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## Non communicable diseases in Pakistan: Burden, challenges and way forward for health care authorities

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Pakistan will be celebrating its 67th year of independence this year. As the country undergoes economic development, the changing lifestyles have resulted in a transition in the health profile of the population. According to World Health Organization (WHO) under 5 year mortality is 86 per 1000 live births. Maternal and Child health and infectious diseases have been the top priority for a decade.<sup>1</sup> During the last decade there has been a gradual shift from communicable to non-communicable diseases (NCDs) such as cardiovascular diseases (including stroke and heart disease), diabetes, mental health disorders, cancers, and chronic airway diseases.<sup>2</sup>

Pakistan is the sixth most populous country in the world, but a country in which close to 80 million of its individuals (approximately 50% of the population) suffer from one or more of these chronic conditions.<sup>2</sup> Death due to NCDs now far outnumber deaths due to communicable disease. The Global Burden of Disease 2010 data suggests that NCDs and injuries account for 77% of age standardized deaths in Pakistan.<sup>3</sup> The burden in terms of disability is also tremendous and mostly attributable to stroke and injuries.

Although large population based studies on prevalence of these conditions are lacking, there are smaller surveys that have shed light on the burden they pose. Translating these figures to a population of 180 million individuals means the numbers affected by these conditions are staggering. An estimated 40 million individuals in Pakistan suffer from high blood pressure, 32 million from heart disease, 24 million from obesity, 18 million from high cholesterol, 8 million from diabetes and about 50 million from mental health disorders.<sup>2</sup>

The mortality figures are also quite alarming with close to 2000 Pakistanis losing their lives to a preventable non-communicable disease every day. The disability figures are just as bad with approximately 100 people undergoing amputations per day due to diabetes and trauma, and another 100 going on dialysis every day,

mostly due to diabetes induced renal failure.<sup>2</sup>

At the current rate, the burden is expected to increase by 10-15% over the next 10 years. Using population level mortality rates, Jafar et al have projected that between 2010 and 2025, 3.87 million Pakistanis will lose their lives to NCDs like cardiovascular diseases, cancers and chronic respiratory diseases. They also project that the economic burden associated with NCD deaths will rise from \$152 million in year 2010 to \$296 million in 2025.<sup>2</sup> If projections could be made for disabilities and mental health disorders, this number would be multiplied several times.

Pakistan is not prepared to deal with the epidemic that has insidiously hit its people. Post devolution the provinces are responsible for developing policies suitable to their local context. At present, provincial governments are the single largest institutional entity spending on health care and allocation has positively gone up post-devolution from 4-6% of budget in 2010 to 8-11% of budget in 2012-13.<sup>3</sup> However most of this goes towards curative care, and the health system lacks the ability for NCD prevention and control. International donors while accounting for a relatively small portion of total health spending, have a high influence on policy making. However, their attention has been traditionally geared towards communicable diseases and mother and child health and they remain aloof from emerging challenges of NCDs. Yet Pakistan has internal resources that can be tapped. Health philanthropy in the country, although poorly recognized, is one of the largest in the world, is growing, and one third of the organizations certified by the Pakistan Center for Philanthropy work in the health sector. Pakistan also has an expanding private sector even in rural areas. But primary care for NCDs — early detection, early management, prevention — remains unaddressed by all these three sub-sectors and the public and private sectors and even philanthropy continues to concentrate the available resources on expensive tertiary care contributing little to avert the tide of NCDs.<sup>4</sup>

Researchers have identified key risk factors that if addressed, will result in more than six hundred thousand deaths due to major NCDs being averted between the years 2015 and 2025. These include simple measures such

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as a 30% reduction in tobacco use, a 3mm reduction in systolic blood pressure, increased consumption of fruits and vegetables and increase in physical activity to name a few.<sup>2,5</sup> Four cost effective interventions including low salt intake, tobacco cessation, exercise and cost effective pharmacotherapy has been suggested to reduce NCD related mortality and morbidity in Pakistan.<sup>6</sup> Pakistan is one of the first developing countries to come up with a comprehensive National Action Plan to address NCDs. What is needed now are functional platforms for providing stewardship on NCD control and a multi-pronged approach involving regulation, primary care interventions, awareness, and surveillance to reduce NCDs on a national scale. Pakistan is fortunate to have experts in both public and private sectors that can actively contribute towards a health system response for NCDs.<sup>7</sup>

Current focus of policy and planning is disease oriented but it has to become health oriented with enhanced focus on primary care, prevention and health promotion. Best strategy to handle NCDs is primary prevention. This editorial suggests many interventions including taxation, law enforcement by governments in addition to use part of philanthropic funding to primary care. It is proposed that Provincial Commissions for Prevention and Control of Noncommunicable Diseases be established as statutory bodies with the participation of professional and public sector representatives to fashion effective public health response to modify NCD risk factors, undertake legislations and set service targets and standards across public and private sector. The Commissions could serve as the catalysts for the substantial work that is needed to be taken through multi-sectoral bodies such as health and Police for injury control, and between health and food processors for sales of healthier food and drinks. Funding for the Commissions can flow from tax levies on tobacco,

sugared drinks, fast foods besides pooled funds from the philanthropic sector. Primary prevention programmes with least cost and higher benefits should be prioritized in national and provincial resource allocation. Population based, cost effective interventions must become priority agenda for future research.<sup>8</sup> Our primary focus is not on philanthropist and international funding. It is part of a multi-faceted strategy. Resources are important but major focus is on priority setting and interventions. There are no local governments in Pakistan at this moment so all proposed interventions are directed toward Federal and provincial governments. The moment has arrived for decisions have to be taken in the light of future trends in health to ward off an epidemic that may very well deprive it of its most productive individuals.

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