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Rising burden of Diabetes-Public Health Challenges & way out

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Concept of Universalization of health care is vital as the burden of non-communicable disease is rising with increasing life expectancy. As evident by the trends diabetes would be the seventh-leading cause of mortality by the year 2030 [1]. World health organization has emphasized to control Diabetes through its current theme "Beat *Diabetes*". Diabetes is no more restricted in urban areas only but is also established at rural areas as well. Rural India is more affected by lack of availability of adequate health care resources resulting in lot of undiagnosed hidden cases which remain untreated in the community resulting in serious complications as retinopathy, stroke, cardiovascular diseases, renal diseases and premature mortalities. Limited awareness, affordability and accessibility are other major concerns in rural as well as urban slums. Worldwide, estimated burden of adults with diabetes was 422 million in 2014, as compared to 108 million earlier in 1980. So the worldwide prevalence has doubled from 4.7 % (1980) to 8.5% (2014) [2]. Amongst all diabetics , Type 2 Diabetes account for majority (90%) of cases and these can be prevented as well as treated easily, while type I diabetes cannot be prevented with current knowledge. Diabetes was one of the four priority NCD as per convention passed on prevention and control of non-communicable diseases [3]. Higher proportion of diabetic deaths are occurring in lesser revenue generating countries than in higher revenue generating countries amongst individuals under 70 year age group [2].

Need of the hour is to focus more on health promotion at all levels of prevention. Massages promoting consistent physical activities to maintain adequate body weight, quitting smoking habits, adoption of yoga and meditation, healthy diet needs to be widely disseminated. Simple interventions at community levels can provide rewarding benefits to the community in terms of morbidity and mortality averted through these efforts. Primary prevention can be implemented at various levels like opening up of preventive clinics in various hospitals to provide individual as well as family sensitization during hospital visits as well as community sensitization during various public health days' celebration in the community. In reference to NCD including diabetes, a healthy balanced diet ought to include higher proportion of whole cereals and pulses, nuts, fruits, vegetables, simpler & less refined carbohydrates, processed meat & fish. Higher salt and trans-fatty acids should be avoided in diets wherever possible. [4,5]

High risk screening can be done through outreach camps, house to house surveys and mobile clinics. All medical colleges can be entrusted to collaborate with District Education Officer (DEO) to train at least two teachers from each school regarding primordial prevention practices towards lifestyle diseases. Faculty of Community Medicine can give guest lecture and inspect these schools for lifestyle modification activities from time to time.

Community Based interventions at policy level includes subsidy for healthy foods and pricing for unhealthy foods, regulations for controlling salt and sugar content in processed foods with labels indicating contents, replacing trans-fats and saturated fats with polyunsaturated fats. Policy for tobacco & alcohol control and public awareness on adoption of healthy lifestyle. By providing space for parks, constructing sports complexes & gyms to promote physical activity for population, promoting activity at school for children and in colleges for youth by setting norms for mandatory playgrounds. Similarly facilitating Day care centres & Geriatric friendly clinics for elderly are some of the interventions for promoting health and prevention of disease.

Strategies to combat the rising burden of NCD includes adoption of healthy life styles by inclusion of behaviour that prevent NCDs and some of its identified risk factors. Unambiguous, feasible evidence based public health interventions should be adopted to decrease exposure to known risk factors. Early diagnosis through better diagnostic facilities by periodic opportunistic screening & treatment of population. Structural growth of PHCs and services required for managing non communicable diseases including Diabetes should be provided under one roof at primary health care level for better access and affordable health care [6]. Emphasis should be on human resource development for prevention and treatment of NCDs as Medical officers sitting in PHC are very hesitant to treat uncomplicated Diabetes too. There is a need of establishing essential health services with efficient referral system to reduce disability and mortality due to non-communicable diseases. With the use of 108 Mobile vans transport and early care is improved in some states of India like in Uttarakhand.

Detection of large undiagnosed chronic iceberg diseases like Diabetes and hypertension etc. thus facilitating early diagnosis and treatment to reduce complications and improving outcomes. Providing access to affordable health care and reducing out of pocket expenditure for the poor. Build capacity for chronic disease management at primary health care level with emphasis on follow up for compliance. Enhance utilization of specialists who are concentrated in urban areas, through telemedicine and effective referral system. Specialists should be promoted by providing compensation packages for rendering services in difficult to reach areas which will ensure timely services & access to all for emergency case management.

As per MCI requirement each medical college has to adopt three PHC, In addition to this one school can also be adopted with the strength of at least 1000 students and these schools can be provided with health package in terms of health checkup camps and sensitization during various public health days viz. world no tobacco day, world tuberculosis day, world health day etc. ASHA workers can also be trained to screen high risk population by blood glucose estimation or by identifying and mobilizing high risk population through household surveys. This can facilitate increased utilization of health services as grass root level workers can work as link workers between community and health care providers [6].

Secondary prevention by community physician can be provided at PHC & CHC level. Focus should always be on early detection of diseases through screening programmes and prevention of mortality. Prevention of chronic morbidity and functional impairment should be emphasized more. At policy level advocacy should be done for providing essential medication like insulin available and affordable to all who need them. At tertiary level rehabilitation, disability limitation and palliative care of person with NCDs is also needed.

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