Has There Been Adequate Progress in Addressing the NCD Epidemic in LMIC?

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Comprehensive strategies for the successful prevention and control of the noncommunicable disease (NCD) epidemic need to encompass laws and regulations, tax and price interventions, improvement of the built environment, advocacy, mass media, community- and workplace-based interventions, risk screening, and clinical interventions [1]. Such strategies create an enabling environment that facilitates the adoption and maintenance of healthy behaviors, promotes early detection and management of NCD victims and those at high risk, helps avert the acquisition and augmentation of NCD risk in the population as a whole, and reduces premature mortality and morbidity burden in the segment of the population at high risk of NCD [2,3].

Governments have a pivotal role in the fight against rising NCD through appropriate policy formulation, and implementing strategies to promote the uptake of healthy lifestyles, and timely detection and optimal management of those in need of more intensive interventions [1,4,5]. In recognition of this central role and in the face of an increasing global NCD burden, the United Nations convened the high-level meeting on NCD in New York in September 2011. This elevated the NCD issue on the domestic policy agendas of member states [6,7] and secured recognition of NCD prevention and control as a global priority. Tobacco control was identified as the "most urgent and immediate priority" intervention to reduce NCD, and countries were urged to fully implement the World Health Organization's (WHO) Framework Convention on Tobacco Control [8]. However, although there has been progress in tobacco control in recent years [9], this has been slow as illustrated in the rising prevalence of tobacco use in low- and middle-income countries (LMIC) [10]. Notably, the most effective tobacco control measure, that is, excise tax levels at the recommended level covers <10% of the global population [10] and only a single low-income country has implemented high taxes on cigarettes [9]. The economic power and financial clout of the tobacco conglomerates who market their products aggressively, deliberately target nonsmokers particularly the youth and women, subvert existing legislation, and use extreme measures to prevent LMIC from implementing effective policies contribute to the low implementation of tobacco-control initiatives [11,12]. Other challenges to effective implementation of tobacco-control policies include a lack of political will, weak intersectoral cooperation, and suboptimal enforcement [9].

In contrast to the measures introduced by the WHO using its legislative powers to conclude the Framework Convention on Tobacco Control to reduce tobacco use, strategies to decrease alcohol use have been minimal on a global scale. In the absence of strong leadership on this front, it is not surprising that no LMIC has comprehensive legislation that will decisively reduce the level of alcohol consumption. Nonetheless, many countries have developed national alcohol polices and action plans [9]. The Russian Federation has strengthened regulations on availability and marketing of alcoholic beverages, enforced drink-driving measures, and increased the minimum retail price for the most common spirit [9], but this is inadequate to limit the high level of alcohol consumption in the country. South Africa has been considering a total ban on advertisements as a means of reducing the alcohol-related burden, but this has not yet been formalized. Mongolia, however, has alcohol legislation banning advertisements and has recently revised its law to bridge the gaps between regulation and implementation and thus strengthen the legal environment for prevention and control of alcohol [9]. Sustained political commitment, lacking in most LMIC, as well as widespread societal support is needed to reduce alcohol misuse. Currently, there is an imbalance of power between the well-organized and powerful alcohol industry that effectively lobbies for industry-friendly policies both internationally and nationally [13,14] and health groups, which results in the continuing neglect of alcohol as a global health issue [15].

Physical inactivity remains an urgent public health issue globally and requires multisectorial government involvement with national policies devised to promote physical activity through daily routine activities. Key strategies involve urban planning and active transport policies to encourage community walking and cycling as well as education policies to mandate physical activity programs in schools [9]. Such an initiative is the bicycle-sharing scheme introduced in Iran and funded by the local municipality. However, women are not allowed to participate in the program. Social norms in many LMIC do not encourage and may even disapprove of women publically engaging in physical activity. These barriers need to be overcome by improving community understanding and acceptance of integrating physical activity into everyday life [16]. In Tonga, for example, where sporting activities are dominated by men, the "Come on Tonga, let's play netball!" campaign has been rolled out

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to encourage women to participate in physical activity [9]. National strategies promoting physical activity in LMIC must therefore be culturally appropriate and capable of challenging cultural influences and responding to changes over time.

Policies and intervention strategies currently lacking in LMIC include those that promote the availability, affordability, and acceptability of health-enhancing diets and restrain the marketing and consumption of unhealthy foods [17]. An effective strategy, as demonstrated in Hungary, was the introduction of a “junk food tax” on foods high in sugar, salt, and caffeine [9]. Equally, subsidizing or lowering prices of more healthful foods has been associated with greater intake of these foods but such measures are minimal in LMIC. Furthermore, policies that regulate specific nutrients in foods such as salt, transfatty acids, and certain fats are effective in changing population dietary patterns with subsequent gains in the reduction of the NCD burden [9]. Whereas some LMIC have implemented voluntary targets for salt reformation, Argentina and South Africa have legislative regulations with specific targets set for various food groups. Both strategies require discourse with the private sector to facilitate reformulation, as well as consumer awareness to empower an informed population to take advantage of an enabling environment. These are important as illustrated in Thailand where, in 2011, initial attempts to halve salt consumption in Thailand were not successful because the reformulated products were unacceptable to the public [9].

The shortcomings in public health policies of LMIC to curb salt intake, increase fruit and vegetable intake, reduce physical inactivity, and encourage weight loss have led to rising trends in blood pressure in these countries in contrast with the declining trends found in high-income countries. The proportion of countries with policies, plans, or strategies on behavioral risk factors was found to be the lowest in the WHO African Region, except for harmful use of alcohol, which were even lower in the Eastern Mediterranean Region [9]. In addition to hypertension, the failure to address unhealthy high caloric diets and physical inactivity in LMIC directly affects rising obesity and diabetes levels.

Together with these population-based interventions, LMIC require greater investments to improve health care delivery for hypertension and diabetes in integrated NCD programs [9]. Although the responsibility of the international community in assisting developing countries to generate effective responses [18] to NCD was positioned resolutely as a development issue, and not only a health issue, was emphasized at the U.N. high-level meeting [19], $<3\%$ of development aid for health is directed at NCD in LMIC [20]. Primary health care systems for NCD management remain weak in most LMIC with major shortcomings in health financing, service delivery, access to basic technologies and medicines, and lack of health care workers. However, some LMIC, mainly from the Asian-Pacific region, the former Russian republics, a few African countries as well as Brazil are slowly strengthening their primary health care systems [9].

Generally, although health policymakers are now increasingly recognizing NCD as a major health priority, this has not translated into much concrete action in the form of strategies, policies, and programs, especially in LMIC. There needs to be sufficient political commitment together with sustainable action with this being steered at the global level.

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