

Market Investigation of Sulfonylureas & NCEs in Urban Cities of India

Submitted By: Pruthvi Bhanabhagawanwala
Batch: MBAPM12
Roll No.: 0259

Mentor: Dr. Saurabh Banerjee
Dean & Associate Professor
School of Pharmaceutical Management



Background of the study

- ▶ Diabetes is one of the major chronic diseases in the world's leading to morbidity and it is a major risk factor for cardiovascular disease.
- ▶ Around 422 Mn people are suffering from diabetes worldwide with 1.5 Mn death each year
- ▶ India is called the capital of Diabetes with having estimated cases of 73 Mn cases in the adult population.
- ▶ There are 2 types of Diabetes, Type 1 and Type 2 (more prevalent in the world).
- ▶ For treatment, lifestyle changes with medication are necessary.
- ▶ Various types of medication used for treating diabetes, in which sulfonylureas is an insulin enhancer which increases insulin secretion in the cells which is preferred treatment second line treatment for type 2 diabetes.
- ▶ Treatment of diabetes is constantly evolving New Chemical Entities are evolving and constant research is going on to decrease side effects such as hypoglycemia.
- ▶ So, for that, the market investigation is necessary to derive a better understanding of the estimation of the market of sulfonylureas and NCE.

Objective of the Study

- ▶ To estimate market value and market volume of Sulfonylureas and NCE evolving
- ▶ To determine the market of drug products and brands of Sulfonylureas
- ▶ To determine the market drivers and challenges for Sulfonylureas
- ▶ To understand the future of evolving NCEs and their possible impact on traditional therapy

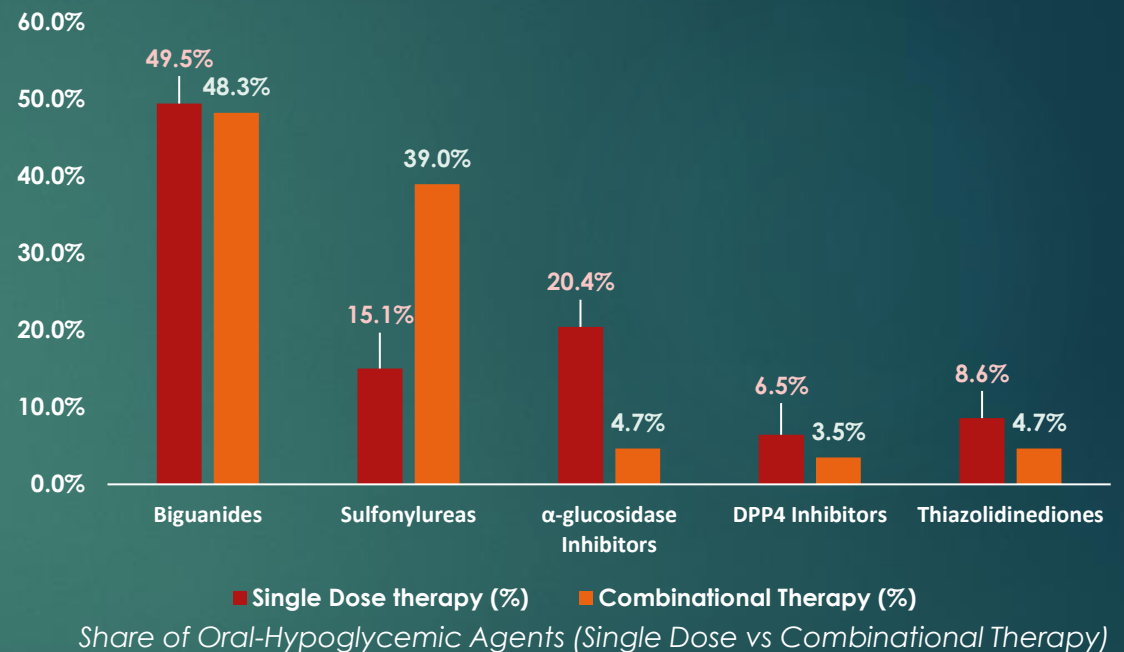
Methodology

- ▶ Contains both primary & secondary research
- ▶ Primary research was conducted through google forms for 100 dispensing pharmacists of Surat and Ahmedabad cities of Gujarat by non-probability convenience sampling
- ▶ Secondary research was conducted through data from renowned review articles and market reports
- ▶ Collected data were analysed through Microsoft Excel

Result

► Share of OHAs in India

- Biguanides i.e., Metformin has the highest share in the Indian market in both single doses as well as combinational therapy (around 50% for both).
- Sulfonylureas i.e., Glimepiride, Glipizide, Chlorpropamide, etc. are the second most preferred treatment for diabetes but majorly combinational therapy of sulfonylureas is preferred more rather than the single dose (15% of a single dose, ~40% combinational therapy) (Glimepiride + Metformin, Glimepiride + Metformin + Pioglitazone).
- Share of other classes of drugs i.e., α -glucosidase inhibitors, DPP4 inhibitors, and Thiazolidinediones has less prescription rate than Biguanides and Sulfonylureas



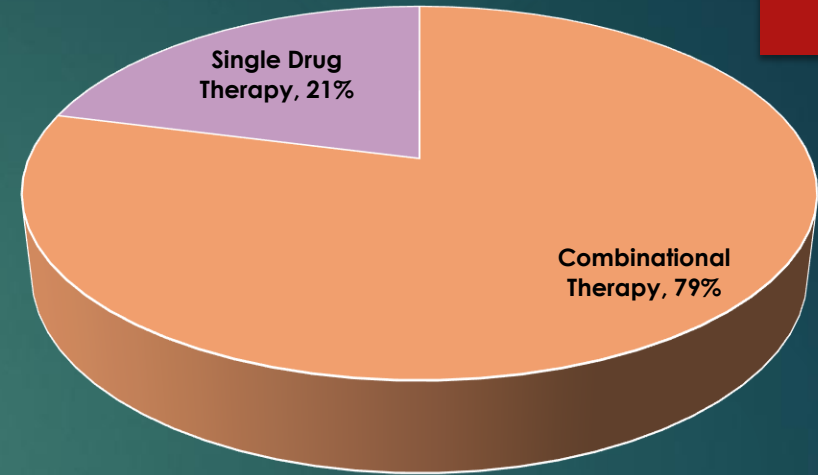
Result

► Preferred therapy of sulfonylureas & molecules

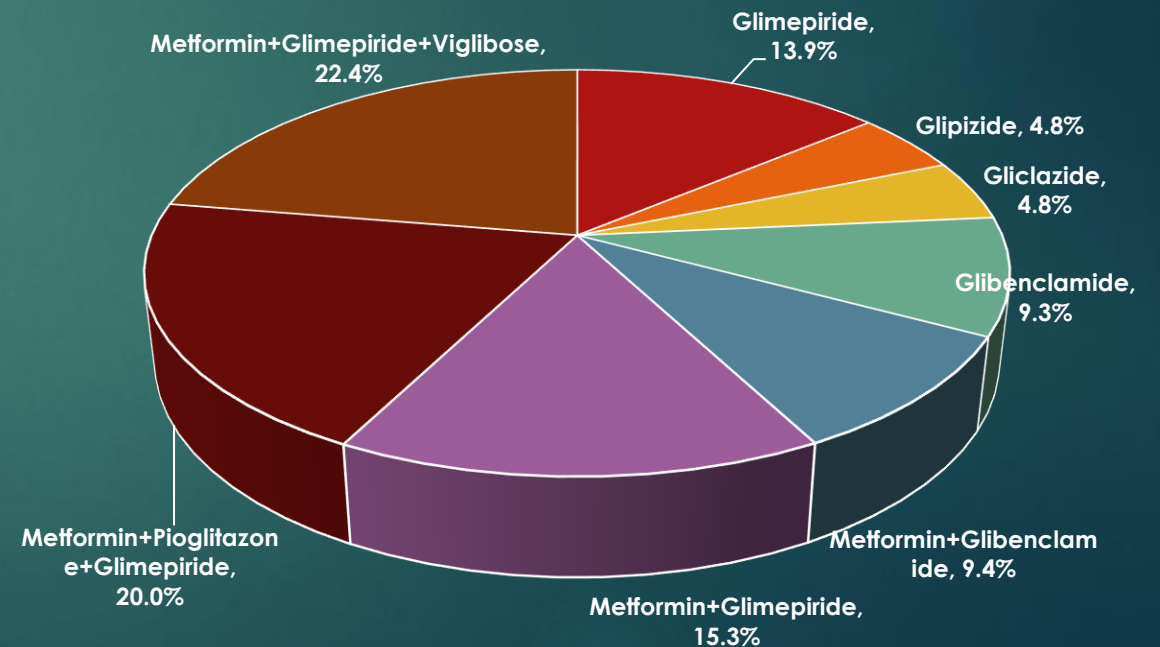
- More than 1/3rd of prescriptions of sulfonylureas therapy were for combinational therapy. Only 21% of total prescriptions were single drug therapy

► Top prescribed molecule & its share

- Metformin + Glimepiride + Vigliboase the has highest prescription rate (22.4%) across all combinations of sulfonylureas with Metformin + Pioglitazone + Glimepiride, second (20%). Metformin + Glibenclamide has a prescription rate of 15% for two-drug combinational therapy.
- Single dose therapy of sulfonylureas including Glimepiride (13.9%), Glibenclamide (9.3%), Glipizide (4.8%), and Gliclazide (4.8%)



Distribution of Single Dose and Combinational therapy



Top Prescribed Molecules of Sulfonylureas

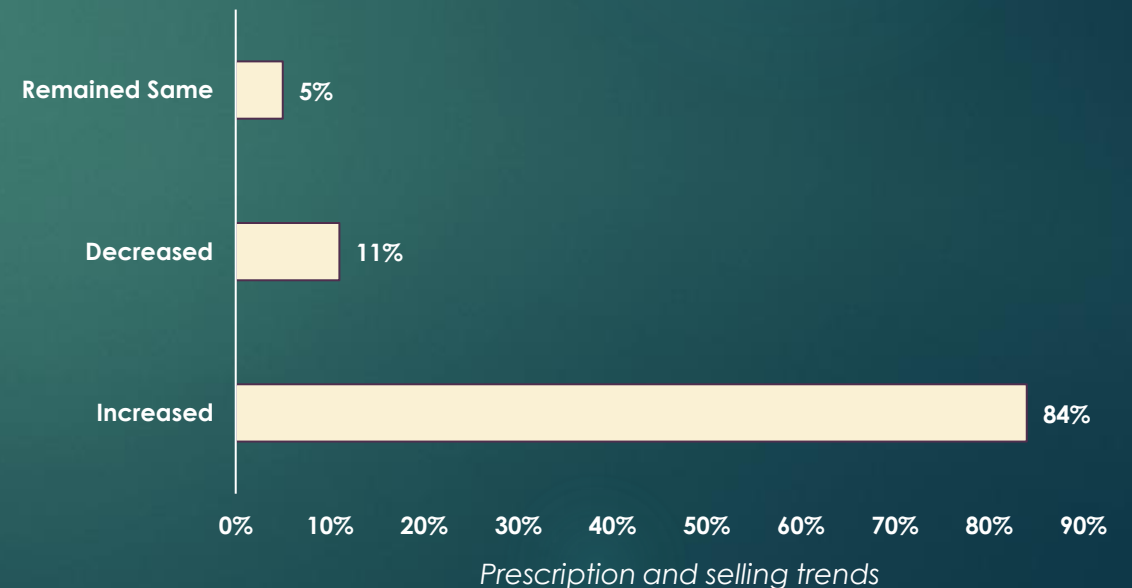
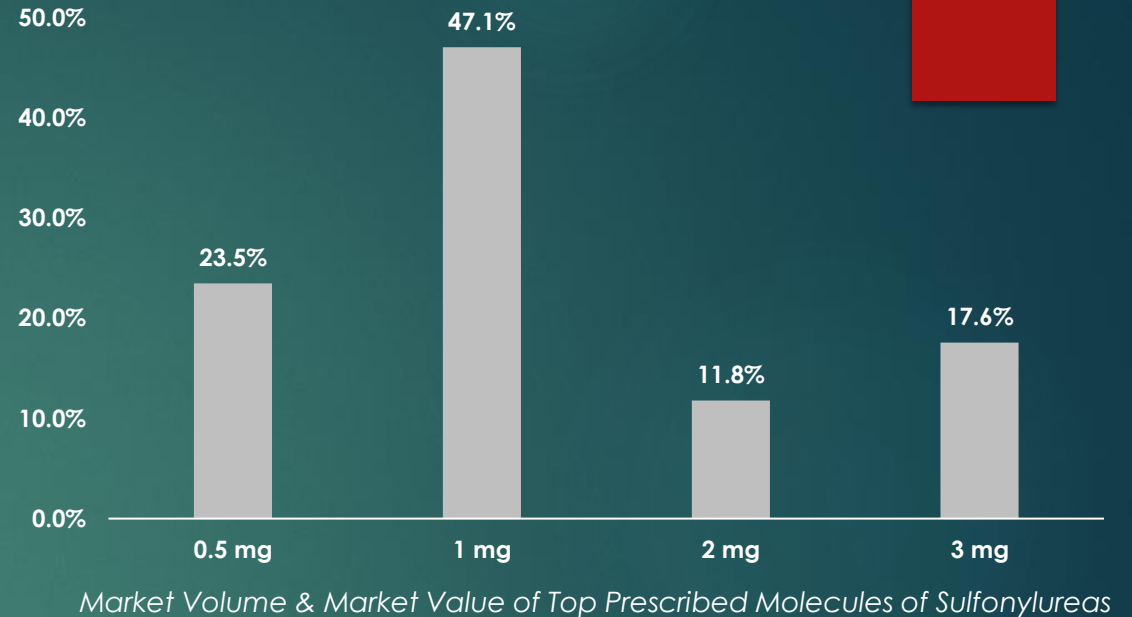
Result

► Dosage Distribution of Sulfonylureas

- 1 mg dose of any sulfonylureas was prescribed the most as majorly the prescriptions were combinational therapy.
- For the severe cases in which blood sugar level was not controllable, a high dose is prescribed as the daily limit of sulfonylureas was a maximum of 6 mg for severe cases.
- 0.5 mg dose of sulfonylureas was prescribed for maintenance therapy.

► Prescription & Selling Price Trends

- COVID-19 has a major impact on the prescription generation and prices of drugs. As per 84% of respondents, prescription and selling prices were increased after the COVID-19 and as per 11%, it was decreased.



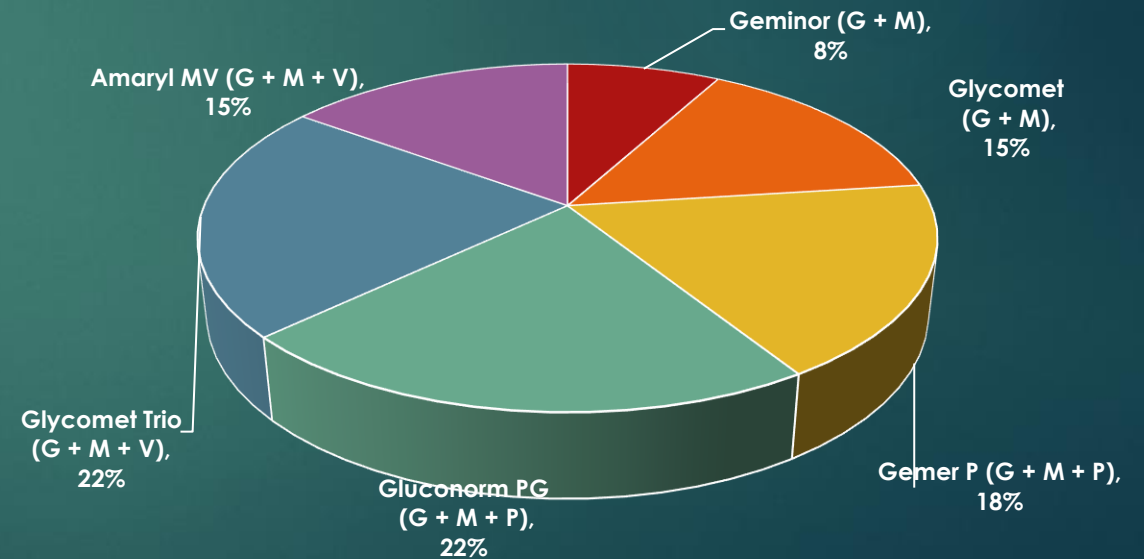
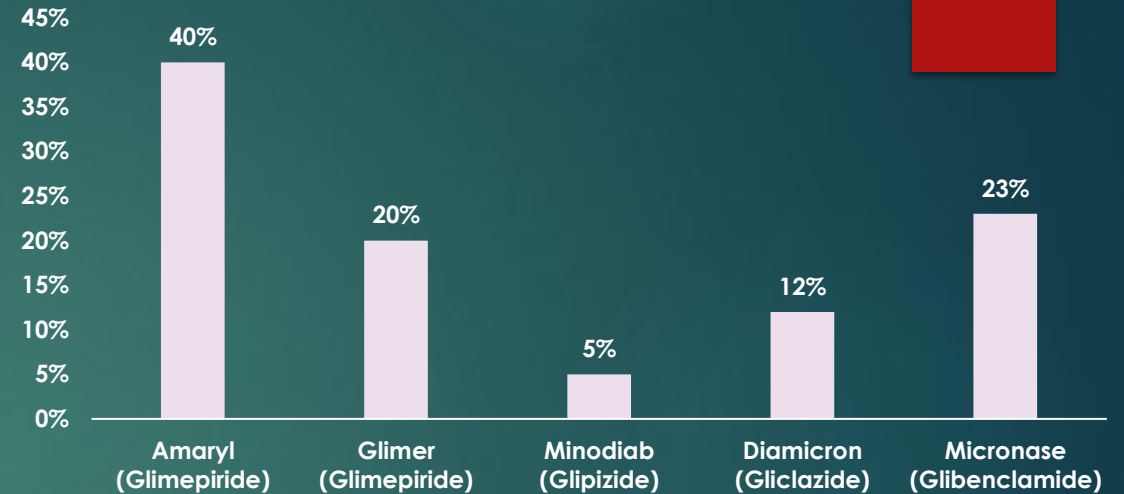
Result

► Top Brands & its prescription share

- Amaryl i.e., Glimepiride of Sanofi Pharmaceuticals has the highest generation of prescriptions (40%). Glibenclamide single dose therapy of Pfizer pharmaceuticals named Micronase has a prescription generation of 23% i.e., second highest prescribed brand. Another Glimepiride brand named Glimer of Abbott Pharmaceutical has a prescription share of 20%.
- Glycomet from USV limited a has 15% prescription share e for the Metformin + Glimepiride combination. Glycomet Trio of USV Limited is a combination of Metformin + Glimepiride + Viglibose and Gluconorm PG of Lupin Limited the highest prescription share in combination therapy i.e., 22%.

► Top market players:

- USV Pharmaceuticals Limited
- Sanofi India Limited
- Lupin Limited
- Pfizer India
- Abbott

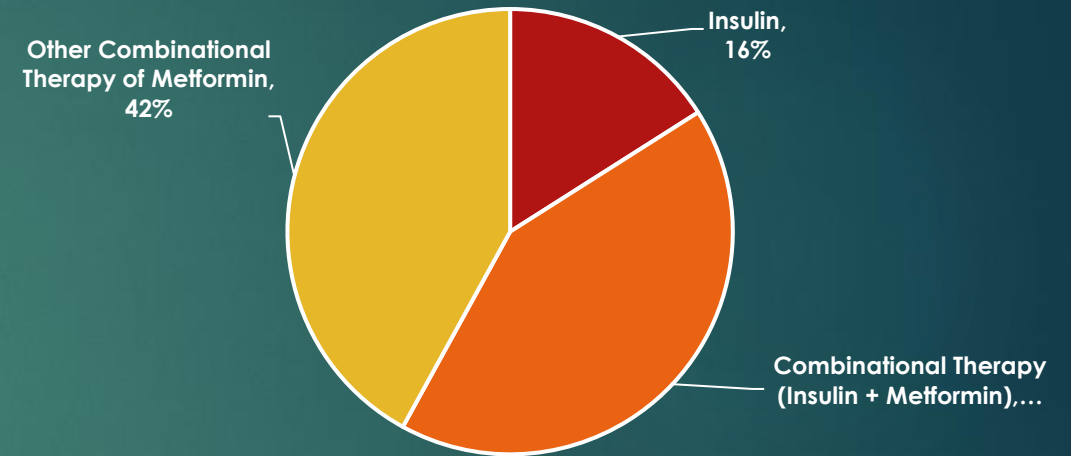


Top Brands and its prescription share

Result

► Substitute therapy of sulfonylureas

- There are 3 major substitute therapies for sulfonylureas i.e., Insulin (single dose), Combinational therapy of Metformin and Insulin, and Combinational therapy of Metformin other than with sulfonylureas.
- As per 16% of respondents, Insulin was a substitute therapy for sulfonylureas.
- For 42% of respondents, other combinational therapies of Metformin substitutes for Sulfonylureas



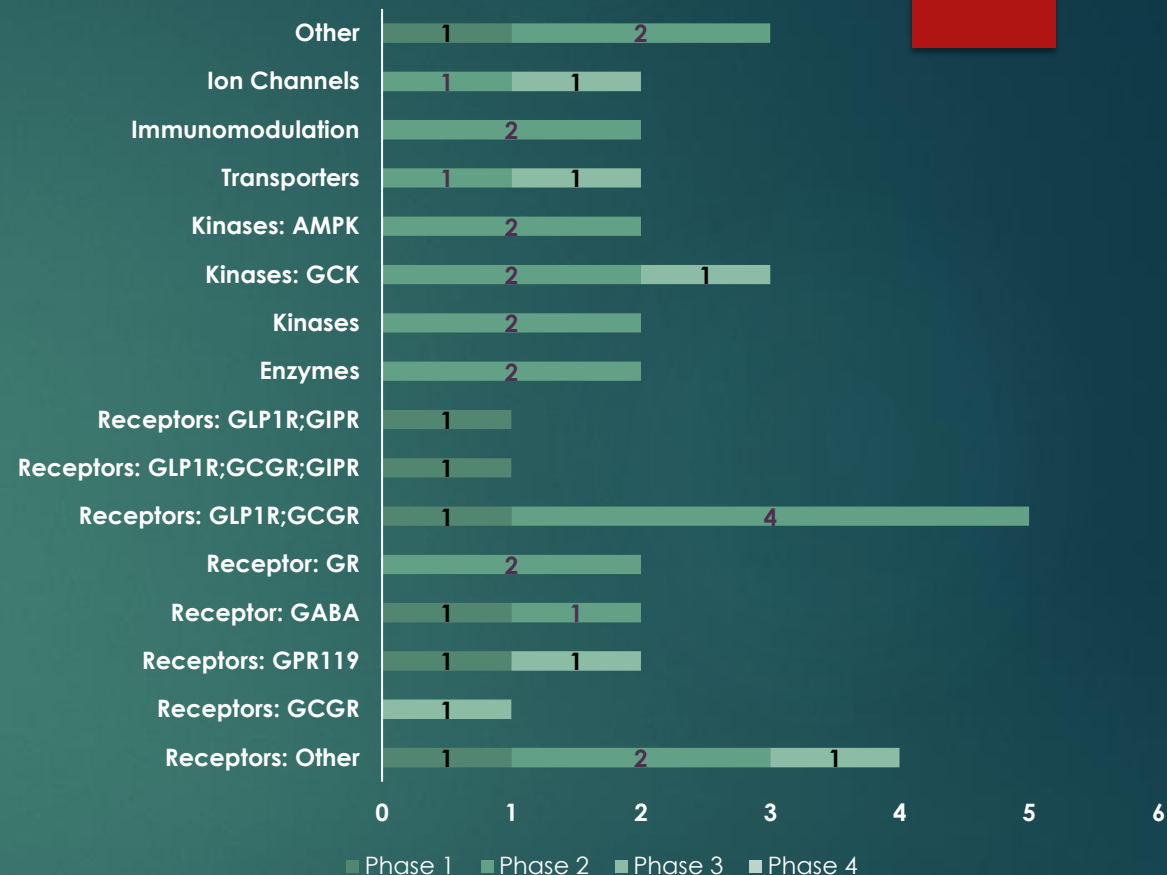
Substitute therapy of Sulfonylureas

Result

► NCEs Under Clinical Trials

- According to the FDA data, it is found that there are around 36 NCEs under clinical trials. In which, entities are targeting various receptors, Enzymes, Kinases, Transporters, Immune systems, Ion Channels, and Others.

	Phase 1	Phase 2	Phase 3	Phase 4
Receptors	6	9	3	
Enzymes		2		
Kinases		6	1	
Transporters		1	1	
Immune System		2		
Ion Channels		1	1	
Others	1	2		



Distribution of New Chemical Entities in phase of Clinical Trials

Conclusion

- ▶ The sulfonylureas occupy 22% of the total OHA market in Ahmedabad and Gujarat but this market is highly influenced by the other OHA therapies.
- ▶ In recent years, many new chemical entities will be launched, which may have higher potency and a better onset of action.
- ▶ For oral hypoglycemic therapy, other than metformin single dose therapy, doctors prescribed combinational drug therapy. But there is high competition and due to that market is quite fragmented. For new entrance, it is quite difficult to enter the market because of customer loyalty to older brands.
- ▶ There are high chances after the approval of new chemical entities and advanced therapy options for T2DM, the market scenario will change.
- ▶ Better market penetration could be implemented to maximize market share as well as salesforce participation can play a major role in prescription generation in these competitive markets.

Thank you...!!!