REVIEW AND COMPARISON OF SALES LEVEL CRM PRACTICES IN PHARMACEUTICAL COMPANIES AS PER CUSTOMER TYPE

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ABSTRACT

Sales level CRM (customer relationship management) practices are essential, important and popular marketing strategies adopted by most of the pharmaceutical companies but do all sales level CRM practices have equal influence on clients? This research paper tries to analyze and explore different type of sales level CRM practices offered by Pharmaceutical companies. They are divided into four types; scientific CRM, non scientific CRM, CRM for stockiest, chemists and CRM for patients and its impact on HCP's (Health care professionals). For this aim, HCP's were divided in two groups'; Super specialty and general practitioners. The survey was conducted with the territory managers of prominent pharmaceutical companies because they have direct contacts with health care professionals. Territory managers of pharmaceutical companies offer various types of sales level CRM to HCP's in the hope of getting business. Thus they have the experience of sales level CRM failure as well as success. For this task, responses were recorded. The results revealed that there was a significant difference between general practitioners and super specialty HCP's as far as the impact of CRM is concerned. With the help of this study it can be concluded that different HCP's have different expectations from pharmaceutical companies. Thus sales level CRM impacts differently on super specialty and general practitioners.

KEYWORDS*: Pharmaceutical Companies, Customer Relationship Management (CRM), HCP, Territory Mangers.*

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Introduction

Pharmaceutical companies promote their products to health care professionals by using various tools, in which sales level CRM (customer relationship management) has become a vital tool for increasing sales. CRM helps in understanding clients in a better manner. Sales level CRM practices are an opportunity for one to one marketing. It helps in getting quick response and feedback from clients. And Pharmaceutical companies use these feedback in improving their products and policies.[1]

Health care professionals, chemists and stockists are the clients for pharmaceutical companies and for all these clients, pharmaceutical companies design different types of sales level CRM. In the competitive market of Pharmaceutical industry, each and every company tries to engage their customers with scientific CRM and non-scientific CRM. Scientific CRM includes CME (Continuous Medical Education), gifting books and journals, conference participation where as non-scientific promotion includes providing gifts, free samples, foreign tours, loyalty programs and many more. As per the interest of the clients, pharmaceutical companies offer CRM to customers and get business from them. [1]

Pharmaceutical companies have various CRM tools for promotion of their products to HCP's like medical conferences, gifts, booklets, seminar, samples but all these tools don't have equal influence on all category of doctors so it would be much better to first of all understand the HCP's and accordingly design different CRM(promotional activities) for different doctors.[2]

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Getting support in the form of prescription from HCP's is the main focus and objective of pharmaceutical companies. And for this motive, they plan many marketing tools to influence HCP's. However in current scenario rather than offering the same kind of promotional tools to one and all it has become more important to analyze the preferences of HCP's and accordingly provides them the required things. These preferences may depend on each individual's qualification, age, income and various factors, for example getting conference participation sponsorship may attract super specialty HCP while it may not affect general practitioners.[3]

Pharmaceutical industry is heavily regulated industry; where one cannot sell directly to end customer except for OTC product. Customers (Patient) need recommendation from HCP to buy the product. So for pharmaceutical companies direct clients are HCP and patient is the end customer. Stockist and retailers also play an important role as clients and for all these clients' pharmaceutical companies design many strategies and the traditional marketing strategy for HCP's are gifts, free samples, detailing through articles and visual aids, bonus schemes, foreign tours. But the challenge is to identify that are all these methods having same impact or there is a need to modify marketing strategies. [4]

There are certain govt. designed regulations, guidelines for pharmaceutical- marketing and if every pharmaceutical company follows those then the cost of products can be reduced. And ultimately the benefit of it can reach to the end customers. Continuing medical education (CME) has the purpose of educating about newer trends, new molecules to HCP's. These kinds of pharmaceutical marketing strategies contribute in welfare of end customer and are well appreciated by all class of HCP's. [5]

It is a tough task to get the time from HCP's busy schedule for Sales personnel of pharmaceutical companies. HCP's shows their least interest to meet pharmaceutical Sales personnel, if they allow meeting then also they give very less time. So they need to adopt innovative approach to cut the competition and understand clients. Having accurate knowledge about clients helps in building rapport. Once the client's needs and preferences are understood well then getting business from them becomes easy because each and individual HCP has different perception and expectation. [6]

Territory managers visits GP's (general practitioner) to promote their products by various methods. Offering free trial packs of drugs is one of the promotional methods of pharmaceutical industry. GP (general practitioner) often use these trial packs in disease management on patients. Once GP's experiences the positive results of these trial packs they start prescribing it so this method is commonly used by pharmaceutical companies and influence them. [7]

Due to increased competition unethical promotional practices have increased in pharmaceutical industry. Most of the territory managers of pharmaceutical companies and HCP's are unaware about the existing code on drug promotion and marketing practices. So it would be beneficial for pharmaceutical companies to promote their products to HCP's with right set of promotional practices. Which enhances HCP's knowledge about new trends, new molecules. And it is observed that in current scenario many HCP's shows their disinterest in accepting and kind of bribes (Gifts). Whereas scientific promotion is well appreciated this includes CME (continuing medical education).[8]

Objective of the Study

There are different types of sales level CRM techniques, used by pharma sales team on clients to develop and maintain good relations. This article seeks to explain prevalence of sales level CRM practices as per type of clients. It is widely believed that CRM practices, adopted by sales team for their clients, differ from clients to clients as per their specific eco-system and needs. The present article attempts to understand this differential application as per different clients".

Research Methodology

- **Research Design**: Descriptive research design was adopted for this research paper, Descriptive research is the attempt to determine what the topic is all about, it is about facts and details with the researcher have no control on the information. Attempt to determine by researcher can be termed as descriptive research.[9]

- **Data Source**: For this research paper primary data were collected from the sales team (territory managers, area managers,) of twenty reputed pharmaceutical companies who have their sales operations in Jaipur. Territory managers and area managers meets the clients of pharmaceutical companies on daily basis so based on their experience on the research objective data were collected. The data were collected from the sales team of following companies:
  - Macleods Pharmaceutical Ltd.
  - Abbott India Ltd.

- Cipla Ltd.
- GlaxoSmithKline(GSK)
- Pfizer Limited
- Alkem Laboratories
- Zydus Cadila
- Lupin Limited
- Mankind Pharma
- Sun Pharmaceutical Industries Ltd.
- Intas Pharmaceutical Limited
- Dr. Reddy's Laboratories
- Emcure Pharmaceutical Ltd.
- Aristo Pharmaceutical Ltd.
- Torrent Pharmaceutical Ltd.
- Sanofi India Ltd
- Glenmark Pharmaceuticals
- USV Pharmaceutical Ltd.
- Micro Labs Ltd.
- Wockhardt Limited

Data were not available regarding the context so secondary data could not be included in the research paper.

- **Sampling Design:** According to June 2016 Information Management System (IMS) report (10), the Indian pharmaceutical industry was valued at Rs. 107,019 crores and registered a 13% growth. From the data it is observed that only 20 companies hold 64% market share of total pharmaceutical revenue. From these twenty companies first 10 companies reflected 11% growth and 43% market share and top 11-20 companies reflected 10% growth with 21% market share.

    Universe of the study consists of top 20 pharmaceutical companies' sales team who work as territory and area managers in Jaipur. These companies hold 64 percent market share and have sales force of around 1160 people. Out of these a sample of 100 were selected to whom questionnaires were sent. 30 Out of these 100 turned ready and responded. After the quality check of the response 10 proved to be productive for the study. (11)

Table 1: Total Number of Employees of Top 20 Pharmaceutical Companies & Employees in Jaipur[12]

	Company Name	Divisions	Employees in India	Territory Managers in Jaipur	Area Managers in Jaipur
1	Sun Pharmaceutical Industries Ltd.	40	10000	120	40
2	Abbott India Ltd.	20	7000	60	20
3	Cipla Ltd.	20	10400	60	20
4	Mankind Pharma	10	5300	100	50
5	Alkem Laboratories	24	7000	48	24
6	Macleods Pharmaceutical Ltd.	10	5300	40	10
7	Lupin Limited	19	6500	56	20
8	Zydus Cadila	18	7000	54	18
9	GlaxoSmithKline(GSK)	6	5000	40	6
10	Pfizer Limited	5	2000	20	4
11	Intas Pharmaceutical Limited	12	7000	30	6
12	Dr. Reddy's Laboratories	8	5000	30	8
13	Emcure Pharmaceutical Ltd.	11	9000	22	7
14	Aristo Pharmaceutical Ltd.	6	5000	15	5
15	Torrent Pharmaceutical Ltd.	12	11000	30	8
16	Sanofi India Ltd.	10	7000	16	6
17	Glenmark Pharmaceuticals	21	22000	42	11
18	USV Pharmaceutical Ltd.	8	7000	24	8
19	Micro Labs Ltd.	14	7000	40	9
20	Wockhardt Limited	12	11000	25	8

- **Sample Selection Technique, Sample Size and Sampling Unit :** The Universe of the study consisted 1160 territory and area managers and out of them 100 were randomly chosen by using "Simple random sampling technique". It **is** a sampling technique where every item of the universe has equal chance of being selected in the sample which means that it removes all chance of partiality.[13] Pharmaceutical companies assign one territory/city to each individual territory manager and their job is to meet pre decided list of customers to achieve their respective targets. Area managers are assigned bigger territory, normally a state. They are responsible to look after each territory which comes under their supervision. In general 8-9 territory mangers work under the supervision of an area manager.
  - **Merits of Simple Random Sampling**
    - o This method is objective and unbiased.
    - o The result can be obtained in terms of probability or error of estimation.
    - o Exact mathematical test may be tested to judge the randomness of the sampling method.[13]
  - **Demerits of Simple Random Sampling**
    - o Time and cost limits the use of simple random sampling. According to this method each sample of universe has the equal chance of being selected so interviewer has to spend lot of time and cost for getting information.
    - o Getting the accurate list of universe elements also limits the use of this method.
    - o In this method sometimes irrelevant item comes in to the sample by chance which affect adversely to the study. [13]

    The Questionnaire was distributed to 100 territory and area managers and out of which 30 responded and they were ready to give their respective responses and after quality check 10 responses were selected and they fulfilled the requirement of the study. Thus these 10 responses were turned out to be the sample size for the study and it was found to be sufficient for the study. Two tailed t- test was applied on collected data to get the result of the study.

- **Research Approach:** Extensive structured as well as non-structured interviews were organized for selected thirty territory and area managers of their respective pharmaceutical companies. Respondents were contacted personally as well as telephonically for gathering of qualitative data. Their opinions on the subject were accumulated in "Respondent Format" for evaluation.

- **Research Instrument:** Questionnaire was designed for primary data collection of the study. A total of four questions were asked from each respondent. All the respondents were given identical questionnaire. The objective of research was explained in detail to respondents before distribution of questionnaire. Details of the respondents were collected in Respondent Format for records.

- **Contact Method:** Respondents were contacted personally, telephonically and through email for data gathering. The Questionnaire was distributed to 100 territory and area managers of selected top twenty pharmaceutical companies. Out of 100, thirty responded and they were ready to give their respective responses. Data gathering by personal contact has always been a better option. Therefore rather than collecting data through email and telephone more priority was given to data collection by personal contact. But due to busy schedule five out of thirty could allow for the same. Out of the remaining, three of them gave their interview telephonically and other two replied on email for the study. Thus these 10 responses found to be sufficient and became the sample size for the research. Two tailed t- test was applied on collected data to get the result of the study.

Data Analysis Technique

The overall data collection aim is to reveal the impact of different sales level CRM on health care professionals. Territory and area managers of top twenty companies were requested to share the amount their respective companies have spent on different CRM like Scientific CRM, Non-scientific CRM, CRM on patients and CRM on Stockiest +retailers in their assigned territory for health care professionals. Their Responses were assembled in tabular form. For the comparative study their arithmetic mean were calculated, and then applied two tailed T-test.

- **Two Tailed T-test**: Two-tailed test is a statistical test in which the critical area of a distribution is two sided and tests whether a sample is either greater than or less than a certain range of values. If the sample that is being tested falls into either of the critical areas, the alternative hypothesis will be accepted instead of the null hypothesis.[14]
- **Merits of Two Tailed T-test**: Easier data accumulation: Data gathering in t-test is more convenient because only single values are required from each subject. When sample size is small less than 30 then t-test can be used. Since the sample size is less than 30 two tailed t-test was appropriate.
    - **Simplicity of Analysis**: Two tailed t-test allows computing and comparing the difference between two groups by finding their mean. It also elaborates the statistical differences between two groups. Therefore it is simple in interpretation.
    - **Convenience in Computation**: The formula of two tailed test is easy in understanding which makes it simple and requires less statistical training. [15]

"When using a two-tailed test, regardless of the direction of the relationship you hypothesize, you are testing for the possibility of the relationship in both directions. For example, we may wish to compare the mean of a sample to a given value x using a t-test. Our null hypothesis is that the mean is equal to x. A two-tailed test will test both if the mean is significantly greater than x and if the mean significantly less than x. The mean is considered significantly different from x if the test statistic is in the top 2.5% or bottom 2.5% of its probability distribution, resulting in a p-value less than 0.05. "(16).
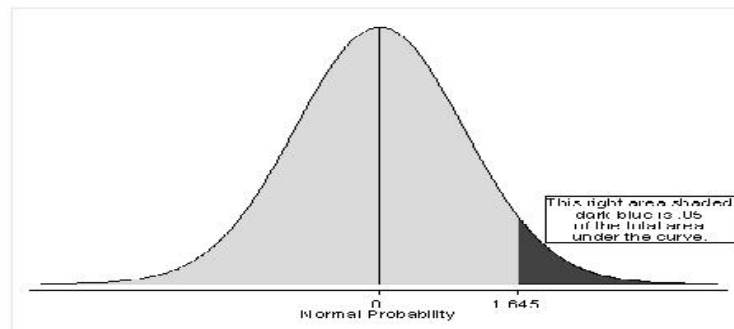
Data Collection

"Data collection is the process of gathering and measuring data, information or any variables of interest in a standardized and established manner that enables the collector to answer or test hypothesis and evaluate outcomes of the particular collection. This is an integral, usually initial, component of any research done in any field of study such as the physical and social sciences, business, humanities and others."[17]

Precaution for Data Collection

- Friendly atmosphere of trust and confidence: To get the accurate and pure responses of questionnaire from respondents friendly atmosphere was created so that without any hesitation respondents can share their feedbacks. And it was assured that their identity will not be disclosed and the data collected from them will be kept confidential.
- Questions were kept simple and straight: Questions were kept straight and simple so at the time of collection of response, respondents were assured that questions are related to their field and it will take minimum time.
- Questionnaire was explained prior: Questionnaire was well explained prior to take replies for the same, so that it will take less time in data collection.

Importance of Data Collection

It is mandatory to maintain and collect accurate data for the research as the whole integrity and credibility depends on data collection, it may be qualitative or quantitative.

Data Analysis and Interpretation

In the research methodology section the research method, data analysis technique, research Instrument, contact method and methodology already have been discussed.   Population and sample of the

research, tools for data collection, statistical analysis have been done in research work. After collection of data from respondents with the help of questionnaire, analysis and interpretation was done. This was done to find the actual solution of the problem. Quantitatively data analysis was done for the present research with the help descriptive statistics and inferential statistics. The descriptive statistical techniques like mean, standard deviation were used and then inferential statistics two tailed t- test was applied for the analysis of responses. Data collected from respondents were recorded in a total of four different tables and then their mean and mean square were calculated which was also presented in the same tables. Based on the research objective a total of four sets of hypothesis were formulated and tested which are given below:

- **Null Hypothesis** :HO=μ1=μ2, There is no significant difference between general practitioner and super speciality so far as company's investment on scientific promotion is concerned.
    - **Alternate Hypothesis:** H1= μ1 μ2 There is significant difference between general practitioner and super speciality so far as company's investment on scientific promotion is concerned.

Table 1 : Mean And Mean Square of Data Collected from Respondents Showing How Much Their Company Invest on Scientific Promotion on General Practitioner and Super Specialists in 2015-16 in their Respective Territories in Jaipur.

Respondents No.	X1(General Practitioner)	(X1-X1)	(X1-X1)2	X2(Super Specialist)	(X2-X2)	(X2-X2)2
1	10	4	16	100	30	900
2	5	-1	1	50	-20	400
3	7	1	1	110	40	1600
4	9	3	9	80	10	100
5	6	0	0	90	20	400
6	3	-3	9	50	-20	400
7	7	1	1	80	10	100
8	5	-1	1	70	0	0
9	6	0	0	40	-30	900
10	2	-4	16	30	-40	1600

Table 1.1: Mean Mean Square, Standard Deviation and T Value of Collected Data

Total of Response	Mean	Mean Square	Standard Deviation
X1=60	6	(X1-X1)2=54	S= (X1-X1)+ (X2-X2)/n1+n2-2
X2=700	70	(X2-X2)2=6400	54+6400/10+10-2=6454/18=18.935

T=mean1-mean2/S , n1n2/n1+n2
6-70/18.935, 10*10/10+10=-3.379*2.236=-7.56

As shown in the table 1.1 it can be seen that the calculated t value is 7.56 and the table value at 5% level of significance is 2.101, thus the calculated t value is more than the table value and hence the difference in the mean value of sample is significant. Hence the null hypothesis "there is no significant difference between general practitioner and super speciality so far as company's investment on scientific promotion is concerned is rejected. Therefore it can be concluded "there is significant difference between general practitioner and super speciality so far as company's investment on scientific promotion is concerned.

- **Null Hypothesis**: HO=μ1=μ2, There is no significant difference between GP and SS so far as company's investment on non-scientific promotion is concerned.
    - **Alternate Hypothesis**: H1= μ1 μ2There is significant difference between GP and SS so far as company's investment on non-scientific promotion is concerned.

Table 2: Mean and Mean Square of Data Collected from Respondents Showing How Much their Company Invest on Non-Scientific Promotion on General Practitioner and Super Specialists in 2015-16 in their Respective Territories in Jaipur.

Respondents No.	X1(General practitioner)	(X1-X1)	(X1-X1)2	X2(Super specialist)	(X2-X2)	(X2-X2)2
1	90	10	100	20	5	25
2	70	-10	100	20	5	25
3	80	0	0	10	-5	25
4	70	-10	100	15	0	0

5	100	20	400	15	0	0
6	60	-20	400	20	5	25
7	90	10	100	10	-5	25
8	80	0	0	10	-5	25
9	70	-10	100	10	-5	25
10	90	10	100	20	5	25

Total of Response	Mean	Mean Square	Standard Deviation
X1=800	80	(X1-X1)2=1400	S= (X1-X1)+ (X2-X2)/n1+n2-2
X2=150	15	(X2-X2)2=200	1400+200/10+10-2=9.428

Formula of calculating t value =mean1-mean2/S ,   n1n2/n1+n2
80-15/9.428, 10*10/10+10=6.894*2.236=15.415

As shown in the above table it can be seen that the calculated t value is 15.415 and the table value at 5% level of significance is 2.101, thus the calculated t value is more than the table value and hence the difference in the mean value of sample is significant. Hence the null hypothesis "there is no significant difference between general practitioner and super speciality so far as company's investment on non-scientific promotion is concerned is rejected. Therefore it can be concluded "there is significant difference between general practitioner and super speciality so far as company's investment on non-scientific promotion is concerned.

- **Null Hypothesis** HO=μ1=μ2, There is no significant difference between GP and SS so far as company's investment on CRM on patients is concerned.
  - **Alternate Hypothesis:** H1= μ1 μ2 There is significant difference between GP and SS so far as company's investment on CRM on patients is concerned.

Table 3: Mean and Mean Square of Data Collected from Respondents Showing How Much their Company Invest on CRM on Patients on General Practitioner and Super Specialists in 2015-16 in their Respective Territories in Jaipur

Respondents No.	X1 (General practitioners)	(X1-X1)	(X1-X1)2	X2(Super Specialist)	(X2-X2)	(X2-X2)2
1	50	-10	100	7	-1	1
2	60	0	0	5	-3	9
3	70	10	100	6	-2	4
4	80	20	400	9	1	1
5	65	5	25	5	-3	9
6	70	10	100	8	0	0
7	65	5	25	5	-3	9
8	50	-10	100	10	2	4
9	40	-20	400	15	7	49
10	50	-10	100	10	2	4

Total of response	Mean	Mean square	Standard deviation
X1=600	60	(X1-X1)2=1350	S= (X1-X1)+ (X2-X2)/n1+n2-2
X2=80	8	(X2-X2)2=90	1350+90/10+10-2=8.94

Formula of calculating t value =mean1-mean2/S ,   n1n2/n1+n2
60-8/8.94, 10*10/10+10=5.816*2.236=13

As shown in the above table it can be seen that the calculated t value is 13 and the table value at 5% level of significance is 2.101, thus the calculated t value is more than the table value and hence the difference in the mean value of sample is significant. Hence the null hypothesis "There is no significant difference between general practitioners and super specialist so far as   company's investment on CRM on patients is concerned" is rejected. And it can be concluded that there is significant difference between practitioners and super specialist so far as company's investment on CRM on patients is concerned.

- **Null Hypothesis**: HO=μ1=μ2, There is no significant difference between Retailers and Stockiest so far as company's investment on CRM is concerned.
  - **Alternate Hypothesis:** H1= μ1 μ2There is significant difference between Retailers and Stockiest so far as company's investment on CRM is concerned.

Table 4 Mean and Mean Square of Data Collected from Respondents Showing How Much their Company Invest on CRM on Retailer and Super Stockist in 2015-16 in their Respective Territories in Jaipur

Respondents No.	X1(retailers)	(X1-X1)	(X1-X1)2	X2(Stockist)	(X2-X2)	(X2-X2)2
1	30	-10	100	15	-4	16
2	20	-20	400	5	-6	36
3	50	10	100	15	4	16
4	40	0	0	20	9	81
5	25	-15	225	10	-1	1
6	25	-15	225	5	-6	36
7	30	-10	100	5	-6	36
8	50	10	100	10	-1	1
9	60	20	400	15	4	16
10	70	30	900	10	-1	1

Total of response	Mean	Mean square	Standerd deviation
X1=400	40	(X1-X1)2=1350	S= (X1-X1)+ (X2-X2)/n1+n2-2
X2=110	11	(X2-X2)2=240	400+110/10+10-2=5.32

T=mean1-mean2/S , n1n2/n1+n2
40-11/5.32, 10*10/10+10=5.45*2.236=12.19

As shown in the above table it can be seen that the calculated t value is 12.19 and the table value at 5% level of significance is 2.101, thus the calculated t value is more than the table value and hence the difference in the mean value of sample is significant. Hence the null hypothesis "There is no significant difference between Retailers and Stockiest so far as company's investment on CRM is concerned" is rejected. And it can be concluded that there is significant difference between GP and SS so far as company's investment on CRM on patients is concerned.

Findings

Pharma companies practices sales level CRM on their customers to convert them and to make them loyal towards their company. It includes scientific promotion, non scientific promotion and CRM for patients. Health care professional, retailers and stockiest are the core customer for pharma companies, the aim of the research was to find out the difference between super speciality and general practitioners so far as pharma companies sales level promotions are concern. Significant differences were found on various sales levels CRM which are as follows:

- Pharma companies invest more on scientific promotion on super specialist health care professionals as compared to general practitioners. May be because they are known to treat critical patients which are often referred by general practitioners. Scientific promotion includes books; conference participation and research article on current happening on disease management. Thus scientific promotional tools are more helpful for super specialists; it enhances their knowledge on disease management. So it can be concluded that there is significant difference between general practitioner and super speciality so far as company's investment on scientific promotion is concerned.

- General practitioners appreciates more the non scientific sales level promotional tools of pharma companies as compare to super specialist health care professionals. Non scientific promotional tools are samples, gifts etc. Pharma companies offer free samples to general practitioners to see the response of it in certain disease so free samples are helpful for general practitioners. Pharma companies offer gifts which work as reminder of their brand to general practitioners.

- Pharma companies invest more on customer oriented CRM on General practitioners as compare to super specialist. Customer oriented CRM are free health camps for awareness of patients like diabetes check, healthy mother healthy baby camps. General practitioners always in need of such kind of support from pharma companies to attract more number of patients at their clinics whereas super specialists often treat referred patients and a majority of super specialist practices at large scale of corporate institutes where they don't allow any free camps for patients.

- Pharma companies invest more on CRM on retailers as compared to stockist. They both are the integral part of pharma companies and to engage them many offers like discounts, schemes,

foreign tours etc. are the CRM tools for them. It was found that retailers have strong influence on patients. Retailers are always in direct contact of the patients so they can promote many products whereas a stockist role is to supply to retailers and they cannot generate demand.

References

❀   1 http://www.slideshare.net/sk_prince/pharma-crm

❀   2. Aditya Khajuria*1, and Vijay Khajuria ,Impact of Pharmaceutical Marketing Communication Strategies on Prescription Practices of Physicians RJPBCS Volume 4 Issue 3 Page No. 882 ISSN: 0975-8585 July- July-September 2013.

❀   3. Girish Taneja Impact of Pharmaceutical Industry Promotion Mix on Doctor's Prescribing Behaviour Asia-Pacific Business Review Vol. IV, No. 4, October-December 2008 pp. 82-95. ISSN: 0973-247.

❀   4. "What Is The Need Of New Marketing Strategy In Pharma Industry Public Law Essay." UKessays.com. 11 2013. All Answers Ltd. 02 2017 <https://www.lawteacher.net/free-law-essays/public-law/what-is-the-need-of-new-marketing-strategy-in-pharma-industry-public-law-essay.php?cref=1>.

❀   5. Impacts of Pharmaceutical Marketing on Healthcare Services in the District of Columbia Prepared by The George Washington University School of Public Health and Health Services Washington, DC for the District of Columbia Department of Health June 15, 20096.

❀   6. Problems and Prospects of Sales Promotion in Pharmaceutical Marketing Communication Anita Mishra, http://www.indianmba.com/Faculty_Column/FC1044/fc1044.html.

❀   7. Jesper Schramm,1 Morten Andersen,1 Kirstin Vach,1 Jakob Kragstrup,1 Jens Peter Kampmann,2 and Jens Søndergaard Promotional methods used by representatives of drug companies: A prospective survey in general practice Scand J Prim Health Care. 2007; 25(2): 93–97.doi: 10.1080/02813430701339659.

❀   8. Mahrukh Mohiuddin, Sabina Faiz Rashid, Mofijul Islam Shuvro, Nahitun Nahar, and Syed Masud Ahmed Qualitative insights into promotion of pharmaceutical products in Bangladesh: how ethical are the practices? BMC Med Ethics v.16; 2015 PMC4666091https://www.ncbi. nlm.nih. gov/pmc/articles/PMC4666091/

❀   9. Ethridge, D.E. (2004) "Research Methodology in Applied Economics" John Wiley & Sons, p.24

❀   10.http://medicinman.net/2016/07/ims-health-market-reflection-report-june-2016/.

❀   11. Based on interaction with all the HR managers of these top 20 pharmaceuticals companies

❀   12. Based on interaction with sales team of top 20 pharmaceuticals companies estimated data collected.

❀   13. Simple random sampling, Definition, Advantages & Disadvantages Philip Bobko,Shari Miller &Richard Tusing ,Pages 157-159 Published online: 20 Nov 2009.

❀   14. https://www.investopedia.com/terms/t/two-tailed-test.asp.

❀   15. Gupta SP, Test of hypotheses, Statistical methods, thirty forth edition (2005) p.911-912, sultan chand & Sons 2006.

❀   16. Introduction to SAS. UCLA: Statistical Consulting Group. From https://stats.idre.ucla.edu/ sas/modules/sas- learning-moduleintroduction-to-the-features-of-sas/ (accessed August 22, 2016)

❀   17. https://www.techopedia.com/definition/30318/data-collection.

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