ANALYZING MARKET POTENTIAL OF GLIPTINS IN BHOPAL

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Business Administration (MBA)

in

Pharmaceutical Management

by

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Under the Supervision and Guidance of

Dr. Rahul Sharma

2022

DECLARATION

I hereby declare that this dissertation Project entitled, **"**ANALYZING MARKET POTENTIAL OF GLIPTINS IN BHOPAL**"** has been prepared by me under the supervision of my guide **Mr. Rahul Sharma,** Asst. Professor, Department of Pharmaceutical Management, IIHMR University, Jaipur, in partial fulfilment of the requirement for the award of the degree of **Master of Business Administration** in **Pharmaceutical Management**. I further declare that I have not submitted this work previously for the award of any degree or diploma tome.

SIGNATURE

KARTIKEY SHARMA

CERTIFICATE

This is to certify that dissertation Analyzing market potential of gliptins in Bhopal is a record of the research work undertaken by Kartikey Sharma in partial fulfillment of the requirements for the award of the degree of MBA (Pharmaceutical Management) from the IIHMR University, Jaipur under my guidance and supervision and his approach to the research study has been sincere, scientific, and analytical.

Faculty Guide	School Dean
IIHMR University, Jaipur	IIHMR University, Jaipur
Date	Date

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ABSTRACT

In contemporary' s competing world place cut-throat rivalry survives, everybody wants to experience their position, their power and proneness, so it is very owned by experience freedom to aim the robust market, hold the market, assess via the marketing planning. The project's goal was to determine the market potential for gliptins. At this moment, I have direct substance & too formula flow of gliptin, most liked and hint, costing, answer, top brands, contestants. This was attempted in Bhopal city concerning the study of project the accompanying major targets. The project was begun on 1st February afterwards experienced all the appropriate facts concerning the project, under the counseling of Rahul Sharma Sir (Assistant Professor at The IIHMR University). The Initial part of the of study explore out study of gliptin in a market scrutinization way also, allure method of operation, clue for gliptin& alliance cure of gliptin in sufferers accompanying type two diabetes . I started my research for this using the Internet as a fundamental source of news. The project's next step was to broaden the poll to include physicians, researchers. The information was then compiled using the survey results obtained by visiting them. To get a conclusion, more, ongoing research was conducted and statistical analysis was used.. While the study it was settled that Sitagliptin is most of the time recommended in gliptin for diabetes victims by way of topmost security, productiveness & persistence.

Keywords: Gliptins; Type two diabetes; Bhopal; Sitagliptin; Victims.

INTRODUCTION

1.1 DIABETES MELLITUS- TYPE 2

This is dubbed as of metabolism discomfort of hydrogen, fat &protein into material, a never-ending condition from the closeness of unusually extreme level of glucose in blood levels occurs on account of problems in insulin result and/or operation

• Insulin fighting in liver happening in hepatic outflow of and oxygen into the hepatic venous order. [1]

• Hormone (insulin) opposition at minor fabric (wasted influences) developing in failure in rude answer of sweet substance. [1]

• Beta-container deterioration (five stages) happening in dropping insulin discharge competency. [1]

The centre from two points, 50% and 66 percent of [being tested]-container function is absent according to data from the UKPDS [25] and Weir [2] for each time patient grows harmed hydrogen resistance. Between 75% and 80% of the testing-container work is missing before hyperglycemia, completing the development of the description of insulin resistance. 10% of the body's natural hormone is present after 10-15 years of diabetes development, and exogenic insulin therapy inevitably improves. Therefore, it makes obvious that a change to newer treatments is required to help preserve tested-container function.

1.1 INCRETIN

Glucose transfer is high adept in more following a spoken and oxygen food as distinguished to a drip sweet substance immersion. This influenced few physicists to trust that the gastrointestinal area was being the reason for release of hormones that supported in sweet liquid conclusion. This belief was diverted in addition100 time gone by [14–19] GLP-1, a glucagon-like peptide, and GIP, a stomachic insulotropic peptide, were eventually identified as the "incretins" responsible for more than 99 percent of the incretin impact (embellished hydrogen conclusion following spoken load). It is GLP-1, the most lively peptide harsh organisms, out of the two hormones combined. Patients who also have T2DM have a blunting or failure of this incretin action. Various incretin-located therapies are based on an amplification of this incretin action.. [14–19]

Neuro-endocrine K-containers, which are physically located in the stomach and nearby parts of the digestive system, release GIP. Nerve and hormone-producing cells share characteristics with neuroendocrine cells. Neuroendocrine tumours can develop anywhere in the body and are uncommon. The pancreas, airways, appendix, small intestine, rectum, and appendix are the origins of most neuroendocrine tumours.

Glucose stability (increased release and glucagon abolition), with post-prandial reconstruction and hyperglycemia prevention. [14,18,19,29] One of the most powerful orexigenic peptides in the brain is called neuropeptide Y (NPY). It promotes eating with a preference for carbohydrate consumption. By increasing meal size, it reduces eating latency, boosts appetite, and delays fullness. The Y1 and Y5 receptors are at least two of the receptors that mediate the effects on eating. Most of the NPY system for controlling appetite is found in the hypothalamus. It is made up of the perifornical region, the paraventricular (PVN), dorsomedial (DMN), and ventromedial (VMN) nuclei, as well as the arcuate nucleus (ARC), where the peptide is generated.

Contrary to those they are intracellular proteases that promote T-container stimulation; as a result, off-course limitation by selective Dpp - iv inhibition can result in offensive and significant side-effects (invulnerable dysfunction, injured restorative.

Anti-Hyperglycemic

Through same pathogenetic consultation it would only appear probable the one selects medicine that appears to address the foreboding collection i.e. a drug that can better testing-container energy), boost insulin opposition, restrain glucagon discharge (incretin located medicines), restrain demand,enhance lipid strength, and restrain renal and oxygen reabsorption. The drug blend that appears probable is incretin-located analyses (sending 4 exhausted the 8 pathophysiological devices) accompanying (focusing on insulin opposition at other gland and wasted power). [2,26, 27,39]

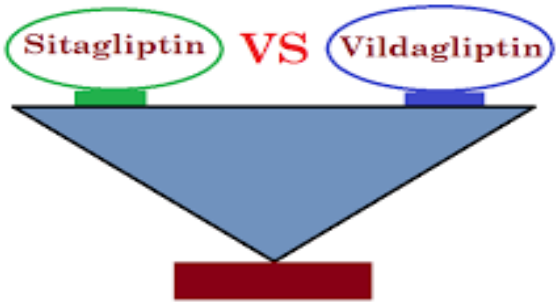
Inhibitors of dipeptidyl peptidase 4

The latest of antagonistic powers appears as it carry transformed situation of hyperglycemia. Perhaps these miscellaneous inhibitors have various pharmacokinetic descriptions, these are unusually identical accompanying commendations antagonistic-hyperglycemic characteristics accompanying a very secure antagonistic effect sketch (pressure noncommittal outside beginning hypoglycaemia) [20-26]

1.1 .A list of applicable gliptins is in this manner:

- Sitagliptin
- Saxagliptin
- Linagliptin
- Alogliptin
- Gemiglaptin

Sitagliptin and vildagliptin's respective contributions to the reduction in total HbA1c were 0.74 percent and 0.73 percent, respectively. If the initial HbA1c was more than 8 percent but less than >9 percent, the glycemic effects were superior. [40]



More importantly, research has shown that adding gliptin to an already-prescribed dose of metformin improves the quality of HbA1c decline (additional HbA1c - 0.7 percent benefit) more than that attained by up-titration in inmates whose HbA1c levels are between two points of seven percent and eight percent while taking metformin medicine, as opposed to optimising the dose of metformin from one to two gm/era or better The use of a gliptin as a second-line treatment in addition to an SU in patients not adequately reserved for metformin treatment.[5,50,52-54]

May be "add ornament analysis to sulfonyureas" because use of these has given a fact that advance suspect-container well-being and advance insulin discharge in a sweet liquid-weak], the contributing use of SU can conceivably be difficult by hypoglycemia. It is accordingly submitted that the minimum likely quantity of SU be begun in addition to utilization of these. By seeing the is then on an SU and adding of gliptin is deliberate, the measure of SU bear be halved and before as necessary, inferior ineffectuality to SU (glipizide, glimeperide, gliclazide) accompanying the additional benefit of being pressure noncommittal and being basically innocent hypoglycemia. Whether distinguished head to head accompanying (moe slash nearly a thes drugs were establish expected productive accompanying considerably most of cases carrying out the HbA1c of <7%.[1,33,48–53]

Healing to the thiazolidinedion

Providing gliptin medication in situations where it wasn't reserved enough led to an average HbA1c decrease of around 0.8–1%. However, using gliptin together with TZD in T2DM inmates who have never taken medication was shown to reduce HbA1c levels by approx to 2 percent after twenty three weeks, as opposed to 1.09 percent when using alone. In addition to the improvement in instigative gravestones, suspect-container energy (equilibrium model appraisal-being tested-container, HOMA-suspect and supporting-insulin/insulin percentage), and stones of insulin fighting also existed. These advantages are currently visualised in alliance (equilibrium way of hormone fighting, equilibrium model estimate-IR). Nevertheless, this consolidation has been hampered by a little amount of edoema and an average pressure increase of 2.49 to 4.9 kg. Even so, the pressure increase. The pressure increase can still be handled a inclusive behavior-pressure-administration program. [21,24, 30, 33–40]

Cure to insulin"

The adding of gliptin to insulin has happened guide a supplementary HbA1c decline of nearly 0.79%. A better distribution of cases were visualized to gain HbA1c level < 6.9. Fasting skin sweet liquid upgraded by nearly 14.89 mg/dl (0.89 mmol/l) and two hour post-food organic compound composed of carbon upgraded by nearly 36.09 mg/dl (1.9 mmol/l). The dared bettering in that is by way of bettering in suspect-container well-being and abolition of glucagon mainly. [11–14]

1.3.11 sitagliptin

It is primary gliptin expected United Nations certified in october. The urged shot is 99.9mg occurring every day. Its assimilation has been unsophisticated via cuisine. For sufferers accompanying moderate renal deterioration (creatinine approval 29.9 to 49.9 mL/brief time period) the urged measurement is 49.9 mg/era and for harsh degradation (creatinine authorization is <29.9mL/brief time period) the urged measure is 25 mg/era. In a meta-reasoning [40] it was proved expected more direct at lowering abstaining glucose distinguished to vildagliptin, but overall efficiency was akin. Recent dossier is arising that apart from reconstructing being tested-container strength, Those main nhibitors too assist upgrade hormone opposition and body tissue stats of lipids.14–16,18,28,29,32]

1.3.1.2 Vildagliptin

It can be said as secondary as expected certified for marketing use even though not united nations approved. The urged measurement is 50 mg doubly moment of truth. Its incorporation is unmoved by drink. It is widely metabolized for one liver and carry >89.9% bioavailability following a sole spoken shot. No portion of drug or other consumable adaptation is necessary for liver affliction even though a better amount of inert metabolites (30% better) are employed in sufferers accompanying harsh liver ailment . In subjects accompanying renal degradation no measurement adaptation is necessary for temperate renal lack nevertheless for renal lack half the urged measurement of 49.9 mg is submitted.[14– 16,18,28,29,32,47]

1.3.11.1 Saxagliptin

It's the tertiary of this group expected certified for monetary purpose, certified as well. The urged lot is five milligram occurring always. Its incorporation gets unchanged via cooking. Saxagliptin faces metabolism chiefly by cytochrome to a main alive, 5-hydroxy saxagliptin that is halfed effective as saxagliptin. Around 74.9% of the total dosage of saxagliptin is discharged via renal route and Twenty two percent was excreted in excrement .half the common dosage of saxagliptin 5 mg (that is2.5 mg verbally during the day) is urged for cases accompanying moderate or harsh

(clcr is lesser than thirty ml/brief time period gone break-up) renal deterioration or ESRD, but no shot adaptation is urged for those accompanying temperate renal degradation

1.3.11.2 Linagliptin

It is recently power in the DPP-4 prevention class namely now having supervisory perception inmany nations. It is in the dosage of 4.99 mg occurring every day. It holds a encouraging which includes characterization of potential benefit over now certified gliptins because it generally has non-renal removal. Linagliptin is mainly discharged by way of the enter hepatic structure, accompanying 84.7% of the drug removed in the excrement and only 5% removed by way of the excretion. It accordingly performs expected reliable in subjects accompanying renal decline.[15,16,18,28,29,32,54]Linagliptin has existed proved to hurry wound restorative in some studies accompanying proof of bettering inhospitalization if needed. [51]

1.3.11.3 Alogliptin

It is a prevention which is to say certified for japan for situation of senior aged cases accompanying this disease . It is urged in the measure of 25 mg occurring every day. It is unmoved by meal. Its ruling route of defecation is the organs which is responsible for better filteration. Caution must be secondhand in subjects accompanying renal degradation accompanying need for appropriate lot adaptations. Sine majorly is removed,Its strange that hepatic degradation would influence allure portion of drug or other consumable. [14–16,18,28,29,32]

Serious effects

Adverse belongings DPP4 inhibitors were mainly allowed private Research. Serious responses have happened guide undiscriminating hindrance of additional appendages of the DPP-4 deoxyribonucleic acid classification).Since it is a indicator of triggered T-containers, primary points were had connection with invulnerable dysfunction guide. DPP-4 inactivation by a gliptin happens surplus-cellular distinguished to inhibitors that is inside the cell. As long as additional appendages of the DPP-4 deoxyribonucleic acid offspring wait honest invulnerable dysfunction is not visualized.[14– 16,18,28,29,32,47] Their substance display or take public the case that they are burden noncommittal and don`t do some meaningful hypoglycemia. A meta-reasoning submitted a raised risk of nasopharyngitis .

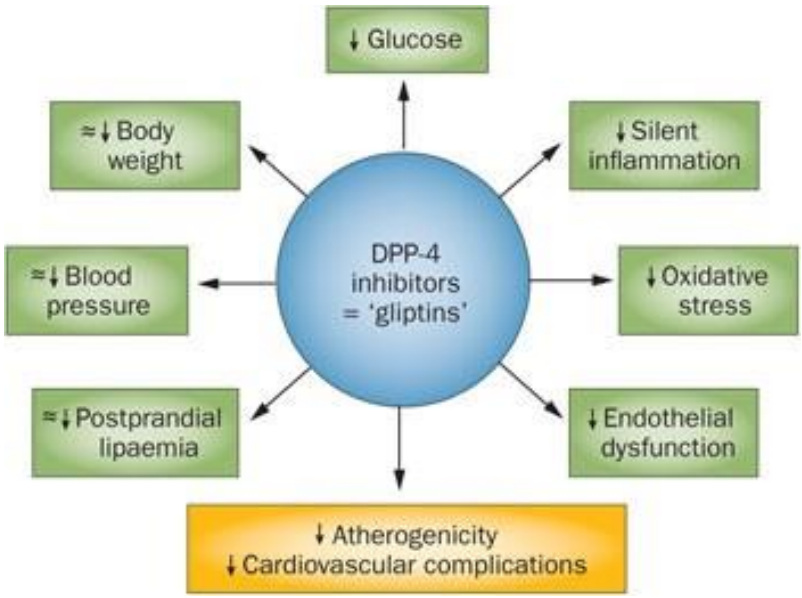
Following instances associated with gland of pancreas with may be utilization of those analogues, the United Nations provided a threat in 2007 about the major issues that can be observed in pancreas with the use of medications.By private, exceptional incidences of pancreatitis caused by DPP-4 inhibitor usage have been identified. There hasn't been a friendship-related set of events that directly connects the two points.

In studies a raised risk or prone of growth of the gland(thyroid) was visualized still as human gland includes a reduced verbalization of different the rodent it is not unexpected which is it performs expected secure cruel beings.[46,47].Although dispassionate studies accompanying DPP-4 inhibitors haven’t proved some unfavorable skin backlash, post- shopping surveillance programs have submitted unique exceptional cases of weighty sensitivity skin backlashes containing Stevens–Johnson disease.[48].Although banned for use in cardiovascular subjects skilled is few plan that these have a similar cardiovascular profile to GLP-1 analogues. Endothelial benefit, antagonistic-atherosclerotic properties, and ancestry pressure-threatening properties have all been reported in preclinical studies[49]. [90] Numerous significant cardiovascular effect issues are currently under way, many of which will specifically address how incretin-located medications affect macro vascular risk. Other than vildagliptin, there shouldn't be much of an adaption for gliptins for patients with hepatic insufficiency.

It is not urged for subjects accompanying alanine aminotransferase or aspartate aminotransferase as well 3 opportunities the highest level of same[32,41,42] For sufferers accompanying renal lack, sitagliptin, vildagliptin, and saxagliptin maybe secondhand in cases accompanying temperate renal lack outside application adaptation; still only sitagliptin and saxagliptin maybe secondhand in cases accompanying moderate or severe renal impairment However, those medications are no longer advised for usage in situations with more mild or severe renal impairment in the European Union. In renal failure, linagliptin operates as predicted and reliably. [32,47]

1.3.2 Gliptins' current status in diabetes management recommendations

The chief diabetic association directions desire that gliptins concede possibility be deliberate over additional antagonistic-diabetic medicines particularly if the patient is experience a raised occurrence of pressure increase. This can be easily observed that even bigger directions acknowledge their utility accompanying the the only issue which terrifies is endured the test momentary and so top-secret under less well-legitimized remedies. As evidence, anti-hyperglycemic advantages grows, present approaches that commonly utilise SU+/- insulin hormone as secondary or tertiary effects to the best drug which can be said as metformin could done as replaced. [15–17]



1.3.1 The most recent indications for gliptin usage include

First order in type two diabetes accompanying HbA1c <7% 2nd line as added ingredient remedy in T2DM subjects previously on 1 consumed the following for unrestrained T2DM accompanying HbA1c >6.99%. Third line as added ingredient medicine in T2DM subjects then on merger remedy (2 in another direction the following Contraindications or evidence for staying gliptin healing contains former or current antagonistic response to gliptins (sensitivity) or defeat to solve an HbA1c decline of degree 0.49% over a 5.99 temporal length of event or entity's existence ending.[25–27]

1. Need for StudyT2DM is a increasing question in the experience, particularly in India. So, an study of advertise potential & medicine styles is wanted to discover unmet healing needs.

The study helps to find:

✓ Useful news for association before beginning an spoken antagonistic-hyperglycemic (OAH) fragment (gliptin).

✓ Market synopsis of gliptin in situation of T2DM

✓ Indication for the custom of gliptin

✓ Most usually recommended gliptin for T2DM accompanying efficiency, security & stamina limits.

✓ Most arbitrary blend medicine accompanying gliptin

✓ Identification of capital stock & purchase of gliptin

✓ Most recommended brands

✓ Major adversaries

✓ Unmet Medical needs with the understanding of T2DM accompanying future sphere of gliptin

1. RESEARCH QUESTION

• What is the potential of group of gliptins in market subjects accompanying type two diabetes in Bhopal city?

2. Objectives

• In order to recognize the market outline of group of gliptins in type 2 diabetes mellitus

• In order to know the pattern of group of gliptins in type two diabetes

• In order to decide the maximal marketing capacity & stock of gliptins

• In order to recognize the unmet needs of of group gliptins in this disease.

3. Methodology

- Sample design

  The descriptive research was conducted and it was cross sectional

- Method of sampling

  It was non probability method of sampling, it was purposive.

- The Area of study

  The study was carried out in Bhopal city.

- Population

  All doctors were included in this

- Size of sample

  Size of sample for the study was 184:

  Physicians: 67

  Pharmacist: 75

  Stockiest: 42

3.1 Data accumulation

Primary data- The primary data for this project was assembled via survey utilizing inquiry, confronting some questions.

Secondary data- via responsible items and research papers subordinate dossier for this analysis got collected.

3.2 Instrument of questions

This tool is the organized inquiry resides of two put questions. The facts composed by putting questions accompanying Physicians, researcher.

All questions kept contained in the inquiry as it could develop knowledgeable extended plan that results into negative reaction of the sample people. Therefore some data was organised by way of simple conversation accompanying the physicians, researcher & stockiest

3.3 Study period

3months (5th February to 5th May)

4 Data Analysis

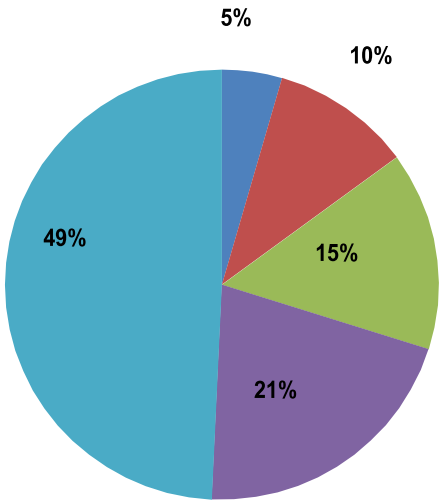
Physician's views

Patient's data

It was shown that around 20.99% of physicians saw between 29.9 and 40 patients each week, while the remaining 39.9% assessed more than 40 patients per week.

Both table number 1 and figure number 1 provide information on the number of patients and the percentage of responses from physicians for each range.

T2DM patients	Counting of patients	% of patients
Lesser than ten	three	four
Ten to twenty	seven	ten
Twenty to thirty	ten	fifteen
Thirty to forty	fourteen	twnetyone
More than forty	Thirty three	Forty nine



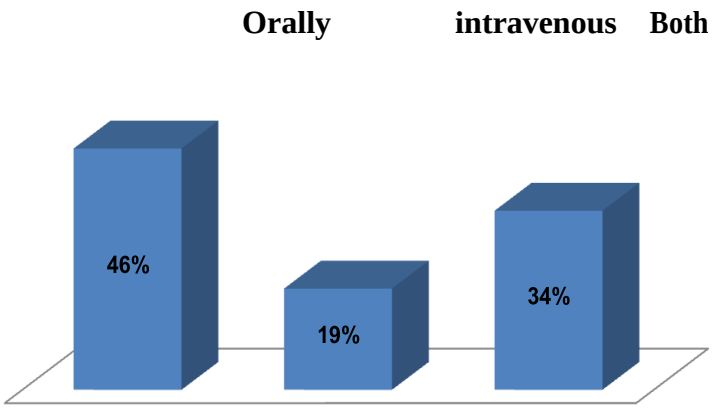
Number of diabetic patients

3.1.1 **Treatment provided**

Result came out that approximately 46% T2DM was used by doctor followed by 34% both oral & I.V.

Table number 2 as well as figure number 2 gives a data of number of treatment used to cure T2DM and percentage of doctor`s reaction treatment used for diabetes

Treatment	quantity	in %
Oral	31	46%
Intravenous	13	19%
Both oral and intravenous	23	33.9%



Aid provided

3.1.1. Type of drug used in T2DM

67 % doctors use branded medications while 33 % use generic ones.

Here data shown shows about percentage of doctors and type of drug used in type 2 diabetes

Type of salts used	in numbers	in %
Generic salt	**22**	**33%**
Branded salt	**45**	**67%**

Aid used for diabetes

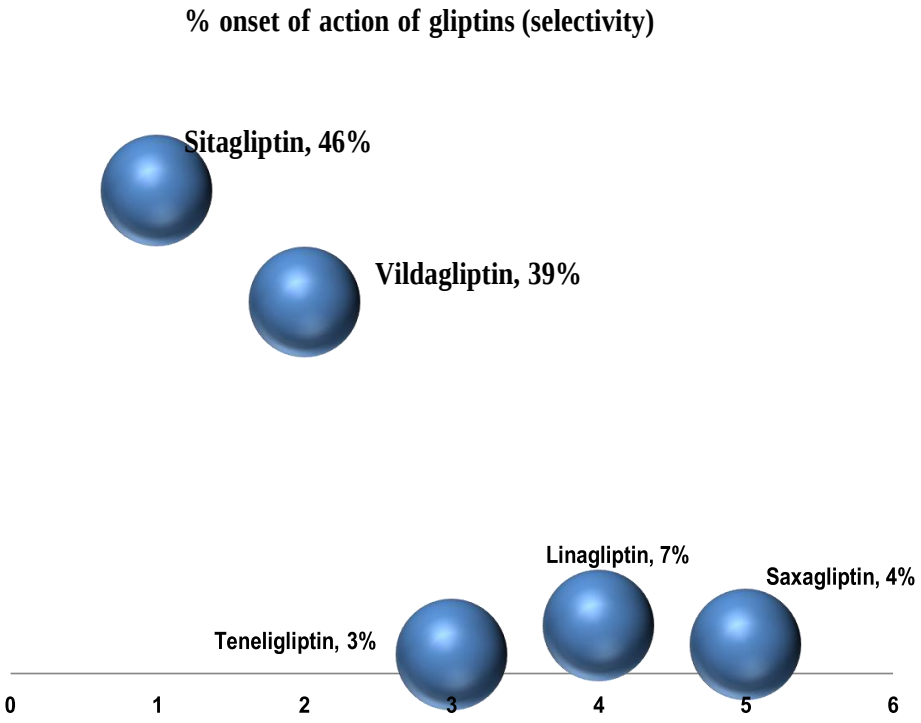
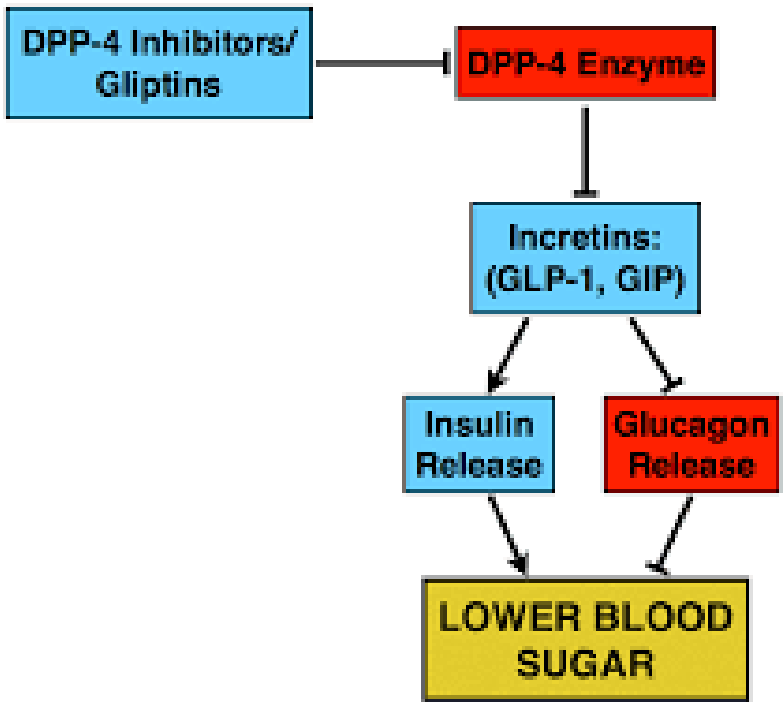


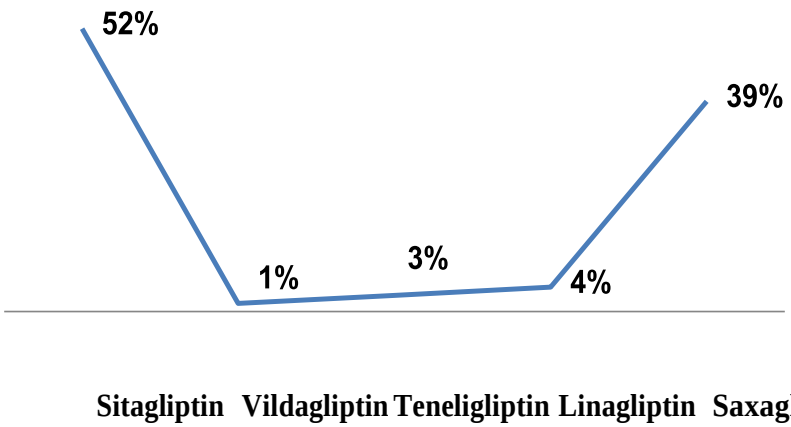
Figure 5: onset of action of gliptins



Molecule	DPP4 inhibition	% DPP4 inhibition
Sitagliptin	35	52%
Vildagliptin	1	1%
Teneligliptin	2	3%
Linagliptin	3	4%
Saxagliptin	26	39%

DPP4 inhibition after 24hrs

Table 6: DPP4 inhibition after 24hrs



3.1.2. CV safety of all gliptins

Molecule	CV safety	% of CV safety
Sitagliptin	**36**	**54%**
Vildagliptin	**1**	**1%**
Teneligliptin	**6**	**9%**
Linagliptin	**21**	**31%**
Saxagliptin	**3**	**4%**

Table 7: CV safety with gliptins

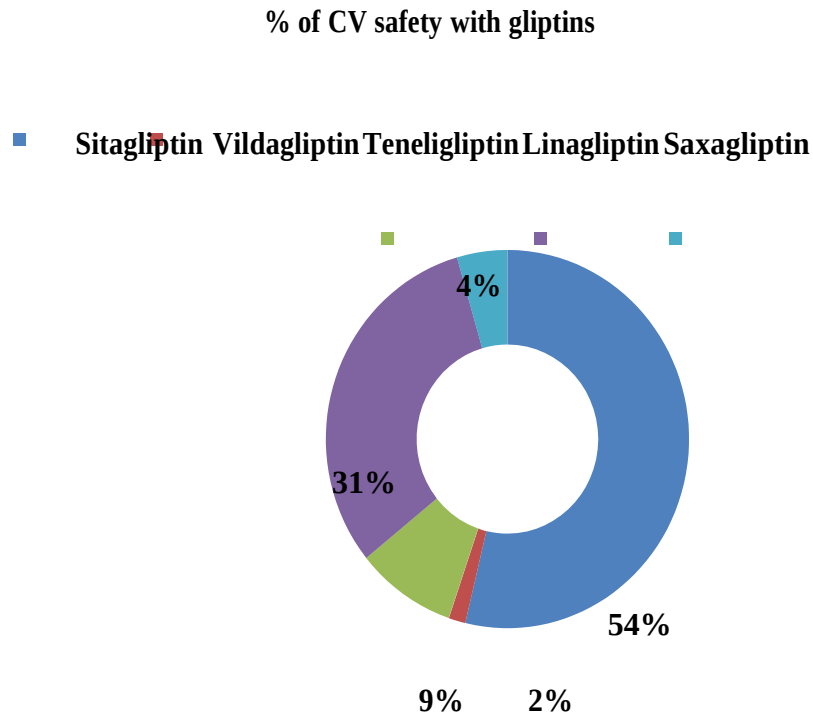
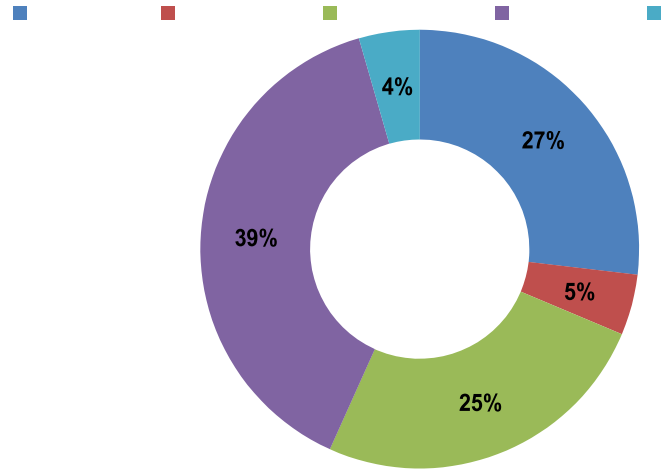


Figure 7: CV safety with gliptins

Molecule	Hepatic & renal safety	% of hepatic & renal safety
Sitagliptin	18	27%
Vildagliptin	3	4%
Teneligliptin	17	25%
Linagliptin	26	39%
Saxagliptin	3	4%

3.1.3. Hepatic & renal safety of all gliptins



3.1.4 Efficacy of all gliptns

Molecule	Efficacy	% efficacy
Sitagliptin	**27**	**40%**
Vildagliptin	**28**	**42%**
Teneligliptin	**4**	**6%**
Linagliptin	**5**	**7%**
Saxagliptin	**3**	**4%**

Table 9: Efficacy with gliptins

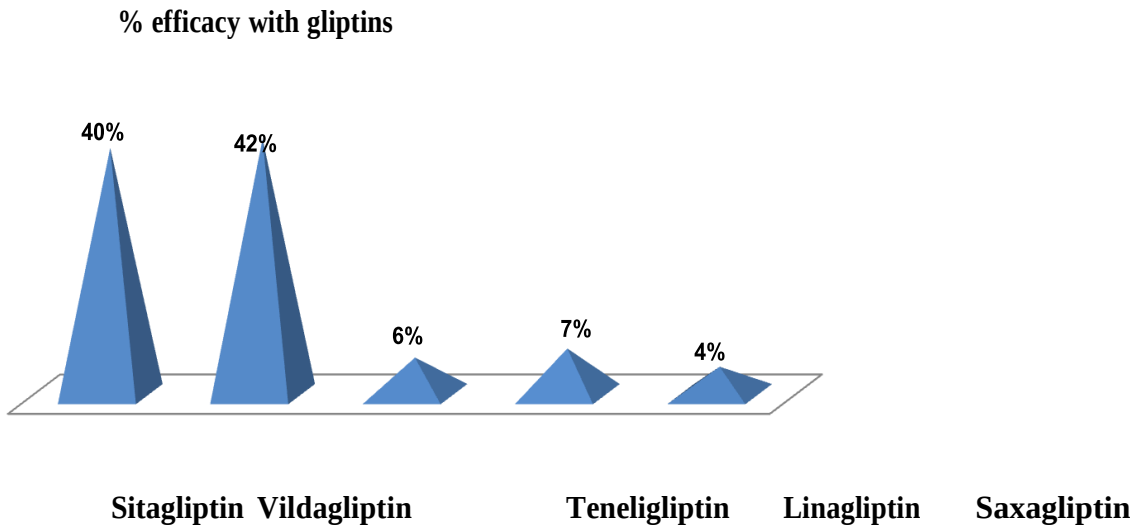
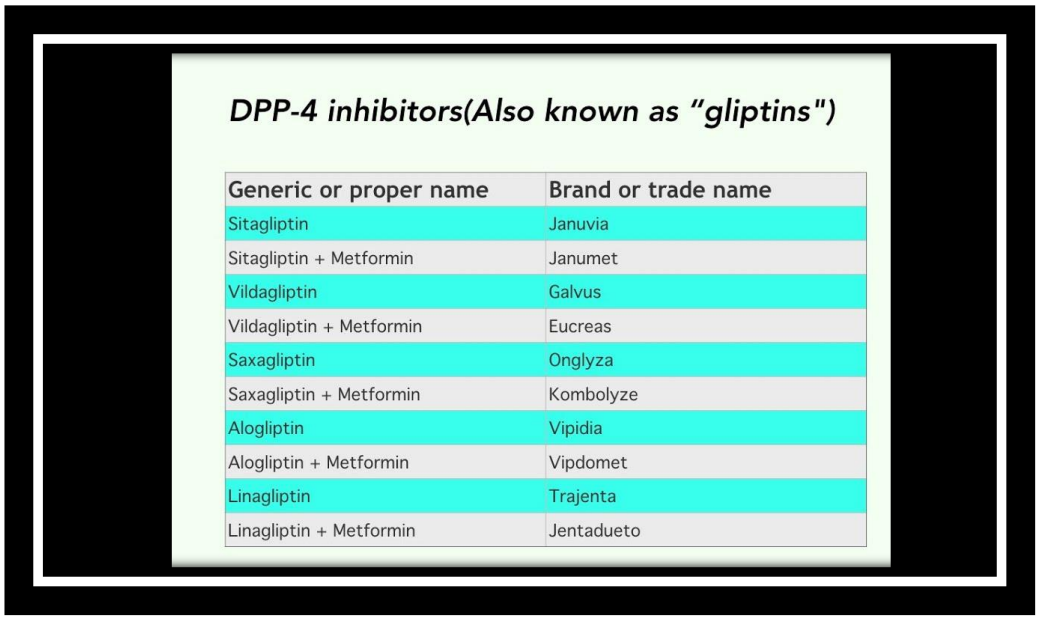


Figure 9: Efficacy with gliptins

3.1.4. Durability with gliptins

Molecule	Durability	% Durability
Sitagliptin	**28**	**42%**
Vildagliptin	**14**	**21%**
Teneligliptin	**13**	**19%**
Linagliptin	**7**	**10%**
Saxagliptin	**5**	**7%**

Table 10: Durability with gliptins



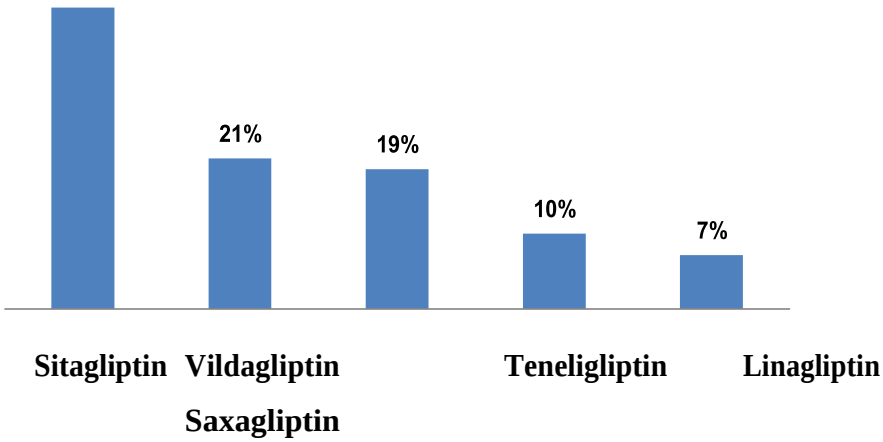


Figure 10: Durability with gliptins

3.1.5. Cost with gliptins

Molecule	cost	% cost
Sitagliptin	**5**	**7%**
Vildagliptin	**1**	**1%**
Teneligliptin	**52**	**78%**
Linagliptin	**1**	**1%**
Saxagliptin	**8**	**12%**

Table 11: Cost with gliptins

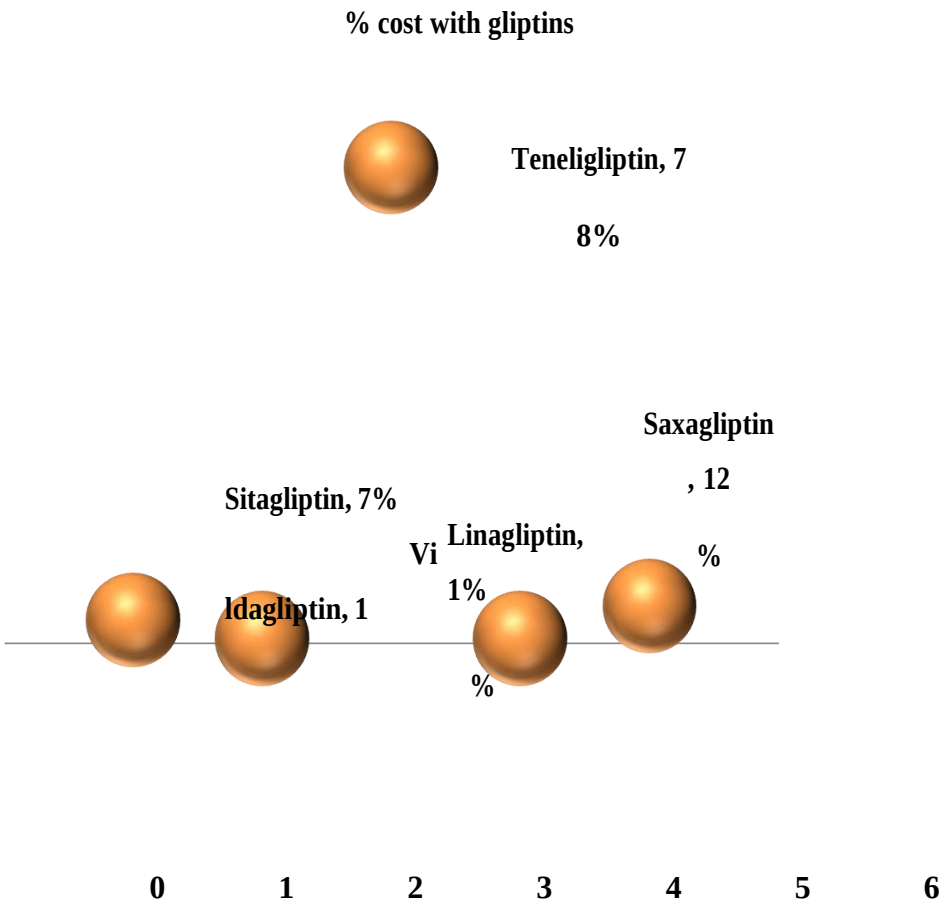
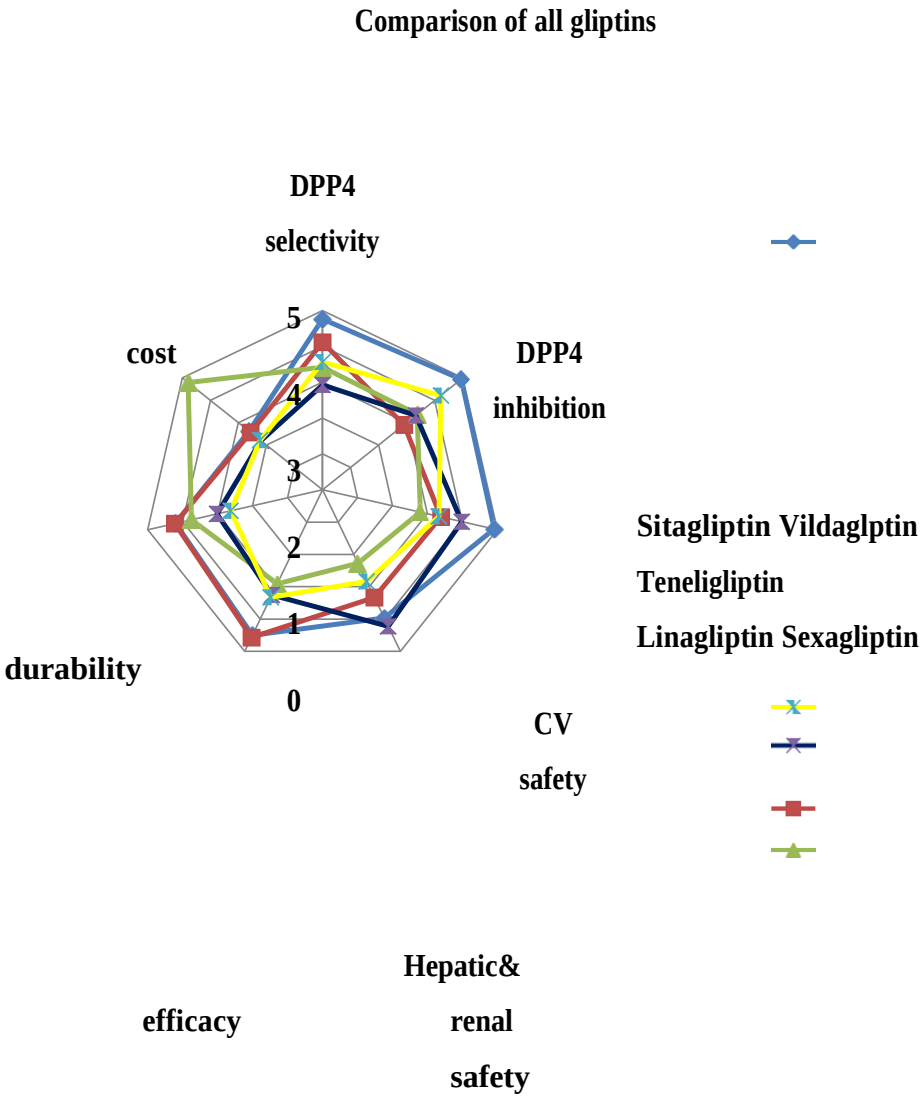


Figure 11: Cost with gliptins

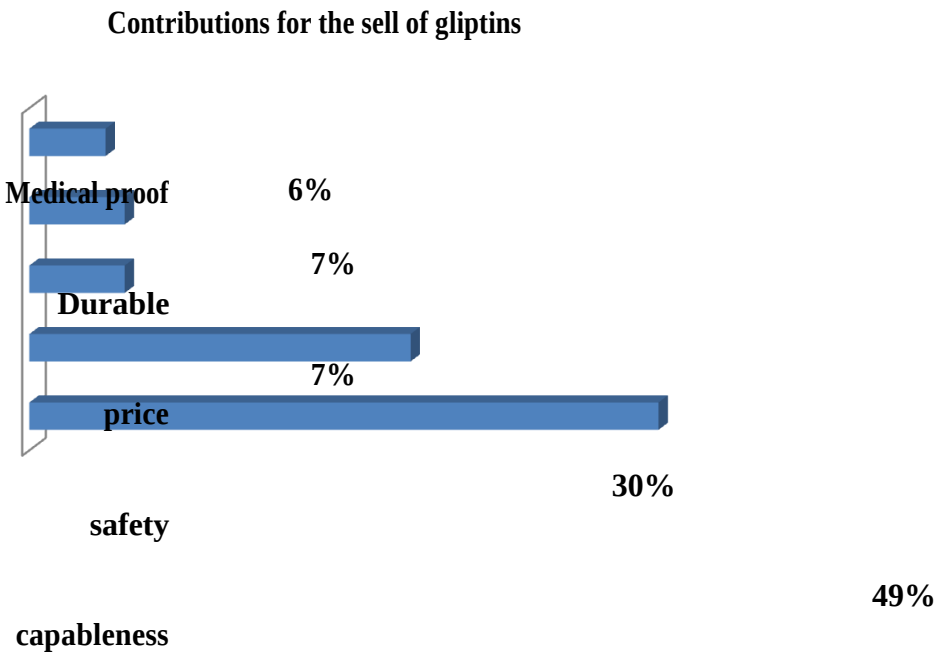
3.1.6.Comparison of gliptins



3.1.7. Factors influencing to prescribe any brand of gliptin

According to research, sitagliptin is deemed to be most effective by about 49% of doctors, followed by vildagliptin by 30%.

Data on the number of patients and the percentage of doctor responses for each range are provided in table number 12 and figure number 13.

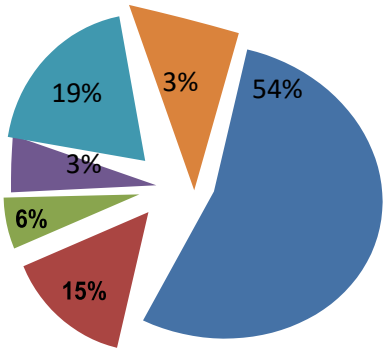


Most preferred brand of gliptins

54 percent of the gliptin prescribed by doctors comes from the Januvia family, while 19 percent comes from Ziten.

Both table number 13 and figure number 14 provide information on the most popular brands and the proportion of doctors who responded for each range

Percentage of maximum prescribed brands



Dark blue =Januvia

Purple = zomelis

Blue = ziten

Red = Galvus

Orange = Tregenta

Green = Onglyza

3.1.9 Therapy in combination which is most preferred

It was discovered that nearly 76% of physician favor merger cure accompanying thses drugs. From the 75.9% of doctors 53.9% use metformin together accompanying gliptins observed by sulfonylurea 25.9%.

Table number fourteen and fifteen shows physicians prescribing merging therapy and their response

Combinationtherapy	Preferred combination therapy	% of combinationtherapy
No	**sixteen**	**Twenty four**
Yes	**Fifty one**	**Seventy six**

Drugs merging therapy

Combination therapy	% Response
Sulfonylurea	**26%**
Metformine	**54%**
TZD	**11%**
Insulin	**9%**

Drugs merging therapy

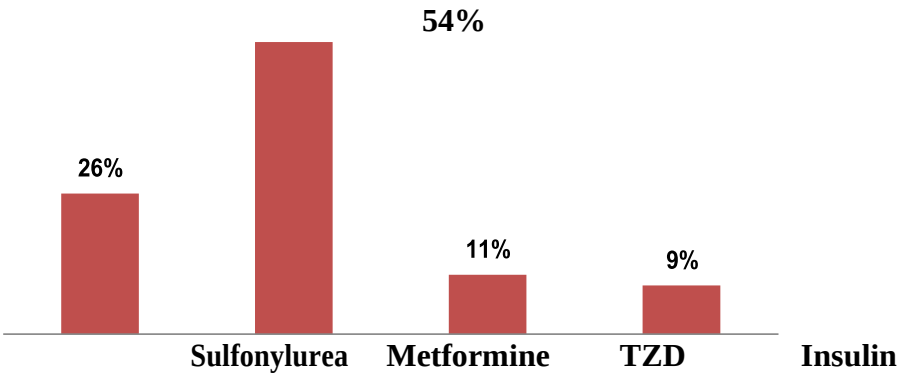


Figure 15: Preferred combination therapy

3.1.10 Unmet needs of gliptins in patients with T2DM

During the survey, most of the doctors had belief that:

- Molecules accompanying minimum aftereffects accompanying cost influence are need for advertise
- Combination cure maybe better than distinct particle

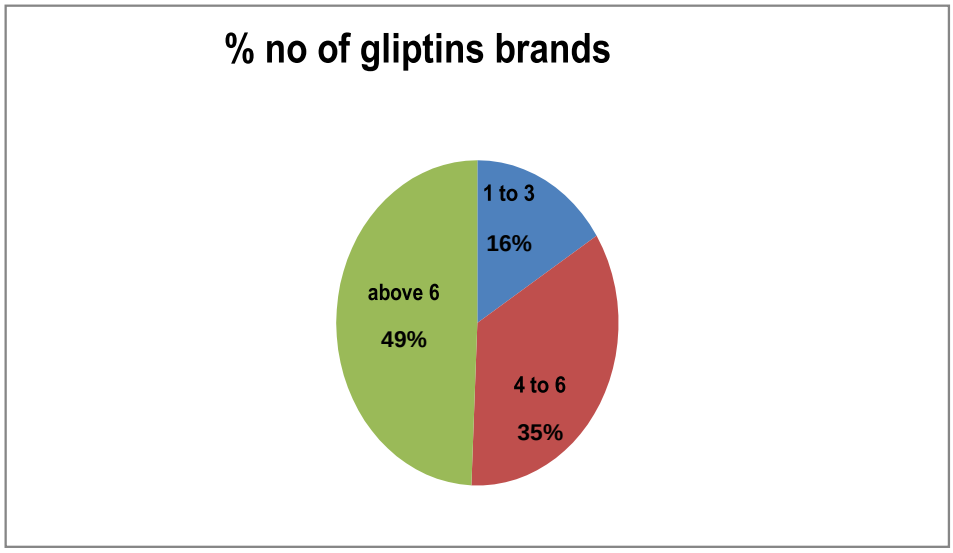
Analysis of pharmacist`s perception

Availability of brands in stock

This was establishing that almost forty nine percent of pharmacists hold additionally six brands. Table no sixteen simultaneously in addition to figure number sixteen, gives a record on the number of brands owned by the investigator also the allowance of the scientist`s answer in each range.

No. of gliptin brands	Response	%Response
One to three	twelve	Sixteen
Four to six	Twenty six	Thirty five
above six	Thirty seven	fourty nine

Table 16: Number of gliptin brands in stock



3.1.8. Brands in stock by chemist

It was erect that nearly 41% of chemists maintain Januvia offspring brands available attended by ten 35%. Table number 17, in addition to figure number 17, gives a dossier on brands maintained by researcher.

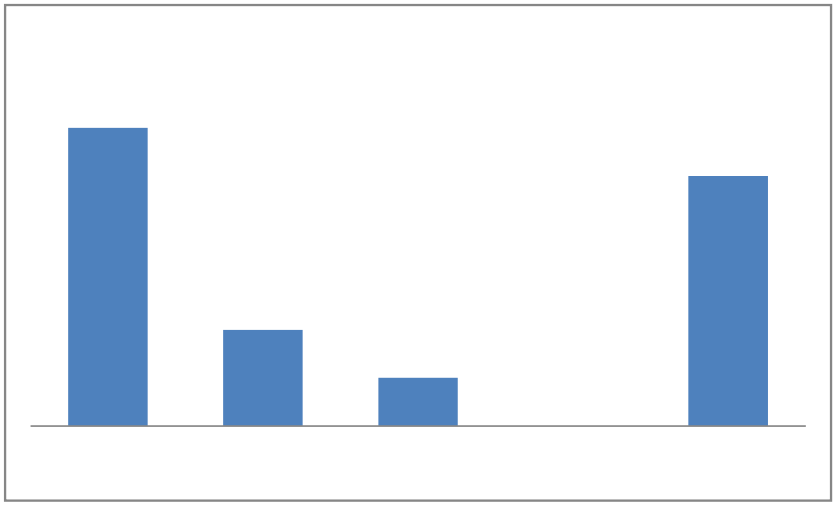


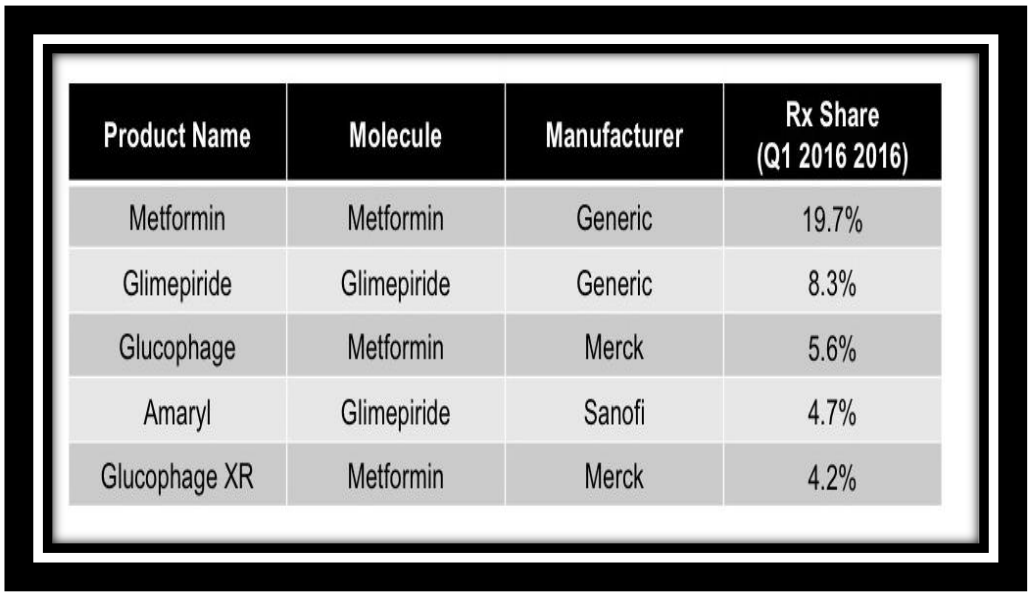
Figure 17: Availability of brands to chemists

3.1.9. Majorly prescribed brands by physicians

It was erect that almost 41% of chemists continue Januvia offspring brands possible accompanied by ten 35%.Table number 17, apart from fig.17, provides a profile on brands uphold by experimenter and allotment for research worker's answer in each range.

Most prescribed brand	Response	% Response
Januvia	**35**	**Fouty seven**
Galvus	**10**	**Thirteen**
Onglyza	**2**	**three**
Zomelis	**2**	**three**
Ziten	**26**	**three**
Tregenta	**0**	**Zero**

Table 18: Most prescribed brand of gliptin



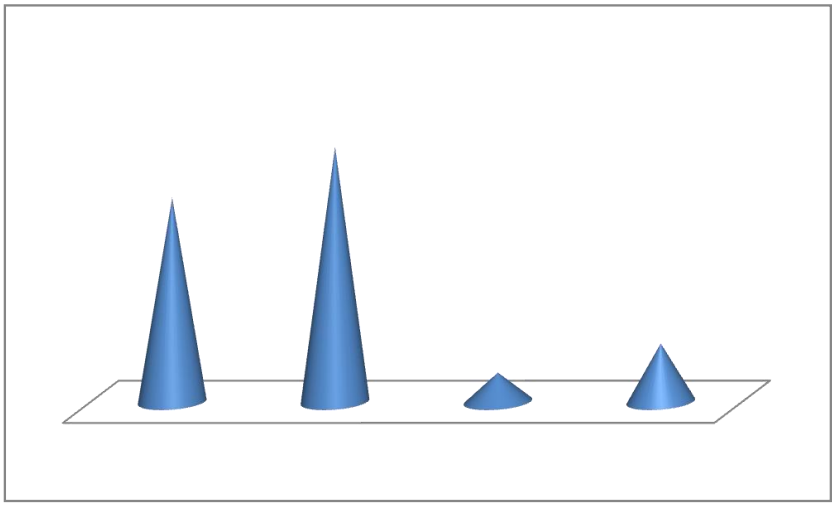
Product Name	Molecule	Manufacturer	Rx Share (Q1 2016 2016)
Metformin	Metformin	Generic	19.7%
Glimepiride	Glimepiride	Generic	8.3%
Glucophage	Metformin	Merck	5.6%
Amaryl	Glimepiride	Sanofi	4.7%
Glucophage XR	Metformin	Merck	4.2%

3.2. Major competitor of sitagliptin

It was learned that nearly 47% researcher plan teneligliptin as bigger opponent attended by vildagliptin 37%Table number 19 in addition to figure number 19 gives a dossier of bigger challenger of sitagliptin and allotment of researcher's answer in each range.

Competitor of sitagliptin	Response	% Response
Vildagliptin	**28**	**37%**
Teneligliptin	**35**	**47%**
Linagliptin	**4**	**5%**
Sexagliptin	**8**	**11%**

Table 19: Competitor of sitagliptin



3.2.1. Profiles for sales of januvia

This was learned about 43% of researcher buying of Januvia per period are 20-30 strips understood by 31% of a researcher the one implies it is 10-20 strips per temporal length of event or entity's existence. Table number 20 in addition to data provided below gives dossier of the quantity of Januvia marketing per period with portion for researcher's answer in each range.

No. of Januvia sold/week	Response	% Response
less than 10	2	3%
10 to 20	23	31%
20 to 30	32	43%
30 to 40	8	11%
more than 40	10	13%

Table 20: number Januvia sale per month

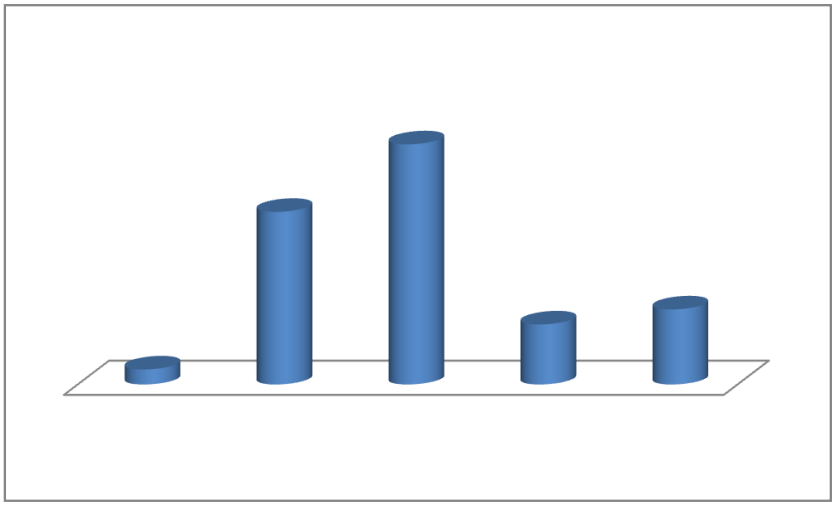


Figure 20: number Januvia sale per month

3.2.2. Januvia family brand prescription

Sales dataThis was discovered that in accordance with 49% of researcher marketing of Januvia on medicine per temporal length of event or entity's existence are inferior 10 strips attended by 28% of researcher the one plan it is 10-20 strips per period Table number 21 in addition to figure number 21 gives a dossier of number of Januvia trade per period.

No. of januvia sold on Rx	Response	% Response
Lesser than ten	**37**	**49%**
Ten to twenty	**21**	**28%**
Twenty to Thirty	**12**	**16%**
Thirty to forty	**3**	**4%**
more than forty	**2**	**3%**

Table: Januvia sales details table

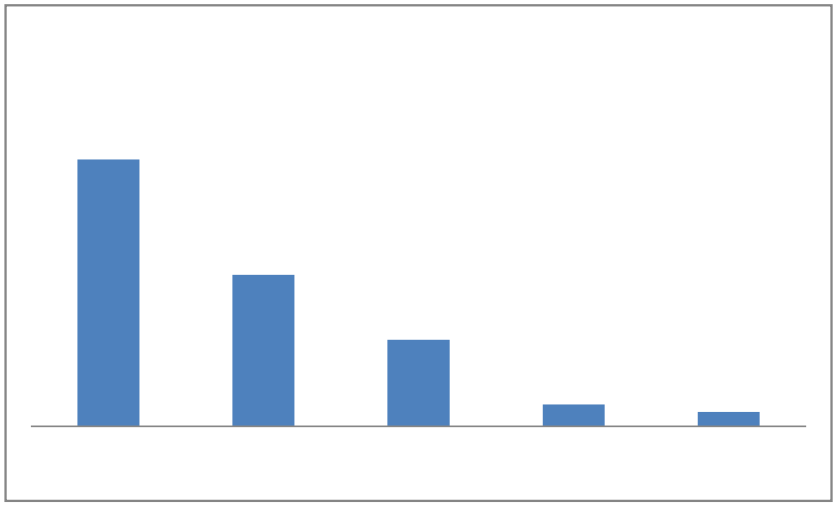


Fig: Januvia sale detailed graph

3.2.3 Sales of other more brands

This has been learned that in accordance with Sixty five percent of researcher don`t sell additional Brands of alike particle in possibility of absence of recommended brand is absent. Still if the thirteen percent of researcher the one selling different brands voice they purchase teneligliptin Eighty three percent as it is a general fragment.

Sale of other brand than Rx	Response	% Response
No	**Sixty five**	**Eighty seven**
Yes	**Ten**	**Thirteen**

sale of other brand	% response
Teneligliptin	**83%**
Vildagliptin	**17%**

3.2.3. Combination therapy with sitagliptin

This has been learned that in accordance with 67% of researcher trade metformin accompanying sitagliptin trailed by 25% of sulfonylurea Table number 24 in addition to figure number 23 gives a dossier of association healing accompanying sitagliptin and portion of researcher's reaction in each range.

Combination with sitagliptin	Response	% Response
Metformin	**50**	**67%**
Sulfonylurea	**19**	**25%**
TZD	**3**	**4%**
Insulin	**3**	**4%**
Vildagliptin		**17%**

Table 25: combination with sitagliptin

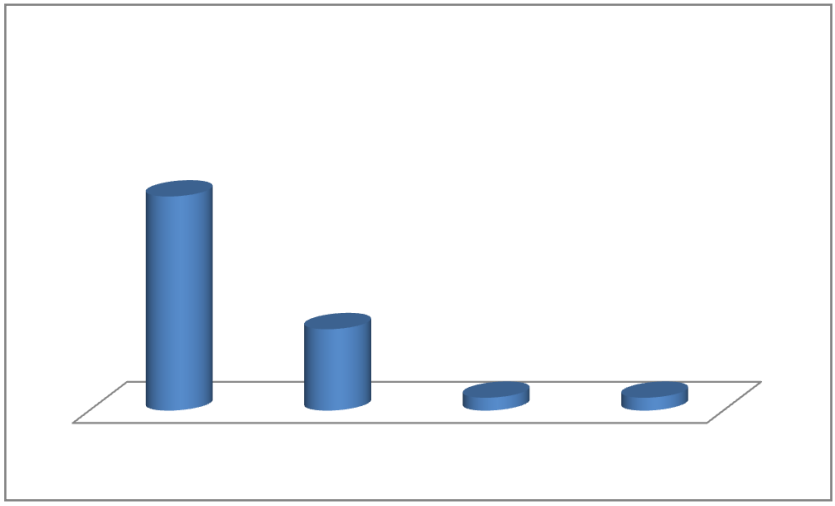


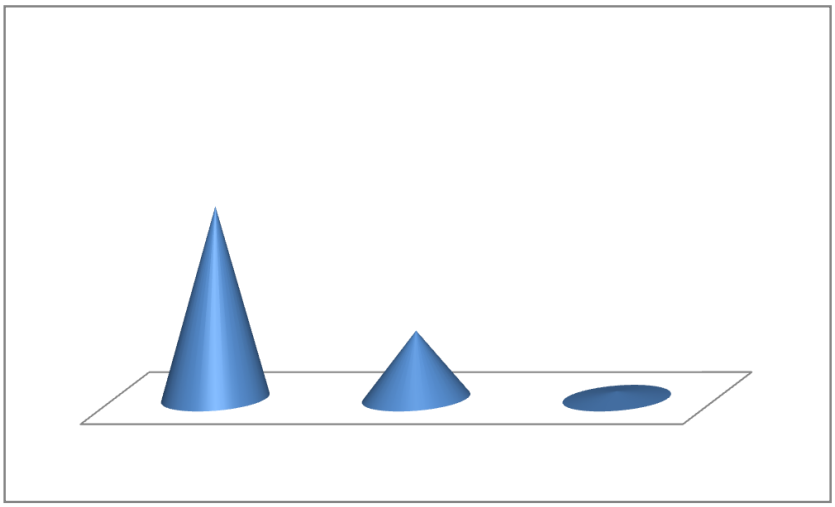
Figure 24: combination with sitagliptin

3.2.4. Most prescribed dose of sitagliptin

It was discovered that in accordance with 72% of researcher most recommended measure of sitagliptin is 100mg trailed by 50 mg Table number 26 in addition to figure number 25 gives a dossier of most recommended lot accompanying sitagliptin and portion of researcher's reaction in each range**.**

Dose of januvia	Response	% Response
100 mg	**54**	**72%**
50 mg	**19**	**25%**
25 mg	**2**	**3%**

Table 26: Most prescribed dose of sitagliptin

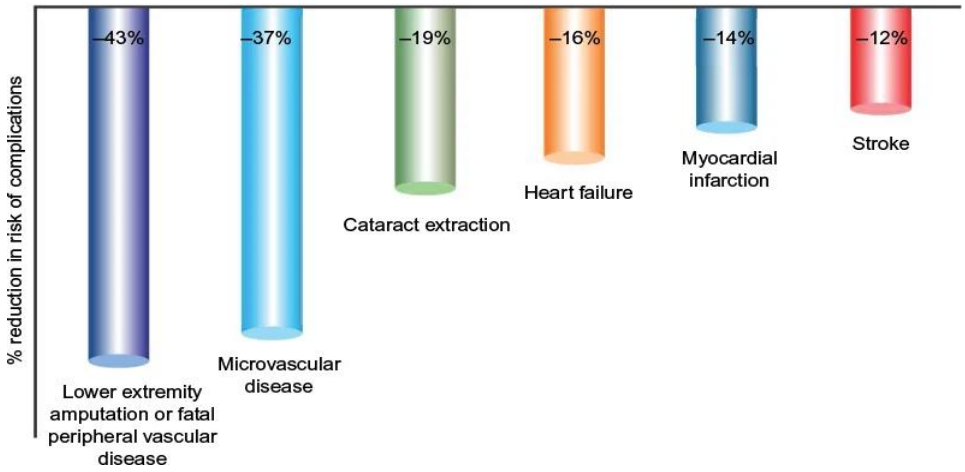


F ig 25: Most prescribed dose of sitagliptin

3.3. Analysis of Stockiest views

Number of brands in stock. This was learned i.e. nearly 55% of stockiest maintain 4 to 5 gliptin brands.

Number of Brands in stock	Response	% Response
Lesser than three	**11**	**26%**
Four to five	**23**	**55%**
More than five	**8**	**19%**



Most prescribed brand of gliptins

It was learned that nearly 43% of stockiest voice Januvia is ultimate arbitrary brand followed by ziten 40% Table number twenty seven in addition to fig number twenty eight provides a dossier of quantity of major of arbitrary brands of gliptins also allotment of stockist's reaction in every extend.

Most prescribed brand	Response	% response
Januvia	**18**	**43%**
Galvus	**3**	**7%**
Onglyza	**2**	**5%**
Ziten	**17**	**40%**
Tregenta	**0**	**0%**
Zomelis	**2**	**5%**

Table 28: Most prescribed brand of gliptins

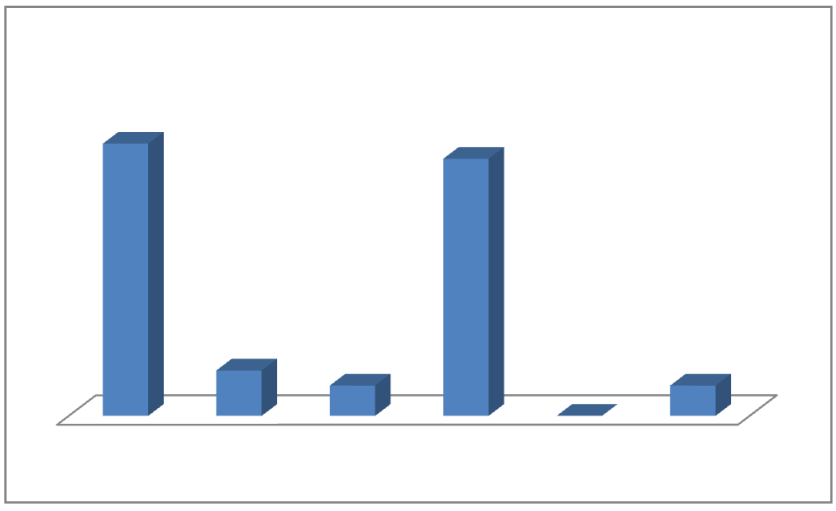


Figure 27: Most prescribed brand of gliptins

Stock of sitagliptin per month

It was learned that nearly 50% of stockiest keeps 500-700 strips of sitagliptin/temporal length of event or entity's existence. Table number twenty seven in addition to figure number twenty eight gives a dossier of number of stock of brands of gliptins and allotment of stockist's reaction in each range.

stock of sitagliptin/month	Response	% Response
Less than 100	**1**	**2%**
100-300	**3**	**7%**
300-500	**6**	**14%**
500-700	**21**	**50%**
700-1000	**5**	**12%**
More than 1000	**6**	**14%**

3.4 Sale of sitagliptin per month

It was discovered that nearly 43% of stockiest business 500-700 strips of sitagliptin/period Table number 30 in addition to figure number 29 provides a dossier of quantity of purchase of gliptins and allotment of stockiest's reaction in each range.

Sale of sitagliptin/month	Response	% Response
Less than 100	**2**	**5%**
100-300	**3**	**7%**
300-500	**8**	**19%**
500-700	**18**	**43%**
700-1000	**7**	**17%**
More than 1000	**4**	**10%**

Table 30: sale of sitagliptin/month

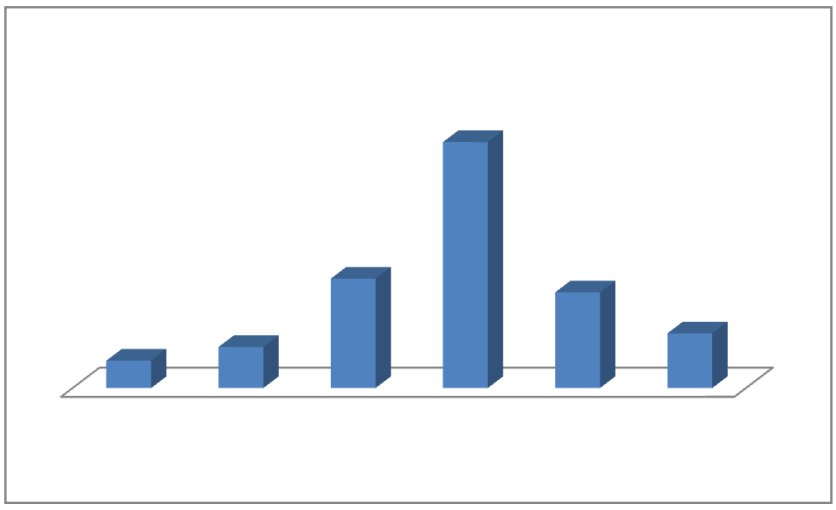


Figure 29: sale of sitagliptin/month

3.4.1 Any brand of gliptin is eligible for the scheme.

It was discovered that around 29.9%of stockiest retain a plan for the gliptin brand. From this 29.9% percent of the stockiest, 52.9% percent offered giveaways like free strips, then 47 percent offered discounts.

Below provided information on the stocking strategy for various gliptin brands as well as the percentage of stockiest responses for each range.

availabililty	**Reaction in %**
Available	**Sixty seven**
Not available	**Thity three**

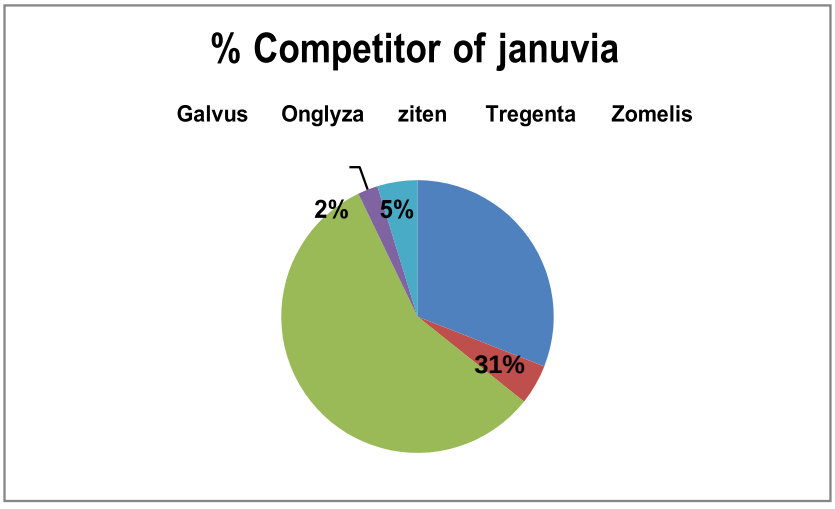
Competitor of januvia

According to 57% stockiest, ziten is a major competitor of Januvia, followed by galvus31%

.

Competitor	Reaction	Reaction
Galvus	13	31%
Onglyza	2	5%
Ziten	24	57%
Tregenta	1	2%
Zomelis	2	5%

Table 33: Competitor of januvia



2. Findings based on observation & key opinions

- The number of victims accompanying diabetes healing is growing exponentially.
- The formula pattern understands efficiency, security & stamina.
- The formula pattern attends minimum reactions of the fragment
- The medicine pattern understands the business-related rank of the victims.
- According to few doctors, the medicine flow never debris the alike, it keeps on changeful.
- Many doctors favor USFDA-certified brand.

3. Suggestions

1) Our nation is an evolving nation, accompanying an abundant population with no economic crisis, Teneligliptin is a drug favored by way of compatible price in adulthood of the hospitals, although teneligliptin is bearing sure aftereffects. When prescribing some crop snag costs may be naive concern alternatively medicine cost.

2) Sitagliptin is high-quality choice as a whole gliptins between doctors in terms of beginning of operation, DPP4 hindrance, CV security, hepatic & renal security, productiveness & endurance.

3) Sitagliptin accompanying Add on analysis accompanying Insulin maybe future display trainer as it is bearing good productiveness.

4) Cost-influence of sitagliptin commit helps a fragment to enhance a retail commander in accordance with few doctors.

5) During the study it was erect that prose is a main restraint. For knowledge of the fruit between doctors, the company's agents concede possibility see the local words.

6) Stockiest and researcher take care of present more blueprints to captivate consumers.

4. Limitations

1)Sample part are restricted for a survey, it influence the veracity of consequences.

2) Survey was completed activity in individual domain only (Bhopal).

3) Time event of the survey acted not admit accumulating more dossier.

4) The accused got found active keep give opportunity to answer.

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11.1 Doctor`s questionnaire

Questionnaire for Doctors

S.No.			

Date:

Q1) How many Type 2 diabetes patients you examine weekly?

Less than 10

10-20

20-30

30-40

Q2) which of the following treatment you use to cure/treat them?

Oral

I.V.

Both

Q3) In which indication you use Gliptins mostly?

a)Starting aid

b)With Metformin

c) with sulfonylurea

Q4)Preffered brand of gliptin you use in T2DM patients?

a)Januvia/Janumet/Janumet XRCP

b)Galvus

c)Onglyza

d)Zomelis

Q.09)Preffered brand of gliptin you use in T2DM patients?

a) Januvia/Janumet/Janumet XRCP

b) Galvus

c) Onglyza

d)Zomeli

Q.10)aid you ruminate with sitagliptin?

a)yes

b)no

Q.11) According to you, Which is the current unmet need in T2DM?

_____
_____
_____
_____
_____
_____
_____

11.2 Chemist`s Questionnaire

S.No.			

Date: _____

Name:_____Location:_____

Q.1 Number of Gliptins do you have in your stock?

a) more than five

b) more than six

c) six to ten

d)More than 10

Q2) which brands you keep?

a)Januvia/Janumet/Janumet XRCP

b)Galvus

c)Onglyza

d)Zomelis

Q3) maximum prescribed brand of gliptins?

a)Januvia/Janumet/Janumet XRCP

b)Galvus

c)Onglyza

d)Zomelis

Q4) Who is the major competitor of Sitagliptin(Januvia Family)?

_____

Q5) quantity of junavia sold in a month

a)lesser than ten

b) more than ten

c)more than twenty

d) more than thirty

Q6) quantity of jnuvia sold with prescription

a) lesser than 9

b) more than 20

c) more than 30

d) more than 40

Q7) in your perception if the required salt is not available can we prescribe another branded salt

a)maybe b)no

Q.8) which combinations with Sitagliptin are majorly described

a) Metformin

b)Sulfonylurea

Q 9) What strength of Januvia is most prescribed?

A) 25mg B)50mg C)100 mg D)150 mg

Questionnaire for stockiest

Date _____

Name _____ Place

_____

Q1) Availability of Gliptins in stock?

a) Less than 3

b) 4-5

c) 5-7

d)more than 7

Q2) name the most prescribe brand of Gliptins?

Q.3) How much stock of Sitagliptin you keep in one month?

a)Less than 100

b)100-300

c)300

d)500

Q4) How many strips of sitagliptin you sale in one month?

a)Less than 100

b) 100-300

c) 300-500

d) 500-700

Q5) Do you provide any scheme for the sale of above mentioned brands?

a) no

b) yes

If yes, what type of scheme you provide for different brands?

a) Januvia/Janumet/Janumet XRCP

b) Galvus

c) Onglyza

d) Zomelis

Q6) Who is the major competitor of Januvia family?

a) Galvus

b) Onglyza

c) Zomeli

d) Ziten