Summer Training at
LUPIN
(April 9-June 1, 2012)

Determination of Current Market Share of Different Combination of Metformin Combination in Jaipur

By
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Under the guidance of
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Post Graduate Diploma in Pharmaceutical Management
2011-2013

IIHMR
JAIPUR

Institute of Health Management Research,
Jaipur
2012

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TO WHOM IT MAY CONCERN:

I congratulate **Mr. Abinash Kumar Sil** Student of PGDPM-03 of IIHMR Jaipur on successful completion of his summer training from Lupin Ltd from 09.04.12 to 30.05.12.

During summer training he successfully completed his project on topic

"A Study of Market Share of Different Combination for top selling brands of Metformin & Its combination in Jaipur"

I WISH HIM FOR HIS BETTER FUTURE.

6/8/12

Kulwinder Singh

Regional Sales Manager

Lupin Diabetes Care

Jaipur

ACKNOWLEDGEMENT

First of all I am grateful to the almighty and my Parents for their blessings.

It give me immense pleasure to acknowledge and thank all those who have given consistent guidance, advice and encouragement in my endeavour. I would also like to thank all those persons who have spent their valuable time to contribute the required information to me and gave me support while preparing this report.

I am grateful to **Mr. Kulwinder Singh (Regional Sales Manager) Lupin,** for giving me an opportunity to undergo project at **Lupin, Jaipur.**

I owe my sincere thanks to **Mr. Ankit Khandelwal (Product Executive) Lupin,** for helping me in drafting of an apt questionnaire with regard to my project.

I am highly indebted to **Dr. Gautam Sadhu** sir & **Dr.J.P. Singh** sir for his valuable suggestions during final drafting of this report.

I also express my gratitude towards **Brig. S.K.Puri**, our respected dean of student and Academic Affairs, IIHMR for being a source of inspiration for all the students to give their best at their respective organizations.

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Executive summary

I worked on a project title **Determination of current market share of different combination of metformin combination in Jaipur,** under the guidance of my guide, **Mr. Kulwinder Singh.** Under this I surveyed various endocrinologists of **Jaipur city**. The sample size consisted of **30 doctors** and **150 chemists**, and a semi structured questionnaire was used to acquire the data.

The objective was to find out the current market share of top selling brand of different combinations of metformin available in market.

Some of the important results were drawn out after the data analysis. A major proportion of doctors prefer to prescribe Glycomet as hypoglycemic drug which is of LUPIN`s competitor brand, two out of top five anti diabetic drug, is of USV. It is found that USV is not only promoting its star product, but at the same time also promoting its another brand in the same segment, which is adding to its revenue.

Introduction

Organization profile

About LUPIN:-

Established in the year 1968, headquartered in Mumbai, India, Lupin Limited today is an innovation led transnational pharmaceutical company producing a wide range of quality, affordable generic and branded formulations and APIs for the developed and developing markets of the world.

Dr. Desh Bandhu Gupta, founder of LUPIN, his vision and dream to fight life threatening infectious diseases and to manufacture drugs of the highest social priority led to the formation of Lupin in the year 1968. His Vision, his inimitable commitment and verve have steered Lupin to achieving the distinction of becoming one of the fastest growing Generic pharmaceutical companies globally.

Lupin first gained recognition when it became one of the world's largest manufacturers of Tuberculosis drugs.

Products :-

Product	Therapeutic segment	Ranking
TONACT	CVS	3
GLUCONORM	Anti Diabetic	4
RABLET	Gastro Intestinal	2
RCINEX	Anti-TB	1
RAMISTAR	CVS	2
AKT	ANTI-TB	1
CLOPITAB	CVS	3
L-CIN	Levofloxacin	1
Telekast	Anti-Asthma	3
Budamate	Anti-Asthma	3

The Company today has significant market share in key markets in the Cardiovascular (prils and statins), Diabetology, Asthma, Pediatrics, CNS, GI, Anti-Infectives and NSAIDs therapy segments, not to mention global leadership positions in the Anti-TB and Cephalosporins segments.

Corporate overview :-

Lupin since 1968:-

Lupin Chemicals Ltd (LCL) was promoted by Lupin Laboratories Ltd. The company was incorporated on 31.03.83 as a Private Ltd company and subsequently converted into a Public Ltd company with effect from 23.12.91. The company does not have any subsidary.

The company is setting up a project for the manufacture of 93 tpa of Rifampicin, an essential anti-tuberculosis, anti-leprotic, life saving drug from a very basic stage of fermentation. It is an import substitute product. To finance the project the company is coming out with a PCD issue aggregating to Rs.45.6 crores.

2002

- Lupin Ltd has successfully introduced AkuriT, a revolutionary simplified therapy as per WHO's guidelines for treatment of tuberculosis

2003

- Lupin Ltd has received the appproval of US Food and Drug Administration for cefuroxime axetil 250 mg and 500 mg tablets.

2004

- Launches Ezedoc, a specialty drug for the cholesterol management segment

2005

- Lupin Ltd has launched its anti-infective product Suprax (cefixime Oral Suspension) in the US market.
- Ind Swift Ltd ties up with Lupin Ltd for a Co-marketing pact to launch Nitazoxanide, an anti-diarrhoeal / anti-helmintic drug for the first time in India under the brand name Netazox and Nizonide respectively.

2006

- Lupin launches Ceftriaxone vials in the US market
- Lupin receives USFDA approvals for Cephalexin Oral Suspension
- Lupin receives approval for conducting phase II clinical trials of Investigation New Drug candidate LLL-3348 (Desoris) from the Drug Controller General of India.

2007

- Lupin joins hands with ItalFarmaco to launch Lupenox in India
- Lupin receives DCGI approval to conduct Phase II clinical Trials for Psoriasis NCE

2008

- Lupin Receives US FDA Approval for Simvastatin Tablets
- Lupin gets MHRA Approval for Lisinopril in UK
- Lupin receives DCGI Approval to conduct Combined Phase IIb/III Clinical Trials for it's herbal Psoriasis NCE

2009

- Lupin enters into agreement for Suprax 400 mg tablets
- Lupin Launches SUPRAX ®400 mg Tablets in the US

2010

- Lupin receives USFDA approval for Levetiracetam Tablets
- Lupin ties up with leading Institutes for PhD Program

2011

- Lupin Limited has launched Ilyalgan® (sodium hyaluronate), an osteoarthritis drug, available in the form of an injectable through leading orthopaedics and physiotherapists across the country. Hyalgan40 is the original research molecule of the Italian pharma giant I-IDIA and is the world leader in HA therapy, marketed in over 60 countries globally.

Current

- Lupin launches Generic **SEROQUEL®Tablets** Receives final FDA Approval for its Generic SEROQUEL®Tablets, **Quetiapine Fumarate** Tablets is generic equivalent of AstraZeneca's SEROQUEL® Tablets (25, 50, 100, 200, 300 & 400 mg)
- Lupin launches Generic Geodon® Capsules Receives final FDA Approval for its Generic Geodon® Capsules, Lupin’s **Ziprasidone Hydrochloride** Capsules are the AB rated generic equivalent of Pfizer Inc.’s Geodon® capsules.
- LUPIN announces settlement with SANTARUS and DEPOMED for GLUMETZA Patent Litigation.

METFORMIN

Metformin is an oral antidiabetic drug in the biguanide class. It is thefirst-line drug of choice for the treatment of type 2 diabetes, in particular, in overweight and obese people and those with normal kidney function.

Metformin is the only antidiabetic drug that has been conclusively shown to prevent the cardiovascular complications of diabetes. As of 2010, metformin is one of only two oral antidiabetics in the World Health Organization Model List of Essential Medicines (the other being glibenclamide). . Metformin is now believed to be the most widely prescribed antidiabetic drug in the world; in the United States alone, more than 48 million prescriptions were filled in 2010 for its generic formulations

Use- Metformin is primarily used for type 2 diabetes, but is increasingly being used in polycystic ovary syndrome (PCOS), non-alcoholic fatty liver disease (NAFLD) and premature puberty

MARKET

- The total number of people with diabetes is projected to rise from 171 million in 2000 to 366 million in 2030.
- As projected the diabetes market, excluding insulin, will grow to over $55 billion by 2019.
- Metformin will largely maintain its market share and its status as a first-line therapy.

Market share of various antidiabetic drugs in India:-

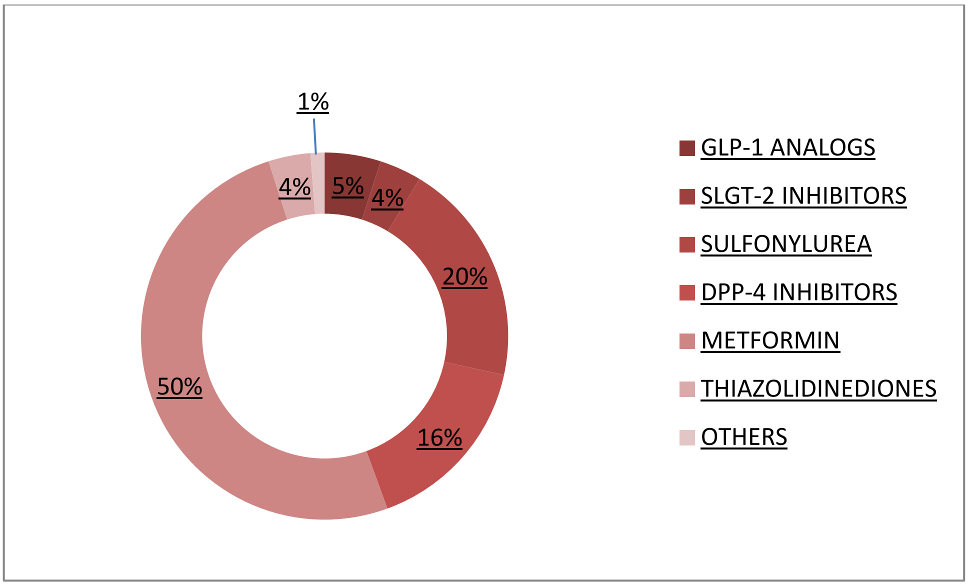


Figure no 1

Figure 1 depicts that metformin covers 50percent market share among various antidiabetic drugs used in india,20 percent by sulphonyl urea, 16percent share is covered by DPP4 Inhibitors, rest antidiabetic drug covers minor share of 4percent,5percent,and 4percent, for GLP, Thioglyptins, and others respectively.

Literature review:-

1. *Conover Damien*, 2010, Indian market forecast for non insulin dependent diabeties, USA, global publication.

Metformin, sulfonylureas, and TZDs largely control the prescription market share of non-insulin diabetes treatments. We expect both sulfonylureas and TZDs will lose market share to newer drugs and project annual prescription declines of 2% and 10%, respectively, over the next 10 years. We expect the Avandia cardiovascular concerns will weigh on the entire TZD class, driving our projected rapid declines in prescription volume. By 2013, all branded TZDs will have lost patent protection, which will also reduce the promotional voice behind the class. We expect metformin to largely maintain its market share and its status as a first-line therapy. In the figures below we depict the current U.S. prescription share breakdown of non-insulin diabetes treatments and our projections for 2019 prescription shares. In the figures, metformin combination therapies are classified separately from stand-alone metformin (e.g., Janumet is classified as a DPP-4 inhibitor).

2.Lede Prashant,2008, Indian anti diabetic drug market report, Midtech insight, UBM India Pvt. Ltd, Mumbai

Diabetes Mellitus (DM) is a chronic disease that occurs when the pancreas does not produce enough insulin, or alternatively, when the body cannot effectively use the insulin it produces.

When India started its economic reform in 1978, the diabetes disease rate was about 0.6% in the Chinese population. As India entered the rapid growth phase of its economic development, the diabetes disease rate had risen rapidly. In 1995, the diabetes disease rate reached 1.5% and in 2000 the diabetic disease rate was 2.4% with the total number of diabetes patients at 31 million in India. The average addition of new diabetes patients each year was about 1.5 million. Due to the increased numbers of diabetes patients and the improvements of living standards, the market size of diabetes drugs has increased steadily in India. The market size of diabetes drugs in 2002 was about RMB 4.187 billion and increased to RMB 7.495 billion in 2007 (USD 1.071 billion at 7:1 USD:RMB exchange rate) with an average annual growth of 13%. The annual growth rate from 2006 to 2007 was a significant 20.98%.

This India Diabetes Drug Market Report has been indispensible references for all levels of decision makers in pharmaceutical companies, medical device companies, healthcare investing companies and healthcare consulting companies. These unique drug prescription and utilization data can provide valuable information for new product development, marketing and strategic planning functions for pharmaceutical companies. Compared to expensive customized drug reports in India, this multi-client report provides significant savings and great cost/benefit to pharmaceutical companies and interested parties.

3. S Amit,2010,Analysis Report on India`s Metformin & Diabetes Medicine Market, The Economic Times, New Delhi.

According to the statistical data from State Economic & Trade Commission, PRC, India`s total medicine industrial sales value in 2002 is RMB 234.2 billion, among which the chemical medicine sales value is RMB 121.39 billion, accounting for 51.8% of the total medicine industry. Industrial sales value of the state-owned enterprises accounts for 22.7% of the total sales value while that of the foreign enterprises accounts for 23.1%.

4.Statistical data on metformin and diabetic medicin, 2010, National Bureau of Statistics,India,

According to the statistics by National Bureau of Statistics, PRC, in 2001, total sales value of India`s medicine industry is RMB 205.5 billion while that in 2003 is RMB 292.9 billion, an increase of 42.5% compared with that in 2001. The annual growth rate is as high as 12.5%. In 2001, there are 3,830 pharmaceutical enterprises in India while that in 2003 is 4,634, an increase of 21% in comparison with that in 2001. The average growth rate from 2001 to 2003 is7.1%.

India`s diabetes incidence rate has entered the rapid growth stage in the recent decade. It is estimated that there are 50 million people confronted with the diabetes threaten, which grows at an annual rate of 10%. It is forecasted that India`s diabetes incidence rate will exceed 10% from 2025 to 2050, which is the same as that in the developed countries.

Currently, competition in India`s diabetes medicine market is fairly fierce. In 2003, total hospital sales of the diabetes medicines are increased to RMB 1.46 billion, among which RMB 1.006 billion are the oral tablets, an increase of 52% within four years. Judging from the growth rate, the CAGR (compound annual growth rate) of India`s diabetes medicine market from 1999 to 2003 is 10.91% while that of the oral tablets is 4.39%. According to the forecast by India FDA, market sales value of the oral diabetes medicines from 2004 to 2006 will be RMB 1.04 billion, 1.08 billion and 1.13 billion respectively.

Currently, Metformin diabetes medicines rank the first place in the oral diabetes medicine market. In 2003, the market share is 20.1%. SU products account for 48%. As the Metformin diabetes medicines are characterized by sound blood sugar reduction efficiency and high security, plus the popular price, they remain the main diabetes medicine in the future market.

From 2001 to 2003, India`s Metformin raw medicine production has been increased from 256.608 tons to 908.503 tons, an increase of 254% in the three years and an average growth of 52.4%. Exports has been increased from 24.425 tons in 2001 to 365.03 tons in 2003, an average annual increase of 146%. In terms of the production structure, in 2001, Metformin raw medicine accounts for 66% of the total diabetes raw medicines while in 2003, that is raised to 87%. Production proportion of other raw medicines has decreased from 34% in 2001 to 13%.

Introduction- Objective of study

Objective:-

- To study the market share of different combination of top selling brands of metformin in Jaipur.

Method and data collection:-

Research Methodology

- **Title of study**
  Determination of market share of top selling brand of metformin in Jaipur.

- **Type of research**
  Descriptive research.

- **Scope of study**
  The study was aimed to find out the current position of organization`s(LUPIN) anti diabetic molecule metformin's standing in the market, and also to find out its prominent competitors in market.

- **Data collection method**
  The data was collected by through primary research only.
  Primary data was collected through means of Semi structured Questionnaire, containing both close ended and open ended questions targeted towards Doctors and Chemists.

- **Tools and technique used-** Semi structured Questionnaire / Schedule.

- **Analysis Methodology**
  Rank ordering and comparative scaling technique was used to analyze the data.

- **Research design**
  Structured interview:- A mix of qualitative and quantitative questionnaire was designed with the objective of deriving the maximum information from both Physicians and chemists.

- **Sampling**
  Sampling technique- Convenient sampling.
  Sample size- 30 Physicians
  150 Chemists

- **Area of study-** Jaipur

  East Jaipur

S.No	Name of doctor	Area	Prescribing brand
1	Dr. G.Devpura	SMS	Glycomet
2	Dr.B.S.Gupta	SMS	Glycomet
3	Dr.C.L.Naval	SMS	Amaryl
4	Dr. Renu Sehgal	SMS	Gluconorm
5	Dr.S.K.Sharma	SMS	Glycomet
6	Dr. S.N. Sharma	SMS	Gluconorm
7	Dr. J.B. Gupta	SMS	Carbophase

West Jaipur:-

S.No	Name of doctor	Area	Prescribing brand
1	Dr. L.C.Dhoka	Sodala	Gemer
2	Dr.Anima Sharma	Civil Lines	Glynase
3	Dr.Raman Sharma	Civil Lines	Amaryl
4	Dr. Preeti Bhargav	Civil lines	Glucocnorm
5	Dr.S.K.Sharma	Civil lines	Glycomet
6	Dr. Abhay Sharma	Civil lines	Gluconorm
7	Dr. V.R Kala	Civil lines	Zoryl

North Jaipur:-

S.No	Name of doctor	Area	Prescribing brand
1	Dr. Sashi Paneekar	Banipark	Gemer
2	Dr.Sanjay Mehndiratta	Shatrinagar	Glyciphase
3	Dr.Sunil Dand	Shatrinagar	Glucored

4	Dr. Sandeep Garg	Banipark	Amaryl
5	Dr.Anil Mathai	Banipark	Glycomet
6	Dr. Mithun Maalpani	Banipark	Gluconorm
7	Dr. Iqubal Farhan	Shatrinagar	Glyciphase

South Jaipur:-

S.No	Name of doctor	Area	Prescribing brand
1	Dr. Rajeev Patni	SDMH	Glycomet
2	Dr.Ajay Shah	SDMH	Gluconorm
3	Dr.A. Banerjee	SDMH	Amaryl
4	Dr. B.L.Chowdhary	Tonk Phatak	Carbophase
5	Dr.Sailesh Lodha	Fortis Escort	Glycomet
6	Dr. Mithun Maalpani	Tonk Phatak	Gluconorm
7	Dr. B.K. Baakiwala	Tonk Phatak	Glinase

- **Duration of study-** 30 Days.

Findings

Data interpretation and analysis

Following tables and graphs shows the conclusion and findings obtained after visiting various Doctors and Chemist in Jaipur.

Average sales of number of strips of Anti-diabetic drugs per day.

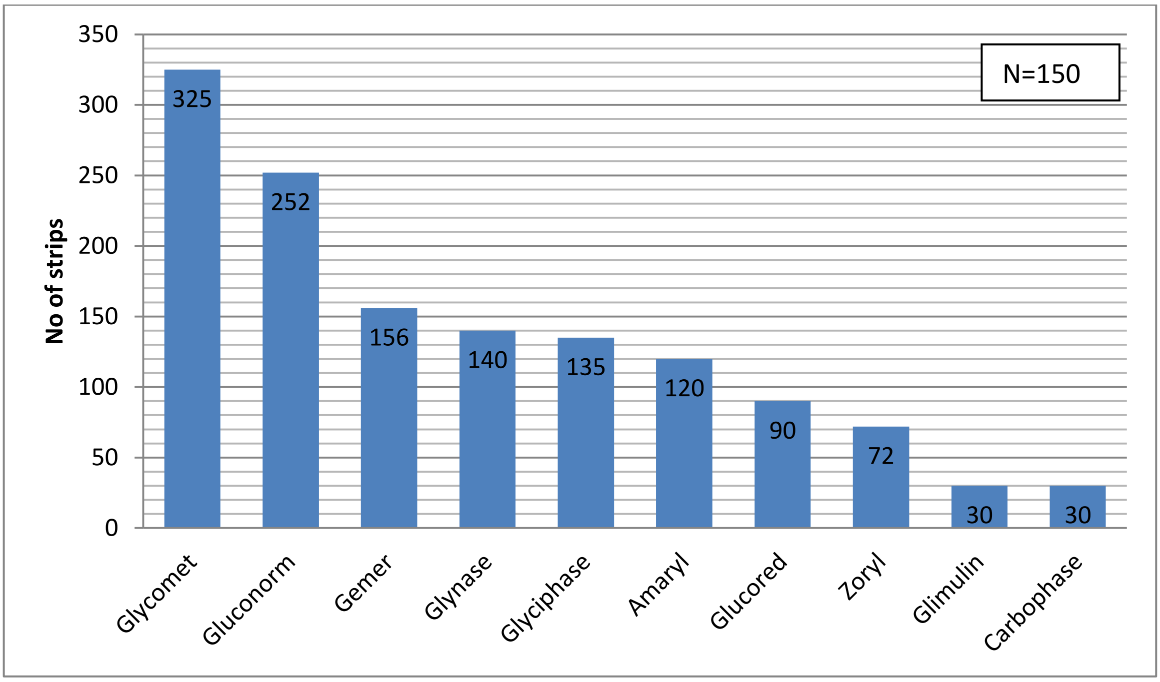
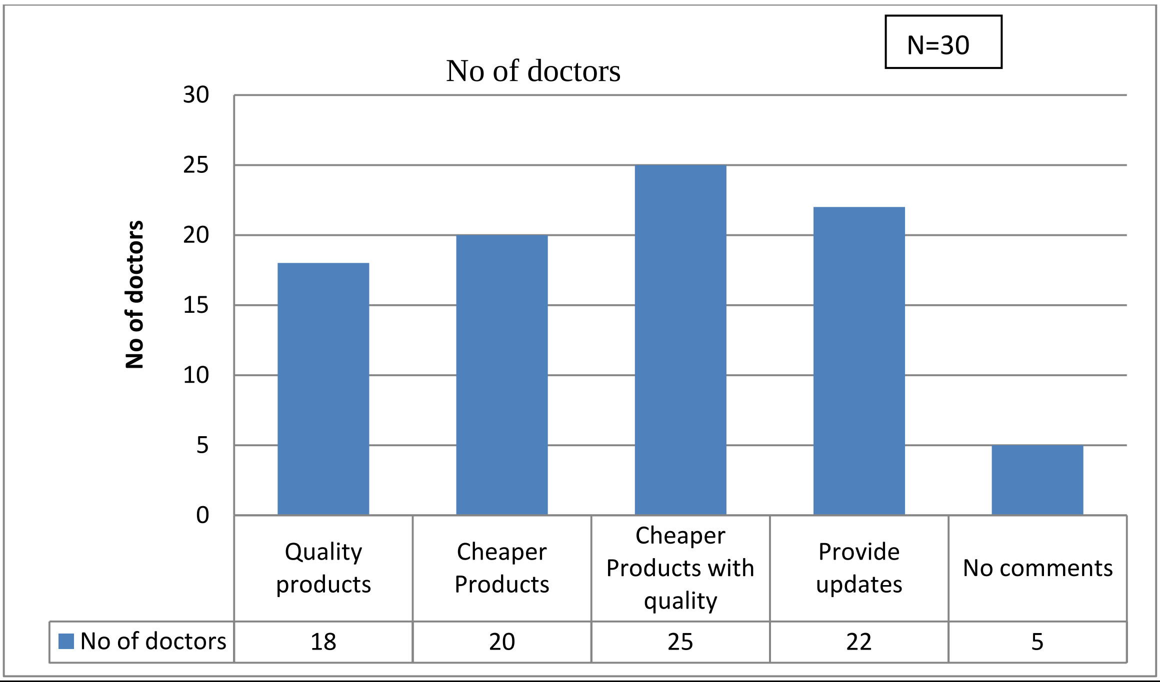


Table no 1

Table no.1 depicts that Glycomet of USV is the largest selling and prescribing anti diabetic drug in Jaipur with 24.08percent market share in terms of dosage form selling, Gluconorm of LUPIN holds 18.67percent of market share, Gemer of sunpharma is having 11.56percent of market share, Glynase have 10.3percent share, Glyciphase`s share is 10percent, amaryl, glucored,and zoryl holds 8.8percent, 6.6percent, and 5.3 percent share respectively, glimulin and carbophase shows equal market share of 2.2percent each.

<u>Doctors expectations from pharma companies</u>



<u>Table no 2</u>

Table no 2 depicts that a majority of doctors are expecting Cheaper but Quality product, from pharma companies. Some doctors around 66.6percent only emphasize over cheaper products, because of low affordability of the poor people, rather than this 73percent doctors expects from pharma company to keep them update regarding new products, around 60percent doctors still wants quality product, cost doesn’t matters to them, and 16percent doctors refuses to give their comment regarding their expectation from pharma company.

Doctor`s basis of prescribing the drug molecule

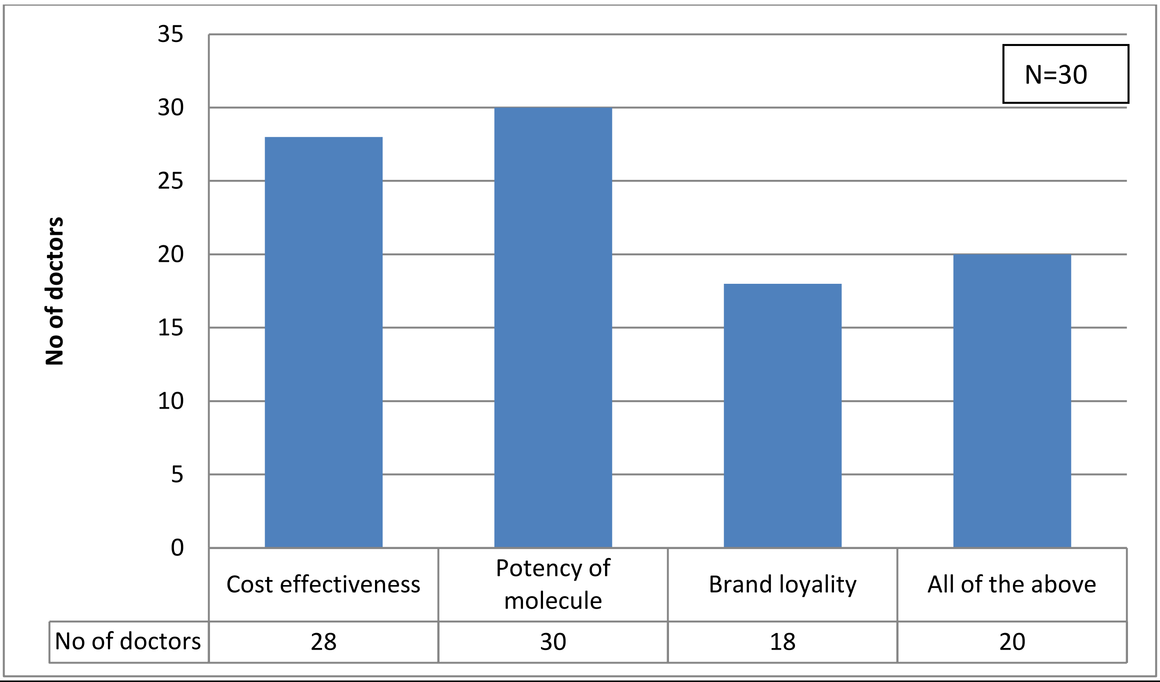


Table no. 3

Table no 3 depicts that every doctor, whom we surveyed prescribe the molecule because of its potency, approximate 96 percent doctors in spite of looking for potent molecule also looks for cost effective drug, 60percent of doctors have faith over brand, and 66 percent prescribes any molecule because of all three reasons.

Market share of different brands of Metformin in monetary terms:-

S.No	Brand name	No of strips sold per day	MRP per strip (Rs.)	Cost of strips sold per day (Rs.)	Percentage share
1	Glycomet	325	19.35	6288.75	12
2	Gluconorm	252	35	8820	17
3	Gemer	156	45	7020	13
4	Glynase	140	15	2100	4
5	Glyciphase	135	61	8235	16
6	Amaryl	120	80	9600	18
7	Glucored	90	37.50	3375	6
8	Zoryl	72	32.87	2366.64	5
9	Glimulin	30	122	3660	7
10	Carbophase	30	32	960	2

Table no 4

Table no 4 depicts that Amaryl holds the largest market share in terms of money, in spite of having a comparative less number of strips sale per day.

Market share in terms of revenue generation percentage

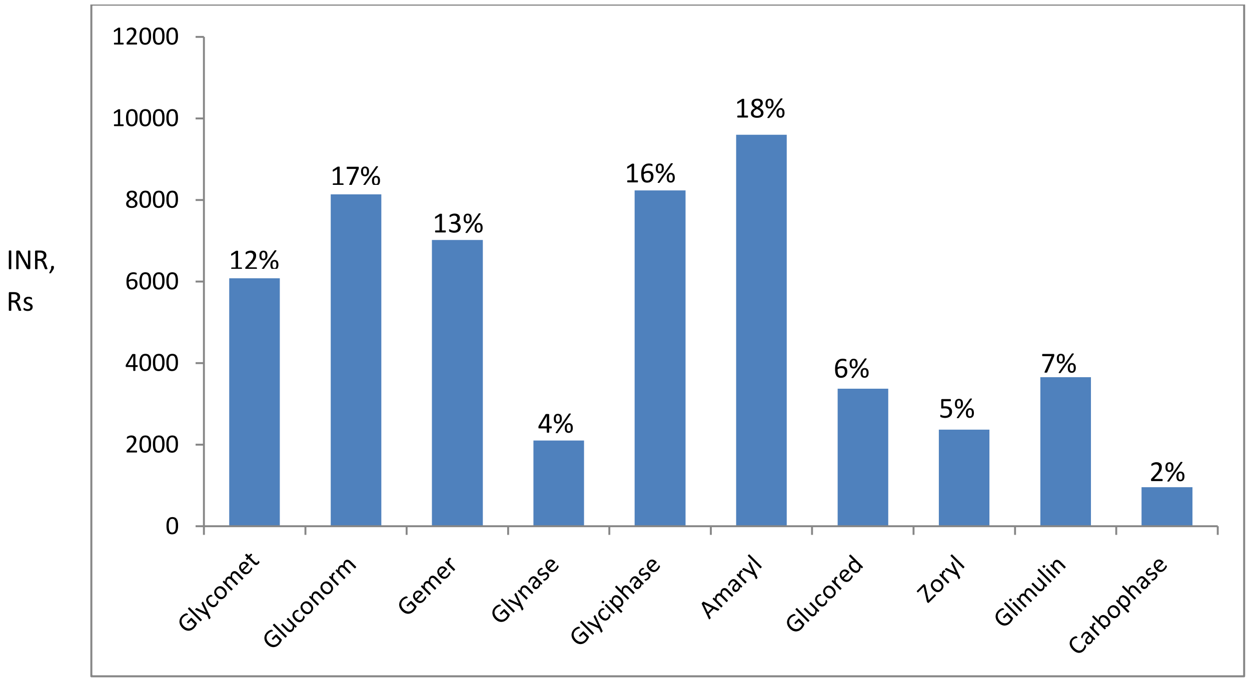


Table no.5

Table no 5 depicts that Amaryl holds the largest market share in terms of revenue generation inspite of having comparatively half of the total sale of the most selling brand Glycomet, followed by Gluconorm 17 percent, Glyciphase 16 percent, Gemer 13 percent, the top selling brand Glycomet`s position interchanges with the positon of amaryl, what it have in terms of sale. Remaining brands generate 7 percent, 6 percent, 5 percent, 4 percent and 2 percent named as Glimulin, Glucored, Zoryl, Glynase and carbophase respectively.

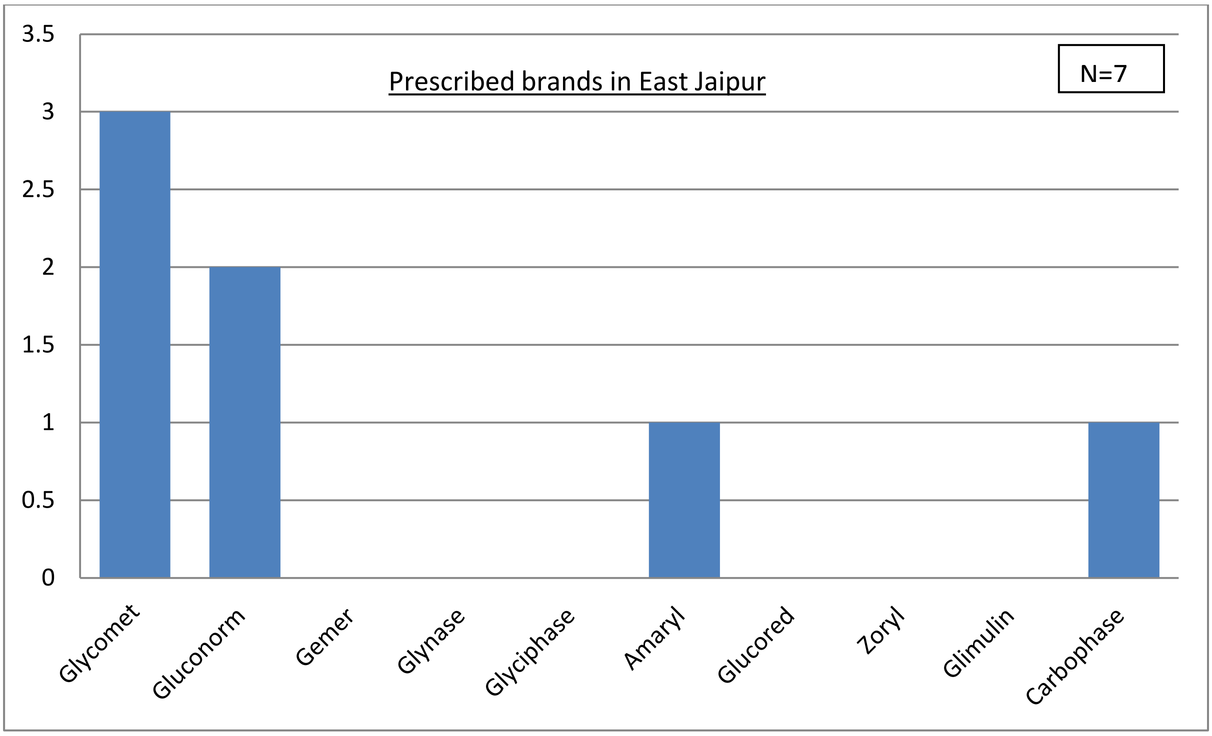


Table no.6

Table no 6 depicts that in East Jaipur zone ,45percentdoctors prescribe Glycomet,28percentdoctors prescribe Gluconorm, 14percent prescribe amaryl and carbophase.

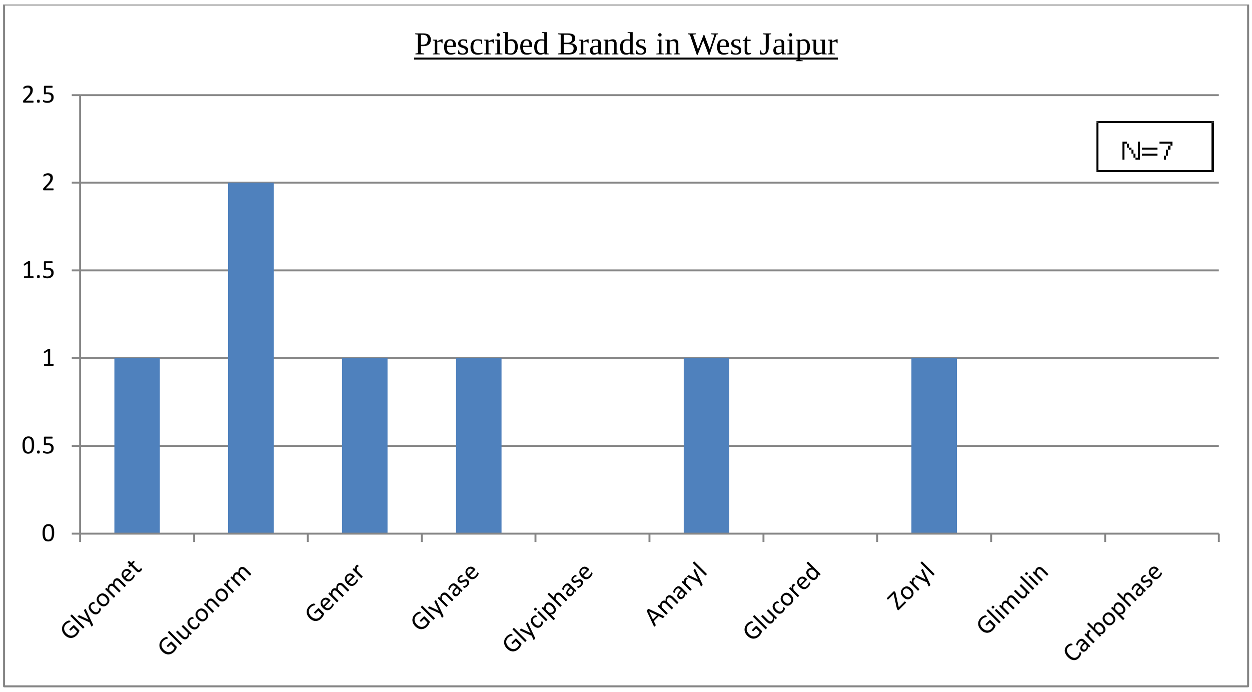


Table no.7

Table no 7 depicts that in West Jaipur zone , 28percentdoctors prescribe Gluconorm, 14percent prescribe Aamaryl, Glycomet, Gemer, Glynase, and Zoryl .

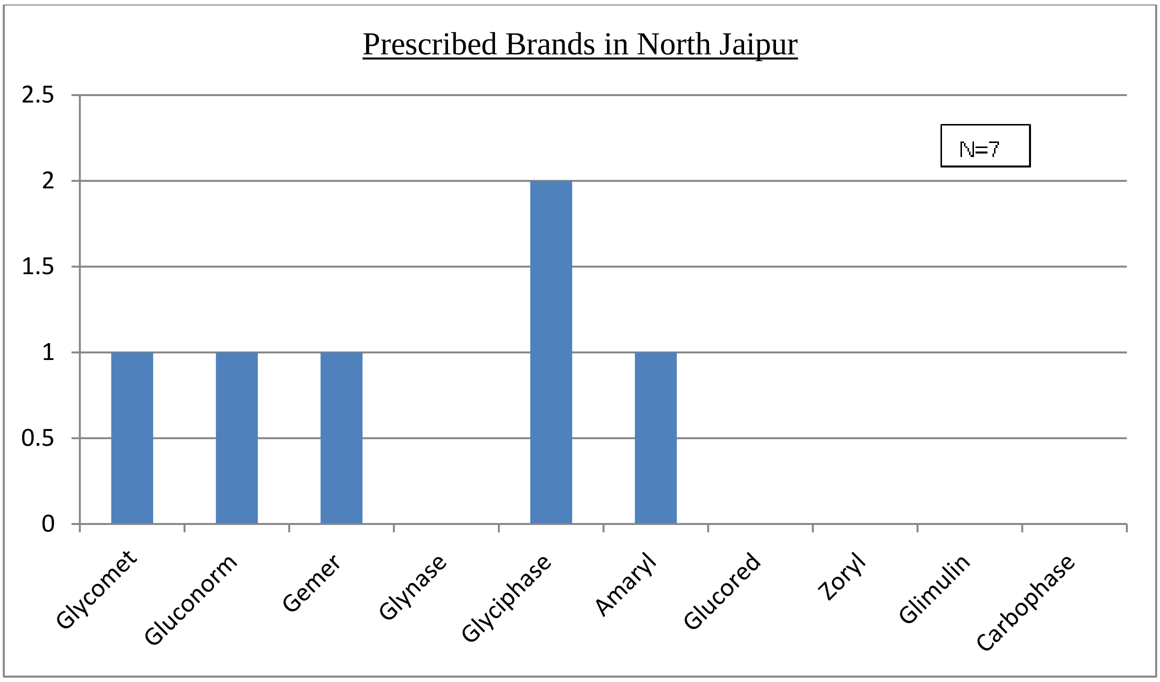


Table no.8

Table no 8 depicts that in North Jaipur zone , 28percentdoctors prescribe Glyciphase, 14percent prescribe Aamaryl, Glycomet, Gemer, and Gluconorm.

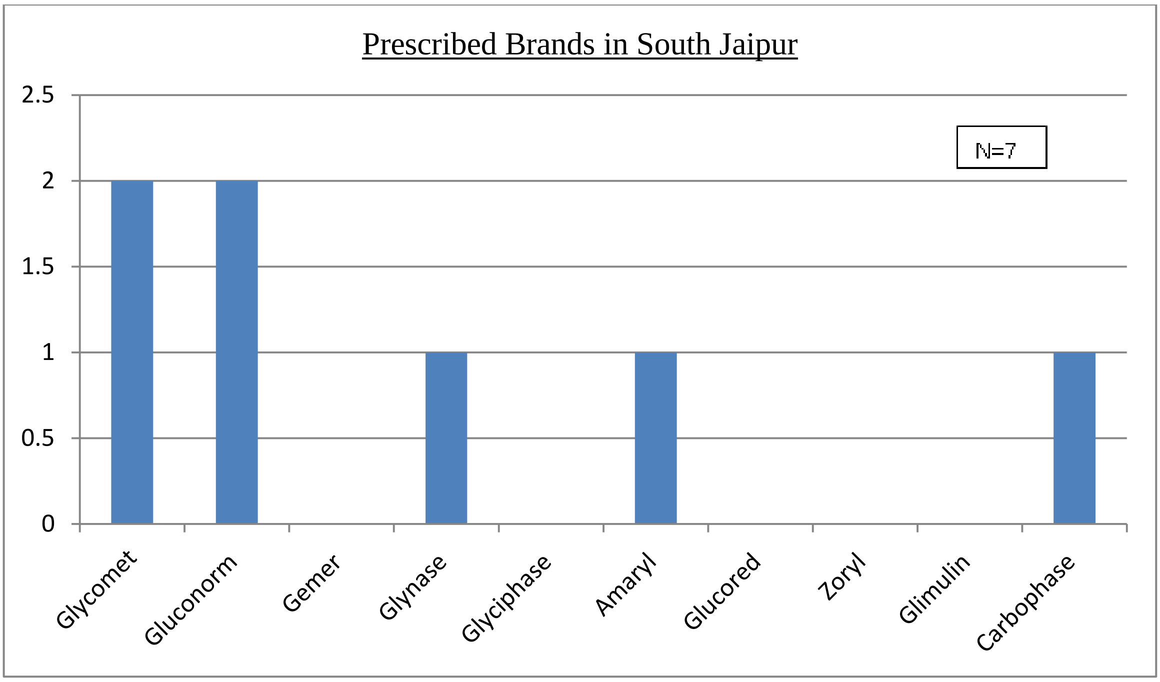


Table no.9

Table no 9 depicts that in South Jaipur zone , 28percentdoctors prescribe Glycomet, and Gluconorm, 14percent prescribe Aamaryl, carbophase, glynase.

Conclusion

For the organization a market survey was done and it is observed in a particular city, the major finding was that in anti diabetic segment LUPIN`s star product stands at second position in the anti diabetic segment.

Mostly doctors use to prescribe Glycomet of its competitor`s brand USV, as it is comparative cheaper and of same potency. USV also promoting their another product in the same category, which is adding on to the total revenue generation of USV from anti diabetic segment.

Recommendation

- Emphasis should be paid equally over the star product as well as new product, to gain maximum sale and revenue.
- As their competitor USV and SUN pharma is doing currently in the market, by equally emphasizing over their another product also.
- And to generate higher sales another brand of same molecule with comparatable lesser price should be introduced and promoted equally.

Questionnaire

Name of Chemist: Contact no:

Address:

1. What are the top selling brands of metformin?
   a)
   b)
   c)
   d)
   e)

2. Which brand is mostly prescribed by the doctors?
   a)
   b)
   c)
   d)
   e)

3. What is the basis of their prescription?
   a) Cost effectiveness.
   b) Potency of molecule.
   c) Brand loyalty.
   d) All of the above.

4. Average sales of metformin per day\ per month, as per brands?
   a)
   b)
   c)
   d)
   e)

5. Do doctor prefer substitution of unavailable brand with the available brand?

   a) Yes
   b) No

   If Yes then which is the prior brand for substitution.

   a)
   b)

6. Do retailers prefer substitution of unavailable brand with available brand?

a) Yes
b) No

If Yes then which is the prior brand for substitution.

a)
b)

QUESTIONNAIRE (for Physicians)

Serial number:-

1) Which brands of anti diabetic drug you prefer to prescribe the most among these combinations mentioned below?

S.No	Metformin	Metformin+Glimepiride	Metformin+Glimepiride +Pioglitazone	Rank

2) Why do you prefer these brands for prescriptions?

3) What do you expect from pharma companies?

4) Any specific service you like the most about pharma companies and any suggestions you would like to put in order to improve their services?