 4 per cent of households. In Colombia, insurance covers the medicine itself, but transport and dietary costs still drive catastrophic hypertension-related spending for roughly 5 per cent of the poorest households

CVD is Chile's leading cause of death, responsible for more than one-quarter of all annual deaths in the country. The Chilean Ministry of Health has run a chronic disease programme through its national network of family health centres since the 1980s.[76] And since 2002, the Programa de Salud Cardiovascular, has managed hypertension and diabetes together under a shared cardiovascular-risk framework.[77] A study across 52 primary care centres in metropolitan Santiago found that blood pressure control among enrolled hypertensive patients rose from 45.3 per cent to 59.7 per cent. The model gives evidence that a sustained, publicly-financed primary care platform can move control rates before any new protocol is layered on top of it.[78]

PAHO and the United States Centers for Disease Control and Prevention began piloting the standardized, simplified HEARTS treatment algorithm with Chile's Ministry of Health in 2013. This standardization created a regimen simple enough to sustain unsupervised through self-care – fewer drugs, fixed doses and a dependable medicine supply. National control among Chile's HEARTS-enrolled population has since climbed to 65 per cent, up from 37 per cent at baseline.[79] More than half of the country's health services now use standardized cardiovascular-risk guidelines as routine practice, and Chile has committed to adopting HEARTS across all primary care centers by 2030.

Financial protection for hypertension care runs through a separate channel: Chile's Acceso Universal con Garantías Explícitas / Garantías Explícitas en Salud [explicit health guarantees scheme], which guarantees timely access to care for 80 high-mortality conditions, caps related copayments, and was among the earliest plans to cover hypertension.[80] That guarantee has narrowed catastrophic health spending, but without eliminating it wholly. A systematic review found that about 4 per cent of Chilean households still faced catastrophic out-of-pocket health costs as of 2012, with well under 1 per cent pushed into poverty as a result.[81] These results point to gains in household impacts, but with remaining room for improvement.

Colombia provides an interesting contrast. Colombia's path ran through insurance first. The 1993 reform known as Ley 100 built a contributory regime for formal-sector workers and a subsidized regime for those without the earnings to qualify, extending coverage from roughly one-fifth of the population in 1993 to near-universal enrollment within three decades. Researchers studying the reform have distinguished between this formal coverage and material coverage and the services patients can obtain in practice once enrolled; the gap between the two remains wide in

74 Pan American Health Organization, "Home blood pressure monitoring: promoting patient self-measurement (HEARTS)", Virtual Campus for Public Health (n.d.). The module includes an illustrated measurement guide, a listing of validated automated devices, a printable seven-day home monitoring log, and guidance on interpreting readings and when to seek care. On the counselling module's use in building self-management capability, see Rohit Doon and others, "Improving cardiovascular health with the patient-centered, integrated primary care HEARTS model in Trinidad and Tobago", *Revista Panamericana de Salud Pública*, vol. 46 (2022).

75 Esteban Londoño and others, "HEARTS quality: a policy framework to strengthen hypertension and cardiovascular risk management in primary healthcare — insights from HEARTS in the Americas", *The Lancet Regional Health – Americas* (2025).

76 Pan American Health Organization, "Chile: where action on hypertension is saving lives" (25 August 2021).

77 Chile, Ministerio de Salud, *Orientación técnica: Programa de Salud Cardiovascular* (2017).

78 Daniela Sandoval and others, "Overcoming barriers in the management of hypertension: the experience of the Cardiovascular Health Program in Chilean primary health care centers", *International Journal of Hypertension*, vol. 2012, article 405892 (2012).

79 Londoño and others, "HEARTS quality: a policy framework to strengthen hypertension and cardiovascular risk management in primary healthcare" (2025).

80 Pan American Health Organization, "Chile: where action on hypertension is saving lives", 25 August 2021.

81 Kira Johanna Koch, Camilo Cid Pedraza and Andreas Schmid, "Out-of-pocket expenditure and financial protection in the Chilean health care system: a systematic review", *Health Policy*, vol. 121, No. 5 (2017).

poorer and rural areas.[82] Hypertension care sits inside that gap. A household survey in low-income urban Medellín found that most hypertensive patients carried some out-of-pocket cost regardless of which regime covered them, and catastrophic spending, while uncommon overall, affected about 5 per cent of households in the poorest quintile. Medicines were rarely the driver: transport to appointments and diet-related expenses made up the larger burden, the same cost category South Africa's CCMDD programme was built to remove.[83]

Colombia adopted HEARTS alongside Chile, Cuba and Barbados in 2013 and produced the strongest early result of the four. Control at Colombian demonstration sites rose from 46 to 78 per cent within 20 months.[84] A newer model, RE-HOPE, is testing whether task-shifted CHWs can sustain that gain in Santander department, the same approach South Africa and India have used to extend care past brick-and-mortar clinics. Task-shifting is also where the protocol becomes important for self-care. A standardized approach allows a CHW rather than a physician to conduct the follow-up care. It remains an early-stage implementation study but may eventually provide insights into what task-shifting can achieve nationally.[85]

Chile's experience points to health system efficiency: standardized care builds on an established primary care network without requiring a separate delivery platform. Colombia shows the limits of household financial protection when insurance covers medicines but leaves transport and diet-related costs to patients. Better control may eventually protect productivity, but neither country yet measures effects on employment or economic growth.

4. Recommendations and Way Forward

4.1 Recommendations

Normative recognition of CVD self-care has moved faster than financing or institutionalization – a trend in line with global policy maturity trends. Drawing on the analysis of available policy, evidence and data, the recommendations below follow the same three pathways used throughout this brief: health system savings, household financial protection and sustainable growth, with an additional section on measuring impact.

Finance Self-Care Solutions to Narrow the Detection and Treatment Gap

Ministries of health

- Institutionalize CHW-delivered hypertension screening and simplified, standardized treatment protocols.
- Use costing exercises to bring facility-visit-shift and delivery-cost estimates into budget negotiations.

Ministries of finance

- In budget decisions, assess CVD task-shifting as a potential fiscal-efficiency investment rather than a health-sector request alone.

Vertical health financing initiatives (e.g. PEPFAR, the Global Fund)

- Build explicit co-financing and transition plans for hypertension and cardiovascular prevention within established HIV, TB and maternal health platforms.

Multilateral development banks and development finance institutions

- Finance capacity-building of the community health workforce that task-shifted CVD models depend on, along with the blood pressure equipment and medicine supply chains that keep it functioning, given the 11-million health-worker shortfall the WHO projects by 2030.

Close the Routine-Cost Gap Before It Becomes Catastrophic

Ministries of health

- Fold routine antihypertensive medicines and blood pressure monitoring into UHC benefit packages and strategic purchasing arrangements, not only hospitalization coverage.

82 Everaldo Lamprea and Johnattan García, "Closing the gap between formal and material health care coverage in Colombia", *Health and Human Rights*, vol. 18, No. 2 (2016).

83 Esteban Londoño Agudelo and others, "Out-of-pocket expenditure for hypertension care: a population-based study in low-income urban Medellín, Colombia", *Global Health Action*, vol. 13, No. 1 (2020).

84 Pan American Health Organization, "Hypertension control project in the Americas", 29 September 2017.

85 J. P. Lopez-Lopez and others, "Implementation, integration and institutionalization of a community-based strategy for hypertension control in Colombia: the RE-HOPE implementation study protocol", *Frontiers in Cardiovascular Medicine* (2026).

WHO

- Link blood pressure control, already a UHC Service Coverage Index tracer indicator and the basis for SDG indicator 3.8.1, explicitly to financial protection reporting rather than service coverage reporting alone.

Treat Premature CVD Mortality as Preventable and Addressable Economic Growth Loss

Ministries of finance and national planning authorities

- Include the expected effects of CVD prevention on working age mortality, disability-related work loss and unpaid caregiving in national workforce forecasts and public investment appraisals.

WHO and the United Nations financing for development system

- Name self-care and CVD primary prevention explicitly, not only by implication, in commitments ahead of the 2027 United Nations High-Level Meeting on Universal Health Coverage.

Development partners, multilateral development banks and development finance institutions

- Prioritize connected-care digital tools paired with human follow-up over standalone apps, a model with a promising evidence base for LMIC primary care.

Make the Fiscal Case Measurable

WHO and development partners

- Develop a standard country-level framework that distinguishes the fiscal effects of CVD primary prevention from wider economic effects such as household savings, work lost to illness and unpaid caregiving. Adapt existing WHO costing and investment-case tools and fund prospective evaluations that report these outcomes over short- and long-term horizons, disaggregated by sex and income.
- Generate more research and policy guidance on CVD specifically, expanding from its resources on HIV and sexual and reproductive health self-care.

4.2 Conclusions and Way Forward

CVD makes the self-care argument in one of its clearest forms. It is the world's leading cause of death, and much of its burden is linked to modifiable risks and long-term management. Evidence supports health gains, and in some settings, cost-effectiveness. However, system savings, household protection and productivity gains should not be treated as automatic or additive. The WHO's at-least seven-to-one estimate applies to a broader package of NCD 'best buys',[86] and PAHO reports that HEARTS hypertension programmes across the Americas have proven either cost-saving or cost-effective, affordable at roughly $18–44 per patient treated per year.[87]

HEARTS already reaches tens of millions of patients across dozens of countries, and the 2027 United Nations High-Level Meeting on Universal Health Coverage sets a near horizon for showing results. Yet, there is clear room to better leverage the promise of self-care, particularly for CVD and the broader NCDs. The 2025 Political Declaration of the Fourth United Nations High-level Meeting on NCDs and the Promotion of Mental Health and Well-Being calls for expanding primary and community-based services but does not explicitly name self-care as an approach that could support these commitments.

That gap is worth closing from both directions. CVD self-care needs the broader self-care agenda's institutional weight, its financing architecture and its place on the UHC agenda, to move from disease-specific pilots into routine practice. And the broader CVD agenda also needs to harness the power of self-care. Self-care is a financing strategy and not only a clinical one, the same role HIV and sexual and reproductive health and rights already play as entry points elsewhere in the agenda.[88]

One official framed the fiscal logic plainly — there will likely not be more money, so systems must use what they already have more efficiently, and self-care is among the clearest ways to do that.[89] What remains to be advanced is a set of financing, purchasing and workforce decisions that ministries of health and finance routinely make so that fiscal and health gains from CVD self-care are fully realized.

86 World Health Organization, *Saving Lives, Spending Less: A Strategic Response to Noncommunicable Diseases* (2018).

87 A. E. Moran and others, "Building the health-economic case for scaling up the WHO-HEARTS hypertension control package in low- and middle-income countries", *Revista Panamericana de Salud Pública*, vol. 46 (2022).

88 World Health Organization, *WHO Guideline on Self-Care Interventions for Health and Well-being* (2022).

89 Key informant interview, conducted via Microsoft Teams, 5 August 2026.

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