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A Current Status of National Program on Prevention and Control of Diabetes in India

Healthcare

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ABSTRACT

India is a home to 40.9 million people with diabetes, nearly 15% of the global diabetes burden. Projections show that this will increase to 70 million by 2025 [2]. With the largest number of diabetic patients, India leads the world with earning the dubious distinction of being termed the "Diabetes Capital of the World." Impaired glucose tolerance (IGT) is a mounting problem in India [5]. 35% of IGT sufferers go on to develop type-2 diabetes. Indian populations have the following biological susceptibilities. The current study is to discuss the current scenario of National Diabetes Control Program in India.

Introduction:

Diabetes Mellitus is a chronic lifelong condition that affects your body's ability to use the energy found in food. There are two major types of diabetes. All types of diabetes mellitus have something in common normally, your body breaks down the sugars and carbohydrates you eat into a special sugar called glucose [1]. Glucose fuels the cells in your body, but the cells need insulin, a hormone, in the glucose and uses it for energy. With diabetes mellitus, your body does not make enough insulin [3].High levels of glucose can damage the tiny body vessels in our kidney, heart, eyes, or nervous system. It can eventually cause heart diseases, stroke, kidney diseases, blindness, and nerve damage to nerves in the feet [5] A periodic test called A1C blood test estimates glucose levels in your body over the previous three months. It is used to identify overall glucose level and the risk of complications from diabetes including organ damage. [2]

The most common form of diabetes is type 2 diabetes, accounting for 95% of diabetes causes in adults. Some 26 million American adults have been diagnosed with the disease [4]. Type 2 diabetes used to be called as adult-onset diabetes, but with the epidemic of obese and overweight kids, more teenagers are now developing type 2 diabetes. Type 2 diabetes was also called non-insulin dependent diabetes.

Type 2 diabetes is often a milder form of diabetes than type 1. Nevertheless, type 2 diabetes can still cause major health complications, particularly in the smallest blood vessels in the body that nourish the kidneys, nerves, and eyes [6].

Diabetes causes vary depending up on genetic makeup, family history, Ethnicity, health and environmental factors, Obesity, Sedentary lifestyle, Increasing age and Bad diet. Health implications of diabetes can be defined in terms of (Disability-Adjusted Life Year) DALYs. DALYS is a measure of overall disease burden, expressed as the number of years lost due to ill-health, disability or early death.150 million people in the world are now diagnosed with diabetes, compared to 75 million in 1975[4]. According to the World Health Organization (WHO), this figure could be doubled by 2025 to reach 380 million people. 40 to 60% of obese people are affected by Type II diabetes. Young people and children are increasingly affected [7]. In 2005, more than 1 million people died in the world due to diabetic complications, and this is likely to increase by more than 50% in the next ten years according to WHO reports. 50% of the deaths caused by diabetes occur in those less than 70 years old.

India is a home to 40.9 million people with diabetes, nearly 15% of the global diabetes burden. Projections show that this will increase to 70 million by 2025 [2]. With the largest number of diabetic patients, India leads the world with earning the dubious distinction of being termed the "Diabetes Capital of the World." Impaired glucose tolerance (IGT) is a mounting problem in India [5]. 35% of IGT sufferers go on to develop type-2 diabetes. Indian populations have the following biological susceptibilities. Lower threshold for development [1]. Indians have, on average, a lower body mass index (BMI) than those of European descent, and risk of diabetes starts to increase at very low levels of BMI for Indians. Higher percentage of body fat that is concentrated in the abdominal area [8].

Indians have, on average, a higher percentage of body fat than those of European descent, and it is concentrated in the abdominal area. Abdominal obesity is a key risk factor for development of diabetes [5]. Children are often born underweight and adapted to a low-nutrition environment. Low-birth weight infants are more susceptible than those of normal birth weight to obesity and diabetes, especially when raised in an obesogenic environment. Excessive insulin resistance has been observed in Indians as a predominant mechanism leading to type 2 diabetes [9]. The current study is to discuss the current scenario of National Diabetics Control Program in India.

Discussion

So far in India, disease surveillance has been predominantly focused on communicable diseases.[6]Although there were some efforts during the ninth and the tenth five-year plans, only in the draft of the 11th five year plan, was there a mention of an objective on surveillance for NCD risk factors.[8] Integrated Disease Surveillance Project (IDSP) was launched in November 2004 to detect and respond to disease outbreaks quickly. Under IDSP, regular periodic surveys were planned for NCD risk factors such as anthropometry, physical activity, blood pressure, tobacco, nutrition etc [7]. The phase I of NCD risk factors survey was carried out in 2007-08 among the population aged 15-64 years in seven states namely Andhra Pradesh, Kerala, Madhya Pradesh, Maharashtra, Mizoram, Tamilnadu and Uttarkhand.

The report of this survey gave baseline data on NCD risk factors among Indian Population. But, the phase II and III risk factor survey among the rest of the states is not yet initiated [9].

Objectives of National Diabetic Control Program :[5]

- Prevention and control of NCDs.
- Awareness generation on lifestyle changes.
- Early detection of NCDs.
- Capacity building of health systems to tackle NCDs.

The following interventions are planned in the programme: [5]

- Health promotion and health education for the community.
- Early detection of persons with high levels of risk factors (at the risk of developing disease) through screening.
- Strengthening health systems at all levels to tackle NCDs and improvement of quality of care including treatment of sleep disorders and augmenting facilities of dialysis.

The following components are envisaged in the programme [6]

- District NPDCs Programme (626 Districts).

- Non-Communicable Diseases (NCDs) Focal Centers at Medical College (54 Medical Colleges)
- State/Union Territory NCD Cell (35).
- National NCD Cell at Centre.
- Information Education and Communication (IEC)/Behaviour Change Communication (BCC).
- Capacity Building and Research.
- Inter-sectoral Convergence.
- Monitoring (including Management Information System) and Evaluation.

The programme shall be implemented in 626 districts in all states/ UTs in India with the

Interventions at Medical Colleges (54), Districts hospitals, CHCs (3035), PHCs (16778) and all

Sub centers through community level activities [6].
The programme shall be leveraging the strengths of NRHM at the primary and secondary health care set up (Sub Center/ Primary Health Center/Community Health Center/District Hospitals) through convergence, Need based training, Private Public Partnership and NGO interventions in school, workplace and community settings [7]. ASHA or any other available Health worker as well as NGO's and Private Practitioners shall be roped in for providing effective promotion, prevention and control strategies on NCD's and its risk factors for urban areas**.**

Achievements of NDCP:
Due to the alarming scenario of diabetes, the Indian Government started the National Diabetes Control Program during the seventh five year plan in 1987 in some districts of Tamil Nadu, Jammu &Kashmir, and Karnataka. During 1995-96, a sum of 12 lakh rupees was allocated for the programme [9]. During 1997-98, a sum of one crore was allocated. Prevention of diabetes through identification of high-risk subjects and early intervention in the form of health education. Early diagnosis of disease and appropriate treatment. Prevention of acute and chronic metabolic, cardiovascular, renal and ocular complications of the disease. Providing equal opportunities for diabetic patients. Rehabilitating partially or totally handicapped diabetes people.

Failures of NDCP:
Due to non-availability of funds, the National Diabetes Control Program after 1987 could not be expanded further in the remaining states of India. No national awareness survey has been performed in India on diabetes [5].Knowledge of diabetes prevention is very poor among women and people with little education. About 25% of Indian city dwellers have not heard of diabetes.

Recommendations to overcome the failure:
Community empowerment can drive diabetes prevention and treatment efforts. Central and state governments can develop better surveillance systems, obtain more data, and do more research to understand the diabetes risk factors in India. India's dietary guidelines should be revised to prevent diabetes through healthier diets [2]. Ghee, which is a traditional Indian cooking ingredient, should be replaced with healthier cooking oils to reduce the cardiovascular risk factors associated with diabetes [7].

Healthier packaged and processed food policies with the support of food industry can control levels of salt, sugar and saturated fats in food products. Government can implement policies in the transportation system to improve the physical activities of urban citizens [5]. Cycling is a cost-effective way to encourage physical activity.

The private sectors can collaborate to implement government policies through funding, providing better ideas in distribution systems of healthier foods, low-cost medicines for treatment and encouraging healthy eating and physical activities[6].Non-Governmental Organizations (NGOs) can assist with formation of networks to strengthen policies, knowledge generation and translation of research findings for policymakers.

Conclusion:
Additional resources and funds should be allocated toward stronger prevention efforts, diagnostic infrastructures, accessibility and affordability of treatment, and skilled healthcare workers Stronger surveillance measures for people with diabetes or pre-diabetes is crucial and can help stop or slow the progression to diabetes For patients with diabetes, patient education and empowerment, cost-effective management and control, comprehensive care and rehabilitation with equal opportunities are crucial. National Diabetes Control Programme should be strengthened to reach more of the population and efforts are needed to educate the public about diabetes risk factors, prevention, and complications using clear and simple messages through the media. Media and telecommunications can play a vital role in the awareness programmes. Instead of health policies the government should have "Health in all policies".

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