Original Article

Waiting time in a medical outdoor clinic and its correlation with patient's expectations and level of satisfaction

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Objectives: To determine waiting time for patients attending medical clinic and to identify the expectations of patients and their level of satisfaction with the waiting time.

Methodology: All patients coming to medical clinic were included, whereas those presenting in emergency reception were excluded. Time of reporting to the clinic and the time at which they entered the clinic for consultation were recorded. After exiting from clinic, they were asked to answer questions on a specially designed questionnaire.

Results: A total of 1407 patients with mean age of 50.76±16.51 years were included. Number of patients seen each day was 35.18±10.90. Median waiting time was 68 minutes, which increased with the number of patients seen daily. However, the day of the week did not add statistically significantly to the prediction (p=0.144). Only 118 patients provided feedback, 80.51% of which were re-visitors. Median anticipated waiting time was 60 minutes. Most of them (87.29%) were satisfied with the waiting time and the time given for consultation.

Conclusion: There is a very little difference between actual and anticipated waiting times, which reflects as a high frequency of satisfaction amongst the patients attending this clinic. (Rawal Med J 2014;39:459-463).

Key words: Health care quality, patient satisfaction, outpatient care, access to health care.

INTRODUCTION

Patient satisfaction with visits to hospitals is driven by a combination of factors related to patients themselves as well as the way health care is delivered. All patients visiting health care facilities have some expectations from the service providers. Interaction between expectations and experiences determines the level of patient contentment and can be used as a marker of quality of care being provided. 'Patient- centered' and 'timely' are two of the parameters defining quality of care as proposed by Institute of Medicine, USA.[1] The former implies caring for individual patient preference, needs and values, whereas the latter emphasizes reduction of waiting times and at times, harmful delays.

Patients need to be satisfied so as to gain their trust. Those happy with their hospital visits are more likely to follow their doctors' advice and adhere to treatment plans.[2] Patient satisfaction is thus of paramount importance in improving clinical outcomes and also on gauging the quality of services being provided. The positive impact of minimal waiting times on the level of patient satisfactions has been proven in several studies.[3-6] Long waiting times are a sour point, especially in government hospitals providing free services to the public. Considering hectic schedules and busy lifestyles, patients wish to spend minimal time in hospitals. Health care providers thus need to tailor their services accordingly. This study was done to determine the average waiting time for patients attending medical clinic of this hospital and to assess the role of potential contributory factors such as the day of the week and the number of patients seen each day.

METHODOLOGY

This cross sectional study was carried out at 1 Mountain Medical Battalion, Bagh (Azad Kashmir, Pakistan) from March to April 2014 and included patients coming to clinic. We have a 50 bedded hospital in this small city located 160 km away from the federal capital of Pakistan. It provides free outdoor facilities to a large number of military and local civilian population. The clinic is run from 0830 to 1400 hours five days a week (Monday to Friday) by a single consultant only. Patients reporting directly to medical emergency were excluded from the study.

Data collection started after obtaining approval from the hospital Ethics Committee. A paramedic

manning the reception desk noted the time of reporting to medical clinic for all patients. Their particulars including identification number, name, age and gender were recorded. All patients were seen by the medical specialist at their turn. The time at which the patients entered the clinic was noted by the physician. Throughout the study period, both the physician and the paramedic were blinded to the time the other person had recorded. There were two clocks, one in the waiting area and the other in the clinic, both of which were synchronized every morning before starting the clinic. Once the patients were free from the clinic, they were explained the purpose of the study by a dedicated and an appropriately trained paramedic. Willing patients, who provided an informed verbal consent were then administered a short questionnaire containing both open and close ended questions about their experience of waiting for their turn.

Data was analyzed with STATA Version 12. Quantitative variables with parametric distribution are described as mean± standard deviation, whereas those with nonparametric distribution are described as median and range. One way ANOVA with 95% significance level was used to compare the waiting times across different days of the week. A multiple regression was run to predict median waiting time from number of patients seen daily and the day of the week.

RESULTS

A total of 1407 patients were seen on 40 working days during this study period. These included 725 (51.53%) male and 682 (48.47%) female patients, with mean age of 50.76±16.51 years. The number of patients seen each day was 35.18±10.90 (Fig 1).

**Fig 1. Average number of patients seen on different days of the week.**
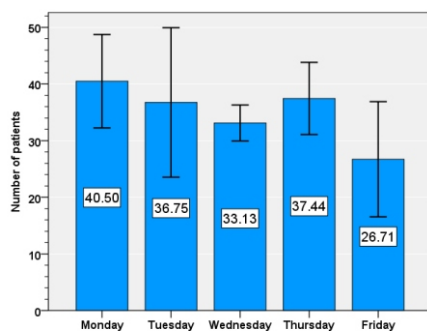
Median actual waiting time during the study period was 68 minutes (range: 0-274 minutes) (Fig 2). Independent samples Kruskal- Wallis test revealed statistically significant difference in distribution of waiting times across different days of the week ($p<0.001$). As shown in Fig 3, both the mean and median waiting times across the study period increased with the number of patients seen each day.

Fig 2. Waiting time on different days of the week.
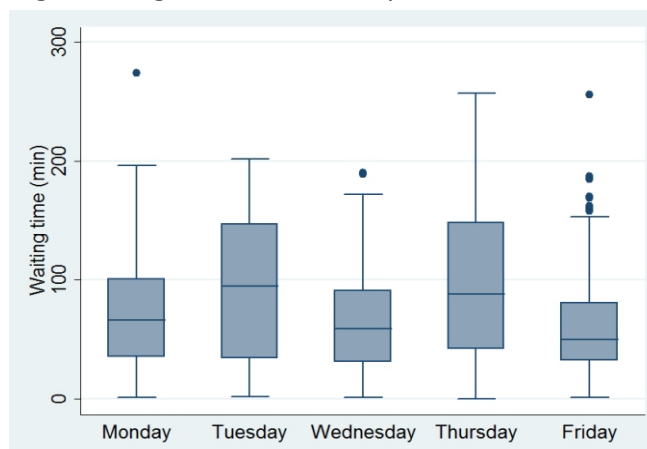
To study the additional effect of the particular day of the week on waiting time, multiple linear regression was carried out. Both the number of patients seen each day and the day of the week statistically significantly predicted the median waiting time, $F_{(2,37)} =17.016$, $p<0.001$, $R^2 = 0.479$. However, the day of the week did not add statistically significantly to the prediction ($p=0.144$) (Fig. 3).

Fig 3. Waiting time increases with the number of daily consultations.
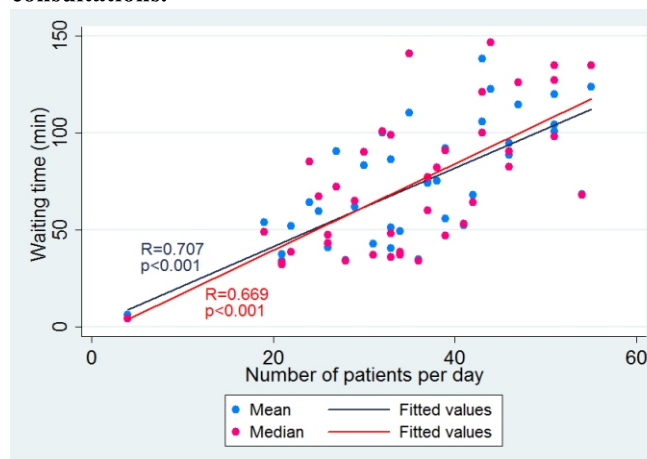
Median waiting time for male patients was 69.50 minutes (Range: 0- 274) and 67.00 minutes (Range: 1- 257) for females. Mann-Whitney U test revealed a statistically similar distribution of waiting times for both genders (p=0.186).

Table 1. Feedback provided by patients.

Parameter		First Visit (n=23)	Re- visit (n=95)	Total (n=118)
Satisfaction with duration of stay in waiting area	Not at all	2 (8.70%)	2 (2.11%)	4 (3.39%)
	Somewhat satisfied	4 (17.39%)	16 (16.84%)	20 (16.95%)
	Fully satisfied	16 (69.57%)	67 (70.53%)	83 (70.34%)
	Did not reply	1 (4.35%)	10 (10.53%)	11 (9.32%)
Reasons for waiting	There were other patients	14 (60.87%)	65 (68.42%)	79 (66.95%)
	Understaffed	1 (4.35%)	3 (3.16%)	4 (3.39%)
	Patients came late to hospital	2 (8.70%)	10 (10.53%)	12 (10.17%)
	Waiting for investigations reports	1 (4.35%)	7 (7.37%)	8 (6.78%)
	Doctor was away	1 (4.35%)	2 (2.11%)	3 (2.54%)
	Patients were not being seen on turn	1 (4.35%)	1 (1.05%)	2 (1.69%)
	No comments	3 (13.04%)	7 (7.37%)	10 (8.47%)
Consultation time	Less than expected	0 (0.00%)	4 (4.21%)	4 (3.39%)
	As expected	13 (56.52%)	46 (48.42%)	59 (50.00%)
	More than expected	7 (30.43%)	37 (38.95%)	44 (37.29%)
	No comments	3 (13.04%)	8 (8.42%)	11 (9.32%)
Suggestions to reduce waiting time	Staff should be increased	9 (39.13%)	24 (25.26)	33 (27.97%)
	Consultation should be by appointment	1 (4.35%)	8 (8.42%)	9 (7.63%)
	Patients should be seen on their turn	6 (26.07%)	16 (16.84%)	22 (18.64%)
	Quicker disposal	0 (0.00%)	6 (6.32%)	6 (5.08%)
	Patients should come earlier	0 (0.00%)	7 (7.37%)	7 (5.93%)
	Not possible	1 (4.35%)	4 (4.21%)	5 (4.24%)
	Change is not required	2 (8.70%)	4 (4.21%)	6 (5.08%)
	No comments	4 (17.39%)	26 (27.37%)	30 (25.42%)

Only 118 patients including 72 (61.02%) male and 46 (38.98%) female patients provided feedback. Their mean age was 50.21±16.37 years and the median education was 5 years (range 0-16 years). 95 (80.51%) had visited the clinic in the past as well. Median anticipated waiting time was 60 minutes for the entire population; this ranged from 10-180 minutes for those visiting for the first time and 0-300 minutes for those re-visiting. Answers given to different questions by these patients are summarized in Table 1.

DISCUSSION

The reputation of any healthcare setup depends on the patients' level of satisfaction, which should thus be monitored regularly.[7] Results of this study have provided a formal insight into the quality of care being delivered at this setup. The median waiting times were only slightly longer than what the patients had anticipated while leaving their homes. Most of them (70%) were thus satisfied with the time they had to wait for their turn. The minor disparity between the patients' expectation and experience can be explained by the fact that the clinic is manned by a single consultant only, who has to take care of all indoor cases as well medical emergencies of the hospital. Another important reason for disparity between anticipated and actual waiting times is the fact that patients are seen on first come basis, rather than following an appointment system. Since most of the clientele comes from the villages adjacent to Bagh valley, the vast majority reports to the clinic early in the morning due to administrative ease. The handling capabilities thus get saturated at this particular time, leading to non-parametric distribution of waiting times.

It is naturally not possible for every patient to get satisfied with time spent waiting for his turn. In a study from a rheumatology clinic in Portugal, waiting time was not acceptable to 2% of the patients.[3] This seems similar to the figures from our study, although another 9% did not respond to this question. In a study from two physical medicine departments in Bangladesh, 65% of patients were satisfied with waiting time at the first visit, but this figure reached nearly 100% on subsequent visits.[8] It remains to be proved whether this dramatic increase in the rates of satisfaction was attributable to dissatisfied patients not following up or otherwise.

In this study, patients reporting for the first time were slightly less satisfied with the waiting times. They had first been seen by the general physicians and might have been asked to get some investigations done, before being seen by medical specialist. It is very much possible that the time they had to wait for their results might have overlapped with the waiting time for their turn. Another reason could be a non-familiarity with the working of the hospital.

Mean waiting times vary from one center to another, even within the same country.[9] Only a handful of studies have recorded the average waiting times for patients at different clinics. A cross sectional survey carried out at family Medicine setup of Agha Khan Hospital, Karachi, Pakistan reported a median waiting time of 30 minutes, against an expectation of 12.69 minutes.[10] A mean waiting time of 74±49 minutes was recorded at two General Practice clinics in North England.[6] Another study at a primary health care setup at Delhi, India reported the average waiting time of 15-30 minutes by 52% patients.[5] In a study from Nigeria, females had to wait longer than their male counterparts.[9]

Time spent on consultation of patients is an important determinant of waiting time for other patients. In the present study, nearly 87% of patients were happy with the time given for consultation. The results are even better than a Nigerian study, where 53% patients felt that the consultation time was appropriate.[11] An attempt made to reduce waiting time could significantly reduce the consultation time, thereby compromising patient satisfaction, In addition, there is not much of a difference between actual and anticipated waiting times for patients at this setup.

A major strength of this study has been the inclusion of all routine cases provided consultation across all days of the week. This has potentially avoided many biases. The author himself had planned the study and was thus aware of data collection being carried out. A quick disposal of patients earlier on during the initial phase of study cannot be ruled out effectively, but the long study duration is expected to have catered for this in the later stages.

A major limitation of this study is a very small number of patients (8.4% of total) who responded to the questionnaire. The information thus gathered might not be truly representative of the entire study population, thereby creating a potential bias. Data regarding the number of patients attended in emergency and the times spent on their assessment and care were not recorded in this study. The additional effect of this on waiting times for routine patients could thus not be assessed directly. Waiting time for the purpose of this study has been calculated as the time between reporting to the clinic and entering the doctor's room. Extra time spent in the hospital has not been recorded for the sake of simplicity of study design. After consultation, patients get some documents made by paramedical staff to get free medicines from the hospital pharmacy. There is a waiting line for this step as well. This might have possibly added to the agonies of the patients, but has not been formally assessed during this study. Due to the particular location of this setup and the associated administrative problems peculiar to the geographic terrain of the region as well as the cultural values of the locals, the results cannot be extrapolated to healthcare setups in other areas of the country. However, they can serve as a strong feedback and thus help improve the quality of patient care being provided further.

CONCLUSION

Average waiting time for patients in this clinic was slightly longer than what they anticipate. However, a vast majority of patients were satisfied with the duration of time they had to wait for their turn as well as the time they are given for consultation. Local policies may thus be formulated to reduce the waiting times further without compromising on the mean consultation times.

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