

**UNDERSTANDING CURRENT PRESCRIPTION TRENDS IN
MANAGEMENT OF CVD AND CHALLENGES OBSERVED
AT DIFFERENT STAKE HOLDERS**

**Dissertation
at
Ray Adcomm Pvt. Ltd,
Mumbai**

**By
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**Under the Guidance of
Mr. Abhishekh Dadhich**

**MBA Pharmaceutical Management
2013-2015**


**Institute of Health Management Research,
Jaipur
2015**

CERTIFICATE

TO WHOMSOEVER MAY CONCERN

This is to certify that Komal Jain student of MBA Pharmaceutical Management from IIHMR University, Jaipur has undergone internship training at Ray Adcomm Pvt. Ltd. from 2nd February to 2nd May 2015.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.



Col. (Dr.) Ashok Kaushik
Dean, Academics and Student Affairs
IIHMR, Jaipur



Mr. Abhishek Dadhich
Assistant Professor
IIHMR, Jaipur



The certificate is awarded to

Komal Jain

In recognition of having successfully completed her
Dissertation in the department of

Strategy & Planning

and has successfully completed her Project on

Understanding the Current Rx Trends in the Management of CVD and Challenges at
Different Stake Holder Levels

2nd Feb 2015 – 2nd May 2015

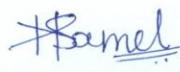
at

Ray Adcomm Pvt. Ltd.

She comes across as a committed, sincere & diligent person who has a
Strong drive & zeal for learning

We wish her all the best for future endeavors


Founder & C.E.O


Head-Human Resources

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Understanding the Current Prescription Trends in Management of Cardiovascular Disorders and Challenges Faced by Different Stakeholders** submitted by Komal Jain, Enrollment No. 198 under the supervision of Mr. Abhishek Dadhich for award of MBA Pharmaceutical Management of the university carried out during the period from 2nd February to 2nd May 2015 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.

Komal Jain

Signature

ACKNOWLEDGMENT

I take this opportunity to humbly express my gratitude to all those concerned with my project and have taken efforts in this project. However, it would not have been possible without the kind support and help of many individuals and organizations. I would like to extend my sincere thanks to all of them. I would like to share the success of my project amongst the persons who have directly and indirectly helped me to complete this project.

I am highly indebted to **Insignia & Ray Adcom Pvt. Ltd** for providing me an opportunity to be associated with this esteemed organization. I would also like to show my gratitude to **Mr. Vijay Lokhande, Ms. Swati Chandra** and **Mrs. Namita Samel** for their guidance and constant supervision as well as for providing necessary information regarding the project & also for their support in completing the project.

I would like to express my gratitude towards my parents, my college, The IIHMR University, my guide **Mr. Abhishek Dadhich** and **Faculty members** for their kind co-operation and encouragement which helped me in completion of this project.

I would also like to express my special gratitude and thanks to my friends for providing me such valuable information, attention and time.

My thanks and appreciations also go to my colleagues in developing the project and people who has willingly helped me out with their abilities.

1. EXECUTIVE SUMMARY

Ray Adcomm Pvt. Ltd. Mumbai has been successfully providing the strategic consultation & fulfilling Creative needs of the Indian healthcare Industry. The aim is to develop insightful & creative, marketing campaigns using the expertise. The Organization now intends to be the No.1 Advertising agency in India.

The study aimed to understand doctor's prescription trends and the reasons that influence them to prescribe a particular brand in the management of Cardiovascular Disorders, the study also aimed to find out the challenges observed at different stake holders.

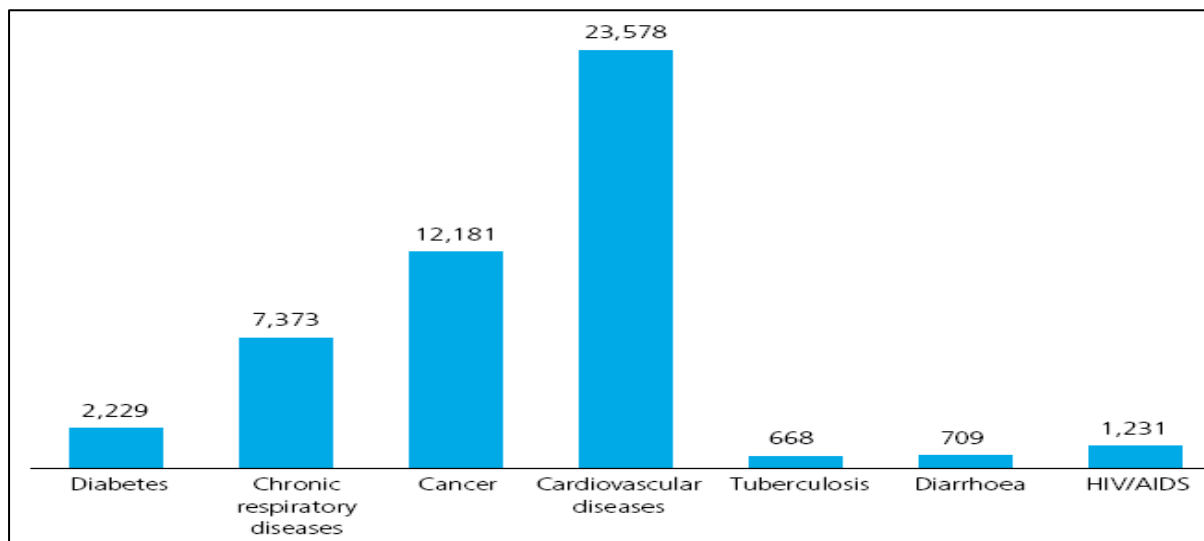
Semi structured questionnaire was utilized for data collection from respondents i.e. 100 Doctors comprising of General practitioners, Consulting physicians and Specialists/Cardiologists), from the cities of Mumbai & Jaipur. Data was analyzed & the findings provided with Doctor's opinion and a comprehensive review of the market situation to be used for framing & suggesting Marketing Strategies.

2. INTRODUCTION

Cardiovascular Diseases are expected to be the fastest growing chronic illnesses between 2005 and 2015, growing at 9.2% annually. Accounting for the second largest number of Non Communicable Disease patients after mental illnesses worldwide, 17.5 million deaths were attributed to cardiovascular diseases.

- 20% deaths occurred in high income countries
- 45% in upper and lower-middle income countries
- 35% in low income countries including India

Between 2005 and 2015, India is projected to cumulatively lose USD \$236.6 billion because of heart disease, stroke and diabetes; shaving 1% off the GDP. The situation is even grimmer when it comes to cardiology. India trains only about 150 cardiologists every year, and the number is not enough given the disease burden. There is a shortage of adequately trained specialists, nurses and technicians for cardiology to cater to the masses for preventive health check-ups, interventions and disease management.¹



Mortality from Major Communicable and Non-Communicable Diseases, 2030²

There are various diagnostic tests like Electrocardiogram, Nuclear stress testing, Echocardiogram, Magnetic resonance imaging, CT scan and treatment modalities; however, the choice of testing modality depends on many factors.

Lifestyles of populations across the world have changed dramatically in the 20th century. These changes (collectively termed as epidemiological transition) have been brought about by a number of developments in science and technology that now affect every facet of human existence. Most human societies have moved from agrarian diets and active lives to fast foods and sedentary habits. Combined with increasing tobacco use, these changes have fuelled the epidemic of obesity, diabetes, hypertension, dyslipidaemia and cardiovascular diseases (CVD).

In developed nations the rise in the burden of CVD occurred over several decades due to a long period of epidemiological transition. In India, perhaps because of the rapid pace of economic development, epidemiological changes have spanned a much shorter time. As a consequence, cardiovascular disease (CVD) has emerged as the leading cause of death all over India, with coronary heart disease (CHD) affecting Indians at least 5-6 years earlier than their western counterparts. Current estimates from disparate cross-sectional studies indicate the prevalence of CHD to be between 7-13 per cent in urban and 2-7 per cent in rural India. The spiralling rates of modifiable risk factors for CHD across the spectrum of rural to urban segments of our population have been demonstrated by several studies across India. In addition, migration and urbanization have resulted in an increase in the prevalence of risk factors such as diabetes, overweight.⁵

The economic impact of these transformations was estimated at 9 billion dollars in national income from premature deaths due to heart disease, stroke and diabetes in 2005 alone, with the projected estimates of 237 billion dollars by 2015. The out-of-pocket health expenses

incurred by households increased from 31.6 per cent in 1995 to 47.3 per cent in 2004 .Modelling studies have estimated that if non-communicable diseases (NCDs) were completely eliminated, the estimated GDP in a year would have been 4-10 per cent higher.

The determinants and the control strategies of the CHD epidemic are multi-factorial, complex and interrelated. We now know that the surge in CHD and their risk factors in varied settings are fuelled by modifiable risk factors which can be reduced by simple strategies. Most of these preventive strategies are in the domain of policy, health system intervention, health promotion and simple quality improvement programmes aimed at improving secondary prevention.

Established modifiable risk factors include smoking, alcohol, physical inactivity, low consumption of fruits and vegetables, overweight and obesity, increased blood pressure. While the need for research directed towards implementing simple but effective CVD prevention strategies and health system strengthening to combat CVD is glaringly obvious, there is very little actual research output in these areas from India. Key research areas to combat CVD should include: (i) cost-effective, innovative ways of reducing CVD risk through health policy and health system interventions; (ii) methods for ensuring integration of CVD care within health systems; (iii) health system financing strategies for individuals with CVD; (iv) best methods of applying existing knowledge for development, implementation and evaluation of CVD prevention programmes; (v) mechanistic research to identify the reasons for the younger age of onset of CVD and diabetes and their occurrence at a lower threshold of risk factors; and (vi) methods to implement health promotion measures to the population at large along with formulation and implementation of 'HEART-friendly' policy measures. The above described measures require multidisciplinary, multi-sectoral and multi-level co-ordination and action. Thus

translational research, (both T1: from the laboratory to studies in humans and T2: from clinical research to clinical practice and beyond) is needed to develop multi-pronged approaches that address the patient, provider, healthcare systems, public health, and public policy for the prevention and control of CHD in India.¹⁴

3. Review of Literature

- The study by Kamath A Shangbhag & Shenoy “ A Retrospective study of the drug prescribing pattern in acute myocardial infarction” in the year 2008 was aimed at identifying the patient parameters, the associated co-morbid conditions and the pattern of drug prescribing among inpatients admitted in the medical wards of a teaching hospital in western Nepal. The short- term study was carried out during the months of July and August 2001 at the Manipal teaching hospital, Pokhara, western Nepal. The patterns of drug use in 129 patients admitted to the Internal Medicine wards and suffering from cardiovascular disorders were studied. 62 male patients (48.06%) were admitted in the Internal Medicine wards during the study period while 67 female patients (51.94%) were admitted during the corresponding time period. The majority of the patients were hospitalized for a time period below 6 days were hospitalized for a time period ranging from 6 to 10 days. The average duration of hospitalization was 6.41 ± 3.35 days (mean $\pm$ SD). The average number of drugs per prescription was 3.39 ± 1.88 . Out of the total of 431 drugs prescribed to the inpatients, 274 drugs (63.57%) were prescribed by brand names. It was observed that the inclination to brand name prescribing was more and there were occasions when prescribing by generic names would have reduced the cost of treatment⁽²⁾

- A observational study “Prescribing Pattern in Coronary Artery Disease: A Prospective Study” by Rajkumar Venisetty was done in the department of Cardiology at Global Hospital, Hyderabad conducted from January 2012 to September 2012. Patterns of drug prescribed in coronary artery disorders were analyzed. 170 patients were included in the study. Out of these 124 were male patients and 46 were female patients. The age group of most of the patients were 46-66. Co-morbid conditions were Hypertension and diabetes. The prescription pattern of these drugs wherein CVD was found to be antiplatelet drugs, antihyperlipidemic drugs, antibiotics, antianginal drugs, antihypertensives, anticoagulants, diuretics and bronchodilators. Percentage of generic drugs prescribed was 1.76. Polypharmacy was noticed and generic drugs prescribed were very few⁽³⁾

4. RESEARCH QUESTION

- What is the Prescription Trend of Doctors in management of Cardiovascular Disorders?
- What are the challenges faced by different stakeholders in management of Cardiovascular Disorders?

5. STUDY OBJECTIVE

The main objective to conduct this research is to identify the prescription trend of Doctors in management of Cardiovascular Disorders.

Primary Objectives:

- To study the reasons influencing doctor's prescription, in management of Cardiovascular Disorders
- To study the challenges observed at different stake holders

6. RESEARCH METHODOLOGY

a. STUDY AREA & STUDY DESIGN:

1. **Study Area:** Mumbai & Jaipur
2. **Study Design:** Exploratory
3. **Study Duration:** 3 Months

b. SAMPLING:

1. **Sample Size:** 100 Doctors (General Practitioners, Cardiologists)
2. **Sampling Method:** Random Sampling

c. INCLUSION CRITERIA:

1. **Inclusion criteria:** The Doctors practising as GP's CP's & Cardiologists

d. DATA COLLECTION & ANALYSIS:

1. **Data Collection:** Primary Data was collected by direct interview method through semi structured questionnaire
2. **Data Analysis:** The tool used for Data analysis was Microsoft Excel

e. ETHICAL CONSIDERATIONS:

1. The aims & objectives of the study were explained to the respondents
2. Confidentiality of the respondent's identity will be maintained.

7. Analysis

1) What are the different types of cardio vascular disorders managed by you in your in-clinic practice?

Figure 1.1

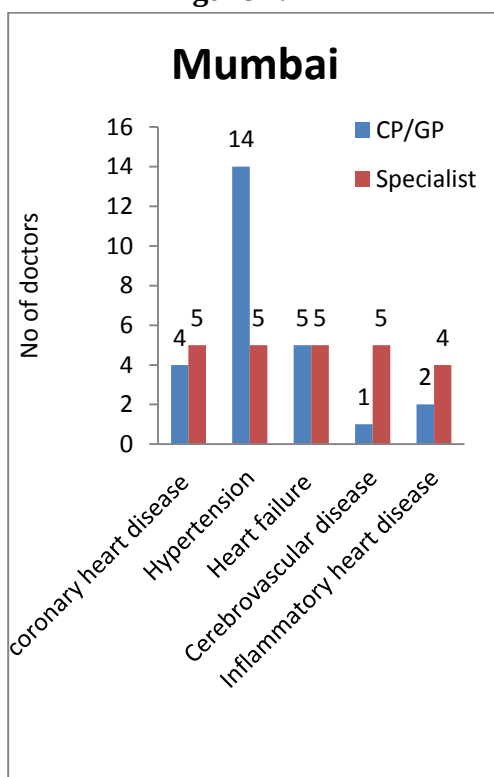
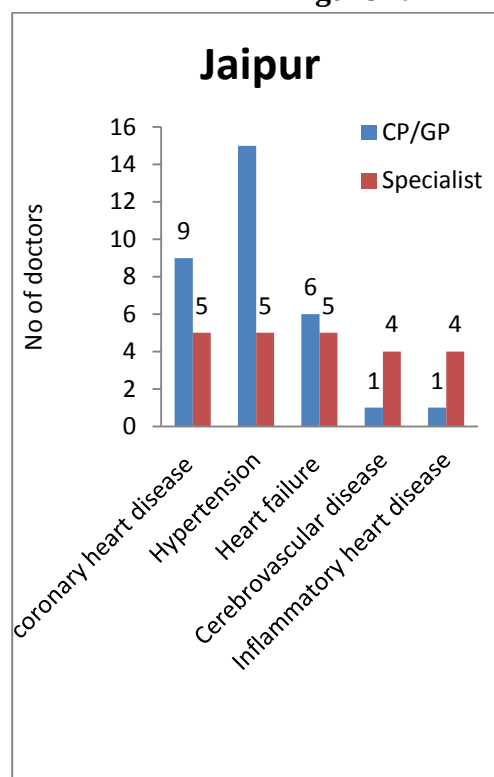


Figure 1.2



Inference

On the basis of statistical data, it is clearly evident that in both the cities, cases of hypertension were treated by GP/CP and Specialists at maximum times followed by heart failure cases.

2) What are the diagnostic tool uses for differential diagnoses of CVD?

Figure 2.1

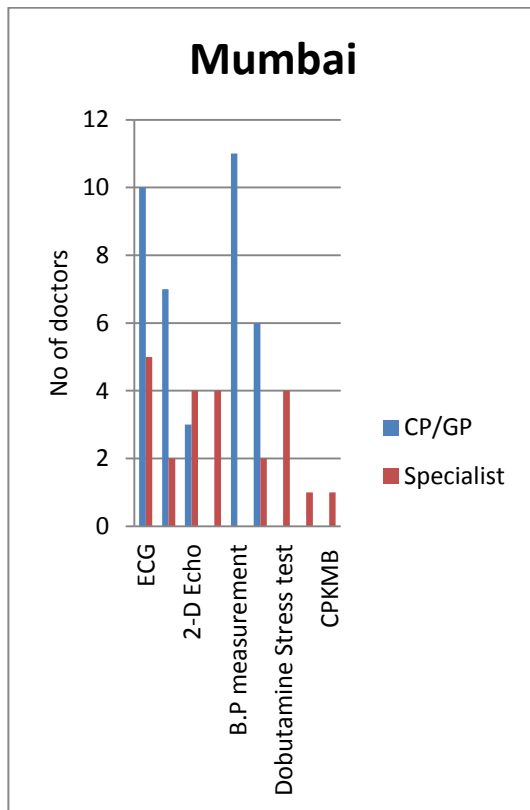
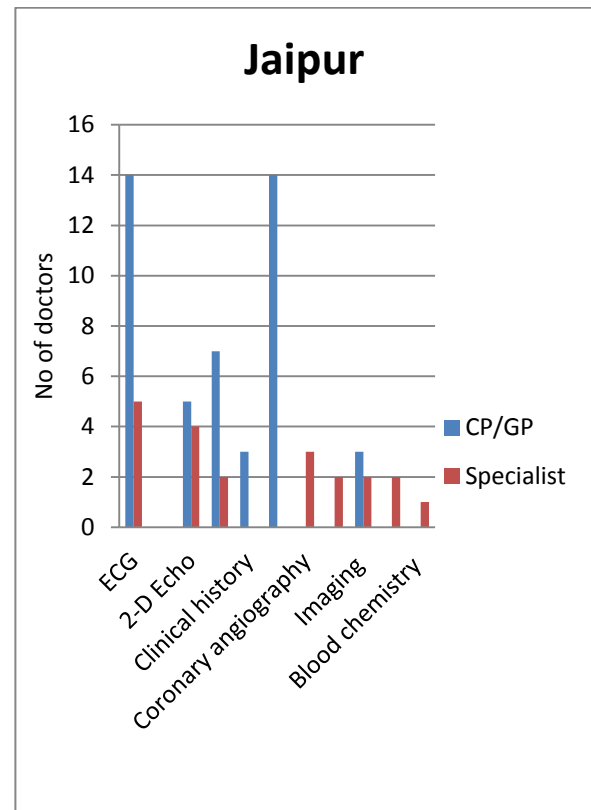


Figure 2.2



Inference

In both the cities it was recorded that **B.P measurement** was most preferred diagnostic tool for diagnoses of the Hypertension.

Other mostly used tools were ECG, lipid profile and coronary angiography.

In Mumbai, many specialists used Throponin T and CKMB tests as diagnostic tools; whereas, Jaipur specialists used CTMT and Catheterization tests as the diagnostic tools for handling CVD cases.

3) What are the different types of co-morbidities seen while managing CVD?

Figure 3.1

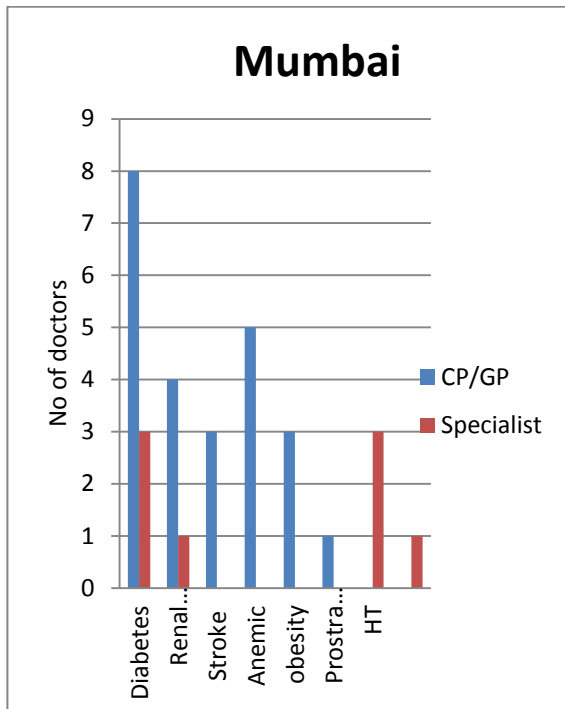
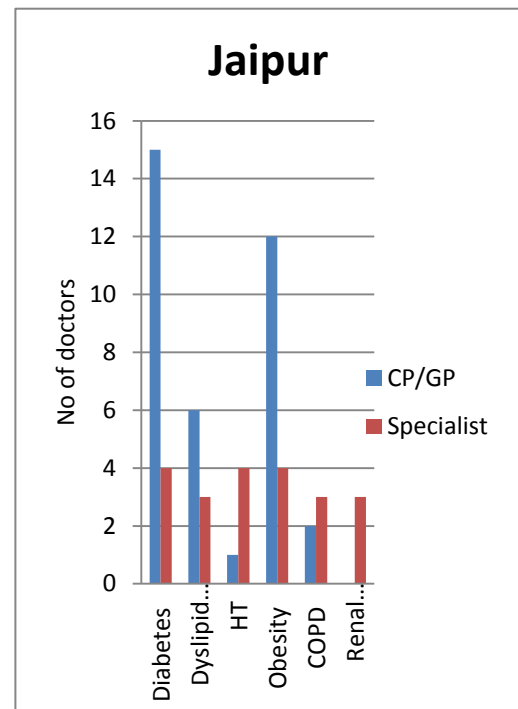


Figure 3.2



Inference

In both the cities Diabetes was seen as the co morbidity associated with cardio vascular diseases

In Mumbai, patients suffering from cardiovascular diseases were found to be anaemic and co-morbidities were observed whole managing CVD cases

In Jaipur, other major co-morbidity associated with CVD was found to be obesity. Patients who were obese had high chances of suffering from CVD.

4) Which are your preferred molecules in management of the following cardio vascular disease as the disease progresses?

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease			
Hypertension			
Heart failure			
Cerebrovascular disease			
Inflammatory heart disease			

Figure 4.1

Mumbai (Specialists)

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease	Ecosprin Lifestyle Modification Diet control	Aspirin +Combinations Clopidogrel Atorvastatin	Aspirin Atorvastatin
Hypertension	Lifestyle modifications Ace inhibitors Salt Restriction	Beta blockers Ace inhibitors	Beta blockers Ace inhibitors
Heart failure	Lifestyle modifications Diet control Regular exercises	Lasix Digoxin Calcium channel blockers	Spironolactones Beta blockers Ace inhibitors

Cerebrovascular disease	Lifestyle modifications Diet control	Ecosprin Atorvastatin	Ecosprin Atorvastatin
Inflammatory heart disease	No primary therapy	Steroids (Endomethacin) Depends on patients	Depends on type of inflammation patient suffers

Figure 4.2

Mumbai (CP/GP)

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease	Aspirin	Aspirin	Aspirin
Hypertension	Lifestyle modifications Diet control	Metoprolol Rosartan Nifedipine	Beta blockers
Heart failure	Lifestyle modifications Diet control Regular exercises	ACE inhibitors Diuretics	Beta blockers ACE inhibitors
Cerebrovascular disease	Lifestyle modifications Diet control	Ecosprin	Ecosprin
Inflammatory heart disease	Convulsions	Convulsions Diuretic Anti inflammatory	Convulsions Diuretics

Figure 4.3

Jaipur (Specialists)

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease	Lifestyle modifications Diet control Timely treatment of the disease	Atorvastatin Aspirin ACE inhibitors Antiplatelets	Atorvastatin Aspirin ACE inhibitors
Hypertension	Lifestyle modifications Diet control	Beta blockers ACE inhibitors ARB	Diuretics Calcium channel blockers ARB
Heart failure	Timely treatment of the disease	ACE inhibitors ARB Potassium sparing class Diuretics	ACE inhibitors ARB Diuretics
Cerebrovascular disease	Lifestyle modifications Diet control	Antiplatelets Beta blockers	Anticoagulants
Inflammatory heart disease	Statins Timely treatment of disease	Statins Diuretics	Anti inflammatory agents Statins

Figure 4.4

Jaipur (CP/GP)

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease	Lifestyle modifications Diet control Statins	Aspirin	Aspirin ACE inhibitors

Hypertension	Lifestyle modifications Diet control	Beta blockers Diuretics ACE inhibitors	Calcium channel blockers Diuretics
Heart failure	Lifestyle modifications Diet control	ACE inhibitors ARB Diuretics	ACE inhibitors ARB Diuretics
Cerebrovascular disease	Lifestyle modifications Diet control	Beta blockers	Beta blockers
Inflammatory heart disease	No therapy yet	Statins	Statins

Inference

In Both the cities, Aspirin, Lifestyle modifications, regular exercises has been recommended as a preventive therapy for CVD.

Though in Jaipur it was said by few doctors that timely treatment of underlying diseases would be preventive therapy for CVD.

Beta blockers, ACE inhibitors and statins were commonly used in the treatment of CVD in both the cities.

In Mumbai, convulsions were used as a 2nd line therapy for inflammatory heart disease whereas in Jaipur statins were prescribed

5) At which stage do you refer a patient to a cardiologist?

Figure 5.1

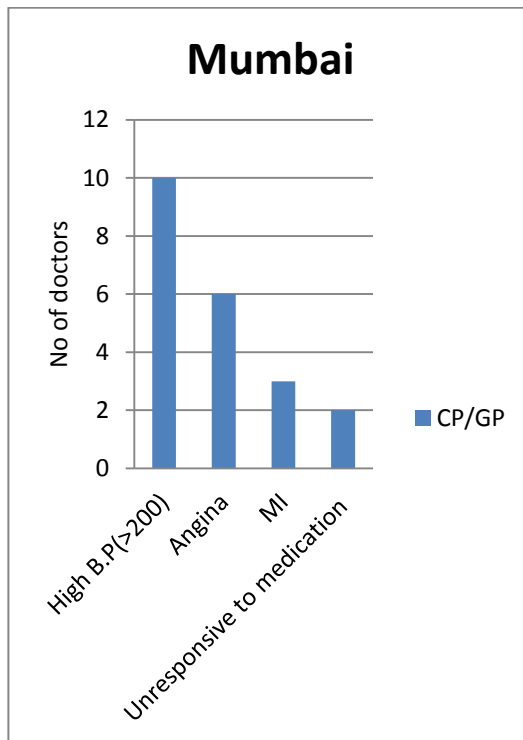
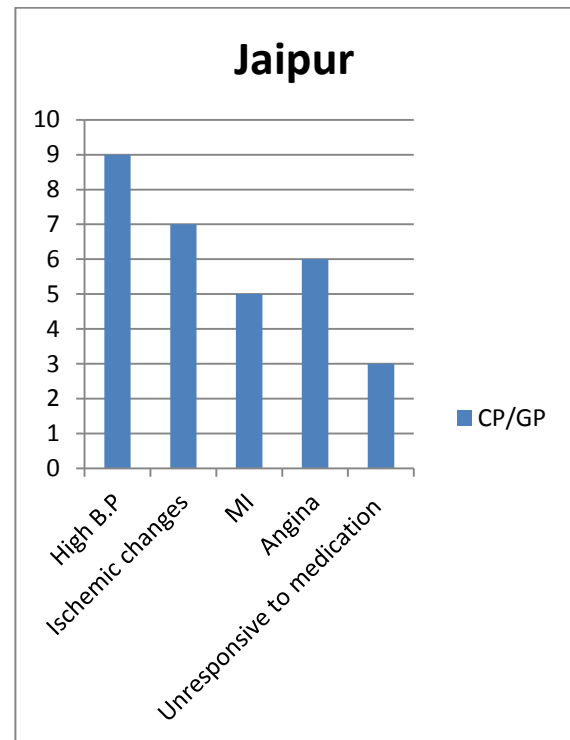


Figure 5.2



Inference

From the obtained statistical data it is clearly evident that, Patients have High B.P (>200) are referred to cardiologist for further treatment.

Severe Ischemic changes and angina were other reasons when a CP or a GP would refer a patient to a cardiologist for timely treatment.

6) What factors motivates you to prescribe any brand?

Figure 6.1

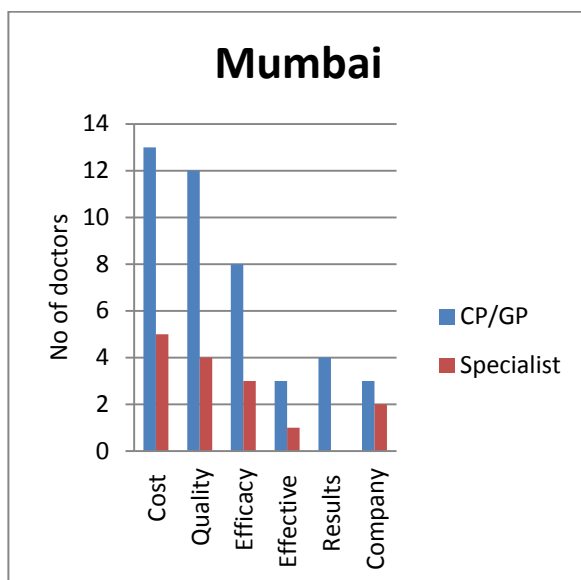
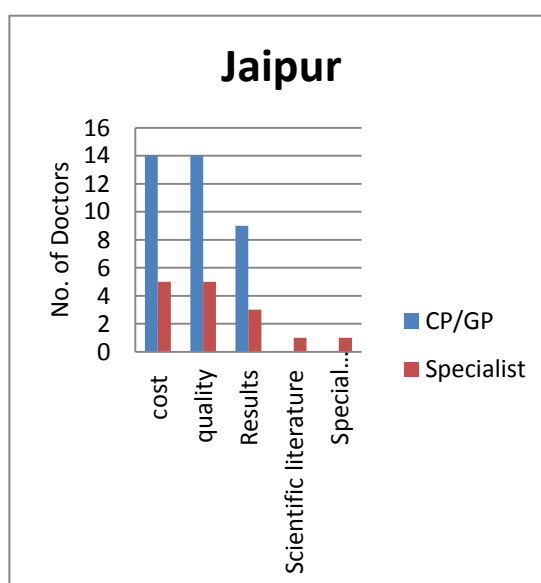


Figure 6.2



Inference

In both the cities, it was found that **Cost** and **Quality** are the main factors that motivate the doctors to prescribe any brand the most.

In Mumbai, Effectiveness and efficacy also played important role among CPs/GPs whereas in Jaipur, scientific literature and formulations were considered by the specialists before recommending any drug.

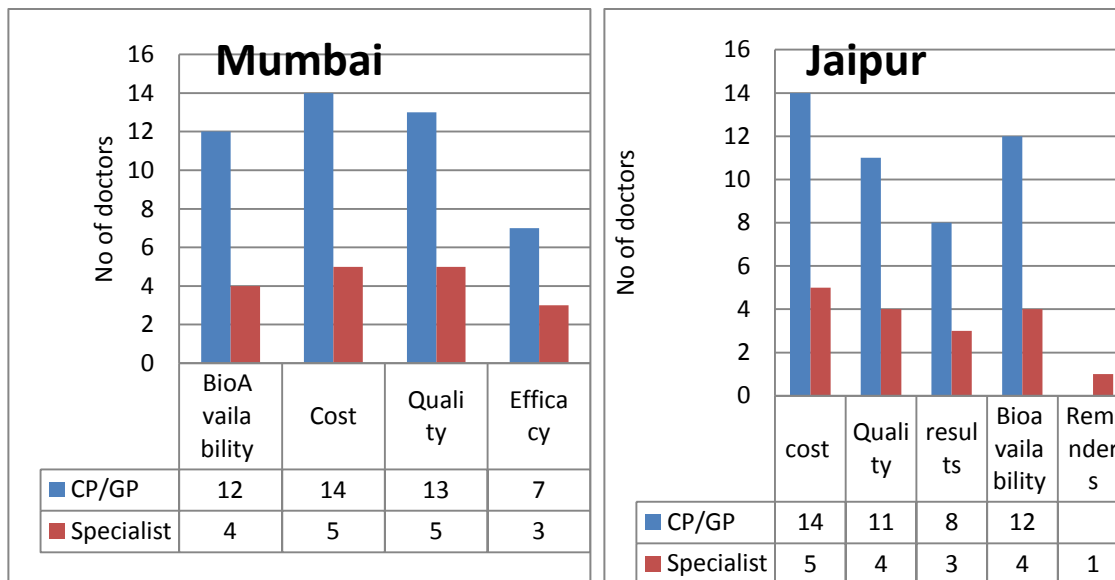
In addition, the action of the drug on patients are also considered by doctors in both the cities.

7) What parameters in a brand influence you to prescribe that brand?

Figure 7.1

Figure

7.2



Inference

In both the cities, **Cost** is the parameter that is considered the most followed by **Bioavailability and Quality**.

Reminders in form of leaflets about the molecules were also considered as a parameter by the specialists in Jaipur for prescribing any brand.

8) According to you which is the most important factor which you consider before prescribing a brand (Kindly rate 1- lowest 5 – highest)

Figure 8.1

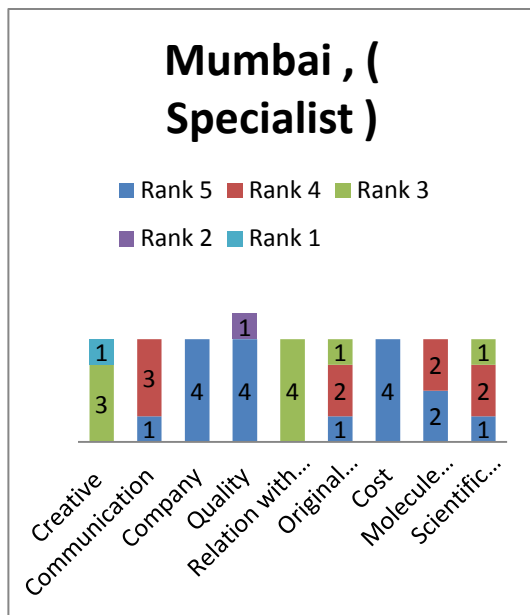


Figure 8.2

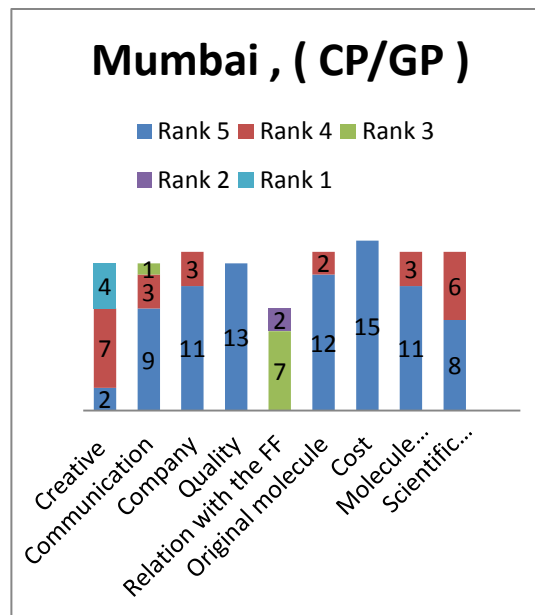


Figure 8.3

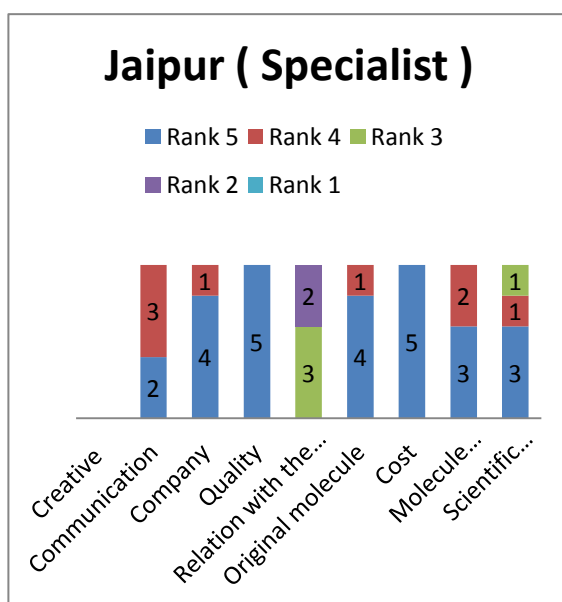
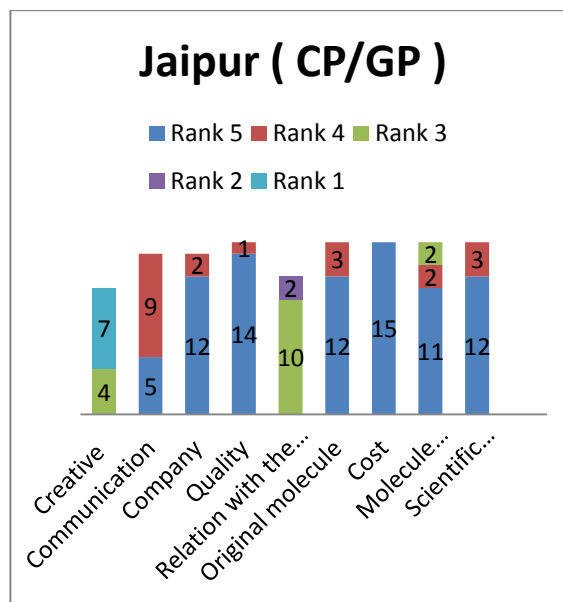


Figure 8.4



Inference

In both the cities, Cost and Quality were considered the most important factors before prescribing any brand, they were the highest rated factors by the doctors.

Relation with the field force was not rated high by doctors in comparison to communication which was rated high in both the cities

9) What kind of communication makes you believe in a specific brand? (Eg. international guidelines, Indian studies, comparative studies, long term studies etc...)

Figure 9.1



Figure 9.2

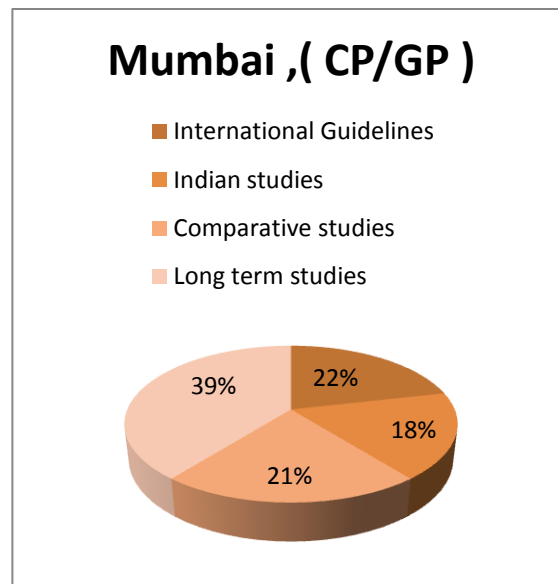


Figure 9.3

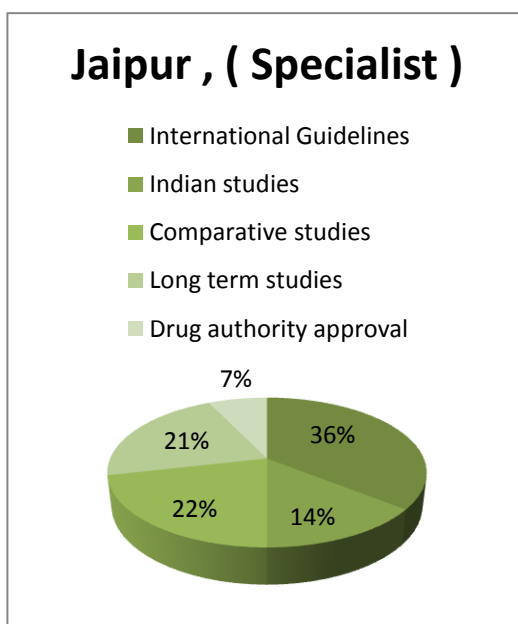
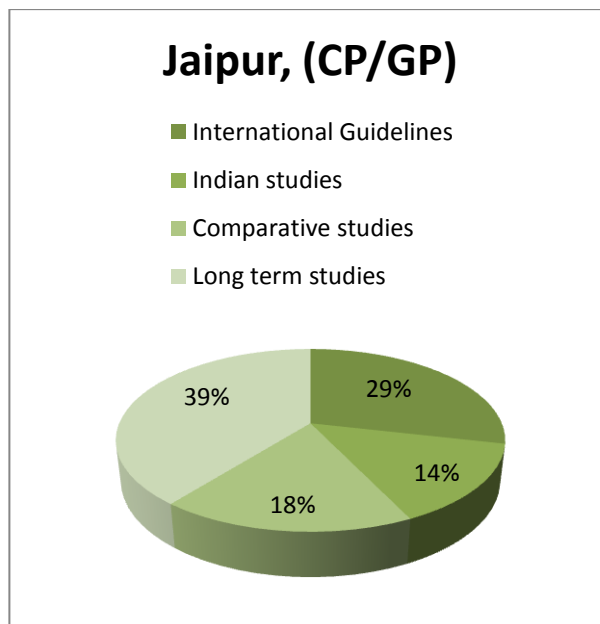


Figure 9.4



Inference

In both the cities, it was found international guidelines were the communication that made the specialists to believe in a specific brand.
On the contrary, it was found that (GP/CP) in both the cities believed in Long term clinical studies.

10) According to you what are the medical education needs in your current in-clinic practice?

Figure 10.1

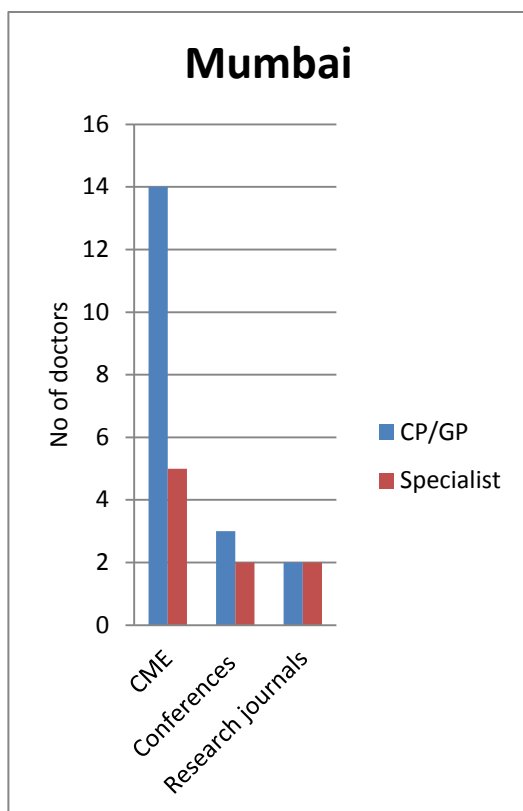
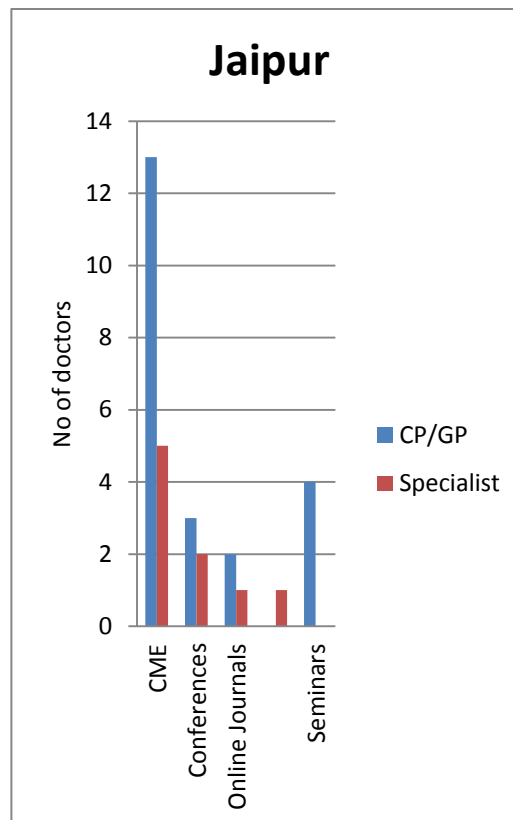


Figure 10.2



Inference

‘CME’ was the most important medical education need, as it help the doctors to keep updated regularly with the recent information and new modalities.

In Jaipur, Long term results of the old molecule were also considered as an medical education need in current in-clinic practice by a few specialists as this would help them in improving their timely patient management skills.

11) Do you agree there exists a need to update regarding the latest trends in management of CVD?

Inference

All the doctors from both the cities said YES, there exists a need to update regarding the latest trends in management of Cardio vascular diseases.

If yes, how do you want to be update on the latest trends and updates? (Kindly tick

- i. Live meetings:
- ii. Online webcast/ webinars
- iii. International/Global speaker program:
- iv. In association with some Indian society:
- v. In association with international society:
- vi. Diploma courses from international universities

Figure 11.1

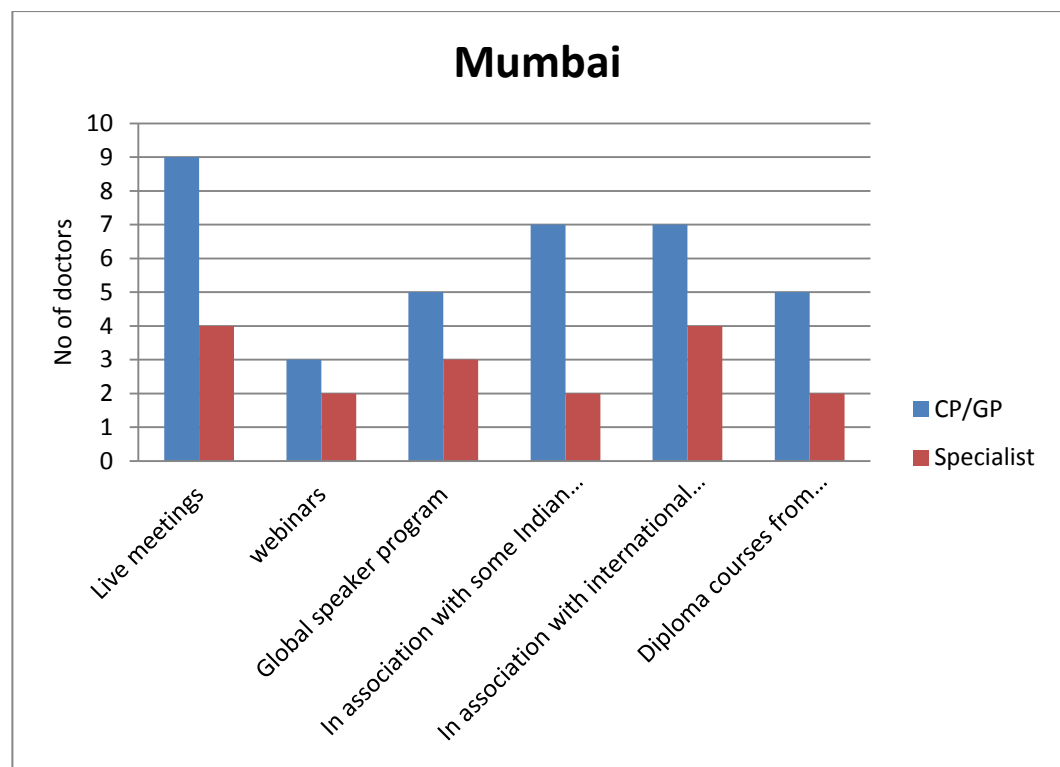
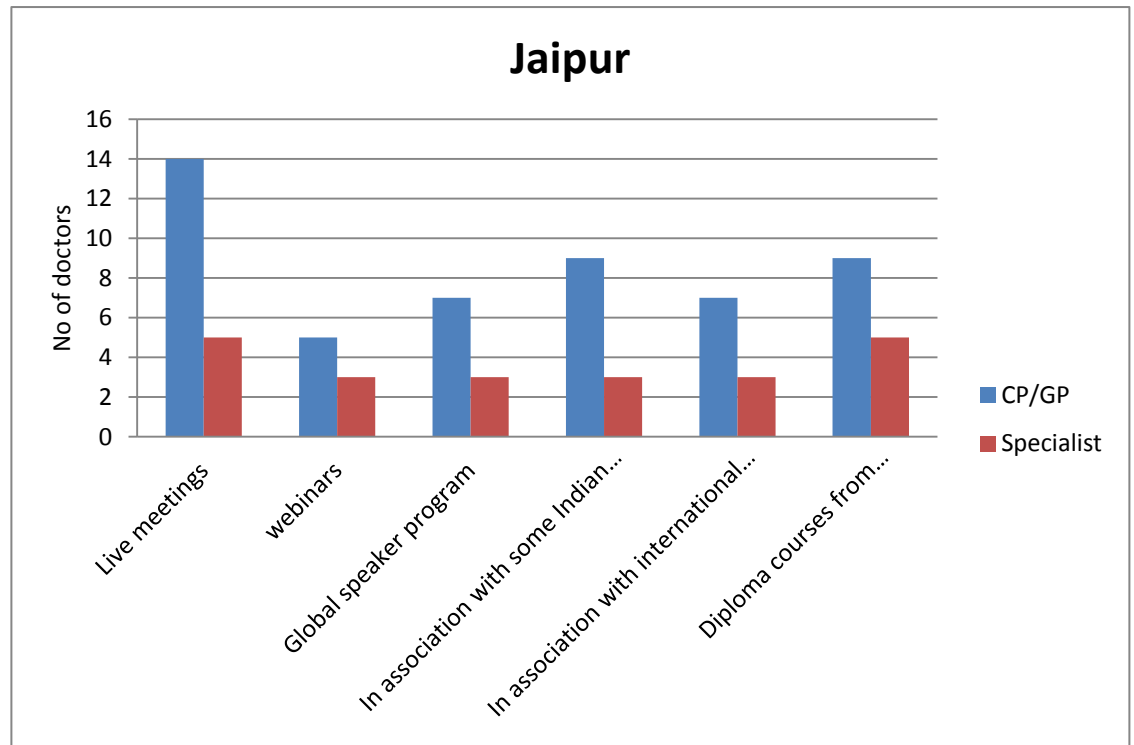


Figure 11.2



Inference

In both the cities, Doctors wanted to be updated on the latest trends through Live meetings, as these meetings would have face to face interactions, which would help them to stay updated.

The specialists in Mumbai preferred to get updated through International society; in Jaipur the specialists preferred Diploma courses from international universities.

In both the cities, Diploma courses from international societies were preferred by doctors (GP/CP).

In both the cities, Doctors wanted to be updated on the latest trends through Live meetings, as these meetings would have face to face interactions, which would help them to stay updated.

The specialists in Mumbai preferred to get updated through International society; whereas in Jaipur the specialists preferred Diploma courses from international universities.

In both the cities, Diploma courses from international societies were preferred by doctors (GP/CP).

12) What are the major challenges faced in management of CVD at different stake holders?

a) Patient level

Figure 12.1

Mumbai,(Speciality)

■ Treatment cost ■ compliance
■ Awareness

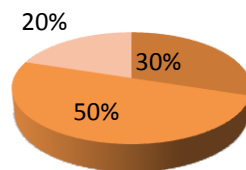


Figure 12.2

Mumbai , (CP/GP)

■ Irregular medication ■ Treatment cost
■ Awareness ■ Lack of diet control

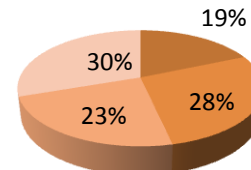


Figure 12.3

Jaipur , (Specialist)

■ Awareness

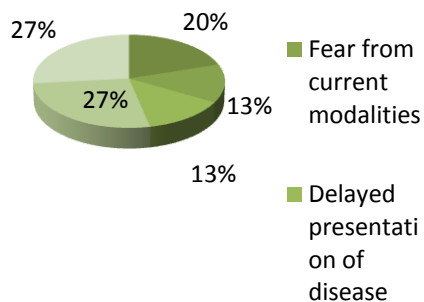
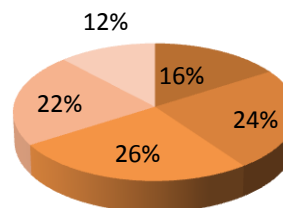


Figure 12.4

Jaipur , (CP/GP)

■ Illiteracy
■ lack of diet control
■ Treatment cost
■ Irregular medication
■ Awareness



Inference

The major challenge at patient level in both the cities was observed to be the treatment cost, which was due to poverty, hence the treatment affordability was low

Illiteracy was the major Patient level challenge faced in Jaipur, due to which convincing patients for the treatment was a difficult task

Delayed presentation of disease was one of the challenges, as this could lead to treatment delays which could lead to severe conditions

Figure 12.5

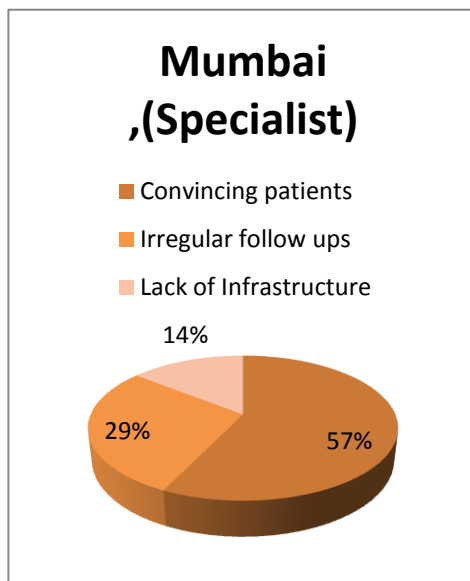


Figure 12.6

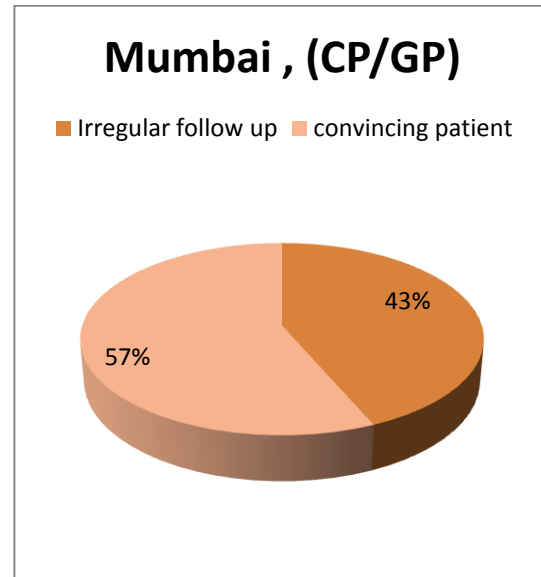


Figure 12.7

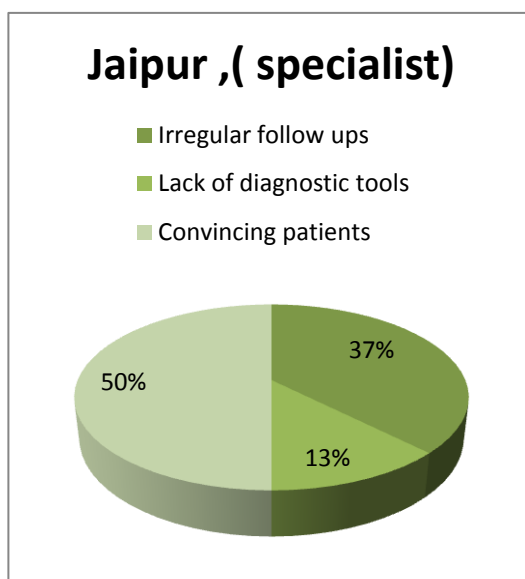
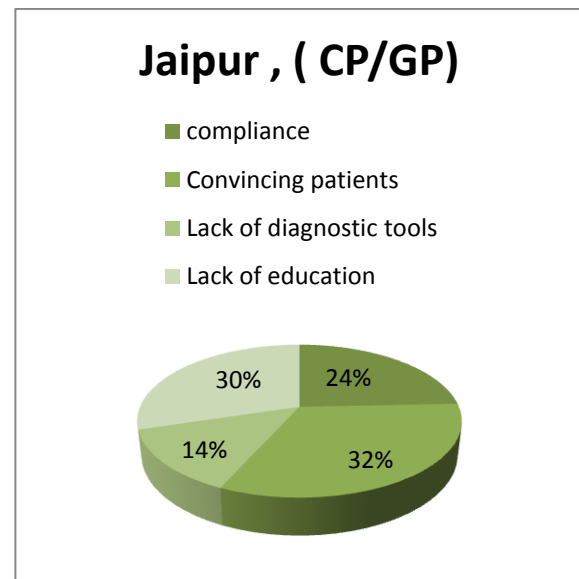


Figure 12.8



Inference

In both the cities, convincing the patients for the treatment was a major challenge as the patients are reluctant to accept that they are suffering from cardiac diseases

Irregular follow ups by the patient was a challenge as because of which the patient recovery and treatment was slow

Lack of diagnostic tools in jaipur led to weaker diagnosis of diseases in few cases.

Figure 12.9

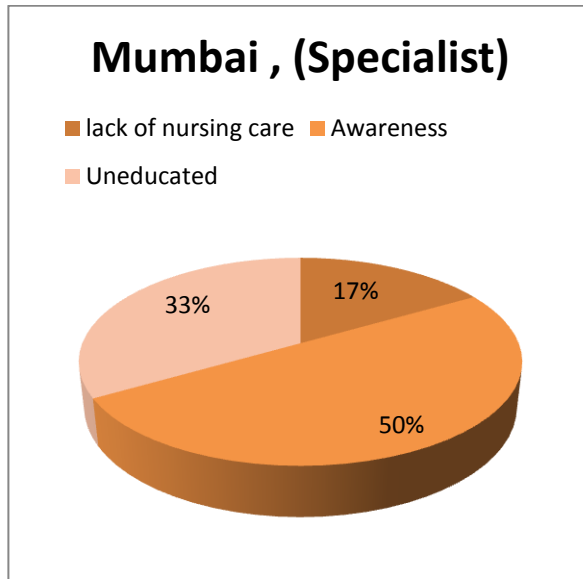
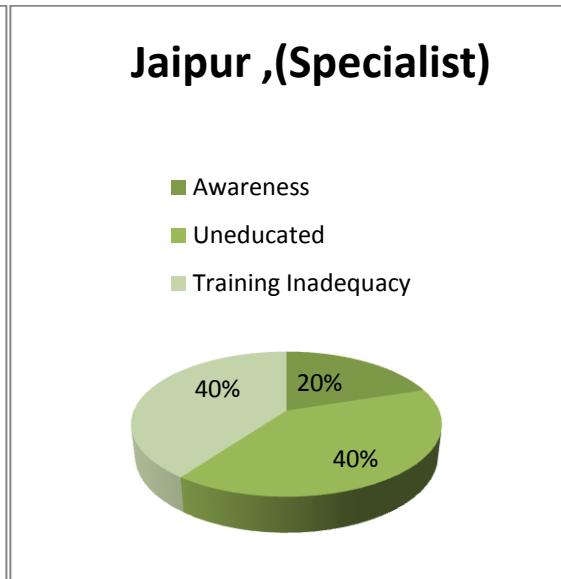


Figure 12.10



Inference

Lack of nursing care and awareness about the disease were the challenges seen in both the cities

Training inadequacy was the biggest challenge at nurse level in jaipur.

**13) What about medical representatives influence you to prescribe a specific brand?
(Kindly rate 1- lowest 5 – highest)**

	1	2	3	4	5
Product knowledge					
Product detailing					
Etiquettes					
Communication skills					
Regular visit					
Personality (dressing and grooming)					
Objection handling skills					
Voice modulation and Tone					
Responsive to queries					

Figure 13.1

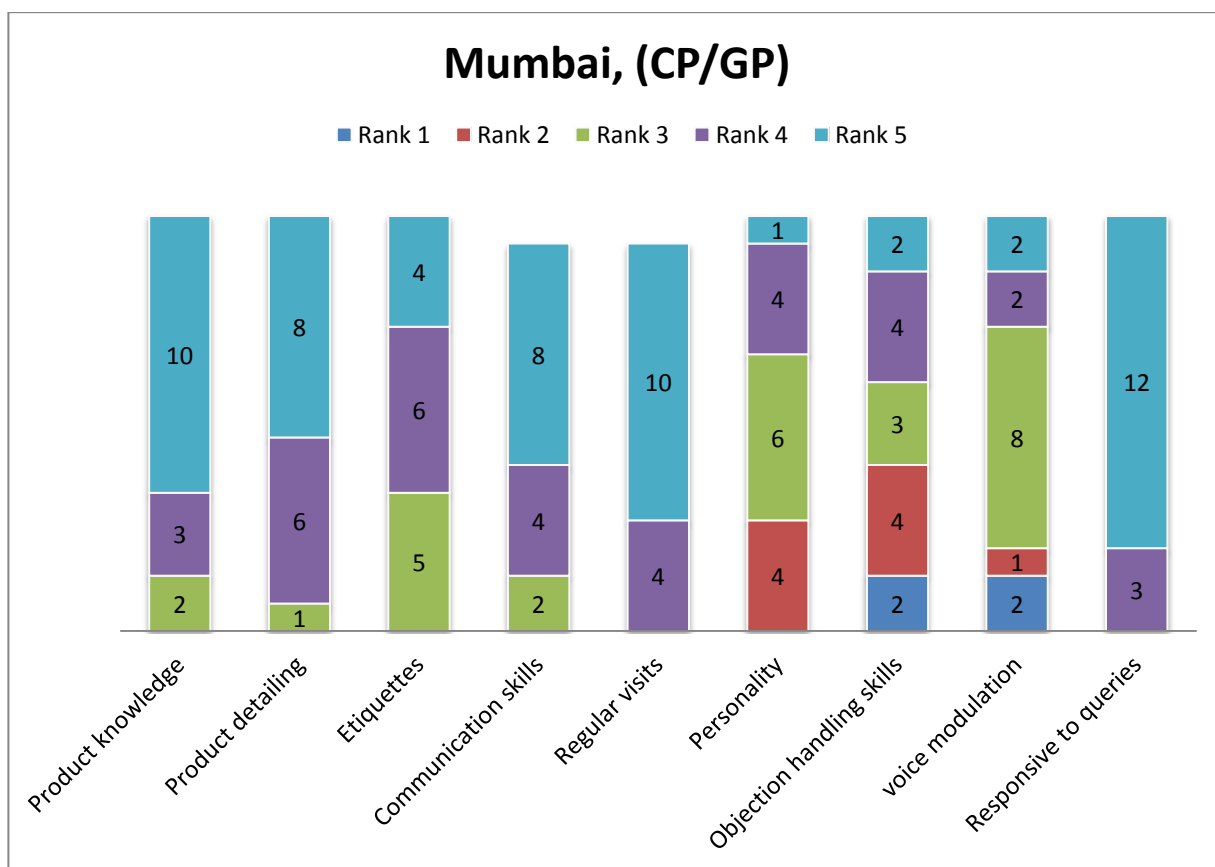


Figure 13.2

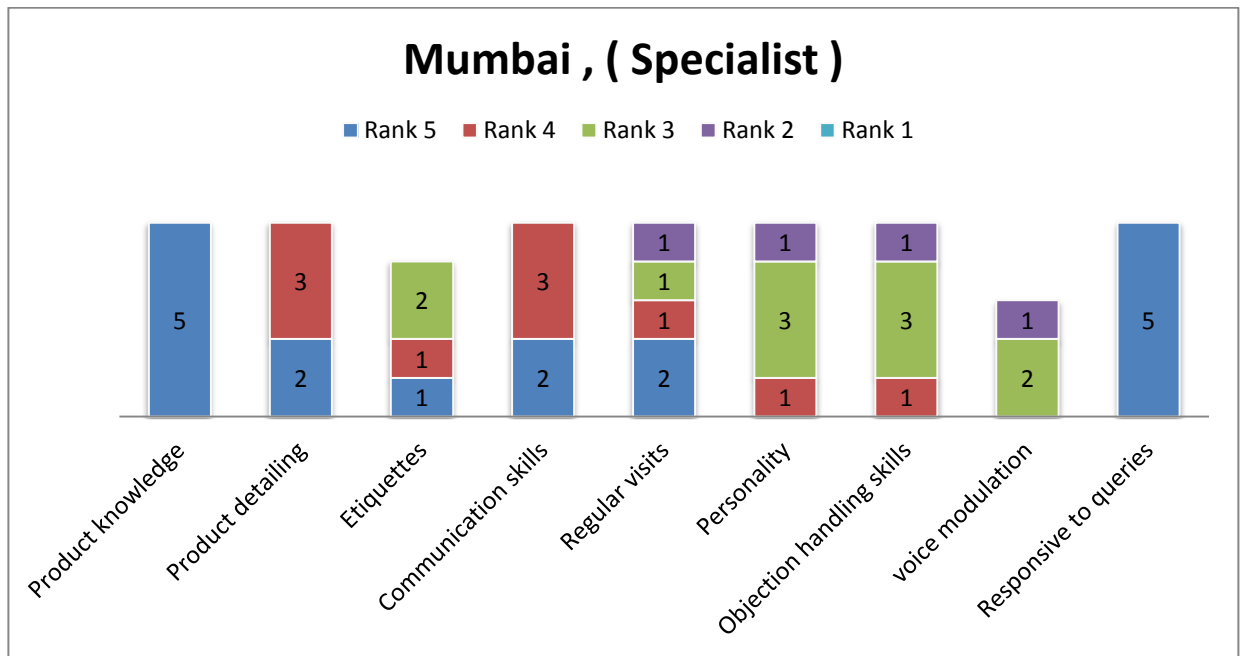


Figure 13.3

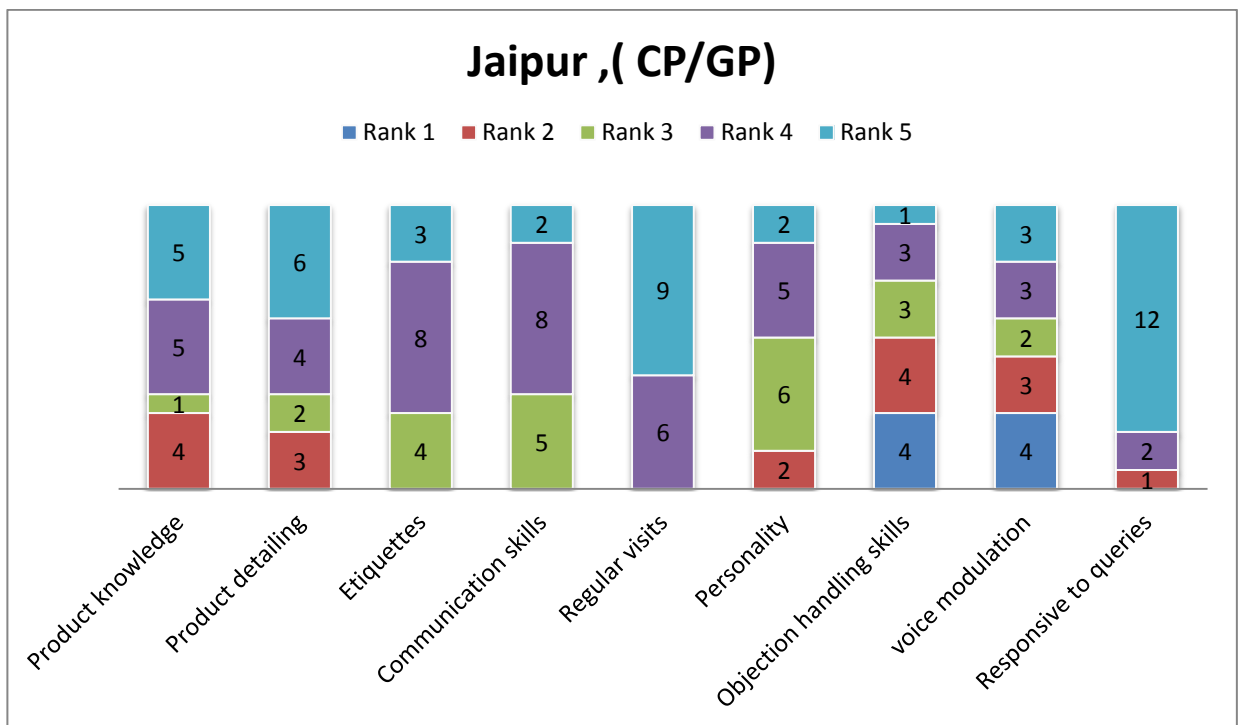
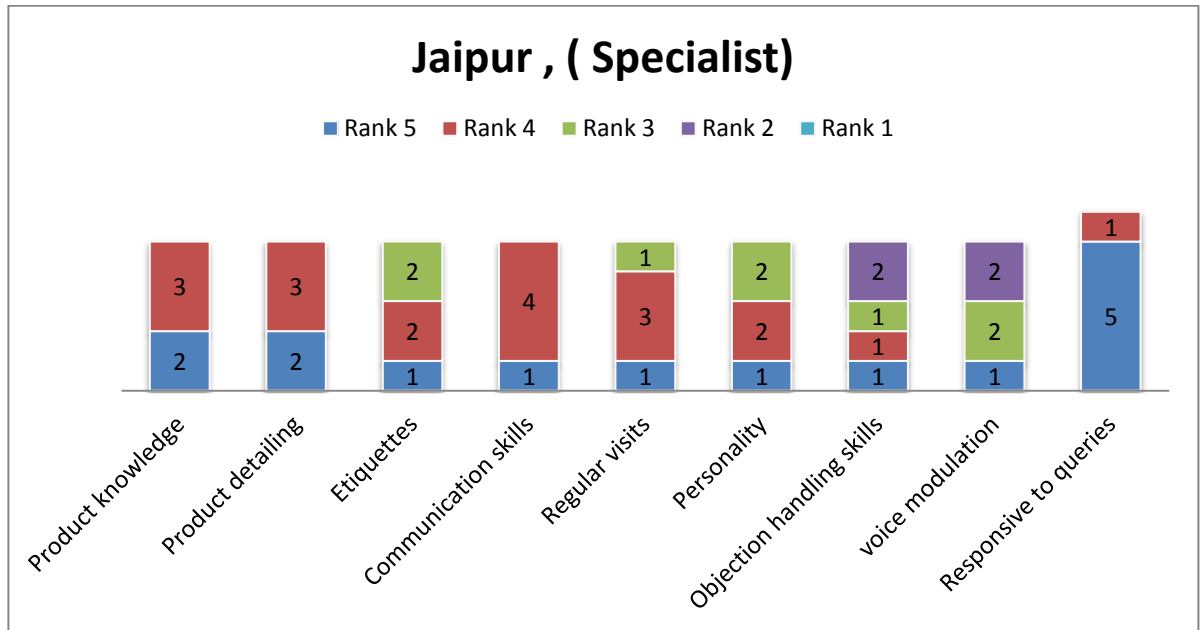


Figure 13.4



Inference

In both the cities, the most important factor that would influence the doctors (CP/GP) to prescribe a specific brand are responsiveness of the medical representative to the queries and their regular visits to the doctors clinic/hospitals ,

In both the cities, medical representative's Objection handling skills and Voice modulation were given less importance while prescribing any brand

According to the specialists in Jaipur, a medical representative should possess communication skills and have a personality to influence the doctor to prescribe a specific brand

Conclusion

- The overall findings of the study helped us to understand the prescription behaviour of the consulting physicians, general practitioners as well as the specialists and the reasons that influence them to prescribe various brands in the cardiac segment, the challenges faced at different stake holder level.
- ECG and B.P measurement were the most preferred diagnostic tool used in the diagnosis of CVD with Aspirins, lifestyle modifications and regular exercises being the best preventive therapy for treatment of CVD. Beta blockers, ACE inhibitors, ARB's were the commonly used 1st and 2nd line therapies for treating CVD.
- The cost and quality are the two main factors that motivated the doctors to prescribe any brand in both the cities. Reputation of the company was also one of the factors.
- It was found that the most preferred mode of communication by the doctors that made them believe in a specific brand were Indian studies and international Guidelines. Doctors wanted to be updated on the latest trends through CMEs, live meetings, as these meetings would have face to face interactions which would help them to stay updated.
- Illiteracy and Poverty were some of the major challenges faced at the time of compliance check.
- Lack of nursing care and intolerance were the major challenges faced at nurse level. Medical representative play a vital role in the pharmaceutical industry and have to be well educated with product knowledge, etiquettes and good communication skills.

- Therefore the overall findings and observations helped us to know the prescription behaviour and challenges faced at stake holder level in Mumbai and Jaipur..
- Illiteracy is a major problem faced and hence convincing patients for treatment becomes difficult.
- Seriousness with respect to the diseases is lacking in patients. They take the disease lightly which can sometimes lead to serious consequences
- Lack of well trained nursing staff for treating CVD
- In some cases, inspite of best efforts no results are seen, such cases are challenging
- Medical representatives should help doctors use the online research journals, that keeps them updated.

Recommendations

- Awareness about the Cardio vascular disease and how dangerous it could be if not treated on time through role plays an important role
- Lifestyle modification plays a major role in patients suffering from CVD and for better understanding this should be explained to the patients through videos and articles
- Lack of diagnostic tools and improper infrastructure should be taken into consideration for effective treatment
- Online 3D training programs should be organised for the doctors for staying updated
- Nurses should be aware and educated about the disease and side effects of the medicines to treat the patients with CVD
- Improved training and development programs for the medical representatives can help them to perform better during their field work
- Educate the patients by making them understand the importance of timely treatment of the cardiovascular disorders and its complications through articles, videos or health camps
- Organise Special training programs on diagnosis and prevention of common cardiovascular disorders for doctors
- Nurses should be able to refer the patient to the right doctor for further evaluation and specific treatment

8. DISCUSSION

The study has helped in deriving few strategic imperatives that can be further used while developing the strategies or campaigns in near future for the brands in management of Diabetes Mellitus.

The derived strategic imperatives on the basis of the conclusion are as follows:

- Patient awareness campaign for type 2 Diabetes Mellitus can be designed as major patient pool is of Type 2 Diabetes Mellitus.
- Diabetes Mellitus Camps can be organized on ‘‘World Diabetes Mellitus Day’’ for diagnosis of Diabetes Mellitus, the camps will also help to maintain the relationship with doctors & increase prescription base.
- Preventive therapies as Life style modifications, diet charts & Exercises can be use, these charts can be distributed in the camps to prediabetes patients
- A visual Aid must communicate Cost, Quality, Effectiveness & Bioavailability of the molecule in a creative way (emotional connect with doctor) as they motivate Doctors to Rx a particular brand.
- To authenticate the above data studies on Indian patients can be used, comparative studies to demonstrate the efficacy of a molecule over other in the management of T2DM can be used, authentication with the use of elements such as stamps from the International guidelines can also be used
- Organizing CME’S, Live meetings and associating with international societies for branding

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ANEXXURE

Objective: *'To understand doctor's prescription behavior, the reasons which influence doctor's prescription, in-clinic practice in management of CVD and challenges observed at different stake holders'*

- 1) What are the different types of cardio vascular disorders managed by you in your in-clinic practice?

☐ Coronary heart disease ☐ Hypertension ☐ Heart failure
☐ Cerebrovascular disease ☐ inflammatory heart disease

- 2) What are the diagnostic tool uses for differential diagnoses of CVD

- 3) What are the different type of co-morbidities seen while managing CVD

- 4) Which are your preferred molecules in management of the following cardio vascular disease as the disease progresses?

CVD	Preventive therapy	1 st line therapy	2 nd line therapy
Coronary heart disease			
Hypertension			
Heart failure			
Cerebrovascular disease			
Inflammatory heart disease			

- 5) At which stage do you refer a patient to a cardiologist (*Ask this question only to only a GP/ CP*)

- 6) What factors motivates you to prescribe any brand?

7) What parameters in a brand influence you to prescribe that brand?

8) According to you which is the most important factor which you consider before prescribing a brand (Kindly rate 1- lowest 5 – highest)

	1	2	3	4	5
Creative					
Communication					
Company					
Quality					
Relation with the FF					
Original molecule					
Cost					
Molecule superiority					
Scientific communication					

9) What kind of communication makes you believe in a specific brand? (*eg. international guidelines, Indian studies, comparative studies, long term studies etc..*)

10) According to you what are the medical education needs in your current in-clinic practice

11) Do you agree there exists a need to update regarding the latest trends in management of CVD

Yes ☐ .. No ☐ ..

If yes, how do you want to be update on the latest trends and updates? (*Kindly tick*)

- i. Live meetings:
- ii. Online webcast/ webinars:
- iii. International/Global speaker program:
- iv. In association with some Indian society:
- v. In association with international society:
- vi. Diploma courses from international universities:

12) What are the major challenges faced in management of CVD at different stake holders

a) Patient level -

b) Doctor level -

c) Nurses and Paramedic level-

13) What about a medical representative influence you to prescribe a specific brand
(Kindly rate 1- lowest 5 – highest)

	1	2	3	4	5
Product knowledge					
Product detailing					
Etiquettes					
Communication skills					
Regular visit					
Personality (dressing and grooming)					
Objection handling skills					
Voice modulation and Tone					
Responsive to queries					