

Patients' Perception to Mail Order Pharmacy Service in a Specialized Cardiac Center

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SUMMARY. A telephonic structured survey questionnaire was designed to explore the level of satisfaction of cardiac patients receiving refill medications via mail-pharmacy services at Prince Sultan Cardiac Center (Riyadh, Saudi Arabia) between March and August 2012. Most of the respondents (71.4%) were male and majority from an age group of 45-60 years. About 70% of the respondents receive the prescription refills on time, about 80% receive all of their ordered medicine, approximately 90% received it in good condition and nearly 98% prescriptions contain the clear and simple instructions. Most of respondents (75.5%) indicated a high level of satisfaction with mail order pharmacy service. The study provides evidence that patients experience high level of satisfaction with mail order pharmacy services in a specialized cardiac center in Riyadh, Saudi Arabia. Patients' perceived satisfaction was considerably higher in terms of turnaround time of an order and clarity of instructions written on dispensed medications.

RESUMEN. Se diseñó una encuesta telefónica estructurada para explorar el nivel de satisfacción de los pacientes cardíacos que reciben medicamentos de recarga a través de los servicios de farmacia de correo del Centro Cardíaco Prince Sultan (Riad, Arabia Saudita), entre marzo y agosto de 2012. La mayoría de los encuestados (71,4 %) eran hombres de 45-60 años. Alrededor del 70 % de los encuestados reciben los reabastecimientos de recetas a tiempo, alrededor del 80 % recibe toda su medicina ordenada, aproximadamente el 90 % la recibió en buen estado y cerca del 98 % de las recetas contienen instrucciones claras y simples. La mayoría de los encuestados (75,5 %) mostraron un alto nivel de satisfacción con el servicio de farmacia por correo. El estudio proporciona evidencia de que los pacientes experimentan alto nivel de satisfacción con los servicios de farmacia de pedidos por correo en un centro de cardiología especializada en Riad, Arabia Saudita. La satisfacción de los pacientes fue considerablemente mayor en términos de tiempo de respuesta de una orden y la claridad de las instrucciones por escrito sobre los medicamentos dispensados.

INTRODUCTION

Dispensing medications are provided by different types of distributive channels, namely community, hospital, mail-order, and internet pharmacies. Mail service pharmacy is a relatively new industry that has gone through a rapid evolution during the last decade and involves the direct delivery of prescription medications to a patient's home or work place via private courier service or the postal service. Mail order pharmacy services can be considered a system-level intervention for improving access to chronic illness medications by making medications available to patients without the need to travel¹.

Mail-service pharmacy has experienced substantial growth over the last several years. In the United States, mail order distribution of prescription has grown in 2011 to 17%². A study sponsored by the Pharmaceutical Care Management Association³ concludes that the potential savings to the health care industry from the use of mail service pharmacy is close to \$46.6 billion over the next decade³. Evidence shows that mail-order pharmacy is generally used by individuals and elderly patients who require maintenance medications for chronic conditions and prefer to receive their maintenance medications in larger than 30 days' supply⁴⁻⁷. In addition,

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tion, Mail-order services are more convenient in situations where the patient has used the same medication over a long period of time ⁸.

Despite a number of advantages to using mail order pharmacy, there are some potential drawbacks. Product damage, products not received by the beneficiary on time, inconvenience, remoteness of a mail-order pharmacist and inability to ask questions to pharmacist are the main problems of mail-order pharmacy ^{9,10}. Furthermore, the use of mail-order pharmacy is not common for short-term treatments, and is infrequently for medications requiring refrigeration ¹¹.

Patient's satisfaction is an integral component of patient care services. The effectiveness of health care is determined to some extent by consumer satisfaction with service provided ¹². Patient satisfaction has been connected with patients' quality of life, adherence to medication therapy, level of pharmaceutical care received, and patients' perception of the pharmacist's ability to help them ^{13,14}. The assessment of consumers' satisfaction with pharmacy services is relevantly a new conception for developing nations ¹⁵. Hence, it is important to determine the underlying factors that are accountable for patients' satisfaction toward pharmacy services ¹⁶. Globally, several studies have investigated patients' satisfaction with mail order pharmacy services ^{6,17-21}. However, in Saudi Arabia, no study has been reported that focuses on the patient satisfaction with mail order pharmacy services. Hence, we designed a study to assess the level of patient satisfaction of cardiac patients receiving refill medications via mail-pharmacy services at Prince Sultan Cardiac Center (PSCC), Riyadh, Saudi Arabia.

METHODS

A telephonic survey questionnaire was designed by modifying a questionnaire used in a previous study ¹⁸ to explore the level of satisfaction of cardiac out patients receiving refill medications via mail-pharmacy services of hospital outpatient pharmacy at Prince Sultan Cardiac Center (PSCC), Riyadh, Saudi Arabia between 1st March 2012 and 31st August 2012. Prince Sultan Cardiac Center is a specialized healthcare center that provides comprehensive cardiovascular services to all Armed Forces personnel, their dependents and other patients referred to the center for further evaluation and specialized treatment and includes about 174 beds dedicated to Adult and Pediatric Cardiac patients. The mail

order service at PSCC was started in March 2012 and is open Saturday through Wednesday according to the standard pharmacy operating time. The usual turnaround time for mailed medications is 48 h. If delivery times exceed 48 h, the parcel shall be returned to PSCC pharmacy department.

Validation of survey questionnaire

The contents of the survey questionnaire were screened out for the appropriateness, and after finalizing the contents of the questionnaire, all the items were translated to Arabic language using a forward backward method. For the questionnaire validation, a pilot study on a group of sixteen participants was carried out before and after translation.

Contents of survey questionnaire

The survey questionnaire was comprised of three sections. Section one mainly focused on the demographic information, *i.e.* age, gender, education level, area of residence, household income, and occupation of respondents. The aim of second section was to inquire the respondents about their medication refill experience before mail order pharmacy service. Section three was the core section of the survey questionnaire aiming to assess the patient satisfaction with the mail order pharmacy services provided to them.

Data Collection

The respondents for this study were patients who submitted their application/order to refills their prescription over phone. During the study period a total of 87 patients made an order to refills their prescription. Out of 87 patients, 23 patients requested for prescription refills more than one time ($n = 87 - 23 = 64$). Hence, a total of 64 patients requested for prescription refills at least one time and these patients were eligible to be included into the study. Out of 64 patients there were 7 patients whose phone was not in use/switched off ($n = 64 - 7 = 57$), 6 patients who did not answer the phone call ($n = 57 - 6 = 51$), and 2 patients were not willing to participate into the survey ($n = 51 - 2 = 49$). Therefore, the total numbers of patients included into the study were reduced to 49.

Data Analysis

Data were entered into Predictive Analytics Software (PASW) Advanced Statistics version 20 (formerly called SPSS Advance Statistics, SPSS

Inc., Chicago, Illinois) licensed for King Saud University for further analysis. The research protocol was approved by PSCC research ethics committee.

RESULTS

Socio-demographic information

Most of the respondents (71.4%) were male and majorly from an age group of 45-60 years (32.6%) followed by above 60 years (28.6%). Furthermore, the majority of the respondents were from north region (34.7%) followed by south region (32.6%) and most of them were employed (61.2%), had an intermediate level and above of education (61.2%). Details about the demographic of the respondents are shown in Table 1.

Respondent's prescription refills experience before mail order pharmacy

About 74% of the respondents reported that

previous to this mail order pharmacy service they usually arrive to the hospital in person, nearly 44% of them used their car to reach the hospital and about 56% of these respondents spent between 500-1500 SAR and 1-2 days (58.4%) for the refill of prescriptions previous to this mail order pharmacy service (Table 2).

Respondent's prescription refills experience with the mail order pharmacy

Phone service

Majority (71.4%) of the respondents were satisfied with mail pharmacy customer service number and 67.3% of them rate the service provider as excellent (Table 3).

Turnaround time

About 70% of the respondents reported to receive the prescription refills on time, while those who do not receive it on time nearly 53% of them reported to wait 3-7 days before their prescriptions reached to them. Additionally, just

Characteristics		No. of respondents (n = 49)	
		N	(%)
Age (years)	less than 18	9	18.4
	18-30	5	10.2
	31-45	5	10.2
	45-60	16	32.6
	more than 60	14	28.6
Gender	Male	35	71.4
	Female	14	28.6
Area of residence	Middle region	4	8.2
	North region	17	34.7
	South region	16	32.6
	West region	9	18.4
	East region	3	6.1
Employment	Yes	30	61.2
	No	19	38.8
Monthly income (Saudi Riyal, SAR*)	less than 3000	12	24.5
	3001-5000	7	14.3
	5001 -7000	9	18.4
	7001-10000	7	14.3
	10001 -13000	9	18.4
	More than 13000	5	10.2
Level of education	No formal education	10	20.4
	Primary school	8	16.3
	Intermediate	13	26.5
	Secondary school	7	14.3
	Graduate	10	20.4
	Not disclosed	1	2.1

Table 1. Demographics of respondents. *1 US\$= 3.75 SAR.

Statement		No. of respondents	
		N	(%)
Do you refilled your medication before mail order pharmacy service	Yes	36	73.5
	No	13	26.5
Mode of transportation (n=36)	Car	16	44.4
	plane	14	38.9
	Train	1	2.8
	Other	5	13.9
Cost of medication refill (Saudi Riyal, SAR*, n=36)	100-500	11	30.5
	501- 1000	10	27.8
	1001- 1500	10	27.8
	1501-2000	4	11.1
	more than 2000	1	2.8
Number of days spent for refill (n=36)	1 day	6	16.7
	2 days	15	41.7
	3 days	8	22.2
	4 days	7	19.4
Have you ever stopped taking medicine because of unavailability	Yes	18	36.7
	No	31	63.3

Table 2: Information about respondent's medication refill experience before mail order pharmacy service *1 US\$= 3.75 SAR.

about 80% reported to receive all their ordered medicine and approximately 90% of them received it in good condition (Table 3).

Written information

Almost 98% of respondents reported that the mailed prescriptions they received contain clear and simple written instructions and medication information and there was no need for a pharmacist to counsel (Table 3).

Satisfaction

Most of respondents (75.5%) indicated a high level of satisfaction with mail order pharmacy service (Table 3).

DISCUSSION

To our knowledge, this is the first study to evaluate the patients view about the mail order pharmacy services in Saudi Arabia. In our study, most of the consumers agreed to express their experience with this service, possibly keen to obtain a better service in future. The majority of our respondents were male, and nearly two-thirds were educated to intermediate or above level. This is in conformity with a study in Nigeria which showed that about 54% of the respondents were male and over two-thirds was educated up to tertiary level ²². Patients who use mail order pharmacies tend to be older. As, nearly 61% of respondents in our study were

more than 45 years of age. Also, a survey result of random samples of senior citizens in United States showed the proportion of senior citizens using mail-order pharmacies rose significantly, from 17% in 1998 to 27% 2001 ²³. Additionally, another study reported mail-order pharmacy utilization is higher amongst elderly patients ⁷.

In the current study, nearly three-fourth of the respondents reported that previous to this mail order pharmacy service they usually arrive to the hospital in person, over one third of them used their car to reach the hospital and more than half of the patients spent between 500-1500 SAR and 1-2 days for the refill of prescriptions. Studies indicated that consumers tend to choose mail order pharmacies based on cost and convenience ^{9,11,18}. However, there is very few evidence that providing medications via mail-order pharmacy saves money relative to community pharmacy ^{3,24}. Although, community pharmacy in Saudi Arabia is a private service which is not covering patients in the public sector, like for our study setting.

Almost all of the respondents in our study reported that the mailed prescriptions they receive contain the right amount of written information. Our finding is in conformity with an earlier study ⁵. In our study, over two-thirds of the respondents reported to receive the pre-

Statement		No. of respondents (n=49)	
		N	(%)
Is there any difficulty in submitting the application/order over the phone?	Yes	14	28.6
	No	35	71.4
How did the staff handle your phone request?	Excellent	33	67.3
	Good	11	22.5
	Poor	3	6.1
	Not disclosed	2	4.1
Did you receive your medication on time?	Yes	34	69.4
	No	15	30.6
If the answer is no, how many days it will take medicine to reach you (n=15)	3-7 days	8	53.3
	8-12 days	6	40.0
	More than 12 days	1	6.7
The clarity of labels on prescription medication	Clear	48	97.9
	Not Clear	1	2.1
Is all ordered medicines available?	Yes	39	79.6
	No	10	20.4
Have you received medication in good condition?	Yes	44	89.8
	No	5	10.2
Is there a need for a pharmacist to counsel the drug?	Yes	1	2.1
	No	48	97.9
How satisfied are you with the mail order pharmacy service in general?	Very satisfied	37	75.5
	Satisfied	10	20.3
	Dissatisfied	1	2.1
	Very dissatisfied	1	2.1

Table 3. Information about respondent's satisfaction with the mail order pharmacy services.

scription refills on time and over three-fourths of the patients reported to receive all of their ordered medicine. In contrast, consumers have expressed concern about time delays in filling prescriptions by mail order pharmacy and the possibility of running out of medication before a refill was received ^{9,10}. The results of our survey indicated a high level of consumer satisfaction with the mail order pharmacy services. Studies found that mail-order consumers are satisfied with their mail pharmacy services ^{6,17-19}. In contrast, another study found consumers of mail order pharmacies were less satisfied ²⁰.

The results of this study must be considered in the context of the study design as it was conducted in a single healthcare center and the number of participants was small; this may limit the ability to generalize this finding to larger population. Future research should continue to explore patient satisfaction and cost saving to patients and hospitals in different types of prescription medication distribution channels in multi center healthcare facilities in Saudi Arabia.

CONCLUSION

The study provides evidence that patients experience high level of satisfaction with mail order pharmacy services in a specialized cardiac center in Riyadh, Saudi Arabia. Patients' perceived satisfaction was considerably higher in terms of turnaround time of an order, clarity of labels on dispensed medication, and phone handling.

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