

# Awareness of Diabetes Mellitus and its Complications among Patients at Tertiary Care Hospital

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## Abstract

**Aim:** To study the awareness of diabetes and its complications among the patients in tertiary care hospital.

**Objectives:** India is one of the fastest growing countries in the world. The initiative is taken to find out the awareness and to find out how aware our patients are about their diabetes and also to find out about advice given by the treating doctor (general practitioner/specialist). All the information is based on a questionnaire.

**Materials and Methods:** All diabetes mellitus Type 2 patients admitted toward and those visiting the outpatient at our center are included in the study. 500 patients were included in this prospective study.

**Results:** In our study, 48% had familial history, 47% did not know the frequency of blood sugar check-up, amazingly 55% did not know the complications, 45% of patient were not aware of insulin and 40% of the patients did not know names of the tablet of their own treatment.

**Conclusion:** The potential benefits of early detection are improved quality of life, decreased hospitalizations. Screening of diabetes is important as it not only detects new cases but identification of many impaired glucose tolerance and impaired fasting glucose pre-diabetes states. Public health policy should be aimed at the aspects. Clinical practitioners should aim at regular health campaigns in community to identify these hidden cases.

**Key words:** Awareness, Diabetes mellitus, Impaired glucose tolerance and impaired fasting glucose

## INTRODUCTION

India has dubious distinction of having the largest number of people with diabetes. India has around 50 million cases of diabetes, expected to be around 80 million by 2025. It is 15-20% of global burden, contributes 1% of world's diabetes research.<sup>1</sup> It is known as diabetes capital of the world. In India, it is no longer a disease of rich and affluent man disease. It is becoming a problem in middle-income group and poor sections of society. Poor diabetic subjects are more prone to complications and morbidity. Till date, no national awareness program has been performed.

Nearly, 25% of Indian city dwellers have not even heard of diabetes according to a study. Screening of patients is necessary to reduce the burden of disease on individuals as well as community and nation.

Screening is defined as "A process of identifying those individuals who are at sufficiently high risk of a specific disorder to warrant further investigation or direct action." Types of screening are (a) entire population, (b) targeted screening, and (c) opportunistic screening.

Diabetes is part of a larger global epidemic of non-communicable diseases and a major public health challenge globally. This affects 6.6% (285 million people) of the world's population in the 20-79 years age group.<sup>2</sup> According to the International Diabetic Federation (IDF), this number might reach 380 million by 2025.<sup>3,4</sup> The IDF in 2007, the country with the largest numbers of people with diabetes is India (40.9 million), followed by China (39.8 million), the United States (19.2 million), Russia.<sup>5,6</sup>

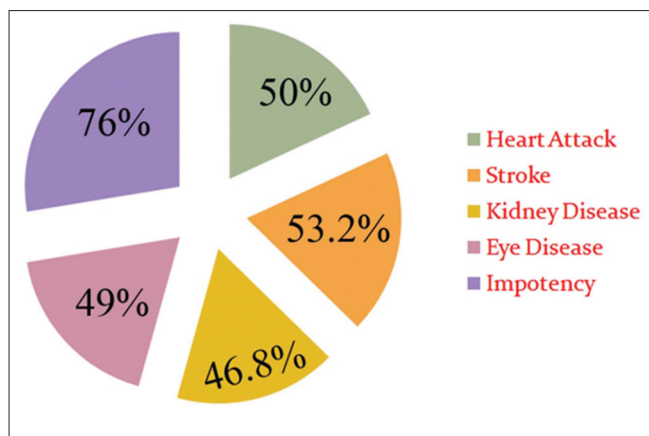
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**Figure 1: Percentage of patients unaware of diabetic complications**

Nearly 15% of the global diabetes burden is in India accounting for 40.9 million people with diabetes. Projections show that this will increase to 70 million by 2025. As India has a population of 1.2 billion, 40% of who are under the age of 18, investment in the health sector of India's future is crucial.

Diabetes is a part of metabolic syndrome with high blood sugar levels with impairment of protein, fat and carbohydrate metabolism. There is increased burden of disease all over the world. Industrialization and westernization of culture have led to a global pandemic. A total number of impaired glucose tolerance (IGT) is more than the diabetes people itself. Screening is important, as in diabetes there is a long asymptomatic period, so major portion of people are undiagnosed and complications can be delayed or prevented if diagnosed early.

A questionnaire-based study was done at our center to find out awareness of diabetes and its complications in the community surrounding the hospital.

### MATERIALS AND METHODS

This is a prospective study, all diabetes mellitus (DM) patients admitted to hospital as IN patients and OUT patients at tertiary care hospital are included in the study and the study is based on a questionnaire and the sample size is 500 patients.

### RESULTS

There were 500 patients included in the study. There were 348 males and 152 females in the study. Only Type 2 DM patients were included in the study.

Questionnaire	Yes (%)	No (%)
When diagnosed, duration known to the patient	82	18
Was the diagnosis based on FBF/PPBS OR RBS	82.8	17.2
Did the patient know where the diagnosis is/was made (GP/hospital)	89.2	10.8
Family history	48	52
Was the patient educated at diagnosis by the doctor who has diagnosed first	55.4	44.6
Were you told about the frequency for blood sugar to be checked initially	53.5	46.5
Were you told about the insulin at any stage during your treatment? Whether discussed	55.4	44.6
Is diet advised to you by the doctor?	68.8	31.2
Was foot care, eye care advised anytime during treatment?	64.3	35.7
Was exercise advice given	71.5	28.5
Do you know the name of your own medications	60	40

Questionnaire	Yes (%)	No (%)
Were you made aware of complications/do you know about the complications		
Heart attack	50	50
Stroke	26.8	73.2
Kidney disease	49.2	50.8
Eye disease	31.25	68.75
Impotency	19.7	80.3

The percentage of patients unaware of diabetic complications like impotency was 76%, 53.2% stroke, 50% Heart attack, 49% eye disease and 46.8% with kidney disease (Figure 1). kindly add this in line 31 of page 2 of results.

In our study, 48% had familial history, 47% did not know the frequency of blood sugar check-up, amazingly 55% did not know the complications, 45% of patient were not aware of insulin and 40% of the patients did not know names of the tablet of their own treatment.

### DISCUSSION

This scenario is seen in worldwide. People are not aware of diabetes disease and its complications, how it affects their personal life and family. Many awareness studies had also similar results. A questionnaire was tested in Onondaga county New York as a community screening program, which showed a sensitivity of 80% and specificity of 35.7<sup>8</sup> Public response to screening was seen in few studies in the range of 30-80%.<sup>9,10</sup> Aim of the screening studies should be clean and relevant to the individuals at risk of undiagnosed diabetes or at risk diabetes.

Epidemiological surveys are necessary along side of these tests. Data should be maintained about particular community and periodically it should be screened. The

cost of screening can be reduced if screening data is linked to other programs which are done like cardiovascular screening should be linked to glucose and lipid testing's. National diabetic programs, media awareness programs on television, advertisements of screening program are done all worlds over. RCT'S and observational studies have been done in countries to maintain the data of diabetes patients in their registry.<sup>11</sup>

## CONCLUSION

The potential benefits of early detection are improved quality of life, decreased hospitalizations. Screening of diabetes is important as it not only detects new cases but identification of many IGT and impaired fasting glucose pre-diabetes states. Public health policy should be aimed at the aspects. Clinical practioners should aim at regular health campaigns in community to identify these hidden cases.

In view of above results, authors like to conclude that greater effort is needed to create awareness regarding diabetes disease burden and its complications related to it can be reduced.

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