Editorial

Prevention and Care of Non-communicable Diseases among Youth : Call for Action

Non-communicable Diseases (NCDs), aptly described as the modern "invisible epidemic," are responsible for 71% or 41 million of current annual deaths globally[1], of which more than 15 million people die from a NCD between the ages of 30 and 69 years and 85% of these "premature" deaths occur in low- and middle-income countries[2]. The growing burden of NCDs have threatened poverty reduction initiatives by increasing morbidity and household expenditure on health care. This has slowed down the global objective of meeting the Sustainable Development Goal (SDG) target 3.4 ie, to reduce premature mortality from non-communicable diseases by one third by 2030[3]. WHO member states of which India is signatory, pledged to reduce premature mortality in the age group 30-70 years from cancer, cardiovascular diseases, respiratory diseases and diabetes, the four major groups of diseases accounting for over 80% of all premature NCD deaths by one-fourth within 2025[2]. India's commitment to tackle NCDs was initiated with launching of the robust National Program for Prevention and Control of Cancer, Diabetes, CVDs and Stroke (NPCDCS) in 2008. This program is further strengthened by the'National Multisectoral Action Plan for Prevention and Control of Common NCDs' in 2017-2022 which addresses the need for integrated and coordinated multisectoral approach for effective control of the rapidly increasing burden of NCDs[4]. Despite these initiatives, challenges are many, amongst which lack of population awareness, shortage of trained human resources, dependence on private health sector, and gaps in referral and follow-up of cases are some of the policy gaps being faced[5]. It is needless to say that the recent Coronavirus disease 2019 (COVID-19) pandemic resulting in near disruption of the health systems across the world has also negatively impacted the lives of people living with NCDs[6].

Contrary to common belief, NCDs have also impacted the health of children and adolescents. Each year, globally approximately 1.2 million people aged under 20 years die from treatable NCDs (such as chronic respiratory illness and cancer), accounting for 13% of all NCD mortality[1]. NCDs cause 24.8% of Disability-affected Life Years (DALYs) and 14.6% of deaths among children and adolescents, and NCD risk factors such as child overweight and obesity have negative impacts not only on their mental and Emotional wellbeing, Peer relations, Learning and Other opportunities, these risk factors also expedite the occurrence of NCDs among them in early adulthood[1]. India's NCD scenario is no exception. India is home to the highest number of children and adolescents aged 0-19 years with Type 1 Diabetes

Mellitus (Type 1DM) in the world. Prevalence of Type1DM in India is 10/100,000 population with certain urban pockets reporting over 30/100000 population[7,8]. In India, the prevalence of hypertension among adolescents aged 10 to 19 years ranges from 2% to 21.5%[9]. Combined prevalence of overweight and obesity among adolescents in India wasfound to be 23.9%, where prevalence of obesity and overweight was 6.8% and 17.1% respectively[10].

However, the National *Programme* for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) focuses mainly on adults and there are no major initiatives for addressing young people living with or at risk of NCDs. Many isolated studies point at the enormity of the disease burden among them but programmatic efforts to screen and detect NCDs at the earliest opportunity is yet to materialize,thus making it difficult to understand the rapidity at which the disease burden among Young People Living with NCDs (YPLWNCDs) is increasing in India. Our health system does not provide the platform where the voices of the YPLWNCDs pertaining to their health needs for a better quality of life can be heard. Nor does culturally specific and acceptable chronic care model at primary care level exist to cater to their health needs. Though NPCDCS has a robust population based NCD screening mechanism through Community Based Assessment Checklist (CBAC) Form, screening initiation is from 30 years onwards, thus creating missed opportunity to detect NCDs among youth at the earliest. Hence,it is increasingly being felt that it is high time for the health system to gear up interventions withtwo-pronged approach ie,integrate care of YPLWNCDs within the existing health programmes and create, sustain and expand health-promoting environments to reduce modifiable risk factors of NCD among children and adolescents.

To reach young people at risk or suffering from NCD, World Health Organization (WHO) promotes integrating prevention and control of NCDs with other health programs such as sexual and reproductive health services, maternal and child health services, HIV/AIDS and communicable diseases. The benefits of integration include reaching more young people with NCD services, pooling scarce resources to gain maximum cost effectiveness, reducing stigma often associated with seeking sexual health services and HIV care[1]. In 2018, an independent High Level Commission on NCDs recommended health-in-all policies, whole-of-government, whole-of-society, cross sectoral and life course approach to NCDs[1]. American Diabetes Association (ADA) recommends opportunistic screening for Diabetes Mellitus of at-risk asymptomatic children ie, children >10 years in age, who are overweight (BMI≥85th percentile for age and sex, weight for height ≥85th percentile, or weight ≥120% of ideal for height) and have any one of the following risk factors ie, family history of type 2 diabetes in first- or second-degree relative, signs of insulin resistance or conditions associated with insulin resistance (acanthosis nigricans, hypertension, dyslipidemia, polycystic ovary syndrome, or small for gestational-age birth weight) and or maternal history of diabetes or Gestational Diabetes Mellitus during the child's gestation. Similar guidelines for opportunistic screening for Diabetes Mellitus of at-risk asymptomatic children need to be developed in Indian context.

Aligning evidences from above mentioned notable international best practices, integrating NCD preventionand careserviceswith the existing maternal and child health services may be one approach in reaching out to these vulnerable populations in Indian context. Other avenues may be scaling upthe existing NPCDCS program for effective servicedelivery intermsof early detection by lowering thepopulation-based screening ageto 18 years by Community Based Assessment Checklist form. Inclusion of screeningof NCDs at school/college level routinely at specified intervals and screening of modifiable risk factors like obesity, substance abuse, depression etc. using available screening tools during routine schoolhealth checkups through existing School Health Program will help in early detection of NCDs and facilitate better health outcomes. Creation of a national registry of YPLWNCDs in similar line with the existing Young Diabetes Registry would be enormously beneficial to track, treat and provide them with consistent care. Longitudinal database of the registry would also help to understandthe impact of early-onset disease on children as they grow up; this is needed to ascertain specific intervention targets at appropriate time during their life course.

The heath needs of the children and adolescents who are suffering from NCDs like Type1 DM are intensive as they need a complex and time-consuming lifelong daily Type1DM management which is difficult

to sustain. Parents of Type1DM patients often experience psychosocial stressors due to the daily Type1DM responsibilities. Similarly,management protocols, referral criteria, lifestyle modification and counseling strategies for adolescent hypertensive children are also different which needs capacity building of the health care providers including training of grassroot level workers for providing home based supportive care services. The existing NPCDCS framework can be expanded to cater to service delivery for the YPLWNCDs in the form of primary health-care package for their diagnosis and effective management and ensure equitable access to affordable essential medicines (including insulin) and technologies (including diagnostic equipment and supplies).

At the same time, to scale down the modifiable risk factors among children and adolescents, it is equally important to create, sustain and expand health promoting environments by formulating culturally appropriate strategies to promote the intake of healthy locally available sustainable balanced diet and reduce the intake of unhealthy food and sugar-sweetened beverages. Implementation of fiscal measures to raise the price of sugar-sweetened beverages and unhealthy foods and/or lower the price of healthier foods andlaws and regulations that reduce children's and adolescents' direct and indirect exposure to tobacco, alcohol, illicit drugs,unhealthy foods through media and at points of sale have now become essential to curb the exposure to risk factors of NCDs. Awareness generation on Front of Package nutrition labeling, promotion of breastfeeding, providing access to safe, affordable opportunities for physical activity and making every school ahealth promoting school as per WHO guidelinesare also some of the time-tested initiatives for reducing burden of modifiable risk factors.

To achieve the overarching goal of reducing the preventable and avoidable burden of morbidity, mortality and disability due to NCDs among children and adolescents, aconcerted, multipronged effort is needed, involving the community, health care providers, professional medical bodies, teachers and schools, media, programmatic support and political willingness to generate the momentum for better health outcomes of young India.

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