Bahrain Medical Bulletin, Vol. 35, No. 3, September 2013

Why Do Patients with Minor Medical Problems Seek Medical Care from the Emergency Department?

Eman Sharaf, MD, ABFM* Ameera Barakat, MD, ABFM**

Background: Patients with minor medical problems sometimes go to the emergency department seeking care. This could overload the emergency department (ED) and lengthen patient's waiting time.

Objective: The aim of the study is to identify the reasons that make patients with minor complaints seek medical care from the ED.

Design: Cross-sectional study.

Setting: Accident and Emergency department, Salmaniya Medical Complex.

Method: Four hundred eighty-five patients with minor ailments were interviewed and questionnaires were filled in February 2012. The questionnaire identified mainly the medical problem for which the patient sought advice from the emergency department (ED) and the source of referral. Patients were divided into two main categories; patients who attended ED but who would have gone to their family physicians and those who attended ED but who would have not gone to their family physicians. The cause for attending the ED and not the primary health centers was also identified.

Result: Four hundred eighty-five patients were interviewed. Three hundred twenty-nine (67.3%) were males. The majority of the patients were adults. Three hundred twenty-five (67%) patients were self-referred while one hundred and forty-four (29.7%) were referred from the health center.

Conclusion: This study revealed that the majority of patients were self-referred. The most common minor medical problems encountered in the emergency department were musculoskeletal and ENT complaints. There was a significant difference in the expected reasonable time to wait between those not willing to go to their health centers and those willing to go.

Bahrain Med Bull 2013; 35(3):

Misuse of ED department is a problem in various countries[1]. Patients with minor ailments

* Clinical Fellowship Emergency
**Master of Health Policy and Population Studies
Ministry of Health
Kingdom of Bahrain
Email: esharaf@health.gov.bh

unnecessarily seek medical care from the ED, which result in overloading the ED[2]. This would result in increasing the waiting time for critical patients and leads to lower standard of medical care, medical error and even loss of life[3]. Consequently this lowers the level of satisfaction among patients and staff and increases the hospital services cost[4].

Patients' perceptions of the role of the ED have to be changed[4]. It is crucial to know why patients with minor medical problems seek medical care from the ED. In order to find solutions for this problem, the reasons which made them go to the ED have to be identified.

The majority of patients do not try to consult their GPs before deciding to go to the ED although most of them can be managed by GP[4]. Elderly patients with minor medical problems seek medical help from ED because they expect timely and specialized care; usually they have misconception that the GP is unavailable[5]. This suggests that community based acute care centers have to be developed to provide the specific needs of this age group[5].

ED has been a popular place for patients with minor ailments and studies have shown that two-thirds could have been managed by GPs[6]. Although many studies revealed that lower socioeconomic class patients misuse the ED, some recent studies showed the opposite[6]. The reasons of the misuse of ED are complex and could indicate problems of GP care delivery[6].

There is an urgent need for a better communication between primary and secondary care, and between public and private sectors to facilitate patients' referral[6]. Interim clinical services provided to non-urgent patients by nursing practitioners or by GPs working in ED could also facilitate patients' referral to primary care[6].

Although 40% of minor cases believed that their problem could have been managed in primary care, as many as 75% would still go to the hospital in the future because most minor cases use the ED as a service of immediate primary care[7].

To our knowledge there is no published research about the misuse of the ED in Bahrain.

The aim of this study is to identify the reasons that make patients with minor complaints seek medical care from the Accident and Emergency (ED).

METHOD

Patients with minor medical problems were interviewed and questionnaires were filled. The interviews were conducted during different shifts and included working days as well as weekends. Patients were interviewed after the triage and the registration process in the ED. The total sample was 485 patients which were traced during three-week period.

A structured questionnaire was filled by the interviewer. The following items were collected for each patient:

- Personal characteristics (age, sex, nationality, marital status, educational level and job)

- Medical problem for which the patient sought the advice from ED and source of referral. Patients were divided into two main categories: 1) patients who attended ED but who would have gone to their family physicians and 2) patients who attended ED but who would have not gone to their family physician.
- The cause for attending the ED and not the primary health centers was identified. The questionnaire consisted of 16 items with yes/no answer or multiple-choices. The answers of two questions related to the patients' perceived urgency of their medical problem and their expectation of the waiting time in the ED are in the form of 5 points scale.

A pilot study was performed to evaluate the data collection tool. Minor changes in the phrasing of some of the questions were made accordingly. SPSS version 16 was used for analysis.

The reasonable time for patients to wait before being evaluated by a physician in the ED is grouped into five options: Immediately, 1 hour or less, 2 hours or less, 4 hours or less and more than 4 hours.

RESULT

Four hundred eighty-five patients were interviewed. Three hundred twenty-nine were males (67.8%). The majority of the patients were adults. Two hundred thirty-eight (49.1%) were non-professional. Two hundred eighty-eight (59.4%) were Bahrainis, see table 1. The majority of patients were living in the central governorate, belonging mainly to Isa town health center, Budaiya health center and Jidhafs health center, see table 2.

Table 1: Personal Characteristics

		Number (Percentage)
Age	<12	67 (13.8)
	12-25	109 (22.5)
	26-45	229 (47.2)
	46-65	65 (13.4)
	>65	15 (3.1)
	Total	485 (100)
Sex	Male	329 (67.8)
	Female	156 (32.2)
	Total	485 (100)
Job	Unemployed	86 (17.7)
	Non-professional	238 (49.1)
	Professional	29 (6)
	Retired	8 (1.6)
	Student	86 (17.7)
	Child	38 (7.8)
	Total	485 (100)
Educational Level	Illiterate	36 (7.4)
	Primary	131 (27)
	Intermediate	72 (14.8)
	Secondary	126 (20)
	University	82 (16.9)
	Not applicable	38 (7.8)

	Total	485 (100)
Nationality	Bahraini	288 (59.4)
	Non Bahraini	197 (40.6)
	Total	485 (100)
Marital Status	Married	264 (54.4)
	Single	200 (41.2)
	Divorce	15 (3.1)
	Widow	6 (1.2)
	Total	485 (100)

Table 2: Study Sample Distribution

		Number (Percentage)
Place of Residence	Muharraq	58 (12)
	Manama	132 (27.2)
	Central	188 (38.8)
	Sitra	56 (11.5)
	Hamad Town	51 (10.5)
	Total	485 (100)
Health Centre	Muharraq	25 (5.2)
	Al-Dair	7 (1.4)
	Shaikh Salman	6 (1.2)
	NBB-Arad	20 (4.1)
	Al-Razi	33 (6.8)
	Subah Al-Salem	39 (8)
	Ibn Sina	17 (3.5)
	Al-Hoora	13 (2.7)
	Aali	12 (2.5)
	Hamad Town	25 (5.2)
	Bilad Al-Qadeem	15 (3.1)
	Jidhafs	43 (8.9)
	Budayia	44 (9.1)
	MJK	12 (2.5)
	Al-Zallaq	2 (0.4)
	Al-Kuwait	11 (2.3)
	Jaw and Askar	0 (0)
	Sitra	26 (5.4)
	Ahmed Kanoo	10 (2.1)
	East Rifaa	15 (3.1)
	Isa Town	65 (13.4)
	Al-Naim	39 (8)
	Hamad Kanoo	6 (1.2)
	Total	485 (100)

Three hundred twenty-five patients (67%) were self-referred while one hundred forty-four (29.7%) were referred from the health center, see table 3. Out of three hundred twenty-five self-referred patients, one hundred sixty-six (51.2%) stated that they would not have gone to the health center. Seventy-seven patients (23.8%) stated that they would have gone to the health center and eighty-one (25%) stated they ‘do not know’, see table 3.

The most common minor medical problem encountered in the accident and emergency department were 191 (39.4%) patients with musculoskeletal problems and 101 (20.8%) patients had ENT related complaints, see table 3. Three hundred and fourteen patients (64.7%) had their

medical problem more than twenty four hours before presenting to the emergency department, see table 3.

Table 3: Reason and Source of Referral

		Number (Percentage)
Source of referral	Self referral	325 (67)
	Health center	144 (29.7)
	Others	16 (3.3)
	Total	485 (100)
If self-referral would you have gone to the health center instead of coming to the ED?	Yes	77 (23.8)
	No	166 (51.2)
	Do not know	81 (25)
	Total	324 (100)
What is the health problem that brought you to ED today?	CNS	6 (1.2)
	Ophthalmology	25 (5.2)
	ENT	101 (20.8)
	GI	72 (14.8)
	Cardiovascular	13 (2.7)
	Endocrine	7 (1.4)
	Dermatology	23 (4.7)
	MSK	191 (39.4)
	Breast and axilla	2 (0.4)
	Dental	7 (1.4)
	GU	20 (4.1)
	Hematology	18 (3.7)
	Total	485 (100)
How long you had the symptoms before arrival at the ED?	< 3 hours	59 (12.2)
	3 - 6 hours	27 (5.6)
	6 - 24 hours	85 (17.5)
	>24 hours	314 (64.7)
	Total	485 (100)

Participants also were asked to state their reasons for presenting to the emergency department. One hundred and forty-eight (30.5%) patients reasoned the immediate access to the specialist. One hundred and forty-three (29.5%) patients thought they would get better care in the emergency department. One hundred and twenty-one (24.9%) patients were referred from the health center, see table 4.

Table 4: Why Did You Choose to Go to ED and Not to HC?

Reasons	**Yes**	**No**	**Total**
	Number (Percentage)		
I need immediate X-rays or other imaging	47 (9.7)	438 (90.3)	
I need immediate access to a specialist	148 (30.5)	337 (69.5)	
I can get better care in the emergency department	143 (29.5)	342 (70.5)	485 (100)
I was referred from HC	121 (24.9)	364 (75.1)	
I did not get an appointment in the HC	5 (1)	480 (99)	
Other	45 (9.3)	440 (90.7)	

One hundred and eighty-seven (38.6%) patients thought that their condition is an emergency and 5 patients stated that they did not get an appointment in the health center, see table 4.

Among the patients who were willing to go to the health center instead of the ED, thirty-three (42.9%) perceived that their medical condition is of moderate urgency and forty (51.9%) patients were expecting to have a waiting time of less than one hour before being seen by the doctor in the emergency department, see table 5.

Among the patients who were not willing to go to the health center, seventy-two (43.4%) thought that their medical condition is highly urgent and eighty-nine (53.6%) patients were expecting to be seen immediately by the doctor in the emergency department, see table 5.

Table 5: If Self-Referral, Would You Have Gone to the HC Instead of Coming to the ED?

		Yes	No	P-value
		Number (Percentage)		
How would you rate the urgency of your visit?	Low urgent	20 (26)	22 (13.3)	0.032
	Moderate urgent	33 (42.9)	72 (43.4)	
	High urgent	24 (31.2)	72 (43.4)	
What do you think is a reasonable amount of time to wait until a physician assesses your medical problem?	Immediately	25 (32.5)	89 (53.6)	0.000
	Within one hour	40 (51.9)	71 (42.8)	
	Within 2-4 hours	12 (15.6)	6 (3.6)	

There was a significant difference in the perceived urgency of patients' medical conditions between those not willing to go to their health centers and those willing to go (p-value=0.032), see table 5.

There was a significant difference in the expected time to wait until a physician assesses the patients' medical problems between those not willing to go to their health centers and those willing to go (p-value=0.000), see table 5.

DISCUSSION

Continuity of care is integral to family medicine. Maintaining a continuing relationship with a regular physician is associated with an increased likelihood of receiving preventive care, keeping follow-up appointments, compliance with prescribed medications, shorter hospitalizations, lower health care costs and more effective health promotion and disease prevention[4].

The flow of patients before arrival at the emergency department determines the workload of the department[5]. Therefore, if patients are unable to see their family physicians and choose to seek medical care from the ED, the workload at the ED will increase. Therefore, the situation should be examined thoroughly to determine the factors which influence the flow of patients in the ED.

In Canada, improving entry to medical care and reducing waiting time is important. Crowdedness happens when the demand for medical care in an ED exceeds its ability to provide quality care within medically acceptable time frame[3]. To reduce crowdedness and improve care, patients are assigned triage levels based on their clinical condition.

In Bahrain, 30% of patients visiting the ED at Salmaniya Medical Complex have minor complaints and can be treated in the health centers. A similar study showed that 23% could have been treated in general practice[6].

In a study by Marinos et al found that almost one in three could have been managed by GP[6]. Another study found that cases presented with non-urgent conditions to ED constituted 91%[7]. A similar study found that 59.4% were categorized as primary care patients[8].

Some GPs maintain an interest in urgent and emergency medicine whilst others do not; therefore, even if the cases are within their clinical expertise, they will refer some non-urgent cases to the ED despite their ability to handle such cases[9].

In this study, the majority of the patients (67%) were self-referred. One-third of patients were referred from the primary care. In a similar study, 34% were referred by their family physicians[10].

In this study, 51.2% of the self-referred patients stated that they would not have gone to the health center, 23.8% stated that they would have gone to the health center. In a similar study, 57.4% of the patients were willing to go to their family physicians[10].

In a study, 7% of the non-urgent ED population was willing to seek medical care from their family physicians in the future[11].

In this study, the most common minor medical problem encountered in the accident and emergency department were musculoskeletal problems (39.4%) and ENT related complaints (20.8%).

In a similar study, 59.4% of the patients in ED had primary care or non-urgent problems. Twenty-one had ENT related problems followed by miscellaneous complaints like mild conjunctivitis, allergic rash, refill medications and minor burns (12.7%)[2]. In another study, non-urgent conditions accounted for 91% of the cases and the most common problems presented were related to the upper respiratory tract[8].

In this study, 64.7% had their medical problem more than twenty-four hours before presenting to the ED which reflects that the majority had non-urgent medical problems.

In our study, the most common reason for choosing to go to ED was the desire to have an immediate access to the specialist, (30.5%) followed by getting better care in ED department (29.5%).

In a study, 55% of the patients attending ED were having non-urgent medical conditions which could be treated either in general practice or in minor injury unit or self care. The reason for attending ED mentioned most frequently by the patients was a belief that radiography is necessary[11]. This is not the situation in our study since radiography is available in the health centers.

A study showed 37.6% of patients thought they would get specialist consultation, 31.2% would get diagnostic imaging and 17% would get better care in the ED[10].

A study from San Francisco General Hospital showed that 45% of patients cited access barriers to primary care as their reason for using ED[12]. In this study, 38.6% thought that their condition is an emergency.

Another study in southern Ontario showed that the reasons for not seeing their regular family physicians: the physicians not available (20%), long waiting time for appointments (9%), too far away (16%) and need specialized care (16%)[13-15].

Long waiting times in Athens' emergency departments are common. Some surveys indicate a preference among patients for hospital attendance, the main reason they attributed to is GP inaccessibility[6].

In Canada study, there was no difference in the perceived urgency of patients' medical conditions between those willing to go to their family physicians (p=0.46) and there was no difference between the groups in term of the time patients willing to wait before being evaluated (p=0.25)[12]. This could be explained by the finding that the patients went to the ED department because their family physicians were unavailable, unlike in our study where the majority of the patients considered themselves as having urgent medical conditions[10].

In Canada, a study found no difference in the perceived urgency of patients' medical conditions between those willing to go to their family physicians (p=0.46) and those not willing. There was no difference between the two groups of patients in term of the time they are willing to wait before being evaluated by a physician (p=0.25)[12]. This could be explained by the finding that the patients went to the ED because their family physicians were unavailable, unlike in our study where the majority of the patients considered themselves as having urgent medical conditions[10].

Possible solutions to the unnecessary visits to the ED are to refer minor cases back to the health centers. This solution carries the risk of missing a serious case among the referred back patients.

CONCLUSION

This study revealed that the majority of patients were self-referred and that they would not have gone to the health centre. The most common minor medical problem encountered in the accident and emergency department were musculoskeletal problems and ear, nose and throat related complaints.

We recommend educating the public about the medical conditions, which are supposed to be treated in the ED and the services that can be provided through the family physicians. Furthermore, it is crucial to educate patients about the consequences of the inappropriate use of the ED and about the risk of overcrowding it.

Author contribution: All authors share equal effort contribution towards (1) substantial contributions to conception and design, acquisition, analysis and interpretation of data; (2) drafting the article and revising it critically for important intellectual content; and (3) final approval of the manuscript version to be published. Yes.

Potential conflicts of interest: None.

Competing interest: None. **Sponsorship:** None.

Submission date: 10 April 2013. **Acceptance date**: 22 June 2013.

Ethical approval: Approved by the primary health care research committee and SMC administration.

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