

## DIABETES

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It has been estimated that the global burden of type 2 diabetes mellitus (T2DM) for 2010 would be 285 million people which is projected to increase to 438 million in 2030. It is estimated that total number of people with diabetes in India will rise to 87 million by 2030. However, the status of diabetes control in India is far from ideal. This has resulted in several complications. Moreover, majority of the times, the disease is diagnosed and managed only when complications arises. In this scenario it becomes increasingly necessary to explore the existing situation, problems with regard to managing diabetes, possible solutions and the scope of a nurse in this regard. It is also interesting to note that diabetes related national data is lacking and also there is a lack of streamlined approach in care of Type 2 diabetes mellitus. Being a disease which can be managed in the primary care setting, it is often seen that a major chunk of patients are being treated in high tech tertiary care centers which in turn affects the family budget and national productivity. Considering the fact that the care provided by nurses can be delivered in an outpatient setting, and at primary care level, nurses should explore their scope of practice with regard to this approach which would not only reduce the number of hospital visits, but also reduce expenditures particularly on diabetes complications.

### **Diabetes mellitus in India: Scope for nursing practice in the current scenario.**

#### **Introduction**

India is home to world's largest number of diabetics. Life styles have changed from what it was in the past. Risk-association studies demonstrate that lifestyle factors such as urbanisation, socioeconomic status, stress, sedentary lifestyle, dietary calorie excess, certain specific dietary factors and generalised central obesity are

The impacts of TODM are considerable: as a lifelong disease, it increases morbidity and mortality and decreases the quality of life. Disparity in the availability and affordability of diabetes care, as well as low awareness of the disease, lower age at onset and a lack of good glycemic control are likely to increase the occurrence of vascular complications causing a heavy economic burden for diabetic patients themselves, their families and society.

Based on the available data, the mean glycated hemoglobin levels are around 9% which is at least 2% higher than the goal currently suggested by international bodies.

This has resulted in several complications. In a study conducted among urban South Indian type 2 diabetes population, retinopathy was present in 17.5%, neuropathy in 25.7%, overt nephropathy in 5.1%, and microalbuminuria in 26.5% subjects.

In this scenario it becomes increasingly necessary to explore the existing situation, problems with regard to managing diabetes, possible solutions and the scope of a nurse in this regard.

#### **EXISTING SITUATION**

✓ The absence of a systematic and scientific health statistics data-base is a major deficiency in the current scenario. The health statistics collected are not the product of a rigorous methodology. Statistics available from different parts of the country, are often not obtained in a manner which make aggregation possible or meaningful. (NHP-2002).

✓ In developing countries, less than half of people with diabetes are diagnosed. Without timely diagnoses and adequate treatment, complications and morbidity from diabetes rise exponentially. Most of the time diagnosis is made while seeking treatment for associated complications. (IDF)

✓ Wide disparities in socioeconomic levels, educational background, and the availability of diabetes care pose major hurdles in the management of this disease in India.

✓ Lack of awareness about the disease is a major problem hampering the efforts to contain the disease. The information on healthy lifestyle practices have still not percolated into the minds of educated Indians. The limited studies available on diabetes care in India indicate that 50 to 60% of diabetic patients do not achieve the glycemic



target of HbA1c below 7%. Awareness about and understanding of the disease is less than satisfactory among patients, leading to delayed recognition of complications .

✓Treatment compliance is an important issue. The cost of treatment, need for lifelong medication, coupled with limited availability of anti-diabetic medications in the public sector and cost in the private sector are major reasons.

✓In delivery of diabetic services, the Indian scenario is such that qualified primary care physicians, who are to be the pivotal points for addressing the issue at the community level, get bypassed or even shunted as lesser qualified to address the issue. The simple modalities for detection, management and monitoring are often ignored and are not provided due emphasis.

### **POSSIBLE SOLUTIONS**

✓Inadequate and incomplete data on diabetes can be addressed to an extent by the use of diabetes electronic medical record (DEMR) to connect data from different clinics in different geographic areas in India. The DEMR helps track diabetes care, occurrence of complications and can be a valuable tool for research.

✓The most pressing need in India currently is the primary prevention of diabetes. Screening for glucose intolerance using simplified Indian Diabetes Risk Score and creating awareness on lifestyle modification is an effective tool for the primary prevention of diabetes in Asian Indians.

✓Policy regulations should come up to promote physical activity, especially active transport by providing footpaths for walking and cycling routes, and tax advantages

✓Modify agricultural policies/ practices to encourage production and consumption of fruits and vegetables and healthier oils, create R&D policies that focus on innovative ways to deliver affordable fruit and vegetables on mass scale

✓Spearhead national effort to reduce salt/fat/sugar in processed foods, and implement streamlined, national labeling system.

✓Increase media coverage for heightened awareness and education.

✓Expand healthy school programs by imposing ban on junk food and incorporate physical activity into curricula.

✓Prioritize research that explores innovative ways to prevent and control diabetes and other NCDs.

✓Build capacity in public health schools, medical schools, other academic institutions and work places for primary prevention.

✓ Workable strategies for ensuring timely and appropriate management require extensive linkage and support for enhancing the availability of trained manpower, investigational facilities and drugs

✓A health system strengthening approach with standards of care at all levels, nationally accepted management protocols and regulatory framework can help in tackling the diabetic challenge.

✓The National Rural Health Mission (NRHM) launched in 2005 and the new pilot National Programme for prevention and control of Diabetes, Cardiovascular diseases and Stroke (NPDCS) offer opportunities for improving care for diabetes and other non-communicable diseases through service provision at the primary and secondary levels of care. Guidelines for the management of type 2 diabetes mellitus in the Indian context have also now been developed through a joint consultation by the Indian Council for Medical Research (ICMR) and WHO in 2005

✓Blood tests to detect diabetes are likely to be made compulsory at health centres across India following the internationally followed “opportunistic screening” norm. The scheme is in its pilot stage in 10 states.

✓Redefine the job responsibilities of primary healthcare workforce in detection, monitoring and health education of the life style related disorders like Diabetes and Hypertension.

✓Develop algorithms and management protocols and also to streamline the referral linkages. Make use of tele-medicine facilities which will bridge the gap between the practitioner at the remotest village and specialist centers in towns.

✓The public need to be kept abreast of the latest developments and the latest of the technologies. But, the cheap and alternate options are also to be highlighted.

**NURSING IMPLICATIONS:** Nurses in primary care can help bring down the incidence of diabetes with proper awareness and education and also help those affected manage the disease and maintain quality of life with drugs, exercise and a healthy diet.

Nurses play a key role in primary, secondary and tertiary prevention in diabetes by helping to:

**Screening:** Regular screening of public using Indian Diabetes Risk Score and subjecting them to fasting blood sugar helps to identify prediabetic patients. They should be informed about their risk status and inform the effect of weight loss on lowering their risk status.

**Create awareness and educate:** Nurses help in



preventive healthcare by making public aware of the existence of this disease. They identify those at a high risk-obese people, those with a familial history of diabetes, and those who lead sedentary lifestyles - and educate them about the disease and in self care. They can help them to lead a more active lifestyle with regular exercise, follow a healthy diet, and reduce weight and keep it down.

**Support:** Nurses should empower their patients to monitor their blood glucose levels and accordingly adjust their medications

**Treat/aid in treatment:** Nurses help doctors treat diabetic patients by monitoring their blood sugar regularly, ensuring that they take their medication as prescribed, give them injections if needed, and provide care if they are hospitalized for related complications.

**Maintain quality of life:** Nurses must help patients accept responsibility for their care by following strict instructions like regular exercise, healthy diet and lifestyle changes (no smoking or alcohol in large amounts) will help maintain the quality of life.

✓Nurses are also in a position to assess health beliefs and behavior and identify personal barriers to self management of diabetes, based on which problem solving techniques can be applied and a personal action plan charted out to improve their compliance.

✓Nurses and other healthcare providers must be equipped with systematic education required for providing more organized care in hospitals, educational and social settings such as schools, and work places aiming to overcome the existing gap in treating diabetic patients in our country

✓Camps can be organized in collaboration with social organization like Lions club, rotary club etc for screening of patients for diabetes.

✓Establishing diabetes club would help in increasing compliance to physical activity and dietary adherence thereby controlling their blood sugar.

✓Telephone care provided by nurses has also been reported to be effective in controlling diabetes and its complications as well as alleviating diabetes-induced depression

✓Skilled general practitioners and nurses can control some two third of diseases even in the absence of a specialist Many studies have shown that the care delivered by nurse educators is superior to that delivered by physicians; using this group of health care providers also lowers the

cost of health care

Considering the fact that the care provided by nurses can be delivered in an outpatient setting, and at primary care level, this approach would not only reduce the number of hospital visits, but also reduce expenditures particularly on diabetes complications .

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