

Limited access to CVD medicines in low-income and middle-income countries: poverty is at the heart of the matter



Non-communicable diseases (NCDs) pose a substantial threat to many health systems, especially in low-income and middle-income countries (LMICs) where they are already overstretched.¹ In the past few decades, deaths from NCDs in LMICs have spiked, whereas numbers in high-income countries have stabilised.¹ Worryingly, a large proportion of deaths from NCDs (29%) in LMICs occur among people younger than 60 years compared with the proportion in high-income countries (13%).¹ This finding has been attributed to poor access to effective and equitable health-care services in most LMICs. The threat of NCDs in LMICs was recognised by the UN 2011 High-Level Meeting,² and is now featured in Sustainable Development Goal 3 in the form of reducing premature mortality from NCDs by one-third before 2030.³ Cardiovascular diseases (CVDs) are the leading cause of deaths from NCDs (ie, 48% of all NCDs deaths).¹ Therefore, substantial reductions in CVDs will have a major impact on reducing the overall burden of NCDs globally. The good news is that most CVDs can be prevented by addressing the key underlying behavioural risk factors, such as physical inactivity, unhealthy diet, tobacco use, and harmful use of alcohol, through population-wide approaches. Among individuals with or at high risk of CVD, early detection and effective management with appropriate counselling and medicines can reduce cardiovascular deaths substantially.⁴

The importance of effective treatment for CVD has been recognised in the Global NCD Action Plan 2013–20, for which one of the nine global targets is that at least 50% of eligible individuals should receive drug therapy and counselling to prevent heart attacks and strokes by 2025.⁵ Although admirable, this is a hard target to achieve given that secondary prevention strategies in LMICs are often unaffordable or unavailable.⁶

In this issue of *The Lancet Global Health*, Adrianna Murphy and colleagues⁷ shed light on the inequalities in use of secondary prevention medicines for CVDs by socioeconomic groups in 21 countries at different levels of economic development by using the Prospective Urban Rural Epidemiology (PURE) study data. The authors examined 8492 participants with CVD, which was defined as self-reported myocardial

infarction, coronary artery bypass graft surgery, or percutaneous coronary angioplasty, angina, or stroke. The use of CVD medicines was ascertained by self-report and verified by prescriptions or medical documents. The findings show an alarmingly low use of CVD medicines in many LMICs. The proportion of people with CVD using at least one drug was higher in the richest wealth index tertile group than in the poorest tertile group in all countries except for Canada, Sweden, Brazil, Chile, Poland, Malaysia, and the occupied Palestinian territory, where CVD drug use is either similar or higher among the poorest. Strikingly, the use of at least one drug was nearly 19 times higher among the richest tertile than among the poorest tertile in Pakistan; and six and four times higher among the richest tertile than among the poorest tertile in India and Zimbabwe. The key predictors of inequality in use of CVD medicine were public expenditure on health and overall use of secondary prevention medicines.

The study by Murphy and colleagues⁷ has noticeable limitations, including the cross-sectional nature of the study, lack of data on lifestyle management to reduce CVD risk, and lack of information on what the medicines were specifically prescribed for. Nonetheless, the findings corroborate data on individual CVD risk factors and their treatment. For example, in the ongoing RODAM study on hypertension,⁸ about half of Ghanaian migrants in Europe and 85% of Ghanaians resident in rural Ghana with severe hypertension (blood pressure $\geq 180/110$ mm Hg) were still untreated.

The current findings from PURE have major implications for CVD prevention and management. Two main issues are highlighted: inequalities in access to CVD medicines between the richer nations and the poorer ones, and the large inequalities within countries. At the heart of the matter is the unequal distribution of wealth between and within countries. High-income countries have managed to reduce CVD deaths by more than 25% since 2000.⁹ This reduction has largely been attributed to the introduction of policy interventions to reduce CVD risk factors, strategies to strengthen the health systems at the primary care level, and improvement of acute care with attention to early detection, treatment,

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and control.¹⁰ By contrast, populations in LMICs have not benefited from the advances in CVD risk reduction and treatment as seen in high-income countries, primarily because policies aimed at the reduction of population-wide risk factors have not been widely adopted in LMICs, and the lack of capacity to do so.¹⁰ Furthermore, CVD medicines in general are not affordable for most people in LMICs,¹¹ and there are no social protection mechanisms such as insurance against large health-care-related expenditures, including the cost of medicines in many LMICs. This means that only a fraction of people in LMICs can afford CVD medicine and this subsequently leads to huge inequalities in access to medicines. This suggests that the Global NCD Action Plan's target of achieving 50% drug coverage for eligible patients with CVD will be very difficult unless major efforts are made.¹²

Improving access to CVD medicines is a key strategy to substantially decrease NCD morbidity and mortality globally. Achieving this will require narrowing inequalities in accessibility to CVD medicines both between and within countries. Despite these grim statistics there is a glimmer of hope from the Brazilian experience, which provides a good example of a successful policy approach to reduce inequality in preventive and primary care, with the most common medications free at the point of service for all citizens.¹³ The poorest municipalities in Brazil have particularly benefited from the country's Family Health Strategy Program, which has been associated with reductions in CVD deaths and hospital admissions.^{14,15} These and other examples might hopefully inspire the development of new secondary prevention initiatives that help mitigate the increasing worldwide burden of NCDs.

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