

The Influence of Medical Insurance and Cost of Prescribed Medicines on Patient's Decision-Making in Palestine

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Abstract

The purpose of this study is to investigate the influence of medical insurance and cost of prescribed medicines on patient's drug decision-making in Palestine. One hundred and forty seven (147; group I) patients who get and pay for their medications from community pharmacies were compared with one hundred and fifty one (151; group II) patients who get their medications for free from charitable clinics were compared regarding their prescription filling behavior. Results showed that cost of prescribed medicines is an influencing factor when making medication - related decisions by patients. 53.7% of patients who pay for their medication show prescription compliance, while 96% of patients who get the medications for free show prescription compliance. This study shows that cost is an

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influential factor in prescription compliance and should encourage the health authorities to increase the health insurance coverage especially for low income patients and to review the prices of pharmaceuticals in the Palestinian market.

Introduction:

Palestine is a small country in the middle east. The two existing parts of Palestine are: *West-Bank* and *Gaza strip*. The number of population in the *West Bank* where the study took place is 1,857,872 and the annual growth rate is 3.1% (1). The *Palestinian Central Bureau of Statistics* (PCBS) estimated that 17% of people in West-Bank live under the poverty line (1). In Palestine, the *Palestinian National Authority* (PNA) is the main provider of health services. The *United Nations Relief and Works Agency* (UNRAW) and other *Non-governmental Organizations* (NGOs) have considerable contribution to the health sector in Palestine (2). People with governmental medical insurance are the governmental employees as well as other special patient categories like children. Recent Palestinian health surveys showed that 44.4% of persons in West-Bank/Palestine have governmental health insurance (2). Some patient categories (11.6%) who are desperately poor and have no medical insurance can dispense their prescriptions for free from charitable clinics run by non-governmental organizations and other relief agencies like the “UNRWA” (2). Still, a good proportion of people in Palestine have no medical insurance of any type and they have to purchase their prescriptions from private community pharmacies. All community pharmacies in Palestine are run by the private sector. Governmental pharmacies are also present and they dispense medications for patients with governmental medical insurance.

The number of community pharmacies in West bank is approximately 620 (3). In Palestine, there are several local pharmaceutical companies producing a wide range of pharmaceuticals. In addition, the local market is open to many foreign pharmaceutical companies that were functioning before the Oslo accord. An extensive comparison of the prices of pharmaceutical products in the Palestinian market showed that the locally produced pharmaceuticals are less expensive than their foreign counterparts. For example, GI-Care® (ranitidine) tablets produced by “Pharmacare” is sold to the customers at a price of 2.5 USD per 20 tablets, while Zantac® (ranitidine) tablets produced by “Hoechst” is sold at 8 USD per 20 tablets. The cost of medications is an influencing factor in patient’s drug-related decisions. A study carried out in USA showed that high-risk subjects with

no coverage had 3 to 15 times higher odds of medication restriction than subjects with partial or full coverage (4). Another study have shown that failure to dispense prescriptions (prescription non-compliance) due to cost is a serious problem for many adults with chronic disease or disability (5). Economic factors appeared to play an important role in medication decisions by the elderly as well. The impact of these economic factors was sufficiently high that it could have major negative consequences on the health of elderly persons who are poor and lack drug coverage (6).

No studies have been carried out in Palestine or in close neighboring countries on the impact of health insurance coverage availability on the patient's prescription related decisions. The purpose of this study is to explore the influence of drug / prescription costs on Palestinian patient's decision to purchase medications and comply with the medical advice. This is of great importance because the failure to get the medications as prescribed will lead to deterioration of the patient's disease state and will add to the cost burden on both the patient and the national health system.

Method and Design:

This study was conducted between July 2001 and March 2002. The study was conducted in a charitable clinic associated with a pharmacy unit run by a relief agency in the northern part of West-Bank. Three hundred and twenty seven (327) patients who were selected at random days were asked to participate in the study. Two hundred and ninety eight (298) patients positively responded and agreed to participate. One hundred and forty seven (147; group I) patients with no medical insurance and have to pay for their prescription medications which they buy from private community pharmacies were compared with one hundred and fifty one (151; group II) patients getting their medications for free from a non-governmental charitable clinic. Those patients were included in the study based on the following two criteria: 1) their prescription do not contain drug(s) for chronic conditions like cardiovascular diseases or diabetes mellitus and 2) the prescriptions were dispensed for the first time at the pharmacy. Most of the patients included in the study were dispensing prescriptions containing medications for gastro-intestinal conditions or antibiotic medications for uncomplicated conditions like urinary tract infections. Patients in group I were prescribed medications by private general practitioners or specialist in the private medical sector while patients in group II were prescribed medications by the attending physicians at the charitable clinic. A private community pharmacy unit and the pharmacy unit associated with the charitable clinic participated in this study. The dispensing pharmacists were

asked to take notes on the purchasing behavior or decisions of the patients when purchasing their prescriptions. The notes taken included: (1) decision to buy the full prescription or part of the prescription; (2) decision to replace the prescription with cheaper substitutes or OTC medications; (3) and finally, decision not to get the medications at all. The total price of each prescription was calculated based on the official selling price of each drug extracted from the official updated price list distributed by the agents to community pharmacies. The patients in both groups were told about the study and its goals.

Results:

The characteristics of patients in group I and II are compared and given in table 1. The results show that most patients in group I were lower than 40 years of age while those in group II were above 60 years of age. This is expected because most people who receive charitable medical services in Palestine are the elderly with chronic diseases. The patients in the two groups are also different in gender distribution. Patients in group I are mostly males while the opposite is true about group II. One possible reason for this is that most women in Palestine do not have self support. In Palestine, only 8 – 10% of the workforce is female (1). The patients in the two groups, however, show similar level of education where the percentage of educated people in both groups were above 85%. The patients in group I are mostly city residents who tend to have better monthly income while most patients in group II are villagers who tend to have lower income. The majority of prescriptions for patients in both group I and II contains two drugs. The average cost per prescription for patients in group I was 6.23 USD, while that for group II was 5.7 USD.

Table 1: The demographic characteristics of patients in group I and II. Age, gender, presence of chronic diseases, place of living, education, number of medications per prescription and cost of prescription were analyzed for both groups and presented.

Parameter	Group I (147 patients)	Group II (151 patients)
Age		
<40	52.3%	33%
40 – 60	26.2%	29.4%
>60	21.5%	37.6%
Gender:		
Male	67.5%	40.9%
Female	32.5%	59.1%
Chronic Diseases		
Yes	17.3%	31.8%
No	82.7%	68.2%
Place of living :		
City	53.5%	37.2%
Village	38.6%	51%
Camp	7.9%	11.8%
Education:		
Illiterate	11.4%	14.9%
Educated	88.6%	85.1%
Number of drugs in the Prescription:		
One	17.6%	28.5%
Two	50.2%	48.7%
Three or more	32.2%	22.8%
Cost Of Prescriptions:		
1 – 5 USD	23.2%	33.9%
5 – 10 USD	74.1%	59.7%
> 10 USD	2.7%	6.4%

Statistical analysis of both groups showed that there are no statistical difference ($P > 0.05$) with respect to education between the two groups. However there is a statistical difference ($P < 0.05$) between the two groups regarding gender and age distribution. Analysis of the purchasing behavior of patients in both group I and II show (table 2) that the cost was an influencing factor when making prescription - related decisions by patients in group I who had to pay for their medications. This was not the

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case among patients in group II who did not have to pay for their medications. Approximately half of the patients in group I (68 patients, 46%) failed to purchase their prescriptions as recommended. Twenty patients (13.6%) did not get any of the medications in the prescriptions. Those who failed to get any of the medications said that they will try to get the medications from UNRAW or other relief agencies for free. Approximately one third of the patients (48 patients, 32.6%) get some of the drugs in the prescriptions or asked for a cheaper *over the counter* (OTC) substitute. In contrast, approximately 96% of patients in group II were getting their medications in full and as prescribed. Only very few patients (4, 2.6%) failed to get their prescription medications. Those four patients claimed that they used similar medications before and were not effective for their ailment. Only one patient in group II get part of the medications in the prescriptions. This patient claimed that he does not like to use antacid suspension and was satisfied with the ranitidine tablets. The degree of prescription compliance among the patients in the two groups was ($79/147 = 53.7\%$) for group I and ($146 / 151 = 96\%$) for group II.

Table 1: Patterns of dispensing behavior for both groups in the study. Decision of patients regarding dispensing full or part of the prescription or demanding substitution of the prescription with cheaper alternatives or refusal to dispense the prescription were recorded by the dispensing pharmacist and analyzed.

Category	Group I	Percentage	Group II	Percentage
Get the full prescription	79	53.7%	146	96.6%
Get part of the prescription	32	21.7%	1	0.6%
Get a cheaper substitute or OTC drugs instead of the Prescription	16	10.8%	0	0%
Fail to dispense the prescription at all.	20	13.6%	4	2.6%

Statistically, the results are clearly different between the two groups. Student t-test and two way analysis clearly indicate at P value less than 0.001 that two groups are statistically different in their dispensing behavior.

Discussion:

Several previous studies indicated the existence of prescription non-compliance due to medication costs (5,6). This study is the first to be carried out in Palestine and strongly shows the existence of a relation between ability to pay and ability to medicate. This study was carried out on two groups who were compared in terms of their prescription decision making. The failure to get the full and correct medications was attributed to poor income and expensive medications. The PNA need to get more involved in the pricing of pharmaceuticals in the Palestinian market by establishing and implementing pricing regulations for pharmaceutical companies. Unfortunately, some patients have developed incorrect methods to reduce prescription costs. For example, 21.7% of the patients in group I asked the pharmacist in the community pharmacy to dispense part of the medications and ignore the rest of the medications in the prescription. Yet, another 11% even decided to ignore the expensive prescription and to replace it with cheaper over-the-counter (OTC) medications that would relieve their GIT problems like antacids tablets or suspension. Unfortunately, pharmacists encourage such incorrect patient's practices. Pharmacists sometimes even advised this. Another strategy that was mentioned by a few patients was that they would make their medication last longer by taking a smaller than the recommended dose. Some patients also had stated that they asked their doctors to reduce medication expense by, for example, prescribing inexpensive medications or fewer ones. These results strongly indicates that there are certain patients in Palestine who are not getting their recommended medications and thus may not have the desired therapeutic outcome. This might complicate their diseases condition and adds up more burden to their economical status. The results of this study should encourage the policy makers in the PNA to adopt a more extensive national health insurance plan. During the past two years, the political instability had seriously affected the economical situation of all Palestinians. Special attention and full insurance coverage must be given to certain categories like pregnant women, elderly patients with chronic diseases and children. These results must also encourage the Ministry of Health (MOH) to adopt a comprehensive national policy regarding drug prices. Furthermore, community pharmacists must educate their patients regarding the importance of dispensing the full and correct prescription.

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