



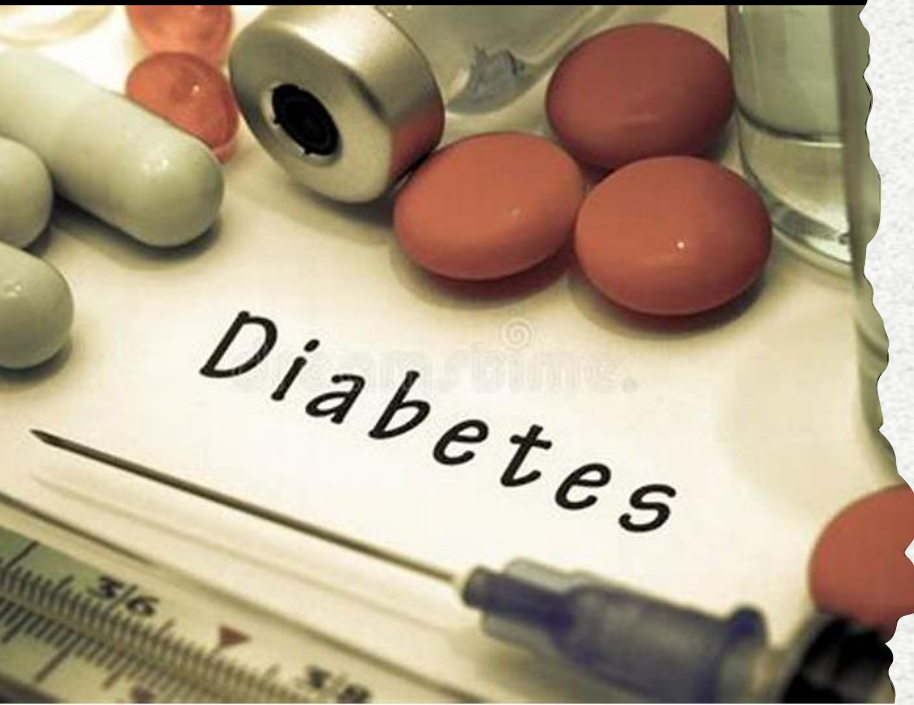
RESEARCH STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE ON INSULIN ADMINISTRATION AMONG DIABETIC PATIENTS AND THEIR CAREGIVERS

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INTRODUCTION

- Diabetes is a chronic progressive metabolic disease in which the regulation of blood sugar is affected.
- Pancreas: Either fail in the insulin production or

Our body is unable to use insulin effectively which has been produced.

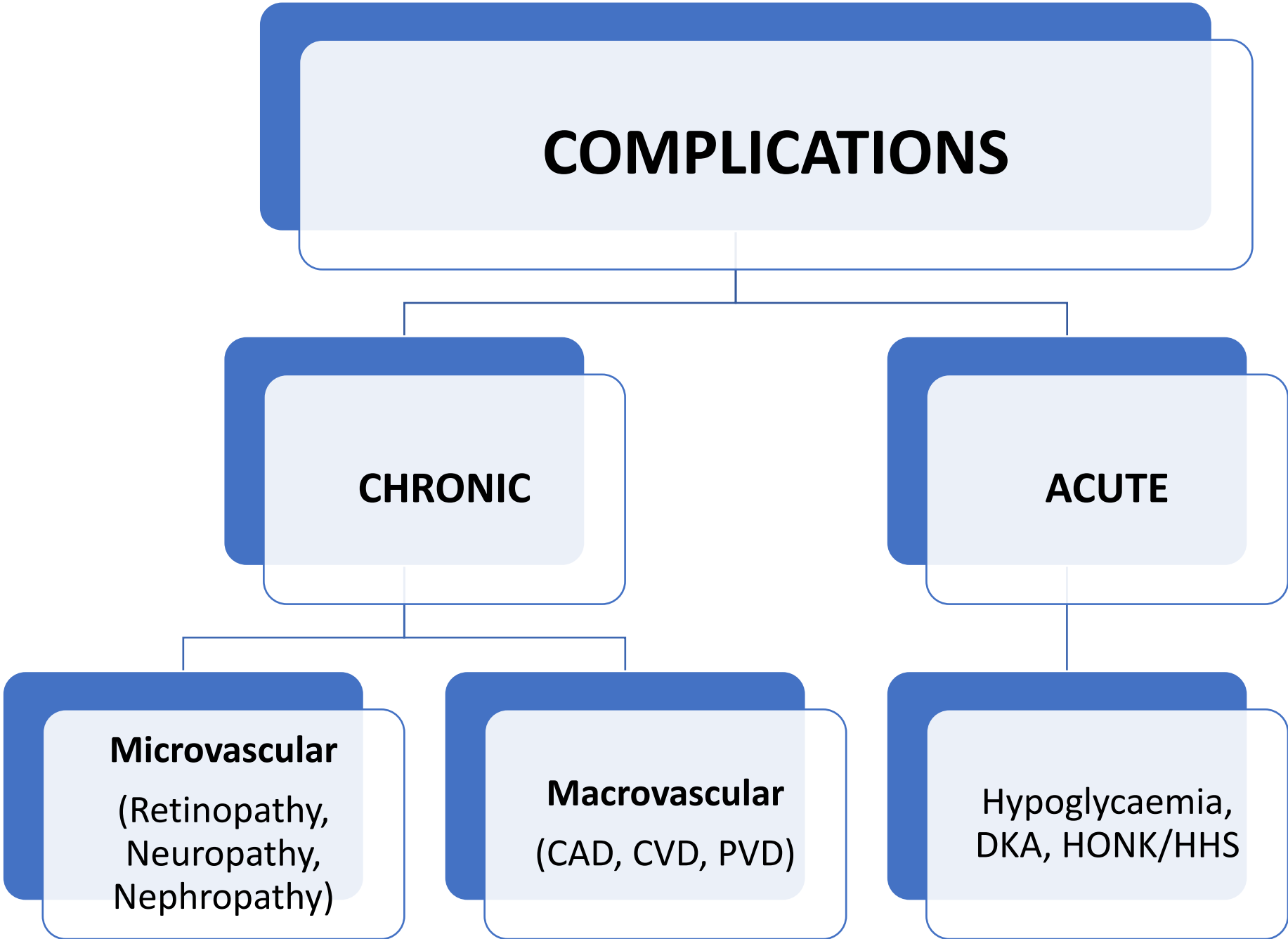
INSULIN:

- Insulin is the energy forming hormone which serve as a transport system to drive the glucose molecule produced in our body to the cells and in turn generate ATP and thus, produces energy.

Types of insulin produced in body:

- **Basal:** This insulin is released during empty stomach or during fasting.
- **Bolus:** This insulin in our body is released between mealtime.

COMPLICATIONS



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graph TD; A[COMPLICATIONS] --> B[CHRONIC]; A --> C[ACUTE]; B --> D["Microvascular<br/>(Retinopathy,<br/>Neuropathy,<br/>Nephropathy)"]; B --> E["Macrovascular<br/>(CAD, CVD, PVD)"]; C --> F["Hypoglycaemia,<br/>DKA, HONK/HHS"];
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The diagram is a hierarchical flowchart. At the top is a box labeled 'COMPLICATIONS'. A line from this box branches into two boxes: 'CHRONIC' on the left and 'ACUTE' on the right. From the 'CHRONIC' box, a line branches into two boxes: 'Microvascular (Retinopathy, Neuropathy, Nephropathy)' and 'Macrovascular (CAD, CVD, PVD)'. From the 'ACUTE' box, a line leads to a single box: 'Hypoglycaemia, DKA, HONK/HHS'. All boxes have a blue header and a light blue body.

CHRONIC

Microvascular
(Retinopathy,
Neuropathy,
Nephropathy)

Macrovascular
(CAD, CVD, PVD)

ACUTE

Hypoglycaemia,
DKA, HONK/HHS

RESEARCH QUESTION

Should Biopharmaceutical Companies work more on the Insulin Compliance to make people more acceptable towards insulin use?



OBJECTIVES

To assess the knowledge and understanding of the HCP's and people towards Insulin.

To analyses the first and most frequent therapy adopted by doctors to resume Insulin.

To analyses the acceptance of insulin compared to OAD's.

METHODOLOGY



Study Design:



A cross-sectional study design was accustomed to verifying the data of patients and doctors regarding the insulin administration.



Method:



A structured questionnaire was used for the people including doctors and patients



Study Sample and setting:

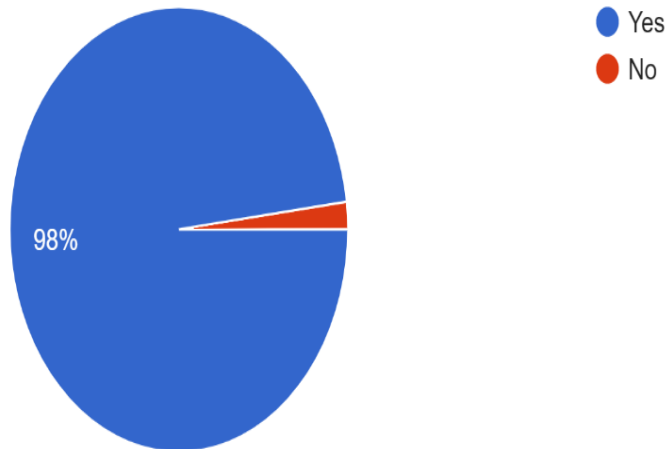


The size of this study was 100 (50 patients and 50 doctors)

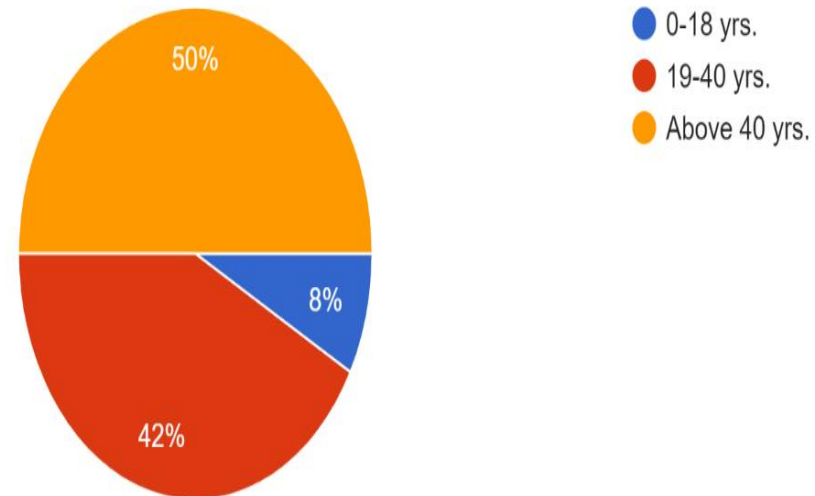
RESULTS AND FINDINGS

Patient's Perspective

Awareness of Diabetes



Diagnosis of Type 2 Diabetes at different age groups

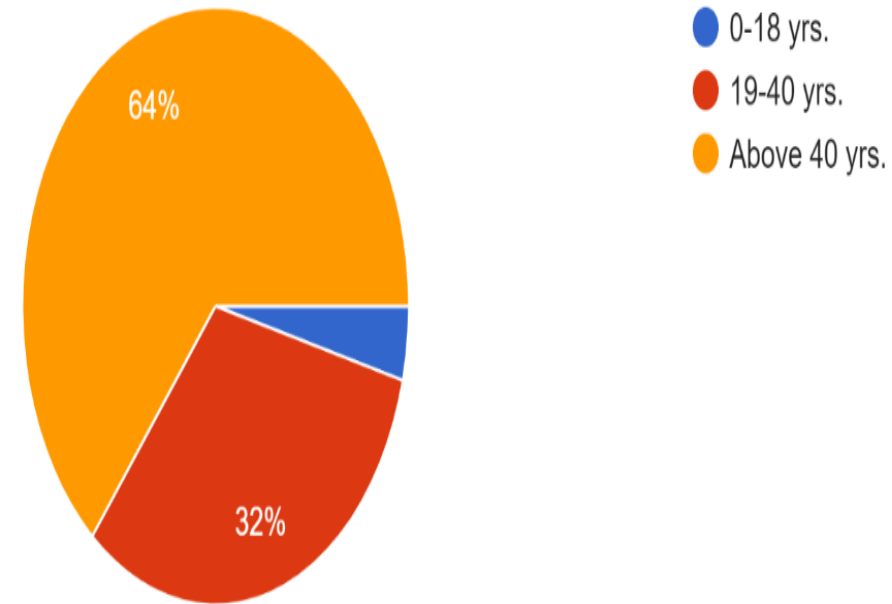


Initiation of Insulin Therapy

According to the survey maximum number of patients whose HbA1c doesn't get controlled by OAD's start the insulin.

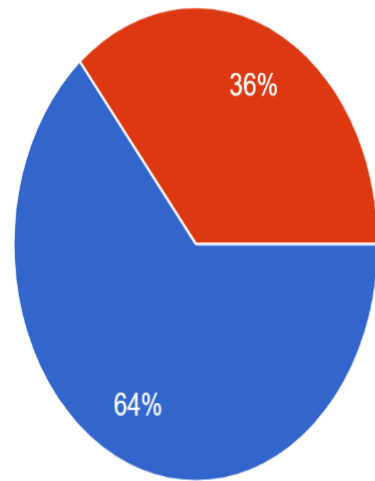
And the onset of insulin therapy is delayed at the age of 40 and above the patients are initiated into the insulin therapy.

64% patients have started insulin intake above the age of 40, 32% at the age of 19-40 and very less patients are administered insulin between the age of 0 to 18 years.

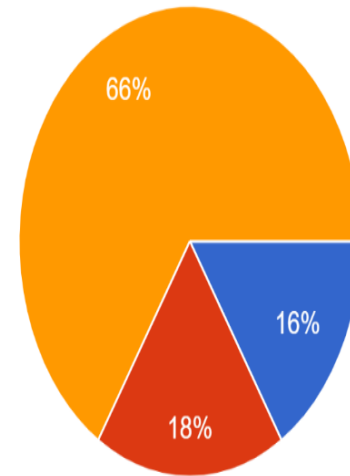


Patients Compatibility towards OAD's and Insulin

Patient's dependence on different types of insulin

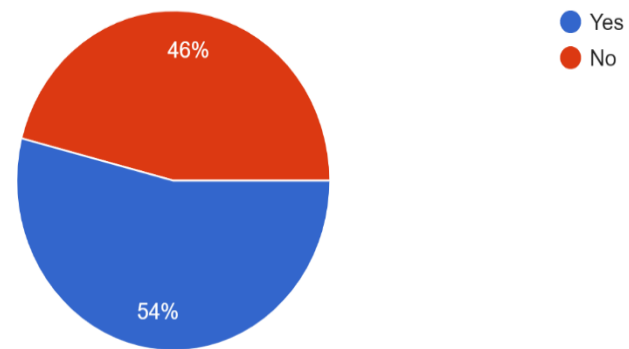


● Oral Anti diabetics
● Insulin

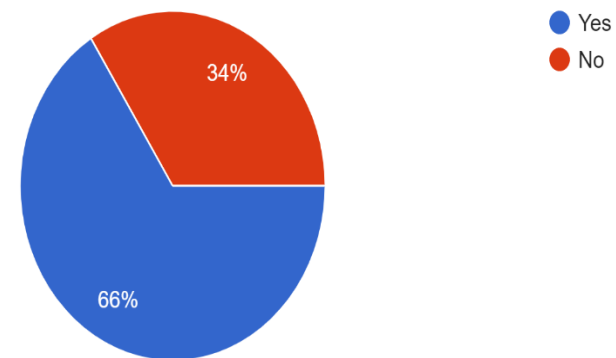


● Fasting/ Basal
● Meal time/ Bolus
● Both

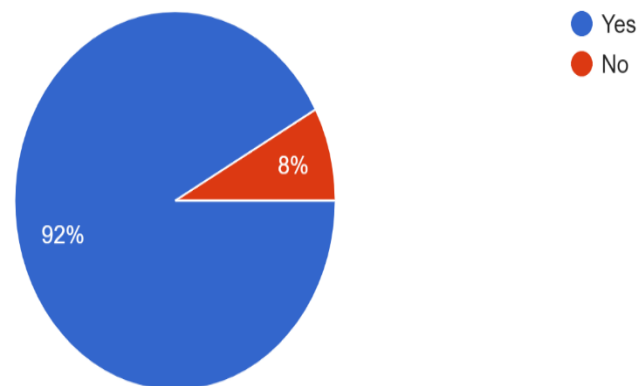
Fear of administering insulin therapy



Social Stigma while administering insulin therapy



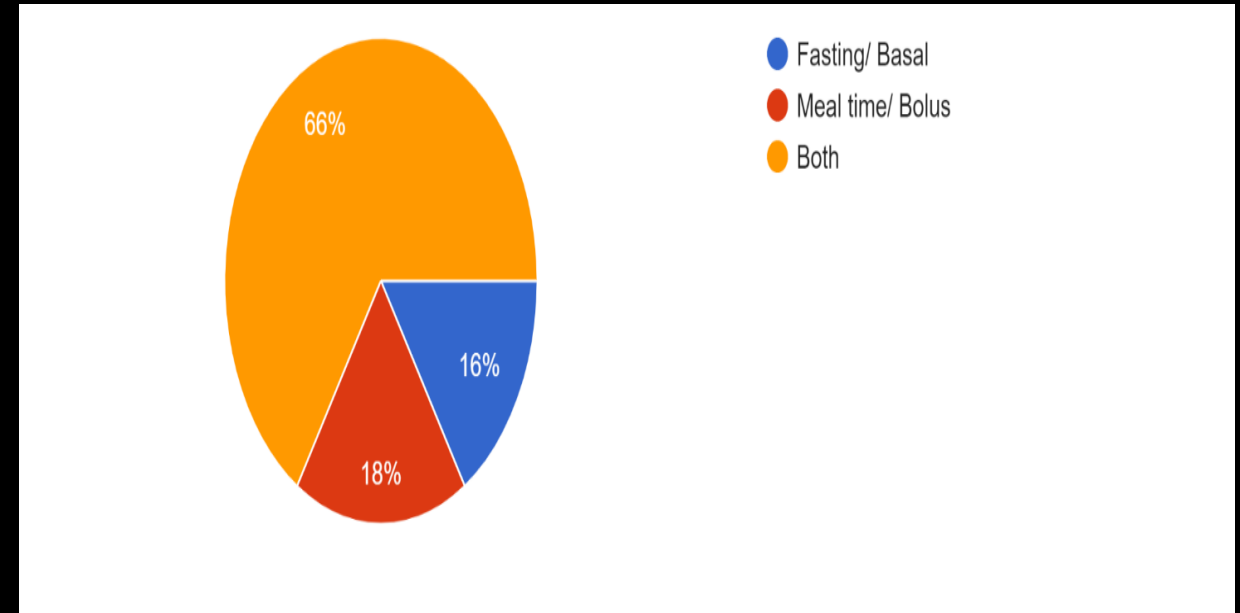
Agreement of insulin therapy for achieving HbA1c targets



Patient's dependence on different types of insulin

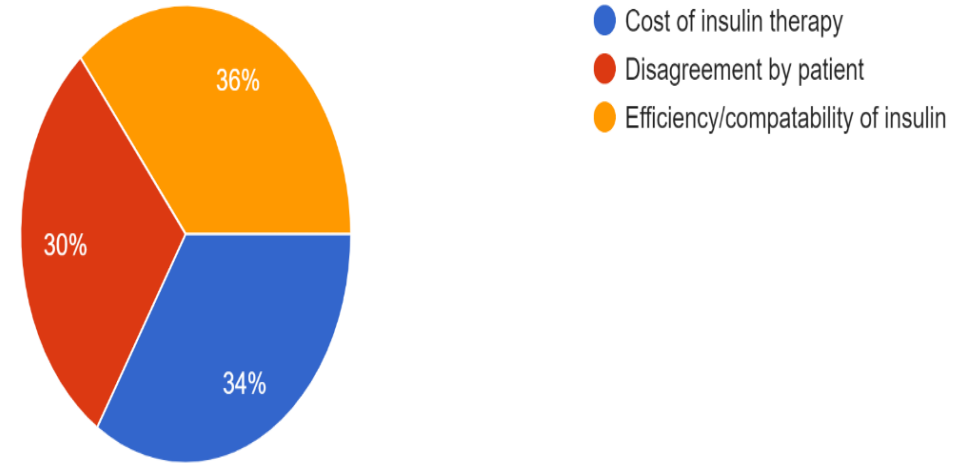
Indian Reality:

- High carbohydrate diet
- They have high PPG concern
- Uncontrolled on multiple OAD's
- Need for simplicity and convenience
- Thus, 66% of the patients rely on both i.e., premix insulin which covers both FPG and PPG and 18% on mealtime insulin and rest 16% on FPG or basal insulin.

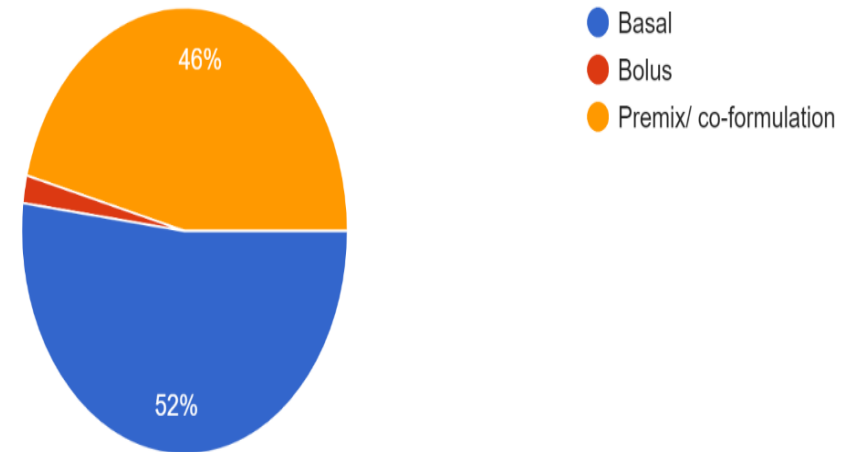


DOCTOR'S PERSPECTIVE TOWARDS INSULIN THERAPY:

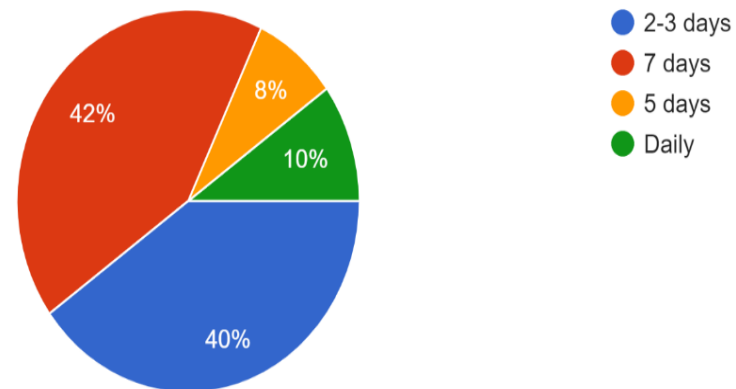
**Obstacles faced for initiating insulin therapy
by doctor's**



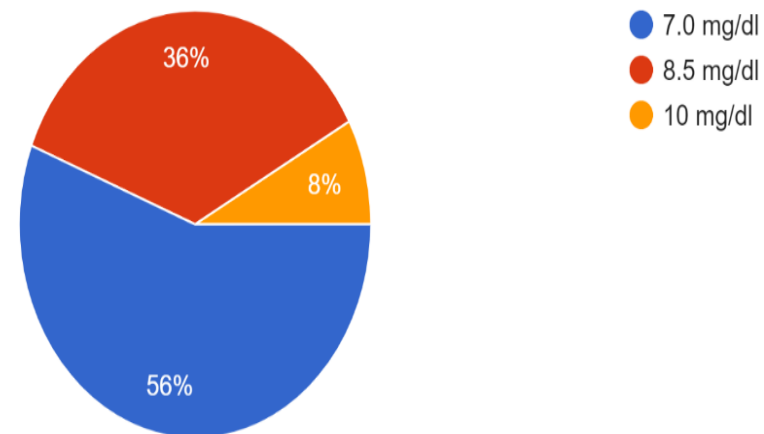
**After 3 multiple OAD failures what is the
starting insulin choice?**



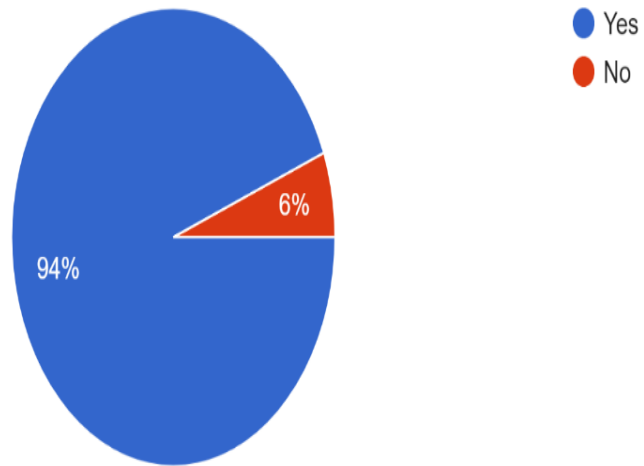
Titration of basal insulin dose



Initiation of insulin therapy at different HbA1c

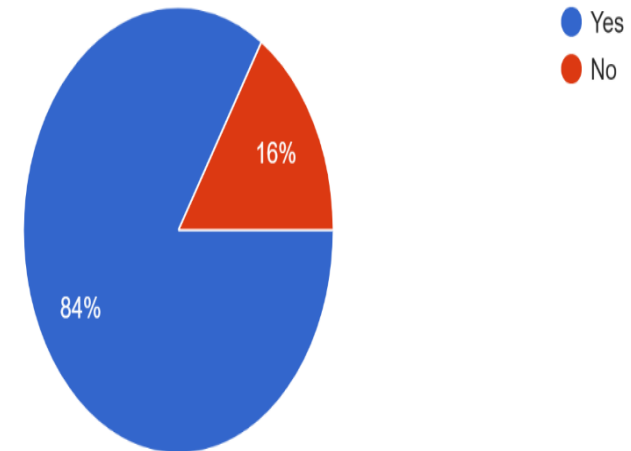


Result achievement of insulin therapy



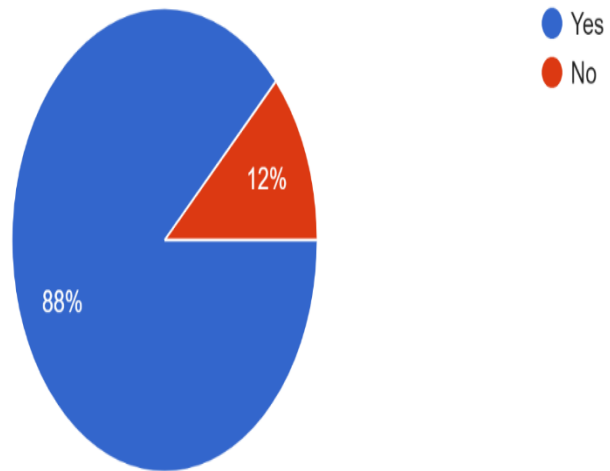
Insulin the best for achieving the HbA1c targets, 94% doctors agree on this term and rest 6% still prefer OAD as a choice.

Response of OAD's v/s Insulin

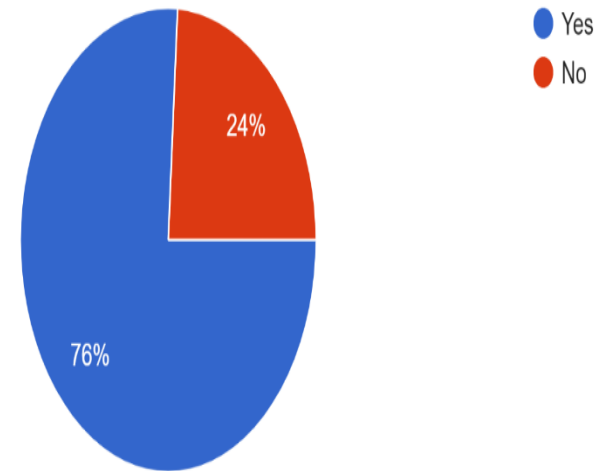


About 84% of the doctors agree on the terms that insulin is better than OAD's.

- **Responses on costly therapy of insulin by Doctor's**



- **Response on costly therapy of insulin by Patient's**



INSULIN IS PROVEN COSTLY

CONCLUSION:

- It was observed that the diagnosis of diabetes has been a major challenge.
- Perception of taking Anti diabetes drugs instead of insulin is still prevalent
- There is a huge fear and social stigma while initiating insulin therapy
- 66% of the patient reply on the premix insulin (which covers both PPG and FPG)
- insulin is able to achieve the HbA1c targets.
- After all the benefits of insulin it is a costly therapy as per patients
- The starting insulin choice by the doctors when the patient fail on multiple OAD's is basal insulin
- Titration of insulin is done once a week by many doctor's.
- Maximum doctor's initiate insulin at HbA1c 7 or more. When the OAD's fail to work anymore.

RECOMMENDATIONS

Insulin education to be provided to the patients.

Insulin pen must be designed in such a way so that the patient faces a minor pain when pricked with insulin.

Once in a week insulin injection must be designed to make it more convenient for patients use.

A simple and convenient pen must be design for patient use.

Cost of insulin should be made affordable.

Device demonstrator and diabetes educator must be allotted to the doctors to deliver the benefits of insulin.

THANKYOU
