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## International Diabetes Federation



## Commentary

# Pakistan and diabetes—A country on the edge



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### ABSTRACT

The rising burden of diabetes is mainly ascribed to environmental and emotional changes. The main contributors are sedentary lifestyle including internet and TV usage, caloric rich diets leading to increasing obesity. The National Diabetes Survey of Pakistan (NDSP 2016–2017) has reported the prevalence of diabetes as 26.3% in Pakistan. Pakistan with very high numbers of prevalent diabetes needs a cost-effective population based approach for screening. Proper governance system has to be adopted to facilitate multi sectoral collaboration, including transparency and evaluation for achieving Non-Communicable Disease (NCD) associated targets. According to health economists, if a country invests 1\$ per person in interventions for NCDs now, it shall expect a return of 7\$ per person in NCDs by 2030. Increase NCDs with increasing age is not unexpected but premature morbidity and mortality with NCDs must be efficiently and diligently tackled. Finally, though the numbers to treat are really high, but human resources and evidence based solutions are enough to call multi stake holders to ACT NOW.

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National Diabetes Survey of Pakistan (NDSP 2016–2017) has reported the prevalence of diabetes as 26.3% in Pakistan. With a population of 207.77 million, nearly around 27.4 million people are affected with diabetes. Added to it is the burden of pre-diabetes of 14.47%. According to NDSP (2016–2017), 47 million individuals are hypertensives [1].

The rising burden of diabetes is mainly ascribed to environmental and emotional changes. The main contributors are sedentary lifestyle including internet and TV usage, caloric rich diets leading to increasing obesity [2,3]. The urbanization of rural areas is further worsening the situation. The

prevalence of obesity in young adults of Pakistan is now 15% [4].

As per the Asian cut offs, every other one is suffering from obesity. Hydrie et al, reported 29% obesity in children [5]. World Bank stated that Pakistan spends 36.2\$ of GDP on health compared to 86\$ in any other low resource country [6]. Ali et al reported that a family spends 10 years of its health budget to get a diabetic foot ulcer treated [7]. These high numbers compounded with resources constraints pose a big challenge.

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Diabetes in women is multidimensional scenario. Gender bias, less privileged, usually compounded with multiple pregnancies, risks our women for higher morbidity and mortality rates. Gestational Diabetes Mellitus (GDM) can serve as a blessing in disguise for early diagnosis and intervention. It shall sensitize multi-stakeholders for prevention of T2DM focusing on a healthy life styles at comparatively younger age group, and in turn also addressing interventions for childhood obesity. GDM shall be integrated into maternal and child health (MCH) care programs [8,9]. Ministry of education shall add in the curricula of primary and secondary schools about healthy diet and life styles for primary prevention.

There are different studies conducted on primary prevention such as Diabetes Prevention Program (DPP, USA), Diabetes Prevention Study (DPS, Finland) was also done in many other countries like Pakistan, China and India have establish evidence that diabetes would restrict [10]. For management strategies of diabetes the Primary prevention is essential part around world. The benefits of life style modifications (LSM) was establish to be more effective rather than pharmaceutical interferences [11].

Pakistan with very high numbers of prevalent diabetes needs a cost-effective population based approach for screening. Risk Assessment of Pakistani Individuals for Diabetes (RAPID) tool has been developed with national prospective studies [12]. Using mobile technology and electronic media, population base screening of diabetes is planned. Services provision and supply chains are strongly dependent on robust data. Health Research Advisory Board (HRAB) is developing disease registries in Pakistan. Diabetes Registry of Pakistan (DROP) is one of the registries being developed by HRAB. Registry for type 1 diabetes (DROP 1) have already been initiated. Facilitation from ministry to centralize it is now being sought [13]. Referral policies for primary to secondary to tertiary dia-

betes care units are cost effective if managed efficiently. Low cost essential medicines as per WHO recommendations must be prescribed and regulated from top to bottom.

Proper governance system has to be adopted to facilitate multi sectoral collaboration, including transparency and evaluation for achieving NCD associated targets. Advisory Board for the Care of Diabetes (ABCD) developed Pakistan's Recommendations for Optimal Management of Diabetes from Primary to Tertiary care level (PROMPT) guidelines based on national data including resources available. These guidelines shall be implemented on priority basis [14]. In the last two decades, public awareness programs have spread all over Pakistan. National Association of Diabetes Educators of Pakistan (NADEP) established in 2010 with aims to provide a consultative forum to the Ministry of Health (MOH) on matters of policy and future planning for diabetes education programs and related guidelines for the Pakistani population. They are working to promote the standardization, validation, development and delivery of diabetes education programs and aims to set up national and international collaboration for diabetes education activities in Pakistan and the region (Fig. 1).

Heads of state and Government shall provide leadership for NCD prevention and control as part of the development agenda. National Action Plans for management of diabetes in Pakistan shall now be implemented seriously [15]. Unhealthy dietary habits, lack of exercise, excessive tobacco & alcohol intake are four major risk factors proven beyond doubt to reduce NCDs ought to be addressed at the policy level [16]. Having excess taxation on tobacco reduces its consumption and generate revenue. Likewise, elimination of subsidies on fats/oils and sweeteners will help reduction of NCDs. Government shall use whole-of-government approaches to provide leadership for NCDs prevention and control [17]. Enough evidence is now available to incentivize multi-

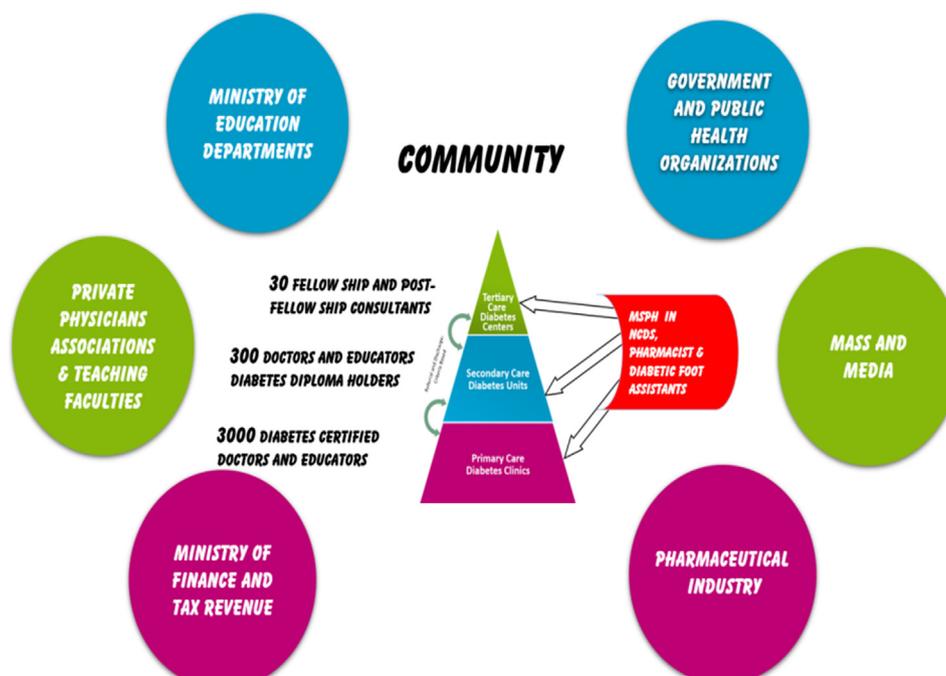


Fig. 1 – Proposed service model in Pakistan: a country on edge with diabetes.

stakeholders. According to health economists, if a country invests 1\$ per person in interventions for NCDs now, it shall expect a return of 7\$ per person in NCDs by 2030 [17].

Increase NCDs with increasing age is not unexpected but premature morbidity and mortality with NCDs must be efficiently and diligently tackled. Finally, though the numbers to treat are really high, but human resources and evidence based solutions are enough to call multi stake holders to ACT NOW.

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There is no declaration of interest or conflict of interest.

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### Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.diabres.2018.11.001>.

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