



# Influences of Pharmaceutical Industry on Prescription Practices in Public and Private Hospitals of Islamabad-Pakistan

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## Abstract

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**Background:** To explore the influences of pharmaceutical companies on prescription practices and to find out types of incentives of pharmaceutical companies on medical doctors in private and public hospitals in Islamabad, the capital city of Pakistan

**Methods:** A qualitative exploratory study was conducted in 06 months May-Oct: 2017 in Islamabad (Capital City of Pakistan). Data were collected from doctors and pharmaceuticals representatives through snowballing sampling techniques through open ended questionnaire in which In-depth interviews were taken. In depth interviews were recorded, transcribed and coded. Qualitative sub-component was included to triangulate the data, sub themes and themes were generated.

**Results:** Respondent's prescription is a basically document in which we suggest minimum effective medication therapy to the patient, that is also cost effective and give maximum treatment to the patient. Few of the respondents are also agreeing on the point that most of the times patient itself influences to prescribe the particular product. Patient itself influences to prescribe the particular product that is redundant in its treatment regimen. Other respondents stated that prescription is varying from patient to patient and our priority is to give the medicine to the patient which shows good efficacy.

**Conclusion:** Most doctors were maintaining protocol of prescription and using brand name of medicine. Pharmacists were visiting them on regular basis conditionally.

**Keywords:** Pharmaceuticals, doctors, medicines, representatives, prescription, public and private

## Introduction

Prescription is formal correspondence concerned to pharmacy (1). World Health Organization characterizes expenditures of pharmaceutical industries is increasing day by day (2). Insufficient budgeting leads to over-prescription (3). Administrations have embraced an assortment about supply, demand and cost (4). Pharmaceutical industries are the largest marketing

(5). The stake holders of Pharmaceutical Industry pay to medical practitioners for their international visits to influence behavior for apprehension of financial support. Various types of techniques are used by the pharmaceuticals for describing medicines to practitioners (6). Aim of study is to improve prescription practices among health care workers and objectives are as: to explore the influences of

pharmaceutical companies on prescription practices and to find out types of incentives given by pharmaceutical companies to medical doctors in private and public hospitals in Islamabad, the capital city of Pakistan.

## Methodology

A qualitative exploratory study was conducted in Islamabad. The study duration was six months i.e. May-Oct: 2017, respondents were Doctors, and pharmaceuticals representatives, snowballing sampling technique were used, in-depth interviews were taken, Interviews were transcribed, coded and recruited. Recruitment of sales representatives include respondents practicing in Islamabad, affiliated with either domestic or international pharmaceutical company with at least 3 years working experience of marketing and refusals were excluded. 02 data collectors were hired and trained with extensive exercises for 15 days. IDI guide were used to collect data, open-ended questions which was already used in study (3) covering all the domains of medicine, prescription and respondents related information. The guide translated into national language Urdu. Ethics of research were maintained.

Issues of reliability and validity

The questionnaire was adapted from the study done in China (3). Some modifications were made according to extensive literature review based on culture and environment variations as well reviewed from the experts. A pilot test was conducted on 10% of sample population. Data analyses in which thematic content analysis was done. IDIs were initially recorded, later on transcribed and translated into English from Urdu local language. All transcripts initially be coded and recoded resulting in theme identifications. After re-reading the transcription, data were grouped into different codes. From codes, sub-themes and themes were identified. After approval of the study IRB of Health Services Academy, Islamabad and the purpose was explained and informed verbal consent was taken. Confidentiality, anonymity and privacy was assured and maintained throughout the study process by excluding identifications in the questionnaires and participants were free to leave the study at any stage of the study/interview. IDIs were conducted according to the good practice abiding ethics of the research. Informed consent was explained and obtained from all before conducting the interviews.

## Results

16 representatives were interviewed (09 doctors and 07 MSRs)

### In Depth Interviews (IDIs)

Qualitative sub-component was included to triangulate the data from main quantitative component. For this purpose, 16 IDIs organized in the comfort environment followed by ethics.

### Socio-Demographical Variables

In all 16 participants, the table shows socio-demographical:

**Table 1. Socio-Demographic Data**

	Mean
Age(Years)	40
Monthly income(Rs.)	90000
Job Experience(Years)	8 years

N = 16

Following sub themes and themes were generated;

**Table 2. Qualitative Component, Thematic Analysis**

Themes	Sub-Themes
Prescription is a document	<ul style="list-style-type: none"> <li>• An official document of treatment</li> <li>• Promotion of medicine chit</li> <li>• Medicine information form</li> <li>• Dosage information letter</li> </ul>
Funding pressure	<ul style="list-style-type: none"> <li>• Over prescription</li> <li>• Out of pocket expenditures</li> <li>• Low funding, maximum investment</li> <li>• Health on low priority</li> <li>• Cannot generate revenue</li> </ul>
Sales targets	<ul style="list-style-type: none"> <li>• Funding issue</li> <li>• Promotion of medicines</li> <li>• Packages</li> <li>• Gifts</li> <li>• Compensations</li> <li>• Bonus system</li> </ul>
Over- prescription	<ul style="list-style-type: none"> <li>• Dissatisfaction</li> <li>• Less knowledge</li> <li>• Work pressure</li> <li>• Minimum facility of alternatives</li> </ul>

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Bonus remunerations and	<ul style="list-style-type: none"> <li>• Low salary</li> <li>• Low packages</li> <li>• Minimum facilities</li> </ul>
Incentives from Pharmaceutical agencies	<ul style="list-style-type: none"> <li>• High profit medicine</li> <li>• Business development</li> <li>• Relationship biased</li> <li>• Personal connections</li> <li>• Gifts, Packages, Tours etc.</li> <li>• Clinical renovations</li> <li>• Abroad visits</li> </ul>
Offering medicine remunerations	<ul style="list-style-type: none"> <li>• Motivational discussion</li> <li>• Money packages</li> <li>• Alternatives availability</li> </ul>
Drawbacks	<ul style="list-style-type: none"> <li>• Using as business instead of facilitation</li> <li>• A type of corruption and cheating</li> </ul>

Asked four open ended questions to the participants. Each respondent was given opportunity to answer it. One question was asked first and opinion of each participant was asked. An audio recording device was used after the verbal consent.

**Prescription View**

MO viewed about prescription as;

*"We follow standard guidelines; we almost prescribed broad-spectrum antibiotics including multi vitamins, we often advice investigation, daily routine investigations are being done in government hospital laboratory and other investigations are being suggested to patients to get themselves out side in the private clinics. We often trust on outside investigation report" (MO, 32 Age, Government Hospital).*

On another respondent expressed as: *"We often follow operating standard of the prescription accordingly, I almost prescribe more than 3 medicines, I often advise routine investigation, in case of any infection of ambiguous symptoms, I advise the patient to get their lab reports from outside because the stains of Government sector laboratories are not much remarkable" (MO, 45 Age, Private Sector Hospital).*

Another told that *"I am not following prescription codes due to huge flow of OPD, I prefer to write symptomatic treatment in case of chronic illness, I prefer to get investigation first so that I can treat as per lab reports, Government lab reports are not much accurate due to that I suggest to patients to go outside but depends upon economy of the patient" (MO, 33 Age, Govt. Sector Hospital)*

**View regarding prescription methodology:**

One of our respondents viewed *"as prescription is a basically document in which we suggest minimum effective medication therapy to the patient, that is also cost effective and give maximum treatment to the patient" (MO, 55 Age).*

Another respondent told that *"I am also agreeing on the point that most of the times patient itself influences to prescribe the particular product. Otherwise, their treatment medication is insufficient" (SMO, 55 Age).*

Other respondents stated that *"prescription is varying from patient to patient and our priority is to give the medicine to the patient who shows good efficacy" (MO, 50 Age)*

One of the most experienced doctors told that *"Pharmaceuticals representatives are the major part of the medicine manufacturing company, so we can't neglect their importance, role and efforts in the medicine field. They are the main source of the medicine information for the doctors and physicians. Job of the MSR is to promote and sell their company products which may be any medicine, surgical equipment, and other health related services. Their targeted costumer is doctor, pharmacist, nurse and other health care providers. They increased awareness and also provide advice and introduce new products and services" (Additional Medical Superintendent, 58 Age).*

**Funding pressure to hospital:**

Majority of the respondents agreeing that main reason for the over prescription and other health expenses are due to insufficient funding. As suggested by the respondents, hospitals revenues basically depend only from the two sources: government subsidies and user's fee.

SMO told that *"Budget ultimately covers capital costs, labor, and other intermediate health expenses which are given by central government In case of provincial hospital, subsidies given to city government and district government."*(SMO, 51 Age).

One another responded as *"Funding pressure from hospital is one of the major problems" (MO, 32 Age).*

Few of the respondents are also noted that health care is of low priority by the government health policy and agenda. Moreover, their funds are limited for hospital and health services. Government should introduce new method of generating revenue instead of getting benefit from Pharma industry

**Setting sales target:**

Responses from private hospitals was suggested that funding issues was one of the main issues, so in private hospitals, revenues are only based from the user fee. Unsurprisingly, for the compensation of loss

of health care subsidies hospitals were advised to generate revenues from medicine sales by pharmaceuticals and other health care services.

One of the respondents told that *"numbers of informants, revenues generated from pharmaceuticals and other health services are linking with doctor's salary and bonus system, for this they assign and set the targets for the medical departments"* (37 Age).

One of the respondents working in private hospital said that *"Generating revenues by using these methodologies from pharmaceuticals sales and other health services is most commonly referred as "using pharmaceuticals to feed hospital" from this practice all hospital and medical staff were aware and have to follow it"* (MO, 45 Age).

Another senior officer told that *"Medical doctor, cost for the basic health services were set low, but hospital tends to over prescribe and go for diagnostic and other health services to cross the subsidizes on basic health treatment"* (SMO, 52 Age).

One MO serving in private hospital doctor said that *"We all health care provider know that pharmaceutical companies use various tools and strategies to feed hospitals. So maximum profit in the hospital is from the sales of pharmaceuticals and provision of health care services (medical and diagnostic). Amount of bonus which we received depends on the revenue which we generated from the sales of pharmaceuticals and provision of other health care services, mostly it is from the pharmaceuticals"* (Medical doctor, 45 Age).

Junior MO told that *"Another noticeable strategy adopted by most of the hospitals is to set targets and goals for individual medical departments to generate revenues. As suggested by number of the informants; the revenue which is generated by each medical department is checked and reviewed quarterly and gives pressure on the medical doctors"* (Junior MO, 25 Age).

A key informant stated *"Hospital assign us targets to generate maximum revenues and profit, so for this on regular basis meeting are conducted in the hospital and discuss the future plan also. More the revenue we generated more the bonus we will take from the hospital"* (Doctor, 48 Age).

Another administrator of the hospital having graduate medical degree told that, *"Since each department have its own goals, targets and achievement plan so they encouraged doctor to over prescribe or go patient for physical examination and also for diagnostic and clinical investigation in order to full fill the hospital targets and plans. Another informant also provided similar accounts"* (56 Age).

One another doctor shared her views as *"the income of the hospital is generated from the pharmaceutical sales and other provided health care services, so for the accomplishment of the targets we are encouraged by the hospitals to over prescribe or go for clinical investigation and other health services. This all is required by the hospital"* (Female MO, 55 Age).

#### **Incentives for over-prescription;**

As noted by one of the MO as *"At the doctor's level there are different mechanisms established for the solution of funding issues. Apart from the salaries, bonus of the medical doctors which they received depends upon the amount of the medicines which they prescribe, provision of health care services and also the amount of generated revenue"* (MO, 54 Age).

One stated that *"My bonus depends upon my department performance, so I received more bonuses if target meets"* (MO, 45 Age).

Another SMO told that *"Similar account was provided by the surgeon that my bonus amount is sometimes more as compared to other medical doctors because we had usually more patients as compared to others departments. Also mentioned by him that orthopedics departments doctors have more bonus because they also have more patients and their bonus is sometimes twice than their salaries"* (SMO, 56 Age).

#### **Usage of bonus and medicine remunerations to compensate low pay**

One of the doctors expressed *"Dissatisfaction towards their salaries because they agreed that their salaries level will not reflect their level of knowledge, skill and experience. Their salaries are quite low and work pressure is very high so, they have to work on nights shifts. Hospital also calls them on emergency conditions because hospitals have no alternative"* (Surgeon, 52 Age).

One of the most Senior Medical Officer told that *"I am always busy at work. So, I have to attend patients. Hospitals also call me during emergency situations because they can't find any alternative option"* (Chief MO, 59 Age).

The narrative provided by the respondents suggested that there work pressure was very high and shows discontent for their salaries that were very low and timing of work was very high.

**When asked from the MSRs regarding the incentives provided pharmaceutical companies to doctors.** They shared as

One respondent told that *"The profit ratio for the pharmaceuticals companies is very high as compared to product actual cost. So, from this profit company again invest and allocate a specific budget for the promotion of their products. This type of budget is known as*

*“promotional budget” or “clinical budget” which is used for the “developing business relationship with the doctors and hospital staff, paying medicine remunerations or other medicine promotion methods” (MSRs, 45 Age).*

Another told that *“For the pharmaceutical companies to market their medicine products, MSRs mostly prefer to use any reference and personnel connections, “for this they may ask to any relatives, friends, classmate, colleagues, senior and junior fellows to introduce to the doctors, and then it is very difficult for the doctors to refuse them and their proposal” (MSR, 55 Age).*

Respondents from the pharmaceutical sectors suggested that *“building, maintaining and promoting personnel connections with the medical doctors and other hospital staff were a key which ultimately leading towards success. MSR after their work socialized the doctors and treated as close friends. More over them also know the doctors strengths and weakness, family status and also manage their personnel issues which are unrelated to their field work” (SMSR, 58 Age).*

Junior told that *“Most of time, my job nature is to give details of the medicines to the doctor. For this I target and approach them, give detail in description of the medicines to them, I also need to know their needs, there family status and background, their demands, even personal likings, I give them money, presents, or other stuff which give them satisfaction and happiness by keeping in mind that they will prescribe more medicines of my company than other” (MSRs, 25 Age).*

Another key informant stated that *“As for me, I gave cash to the doctors and also sometimes expensive gifts. This may be included branded products, home items, clinic renovation, foreign tours” (MSRs, 35 Age).*

One another told that *“Maintain business relationship with the medical doctors included socialized them build and maintain trust, by playing games, picking up their kids from the school and also provided their home related services” (MSRs, 39 Age).*

So, the responses from the informants indicated that the main aim and objective of the pharmaceuticals representatives was to approach the medical doctors and promote their products to sell the medicines, rather than mentioned about the efficacy of their medicines.

**When asked about the offering medicines remunerations;** they told that,

One of the pharmaceutical managers told that *“The most commonly and widely used strategy by the pharmaceuticals companies were to direct offer of medicine remunerations on each single prescription for the motivation of the medical doctors. Moreover, in order to sell*

*medicines in the public or private hospital approval from the hospital pharmaceutical committee was must require. “The committee is usually comprised of a pharmacist, hospital director, various head of department and specialist” (MSRs, 54 Age).*

A key informant told that *“Recommendations made by these members were very decisive that what medicine can be sold in the hospital. Pharmaceuticals sales representatives mostly offered to the members of the pharmaceutical committee gifts or money in order to establish a good and professional personal relationship” (Senior MSRs, 55 Age).*

One told that *“One of the most important things is that you must know and have idea about the members involved in the pharmaceutical committee of the hospital. Then next is to meet and target the right person that is ultimately a key of success moreover selected and target member must speak for you during meeting. Mostly it happens that at the first time they reject you and your money proposal, but at last they must consider you” (MSR, 34 Age).*

Another female shared that *“One of the most important things is to approaches the key figures from hospital pharmaceutical committee and persuades them to use medicine in their hospital was important. For this the most common strategy used by them is economic incentives” (MSR, 45 Age).*

A junior told that *“We must make sure that our company is building and maintaining good relationships with the people of hospital pharmaceutical committee and offering them money; moreover, sometimes it is very difficult for the newly registered brand to get listed in the hospital formulary” (MSR, 32 Age).*

One of the representatives told that *“After the medicine was included in the list of the hospital, then the next step was to facilitate and convince the doctor to prescribe it. Very commonly used strategy by the pharmaceutical industries was to direct offer medical doctors for medicine commission even on single prescription. As noted by the MSR larger portions of doctor’s income directly comes from the medicine remunerations” (MSR, 45 Age).*

Another told that *“Pharmaceutical companies used various methods for the registration of the medicine in the hospital formulary and next their target is to consume it by giving doctors percentage and other economic incentives. Companies give these incentives mostly based on their performance or target based” (MSR, 34 Age).*

## Discussion

The majority of doctors responded that they were prescribing more than 3 medicines and also, they have

accepted that they are getting benefits from pharmaceutical industries (7). Pharmaceutical stakeholders were providing elite targets to practitioners to achieve with highly packages including dinners, parties, gifts, financial assistance and abroad tours (8). On regular basis, MSRs were making visits to practitioners for their benefit purpose rather than curative they are focusing on marketing (9). Clinical pathways are multi subjective plans of care than explore necessary care steps for ill person clinical issues (10). In our study it has been proven in the IDIs from stakeholders that financial assistance plays vital role in prescription and same study was done in USA where there is no any impact of generic prescription to Dutch Physicians was shown (10). In our research MSRs were the major source of information of medical prescription and on other studies conducted in Spain the sales representatives are the major source of information (5).

## Conclusion

Doctors were prescribing more than 3 medicines of choice with no any specific protocol. Most of the doctors were getting gifts, abroad tours, and various incentives to promote their medicines. Most of the doctors were following the protocol of prescription. Pharmacists were visiting them on regular basis. All the doctors were prescribing brand name of the medicine. MSRs were providing dinner parties, offering commissions to get their medicines prescribed on priority basis as marketing promotion. Over-prescription and medicine remuneration are the major issues in domain of pharmacy department.

Based on the findings of this study, The Government and Ministry of Health (MoH) should intervene the law of DRAP regarding prescription. Over prescription, malpractice in prescription and incentivization of pharmaceutical industries should be monitored and audit must be conducted timely via collaboration of Pakistan Medical Commission and DRAP. Experienced Hospital Pharmacists must be assigned their duties as per their job description. Reform policy of prescription of generic name formula must be implemented throughout the country

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