

## Patient's Waiting Time at Emergency Department in a Selected Tertiary Level Hospital

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### Abstract

**Introduction:** Patient satisfaction is one of the principal aims of the healthcare delivery system. Waiting time is an important parameter for assessment of hospital management and influences patient satisfaction. Patient waiting time reflects the effectiveness of treatment and management of the hospital.

**Objective:** To find out the waiting time of patient attending the Emergency Department in a selected tertiary level hospital and to identify the factors related to waiting time, socio-demographic characteristics of the patient and patients satisfaction status about waiting time.

**Materials and Methods:** This descriptive cross-sectional study was conducted at Emergency Department of Dhaka Medical College Hospital from March 2011 to June 2011. A total of 115 cases were selected through systemic random sampling. Self-administered structured questionnaire was used for data collection.

**Results:** Mean waiting time was 10.17±5.17 minutes. Patients waiting time was significantly ( $p<0.001$ ) associated with type of emergency. Out of 115 respondents, 30.4% received treatment within 5 minutes and only 17.4% waited more than 15 minutes. Patients waited more than 15 minutes at obstetric, medical, surgical and gynaecological emergency were 4.2%, 8.8%, 25.0% and 35.3% respectively. Most (72.1%) of the patients were satisfied with waiting time and only 27.8% expressed their dissatisfaction.

**Conclusion:** In this study patients' waiting time was associated with type of emergency and most of the patients were satisfied with the waiting time at Emergency Department.

**Key-words:** Patient waiting time, Emergency department, Tertiary level hospital.

### Introduction

The effectiveness of the hospital relates to the provision of healthcare that it provides. To measure the success of the service provided by the hospital various tools are available and patient waiting time survey is one of the most efficient tools among them. Measurement of patients waiting time with services provided by the concerned hospital is important from two angles. Firstly, the patient constitutes the hospitals' direct clientele. Patient satisfaction is an important objective of a doctor along with treating the disease. Secondly, patient waiting time provides an indirect measure of another dimension as well. It is a well-known fact that patient waiting time is usually correlated with the effectiveness of treatment. In the present scenario of information overflow and cyber technology, the rate of conflicts and altercations between doctors and patients, staff and patients has increased. One of the reasons for this altercation is the imbalance between expectations of care and the provision of care to patients. Hence, it becomes the responsibility of hospital administrators to devise methods of satisfying its client<sup>1</sup>. To satisfy patient is becoming tougher as these consumers have become conscious of their rights, knowledgeable about their disease and demanding for their needs.

At present, the world health policy is facing some important challenges, gender sensitivity, food inequity and accessibility to health service. In this computerized world, human uses the time as a device. Time is an important factor in all aspect. Everybody wants a smooth and comfortable life. But frequently it is disturbed by physical as well as psychological trauma which needs help from doctors in clinic and hospital. Most of the time, it becomes emergency which needs quick attention and action by the healthcare professionals. But the healthcare system has not yet developed in such a way due to some constraints like shortage of trained emergency medical officer, nurses, medical assistants, ward boys and sweepers, O<sub>2</sub> cylinder, sucker machine, autoclaves, nebulizer machine, gloves, mini OT, trolley etc. So patients as well as the attendants have to wait.

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Time is the essence and waiting is a curse for the patient. Client satisfaction is the main pillar of any service delivery, so patient satisfaction is one of the most important factors for successful health service delivery. Majority of the population in this country are moderately poor. They are engaged in different activities for their livelihood. When patients attend the hospital for treatment, they lose their working time which ultimately causes an economic loss of attending patient, so increase patient waiting time causes a negative impact on patients' satisfaction. It is observed from previous studies that the patient's waiting time is an important parameter for the patient's satisfaction. Developed countries have been trying to minimize their patient's waiting time<sup>2</sup>. From various studies, it is revealed that there is a significant difference between the patient's and physician's view of the patient's waiting time in out of patient care and perspective to improve it<sup>3-6</sup>.

Various studies have been carried out in hospitals checking various parameters of patient satisfaction. Here it preferred to find the waiting time in the emergency department of Dhaka Medical College Hospital. The emergency department of Dhaka Medical College Hospital works round the clock in a week. The physical structure of the emergency department is such that the structure follows function. The area has a main entrance close to the road with a car parking area. Near the entrance is the reception counters for males and females. The doctor's consultation rooms are associated with sub-waiting areas adequate enough to accommodate the patients and attendants waiting for a consultation. The circulation area usually remains flooded with patients and attendants. All the facilities of a modern emergency department are available here.

Considering the above-mentioned points, the need for a survey on waiting time has become imperative in the present context. This study was carried out to find out the waiting time of different type of patients in the emergency department of Dhaka Medical College Hospital.

**Materials and Methods**

This descriptive cross-sectional study was carried out in the Emergency Department of Dhaka Medical College Hospital from March to June 2011. A total of 115 cases were selected through Systemic Random Sampling technique. A self-administered structured questionnaire was used keeping a focus on organizational supportive activities and management of emergency patients. The interview was conducted after getting treatment of the attending patients. If the patient was seriously ill then patient's attendant were interviewed.

Confidentiality was duly ensured to all participants and informed consent was obtained. Institutional permission from the appropriate authority was obtained before starting the study. After collection data was scrutinized, edited and verified for its consistency. Data were processed and analyzed by computer software SPSS version 18.0 and expressed in frequency, percentage and mean±SD which one applicable and  $\chi^2$  test was done to see the association.

**Results**

Patients' socio-demographic information presented in Table-I. Mean age of the patients was 31.43±12.72 years and ranged from 5 to 60 years. Out of 115 respondents, maximum 30.4% were in 20-29 years age group and 56.5% were female. Most of the respondents (64.3%) were illiterate or primary level educated, maximum (28.7%) were housewives and only (20.4%) patients monthly family income was more than 15,000 taka.

**Table-I: Socio-demographic characteristics of respondents (n=115)**

	Characteristics	Frequency	%
<b>Age Group In years</b>	<10	9	7.8
	10-19	13	11.3
	20-29	40	34.8
	30-39	28	24.3
	40-49	14	12.2
<b>Sex of the patient</b>	>50	11	9.6
	Male	50	43.5
<b>Educational status</b>	Female	65	56.5
	Illiterate	32	27.8
	Primary	42	36.5
	Secondary	9	7.8
	Higher Secondary	20	17.4
<b>Occupation</b>	Graduation and above	12	10.4
	Student	12	10.4
	Service	20	17.4
	Business	13	11.3
	Housewife	33	28.7
	Day Labourer	10	8.7
	Cultivator	9	7.8
<b>Monthly Family Income in BDT</b>	Others	18	15.7
	<5000	8	7.0
	5000-10000	43	37.4
	10001-15000	40	34.8
	>15000	24	20.4

In this study total 115 patients' mean waiting time was 10.17± 5.17 minutes. At surgical emergency among the 40 patients, 14 (35%) received treatment within 5 minutes and only 10(25%) waited more than 15 minutes. At medical emergency among the 34 patients, 22(64.6%) received treatment within 10 minutes and only 3(8.8%) waited more than 15 minutes. At obstetric emergency among the 24 patients, 23(95.8%) received treatment within 10 minutes and only one patient waited more than 15 minutes. At gynaecological emergency among the 17 patients 4(23.5%) received treatment within 5 minutes and 6 (35.3%) patient waited more than 15 minutes (Table-II).

**Table-II:** Distribution of patients by waiting time and type of emergency (n=115)

Type of Emergency	Waiting Time in Minutes				Total	Statistics
	< 5	5- 10	11- 15	> 15		
<b>Surgical Emergency</b>	14 (35.0%)	6 (15.0%)	10 (25.0%)	10 (25.0%)	40 (34.8%)	$\chi^2 = 30.01$ df = 9 p < 0.001
<b>Medical Emergency</b>	9 (26.4%)	13 (38.2%)	9 (26.4%)	3 (8.8%)	34 (29.5%)	
<b>Obstetric Emergency</b>	8 (33.3%)	15 (62.5%)	0 (0.0%)	1 (4.2%)	24 (20.9%)	
<b>Gynaecological Emergency</b>	4 (23.5%)	0 (0.0%)	7 (41.2%)	6 (35.3%)	17 (14.8%)	
<b>Total</b>	<b>35 (30.4%)</b>	<b>34 (29.6%)</b>	<b>26 (22.6%)</b>	<b>20 (17.4%)</b>	<b>115 (100%)</b>	

Most of the patients 83(72.1%) found satisfied with waiting time at emergency and only 27.8% expressed their dissatisfaction about waiting time (Table-III).

**Table-III:** Distribution of patients by their opinion about waiting time

Opinion	Frequency	Percentage
Highly satisfied	2	1.7
Satisfied	81	70.4
Dissatisfied	32	27.8
Total	115	100

## Discussion

In this study mean age of the patients was 31.43±12.72 years and ranged from 5 to 60 years. Out of 115 respondents, maximum 30.4% were in 20-29 years age group and majority was female. These findings were consistent with the study of Rahman MM<sup>7,8</sup>. About (20.4%) patients' monthly family income was more than 15,000 taka. This finding was consistent with similar studies<sup>9,10</sup>. Most (64.3%) of the patients were illiterate or primary level educated, this findings conform to similar studies<sup>11,12</sup>.

In this study patients' waiting time was significantly associated with the type of emergency. At Gynaecological emergency maximum 35.3% patients waited more than 15 minutes in contrary only 4.2% patients waited more than 15 minutes at obstetric emergency. This difference might be due to extra cautiousness about the pregnant mother and upcoming baby by the attendance as well as by attending medical personnel. This finding was consistent with similar studies<sup>9,13</sup>. At medical, emergency only 8.8% patients waited more than 15 minutes while at surgical emergency 25.0% waited more than 15 minutes. This finding conform to other similar studies<sup>10,14</sup>. In this study 72.1% patients were satisfied with waiting time at emergency but only 27.9% expressed their dissatisfaction. A study conducted by Soleimanpour H<sup>14</sup> on emergency department patient satisfaction survey in Imam Reza Hospital, Tabriz, Iran and it was revealed that overall satisfaction was 63.2% and 13.6% were dissatisfied.

## Conclusion

It is very difficult to draw generalize conclusion from the present study with a limited number of respondent and the

study was conducted at the Emergency Department of DMCH, the most trusted and busy hospital of the country, so it does not reflect the typical situation of entire Bangladesh. The Mean waiting time was 10.17±5.17 minutes and most of the patients (82.6%) received treatment within 15 minutes. Most of the respondents (72.1%) were satisfied with the waiting time at emergency.

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