**Non-communicable disease prevention in Nepal: systemic challenges**

**and future directions**

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**Abstract**

Developing countries like Nepal are experiencing double burden of communicable and non-communicable diseases (NCD) resulting in social and economic losses. In Nepal, more than half of the disease burden is due to NCD. The major NCD in Nepal are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. Behavioural factors such as tobacco use, alcohol consumption, physical inactivity and unhealthy diet are driving the epidemic of NCD which are further influenced by social, economic and environmental determinants. The health system of Nepal has not been able to address the ever increasing burden of NCD. With the formulation of the *Multisectoral Action Plan for Prevention and Control of NCD 2014-2020*, there has been some hope for tackling the NCD and their social determinants in Nepal through a primary prevention approach. This paper discusses the systemic challenges and recommends two key actions for the prevention and control of NCD in Nepal.

**Background**

Developing countries like Nepal are experiencing an unprecedented burden of non-communicable diseases (NCD) (1), with NCD attributing 60% of disease burden in Nepal (2). The major metabolic/biological risk factors driving the NCD epidemic include clinical hypertension, elevated blood glucose, and abnormal blood lipids (3-5). These metabolic risk factors are amplified by interaction with broader social determinants (behavioural, environmental and socio-political factors) disproportionately affecting poor and vulnerable in developing countries (5-7). In this commentary, we highlight systemic challenges for addressing NCD through primary prevention in Nepal especially in the light of Nepal’s recent related policy and programmatic efforts. We further recommend that Nepal could accelerate preventative action against NCD and their social determinants through two key actions: structural reform at policy level for coordinated actions and strengthening community-based health care delivery at implementation level.

**Systemic challenges for NCD prevention in Nepal**

Within the health system, curative services have gained more priority than prevention with increasing budgetary provisions in hospitals, patient care and development of clinical human resources (8). Though the provision of limited partial funding to the poor and destitute from public accounts for treatment of limited NCD, namely cancer, kidney disease, heart disease, Parkinson’s and Alzheimer’s disease and head and spinal injuries (9) is commendable, it is not helping the urgent need for shifting toward primary prevention approaches. Importantly, one of the key NCD policies, the *Multisectoral Action Plan for Prevention and Control of NCD (MAPPCN) 2014-2020,* failed to set up a functional and compelling policy structure for accelerated action against NCD and their social determinants ***(Figure 1)*** (10). The Curative Services Division, a division within Ministry of Health with a primary role for improving curative services in public hospitals, is proposed as the main coordinating body for NCD prevention***.*** This raises questions about whether the system is still in the grip of a medical model paradigm where the system considers NCD as something to be addressed by a curative services agenda (tertiary prevention) and diverts funding needed for primary prevention of NCD in Nepal.

Without an appropriate system structure for primary prevention of NCD, significant policy level momentum including tobacco control initiatives are losing ground under the current structure which is already suffering some early setbacks (11-13). Any efforts on NCD prevention are further constrained by budget limitations and scarcity of human resources. The existing community health workers are of limited scope in NCD prevention and control unless adequately trained. In 2016, the government initiated the Prevention of Essential Non-communicable Disease (PEN) programs in two districts of Nepal but again the question will remain how effectively the program will coordinate with other sectors to address the broader social determinants. In addition, lack of accountability, corruption and poor management are major causes of inefficiency in health and social programs (14). This also poses threats to future NCD programs. In a country which spends less than one percent of its budget on NCD (15), inefficiency, as much as 40% estimated by WHO (16), can deter significant investment from prevention and control efforts.

***Figure 1: Policy structure envisaged by the MAPPCN 2014-2020***

**Future direction of NCD prevention and health promotion**

The NCD epidemic in Nepal demands a paradigm shift from a medical model to a primary prevention model focusing on social determinants of NCD. Countries in the South are already leading the way (17-22). South-North collaboration and technology transfer can help low and middle income countries like Nepal to build up capacity to prevent, control and monitor NCD. We recommend that Nepal should establish an autonomous “Centre” as the key structural reform for effective multi-sectoral and coordinated actions for NCD prevention and control ***(Figure 2)***. A powerful centre is essential to capitalize on the growing recognition of the NCD agenda at the policy level (23, 24). The key social determinants of NCD in addition to the traditional targets proposed in global monitoring frameworks (25\*25 targets) can be incorporated into the existing Health Management Information System (HMIS) which is being revisited.

***Figure 2: Recommended policy structure for NCD prevention in Nepal***

Our second recommendation is simultaneous strengthening of the community based healthcare delivery system for accelerating a community based NCD response. District health system reforms in the areas of quality of care, logistics supply, human resource training and overall management are the basic pre-requisites for the effective implementation of community based actions. Nepal has experience in implementing community based maternal and child health promotion programs where strong leadership, a community-based approach and external development partners’ support have significantly contributed to the reduction in maternal and child mortality (25, 26). Nepal should also tap the growing interest in NCD among students and professionals. A national centre on NCD is thus needed for balancing preventive and curative focuses, strengthening local health system and harnessing collaboration among stakeholders for action on the social determinants of NCD.

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