# DETERMINATION OF WAITING TIME IN PATIENTS VISITING GENERAL MALE AND FEMALE OUTDOOR CLINICS

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## ABSTRACT

***Objective:*** To determine waiting time of patients visiting general male and female outdoor clinics of 01 Mountain Medical Battalion, Bagh.

***Study Design:*** Descriptive cross sectional study.

***Place and Duration of Study:*** The study was carried out at 1 Mountain Medical Battalion Bagh, from Dec 2016 to Feb 2017.

***Material and Methods:*** One hundred and ninety patients selected out of all patients visiting general male and female outdoor clinics during working days were included in this study. Lottery method was used to select ten patients daily in the study period and these were then scrutinized to include those fulfilling the inclusion criteria. Waiting time to get registered, consultation and total waiting time was noted. Data collected was entered and analyzed using Statistical Package for Social Sciences (SPSS) version 17; Independent sample t-test was used to compare means between samples with the level of statistical significance set at 5% ($p<0.05$).

***Results:*** Waiting time to get registered for female patients was 7.24 ± 4.42 minwhile for male patients it was 8.64 ± 5.30 min. Waiting time for consultation ranged from 15.15 ± 10.50 min for female and 16.25 ± 9.89 min for male patients. Total waiting time was 22.04 ± 11.75 min for female and 24.93 ± 12.06 min for male patients. Out of all patients, 83.33% females and 87.5% male patients were seen within 30 minutes after being registered.

***Conclusion:*** Majority of patients visiting general outdoor clinics were seen within 30 minutes of their registration which is close to the international standards. There is need to further improve waiting time of patients to increase patient satisfaction. The difference of waiting time was insignificant between male and female patients.

**Keywords:** Outdoor clinics, Patients, Waiting time.



## INTRODUCTION

Waiting time refers to the time a patient spends in the clinic before being seen by one of the clinic medical staff[1]. It is an important indicator for the quality of service offered by the hospital. It also reflects how efficient health care service is utilized. Long waiting time causes unnecessary stress to patients. It is one of the tangible parameter that patient and quality assurance agencies use to assess health care facility[2].

Substantial time is spent by the patients waiting for their turn for consultation in out-patient clinics. It is directly proportional to the patient's satisfaction with the health care facility[3]. In order to improve patient satisfaction; waiting time has to be managed efficiently. Patients may be made busy and comfortable in the waiting area by variety of ways. Television, newspaper, periodicals, drinking water, heating and cooling facilities are few of them.

According to the Institute of Medicine (IOM) recommendations, at least 90% of patients should be seen within 30 min of their scheduled appointment time[4]. However in most developing countries, waiting times are as long as 2-4 hours[5,6]. It is one of the reasons of dissatisfaction with the health-care facility[7].

This duration varies from hospital to hospital and from country to country. Both developing and developed countries face the problem of long waiting time. In the United States its 60 min in Atlanta and 188 min in Michigan[8,9]. Nigerian Hospitals has waiting time of 173 min in

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Benin and 73 min in University College Hospital Ibadan[10].

There is lack of studies on this important aspect of health care from Pakistan however the situation is not better than other countries. A study conducted at Karachi showed that less than ten percent of patients were seen within thirty minutes of registration at the hospital[11]. Another study from Peshawar showed that only 35% of patients were seen in less than half hour of waiting time[12].

Study of this nature is critical for the appreciation of patient care and data generated can be used by hospital administrators to improve deficiencies in human resource, infrastructure and other internal procedures to help improve patient care.

The aim of this study was to determine waiting time of patients visiting general male and female outdoor clinics of 01 Mountain Medical Battalion, Bagh.

## MATERIAL AND METHODS

This descriptive study was carried out at 1 Mountain Medical Battalion, Bagh from Dec 15th 2016 to Feb 15th 2017. Daily ten patients (both male and female), visiting the outdoor clinic on working days from 0800 hours to 1400 hours were picked up by lottery method from the tokens issued to all patients at the time of their entry into the hospital during the study periodby simple random sampling technique. These token numbers were then followed to trace the time of entry into the hospital, time of registration and time of consultation. The time taken by the patients from entry into the hospital till registration was noted as "waiting time to get registered", time from registration to first encounter with medical officer was noted as "waiting time for consultation" and time from entry to hospital till consultation was noted as "total waiting time". Patients directly reporting to the emergency department or specialist block were excluded from the study. A total 190 patients fulfilling the criteria were included in the study. (Sample size was calculated using the formula $n=Z^2pq/d^2$ where n=sample size, Z=standard normal deviate at 95% confidence level=1.96, *p*=prevalence of the factor under study, 84% (0.84) from a previous study, q= complementary factor for q=1– p, N=average number of targeted population (i.e. average number of patients attending outdoor clinic daily)=150, nf=minimum required sample size (for population less than 10,000), d=precision/ tolerable margin of error=6% (0.06).

Requisite permission from the hospital ethical review committee was obtained for the study. Control of bias and confounding factors were dealt with by strictly following the exclusion criteria. Data were entered into SPSS version 17. Descriptive statistics was used to calculate frequency and percentage for gender and mean and standard deviation for the waiting time. Independent sample t-test was applied at 95% confidence interval to compare mean between the two groups. The *p*-value ≤0.05 was considered as statistically significant. Results were tabulated

## RESULTS

A total of 190 patients were included in this study. Out of 190 patients included in this study, 102 (53.68%) were female while 88 (46.31%) were male. Age ranged between 12 and 62 years with mean age 41.62 years. Time to get registered was 8.64 ± 5.30 min for male patients while 7.24 ± 4.42 min for female patients. Waiting time for consultation was 16.25 ± 9.89 min and 15.14 ± 10.50 min for male and female patients respectively. Total waiting time was 26.93 ± 12.06 for male and 22.04 ± 11.76 for female patients (table-I). The difference in parameters of waiting time was statistically insignificant between male and female patients. Majority of the patients (83.33) male and (87.5) female were seen within 30 minutes of getting registered (table-II).

## DISCUSSION

Out of 190 patients included in this study, 102 (53.68%) were female while 88 (46.31)were male. Age ranged between 12 and 62 years with mean age 41.62 years. All the patients were seen

within 40 minutes after their registration at themale or female outpatient clinics.

Waiting time to get registered was short in female patients than in males (7.24 ± 4.15 min for female and 8.63 ± 5.30 min for male). Less time required may be due to the fact that sign board along with helping staff is appointed on the way from the entrance to the registration counter. At registration counter, there is sufficient clerical staff to welcome the patient and get them registered. Furthermore, less time taken by the female patients may be because femalesaremore efficient in providing demographic data required for registration like name, age etc. All these factors help to reduce waiting time to get registered and thus reduce total time required by the patient in the hospital ultimately increasing patient satisfaction on the system[13,14].

Majority of patients (83.33% females and 87.5% male) were seen within 30 minutes after their registration (table-II). Although these patients were not given prior appointments before coming to clinics as these were seen in general outdoor clinics however considering the IOM recommendations of seeing 90% of patients with appointments within 30 minutes, we were near to achieving this goal[4]. It will be interesting to see the results if patients were given prior appointments, as this ensures pre planned flow of patients. However it was not the domain of the present study[15]. It is pertinent to note that the parameters of various waiting time (waiting time to get registered, waiting time for consultation and total waiting time) was statistically insignificant between male and female patients, however this was not the main objective of our study.

Waiting time in our study was much less than similar studies conducted by Memon *et al* at Karachi and and Shakila *et al* at Peshawar Pakistan[11,12]. International studies has shown waiting time period ranging from 60 to 188 minutes in USA and Africa[8-10]. By comparison our hospital had total waiting time of 22.05 ± 11.76 min for female outdoor clinic and 24.93 ± 12.06 min for male outdoor clinic.

**Table-I: Data of different variables of female and male outdoor clinics n=190.**

| Variable | Female (n=102) | | Male (n=88) | | *p*-value |
|---|---|---|---|---|---|
| | Range | Mean ± SD | Range | Mean ± SD | |
| Waiting time to get Registered | 2.0-30 min | 7.24 ± 4.42 min | 2.0-24 min | 8.64 ± 5.30 min | 0.049 |
| Waiting time for consultation | 1-40 min | 15.15 ± 10.50 min | 1-40 min | 16.25 ± 9.89 min | 0.458 |
| Total waiting time | 6-70 min | 22.04 ± 11.76 min | 4-64 min | 24.93 ± 12.06 min | 0.097 |

**Table-II: Breakdown of "Waiting time for consultation" into subgroups n=190.**

| Variable | Female | | Male | |
|---|---|---|---|---|
| Time (Min) | Frequency | Percentage (%) | Frequency | Percentage (%) |
| 1-10 | 36 | 35.29 | 34 | 38.63 |
| 11-20 | 31 | 30.39 | 37 | 42.05 |
| 21-30 | 18 | 17.65 | 06 | 6.82 |
| 31-40 | 17 | 16.67 | 11 | 12.5 |

The main limitation of this study was the number of participants. More sample size is needed to study the difference in parameters comprehensively. However, the sample size suited the objectives of this study with regard to its variables. Another limitation is that this was a single center study and like all single center studies, the results cannot be widely generalized.

## CONCLUSION

Although waiting time of this health care facility was less than most of the local and

international health care facilities, however we are near to achieving the standards set by the IOM. The difference in waiting time between male and female patients was statistically insignificant. Further studies on larger sample size and in bigger hospitals are needed to analyze the problem comprehensively. As waiting time is one of the parameters on which patients and international agencies judge the health care facility, measures need to be taken to reduce waiting time.

## CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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