The developing world has experienced an unprecedented epidemiologic transition with an accelerating epidemic of noncommunicable diseases. Among these, the rising burden of cardiovascular disease has met poorly equipped health systems to create a perfect storm. Not only has cardiovascular disease become the leading cause of morbidity and mortality in the developing world, its meteoric rise poses an extraordinary financial risk to patients, their families, and the overburdened health systems. However, despite this threat, the financial implications of cardiovascular disease, particularly of unanticipated major cardiovascular events, remain poorly understood in the developing world.

Mohanan and colleagues shed light on the financial outcomes of patients in the 30 days following a hospitalization for acute myocardial infarction (AMI) in a cohort of patients with AMI in the Indian state of Kerala. More than half (56%) of the 2114 participants in the study reported a health care expenditure that exceeded 40% of the annual postsubsistence income, that is, income after food-related expenses. Expenses beyond this threshold can potentially lead to financial ruin and are therefore categorized as catastrophic health expenses. Notably, more than 90% of costs were secondary to short-term inpatient care. One in 10 individuals even reported coping with these expenses through loans. Although the study was limited by its focus on a selected patient population and self-reported income and expenses, the magnitude of financial hardship identified in this study advances our understanding of the unmistakable financial adversity posed by acute cardiovascular disease.

The current study also identified a protective association with health insurance, with 4-fold higher odds of adverse financial outcomes among those without health insurance, relative to the quarter of the overall population with AMI with access to insurance. A notable observation is that despite a national health insurance program that has been in place in India since 2008 for major unexpected health care events, disproportionately relying on out-of-pocket costs places patients and their families at significant financial risk. The authors posit their observations to support wider access to health insurance coverage in India.

Although a focus on wider access to health insurance is likely to counter some of the financial challenges of health care services, a deeper evaluation of their observations offers important insights into the current status of the complex interplay of health insurance coverage and socioeconomic status in India, offering potential future opportunities worthy of further discussion.

First, as shown in Table 1 of the article by Mohanan et al, patients with AMI who had health insurance in India were unique in that their household income was only half of those with insurance—a significant contrast with the United States, where access to health insurance is a sign of affluence. The insurance programs in India, particularly the Rashtriya Swasthya Bima Yojana, a tax-financed national insurance program, however, have mainly focused on providing coverage for inpatient care for individuals and family members below the poverty line. The program, which as of 2016 covered more than 160 million people, has incentivized an investment in tertiary or specialized care in rural areas and prompted reductions in catastrophic health spending. The middle class, which may lack resources to protect itself from the financial distress of major unexpected health events but may not qualify for insurance protections under this program, continue to be vulnerable to the catastrophic financial effects of health care.
Second, the degree of financial protection offered by insurance for patients with AMI is unclear. Although the insured had a lower family income, they did not achieve lower rates of catastrophic health care expenditures through absolute lower out-of-pocket spending, but through lower spending on health care that was a fourth of those with insurance (as shown in Table 2 of the article by Mohanan et al). It is unclear from the presented data whether this lower cost of care among the insured is a manifestation of rural, low-cost facilities relative to the more urban, expensive facilities sought by more affluent uninsured patients. The lower costs could also reflect lower negotiated costs available through insurance payers. Alternatively, however, these observations can also potentially be an indictment of either deferred or a lower quality of health care. The cost savings accrued for the insured are meaningful only if these lower costs of health care services are not achieved through compromising quality or patient outcomes.

Third, studies evaluating the inpatient insurance program in India report a continued requirement for out-of-pocket spending, particularly on medications and diagnostic testing following hospitalization, with a reported lack of an association with the burden of monthly out-of-pocket health care spending in low-income households. Although the study by Mohanan et al suggests insurance offering protection from early wealth shock from acute illness, the absence of financial support for downstream noncovered health care costs, low-income families who are insured and initially protected from the costs of acute events may experience financial toxicity with costs associated with long-term disease management, reversing the benefits associated with the acute period.

Fourth, while we commend Mohanan et al for getting the ball rolling on evaluations of costs of cardiovascular care in India, their study only scratches the surface of an otherwise complex issue. In addition to the adequacy and value of care achieved by the insured in India, it is imperative to evaluate if patients are burdened by medical bills beyond their means, if they have forgone care or treatment because of costs, and how treatment of chronic conditions are pursued. The costs of medications and outpatient care represent a substantial burden in this patient group with cardiovascular disease but remain understudied. The association of these financial stressors with patient health and well-being are also underappreciated.

Finally, as we encourage more comprehensive insurance offering financial protection from long-term disease management beyond acute health care events, we feel there is an urgent need for concurrent investment in programs that focus on prevention to counter the growing financial strains on health systems. Reminiscent of “an ounce of prevention is worth a pound of cure,” it is worthwhile to remind policy makers that implementation of cost-effective primordial and primary prevention interventions for management of risk factors such as diabetes, smoking, and hypertension may be a sound long-term investment for those financing health care in India.

In summary, financial considerations play a central role in cardiovascular care delivery for patients and their families in large parts of the developing world in spite of their subsidized health care through national insurance schemes. Such cost considerations make it imperative that in more limited resource settings, where there are pressures to save costs, we strive to achieve high-quality short-term care, but also ensure continuum of health care services beyond the acute phase. An effort to improve financial health and prevent catastrophic health care spending on short-term care services cannot proceed in isolation and requires that systems of care that also ensure longer-term patient outcomes and financial health are also simultaneously prioritized.
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Conflict of Interest Disclosures: None reported.

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