



## Original Article

# PHYSICIAN OPERATED MEDICATION REFILL CLINICS IN A PRIMARY CARE SETTING: PATIENTS VIEWS AND SATISFACTION REGARDING THE QUALITY OF SERVICE

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### ABSTRACT

This cross sectional study aimed to assess patient's views and satisfaction regarding the quality of services of the "Family Physician Operated Medication Refill Clinics", in a primary care setting of a university hospital in Saudi Arabia. Pre tested, pre designed, well structured questionnaire written in English with Arabic translation was administered to a randomly selected volunteer patients, who presented medication refill clinics during a period of April-December 2009. A total of 302 anonymously completed questionnaires were returned to the investigators. Data was analyzed using SPSS-16 and the results expressed as counts and percentages. The results indicated that, approximately 97%, 91% and 84% participants were satisfied from overall performance of the refill physician, staff nurses and receptionists respectively. More than 93% patients got an appointment for the refill clinic on the day of their arrival and more than 80% of participants were seen by a refill clinic physician within one hour of their waiting time. According to the participants, the area of the service was easily accessible. The participants also recommended strongly the establishment of such a service in all major hospitals of the country. A significant number of respondents indicated the need for adequate facilities for the elderly, provision of suggestion/OVR (occurrence variance report) box and more educational material in the waiting room. The finding suggests that the physician operated medication refill service was highly satisfactory according to the majority of patients using it. Written comments of some of the participants reflected a need to improve some infrastructure and administrative aspects

**Key words:** medication refill; prescription refill; patient's satisfaction; pharmaceutical care; family physician; primary care

### INTRODUCTION

Medication refill clinics by physicians and pharmacists are well established worldwide and the most important reason is to provide cost effective and high quality pharmaceutical care until patients see their primary physicians (Cram et al., 1992; D' Achille et al., 1978; Townsend et al., 2007; Gross et al., 2005). Typically in King Khalid University Hospital, family physicians are responsible for authorizing refills for patients who come to the clinic when they are out of their medications.

Addressing patient's needs is the basis of all quality management programs. Studies have shown that patient satisfaction is directly related to adherence with the pharmaceutical and non pharmaceutical advice; it improves trust and loyalty and decreases number of lawsuits (Platonova et al., 2008; Stelfox et al., 2005). Hence, basic to the success of any practice is to satisfy patients by thoroughly understanding their needs

which definitely can make a big impact on the service and improves the overall quality of care (Cho et al., 2004; Torres and Guo, 2004).

A well established way to measure client satisfaction is by a survey which is usually short and easily administered questionnaire, that provides information and insight on patients' views of the services they receive (Rubin et al., 1993; Gasquet et al., 2004; Tso et al., 2006; Pellegrin et al., 2001). Patient satisfaction survey is an effective tool to either design a new practice plan or to improve a practice plan in which stake holders are already participating.

We conducted this quality of care study, because of the increasingly competitive environment and global trend in healthcare development toward integrating client satisfaction into the evaluation of medical service quality. We assessed the overall level of patient satisfaction of the refill clinic service and whether the physician operated primary care refill clinic at King Khalid university hospital met the expectations of the patients who attended this clinic.

#### MATERIAL AND METHOD

This cross sectional study was conducted among patients of King Khalid University Hospital (KKUH) Riyadh, Saudi Arabia during their visit for refill of their prescriptions. KKUH is a community based teaching hospital with 960 beds. Two Family Physician-operated medication refill clinics have been operating for about 5 years in the out patient settings of KKUH Riyadh. While waiting for a scheduled visit with their physician, these clinics help patients to overcome the medication related problems and also refill the medication prescriptions for chronic problems, like diabetes mellitus, hypertension, ischemic heart disease, hypercholesterolemia, epilepsy etc.

This study was conducted from April - December 2009 to assess the patient's satisfaction related to the service being provided at the prescription refill clinics.

A systematic randomized sampling technique was used to select the participants irrespective of their gender, nationality, age, marital status, educational level or Bio-Psycho-Social status. Pre tested, pre designed well structured questionnaire containing open-ended and close-ended questions written in English with Arabic translation was administered to every 10<sup>th</sup> patient, during working hours i.e. 8:00 Am – 4:00 Pm from Saturday to Wednesday. The covering letter of the questionnaire outlined the title and the purpose of the study and the identity of the researcher. Participants were informed about the importance of the study and were encouraged to participate. They were also assured of the confidentiality aspects of the study.

Questionnaire was divided into various sections with 19 items to highlight the most important issues related to the quality of care, accessibility to the service and interpersonal attitudes. The responses requested for items on interpersonal attitudes were in a 5-point Likert scale ranging from 'poor' to 'excellent'. During

analysis, scale was translated to a score as under;

	Poor	Fair	Good	Very good	Excellent
Scale	1	2	3	4	5
Score	00	25	50	75	100

Responses for items related to quality of care and access to the refill facility were either in 'true' or 'false' form or 4-point Likert scale, depending on the type of question. In a section at the end of the survey questionnaire, comments/suggestions were requested from the participants to improve the quality of service being provided by the medication refill clinics.

Various steps were taken to increase the content validity of the questionnaire. Firstly, a comprehensive review of the relevant literature was carried out. Secondly, a pilot survey of 50 participants was conducted and on the basis of that survey few questions were reformed, added or deleted. Lastly, all participants were informed and assured about the issue of anonymity and no identifying information was included in the questionnaire. The pilot survey questionnaires were not included in the main survey. The data for this study was collected by staff nurses working in the primary care clinics of King Khalid University Hospital.

Out of 350 administered questionnaires, three hundred and two anonymously completed questionnaires were returned to the investigator.

#### STATISTICAL ANALYSIS

Data was entered into spread sheet & processed on Statistical Package for Social Sciences-16 (SPSS-16). Demographic data and answers to the questions in the questionnaire were analyzed in a descriptive fashion. Results were expressed as counts and percentages

#### RESULTS

##### Respondent's characteristics:

Validated patients feedback questionnaires were collected prospectively from 302 randomly selected patients who attended the refill clinics over a period of eight months (April 2009 to December 2009). One hundred and sixteen (38.4%) participants were men and 186 (61.6%) women. Saudi national participants were 266 (88%), whereas non Saudis were 36 (12%). Participant's mean  $\pm$  S.D age was  $52.82 \pm 16.15$  years (range, 13-110 years).

##### Access Issues:

Access from the point of residence of patients to see the refill physician in the refill clinic was assessed by various open and close ended questions. As per the response of participants, hospital is easily accessible from every part of the city. Hospital car parking is just close to the main building area which has the refill clinic and is freely available for all. Almost all (94%) who came for refill of medications were given an appointment on the same day, whereas a negligible number had their appointment in 2-5 day (Fig 1). Most of the men and women (87%) were satisfied

**TABLE1**  
**PATIENT'SSATISFACTIONWITHTHETIMETOGETANAPPOINTMENTANDSEETHEPHYSICIAN**

Variable	Men n=116			Women n=186		
	Yes (%)	No (%)	No reply (%)	Yes (%)	No (%)	No reply (%)
Acceptable time to get an appointment.	101 (87.07)	13 (11.21)	2 (1.72)	163 (87.63)	15 (8.06)	8 (4.30)
Acceptable waiting time in waiting area (from arrival to see the refill physician)	97 (83.62)	16 (13.79)	3 (2.59)	155 (83.33)	28 (15.05)	3 (1.61)

**TABLE2**  
**PATIENTSATISFACTION(LIKERTSCALE):**

INTERPERSONAL COMMUNICATION, COMFORT OF WAITING AREA AND CONVENIENCE OF LOCATION

Variable	Men	Women
How was the comfort of Waiting Area?	82.46	79.42
How was the courtesy of Receptionists?	83.4	85.18
How was the courtesy of Nursing staff' ?	91.52	91.11
How was the courtesy of Physician?	96.55	96.37
Convenience of hospital location		
And refill clinic location?	93.36	92.02

with the length of time to get an appointment; whereas the rest were either not satisfied or did not comment on this issue (Table 1).

Most of the patients were seen by the refill physician within an hour from their arrival in the waiting area, while very few had to wait for = 2 hours (Fig 2). Approximately 15% of the patients were not satisfied with the waiting time in waiting area (from arrival to see the refill physician) and were of the view that this time should be reduced (Table 1). More than three fourth were satisfied with the comfort of the facilities in the waiting area (Table 2).

#### **Quality of care issues:**

Most patients were satisfied with their consultation by a refill physician. A few were unhappy because of the delay in getting the appointment to see the doctor and poor explanation of the delivery of service at the reception (Table 3).

More than 250 participants provided comments at the end of questionnaire. These comments generally reflected satisfaction with the refill service. Virtually all comments were highly favorable and complimented the family physician involved. For further improvement of services, patients expect a better time management in the running of the clinic, adequate facilities for elderly and disabled people and staff to be more pleasant (at

reception and nursing counter) with adequate explanation of their problems. Further suggestions were to decorate waiting room by better furniture, provide suggestion/OVR (occurrence variance report) box and have a more educational intervention and handouts in the waiting room.

#### **Interpersonal issues:**

Intercommunication of patient with hospital staff, patient's respect, dignity and confidentiality was assessed in the various sections of questionnaire. Few patients' were unsatisfied from the staff at reception and were of the view, that there is a need to improve their skills, by training before and during the job. Most of the patients were satisfied from the communication of staff nurses, nursing care and their attitude.

The responses were highly favorable for refill physicians. Refill physician's courtesy was highly appreciated, with mean score of above 96. More than 97% patients were satisfied from overall performance of refill physician and were of the view that such type of clinic should be established in all major hospitals, through out the country (Table 2).

#### **DISCUSSION**

Physician's good communication skill is a well recognized key

**TABLE 3**  
**PATIENTS SATISFACTION FROM THE CONSULTATION OF PRESCRIPTION-REFILL-PHYSICIANS**

Quality Indicators	Men N=116			Women n=186		
	Yes (%)	No (%)	No response (%)	Yes (%)	No (%)	No response (%)
Listens carefully	110 (94.83)	1 (.86)	5 (4.31)	173 (93.01)	1 (0.54)	12 (6.45)
Gives good Advice	104 (89.66)	3 (2.59)	9 (7.76)	158 (84.95)	5 (2.69)	23 (12.37)
Fulfills needs	104 (89.66)	- -	12 (10.34)	160 (86.02)	4 (2.15)	22 (11.83)
Enough consulting time	108 (93.10)	3 (2.59)	5 (4.31)	172 (92.47)	2 (1.08)	12 (6.45)
Behaves friendly and helpful	106 (91.38)	1 (0.86)	9 (7.76)	158 (84.95)	4 (2.15)	24 (12.90)
Explains well at the level of understanding	109 (93.97)	2 (1.72)	5 (4.31)	172 (92.47)	1 (0.54)	13 (6.99)
Satisfaction with overall care provided by physician	113 (97.42)	2 (1.72)	1 (0.86)	182 (97.85)	3 (1.61)	1 (0.54)

FIG-1

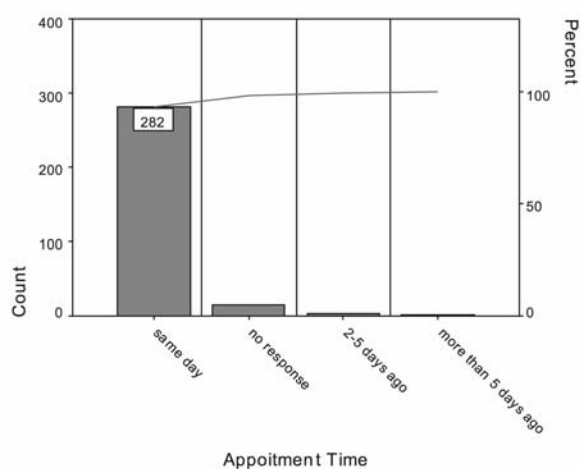
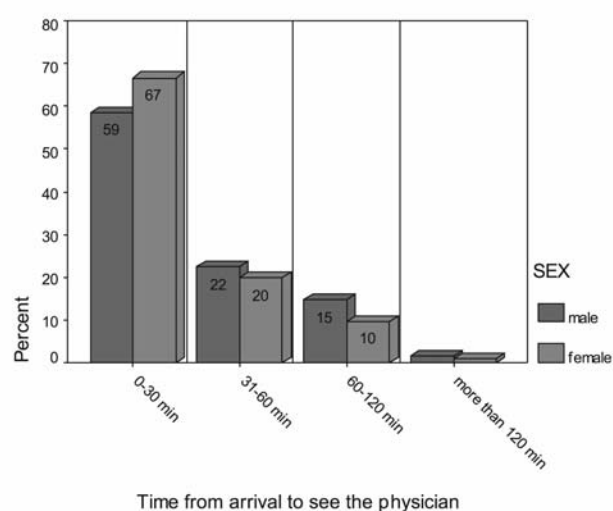


FIG-2



component of patient satisfaction (Trumble et al., 2006; Brown et al., 1999; Homer et al., 1999; Roter et al., 1997). Based on the results of this study, almost all patients reported high level of satisfaction with refill physician's consultation. The most likely explanation for this positive finding could be the excellent communication skills of the refill clinic physician.

A large percentage of respondents reported reasonably good level of satisfaction related to the communication and attitude of receptionists and nursing staff. However, as reported by some patients, more training of nurses and receptionists is required to further improve the handling of a wide variety of patients with bio-psycho-social and attitude problems.

The findings of this study related to patient satisfaction are comparable to a similar study at the University of Chicago, where high level of satisfaction by patients enrolled in the refill service was observed (Shapiro et al., 2001).

We did not examine the socio-demographic predictors of dissatisfaction. However, the percentage of dis-satisfied respondents related to the service of refill physician was less than three. Out of the few dis-satisfied respondents, most identified the waiting time, appointment time, comfort of waiting room and the courtesy of receptionists as the reasons for their dissatisfaction.

From this survey, it is also evident that the problems which exist should be appropriately addressed. Perhaps replacing the paper record by an electronic one may make the process more efficient and could minimize the cost and time spent for pulling, transporting and refilling paper charts.

Respondents indicated a strong desire for adequate facilities for elderly and the disabled people, better decoration of waiting room including better furniture, provision of suggestion/OVR (occurrence variance report) box and more educational intervention and handouts in the waiting room. These were the identified areas, which require improvement for greater satisfaction of the patients, using the medication refill clinic service. In the light of the findings of this study, the establishment of medication refill clinics in other Saudi hospitals would be greatly appreciated by patients. However some limitations should be considered when evaluating this study. A relatively small sample size, not interviewing patients directly and limiting the study to only one service/centre may influence negatively towards the generalizability of the results. Only patient's satisfaction is not an appropriate indicator to make a favorable comment on the quality of service of the medication refill clinic. Therefore, there is a need to assess and evaluate other indicators of quality, like error rate and refill physician's documentation in-depth. However, the significantly high level of patient satisfaction related to various areas, which were assessed, justifies a degree of generalizability regarding the benefits to the patient care of the medication refill clinics in the presence of a physician.

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