INAPPROPRIATE USE OF EMERGENCY DEPARTMENT AT PRINCE ZEID BEN AL-HUSSEIN HOSPITAL

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ABSTRACT

Objective: To define size and reasons of non-emergency visits to the Emergency Department at Prince Zeid Ben Al-Hussein Hospital.

Methods: This study was carried out at Prince Zeid Ben Al-Hussein Hospital during the period between February and May 2004. A total number of 3200 selected patients attending the Emergency Department were inquired about the cause of their presentation. Other information included the patient's age, gender, and main complaints.

Results: About 83.1% of cases were not considered as urgent cases and could be managed in outpatient clinics or primary health care centers. The most common cause for attendance to the Emergency Department was respiratory complaints (51.9%), followed by gastrointestinal problems (18.5%). Trauma cases constituted 4.9% of the visits, and 5.7% of these patients were admitted to hospital.

Conclusion: It is important to emphasize the role of primary health care centers in managing the non-urgent cases which constitute the bulk of emergency department patients consuming its resources and affecting the management of urgent cases.

Key words: Emergency department, Primary health care centers, Urgent, Inappropriate, General practitioners.

JRMS Dec 2005; 12 (2): 10-13

Introduction

A subgroup of patients make frequent use of hospital Emergency Departments thereby accounting for a substantial portion of the total number of visits to these facilities. Repeated visits may frustrate the staff at busy Emergency Departments, as these patients' complaints are often judged as non-urgent and inappropriate for emergency department care, contributing to "inappropriate" utilization of hospital resources and expertise, prolonged waiting times [(1)], and staff stress. Frequent visitors may also run a risk of fragmented care or of over treatment because they are seen by many different doctors [(2)]. This inappropriate use of accident and Emergency Departments has defied solution throughout the world, partly because the problem has been defined by doctors and not by patients [(3)]. Reported proportions of inappropriate attendees have varied from 7% to 70%. This large variance is not surprising given that there is no accepted objective definition of appropriate use [(4)].

The patients' problems present to hospital accident and Emergency Departments overlap considerably with those that are commonplace in general practice. Numerous studies have analyzed attendances retrospectively and suggested that one third to two thirds of patients attend accident and Emergency Departments with problems that could have been managed appropriately in general practice [(5,6)].

In this study which was carried out in Tafilah city in the south of Jordan, we aimed to evaluate the cases that attended the emergency department and decide whether these cases were urgent or not, and to emphasize on the importance of primary health care centers and employing general practitioners in Emergency Department in

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Manuscript received August 1, 2004. Accepted October 28, 2004.

treating non-urgent cases which consume hospital resources.

Methods

This study was conducted between February 2004 and May 2004 where a total of 3200 selected patients from those attending the Emergency Department at Prince Zeid Ben Al-Hussein Hospital were evaluated. Every fifth patient attending the Emergency Department was selected and asked about his age, gender, and the cause of attendance. Patients were evaluated by a physician who labeled the case to be either urgent or not-urgent. There were no definite criteria to classify the urgency of cases. The decision to classify cases was totally a qualified physician decision (an internist, or a surgeon, or a family practitioner). Pregnant women were not included in the study as they were seen in their own wards. Admitted cases were also recorded with the cause of admission.

Results

Table I shows the age and gender distribution for patients attending the Emergency Department with females being more common than males in a ratio of 1.3:1.

About 83.1% of cases were not considered as urgent cases and could be managed in the outpatient clinics or primary health care centers. The most common cause for attendance was respiratory complaints followed by gastrointestinal, cardiac, and renal problems (Table II). Trauma cases constituted 4.9% of the visits. Respiratory complaints and trauma were responsible for more than half of urgent cases that either attended to the Emergency Department or were admitted (Table III, IV). Only 11% of the respiratory complaints were urgent constituting 33.9% of the urgent cases that attended the Emergency Department (Table IV). About 5.7% of these patients were admitted to hospital.

Discussion

Emergency services have been organized to meet the urgent needs of patients and to provide treatment for patients with unanticipated life threatening and urgent conditions [7]. Emergency Departments are organized to provide emergent and urgent care, and many patients have high rates of chronic diseases and injury risks [8]. Inappropriate use of Emergency Department results in overcrowding, inappropriate utilization of resources, decreased effectiveness of quality of care, increased cost, and patient dissatisfaction.

The majority of our patients were adults with 58.1% of them aged between 30 and 59 years. Children less than 14 years represented 10.5% of our patients, while patients older than 60 years represented 13%. Poncia *et al* stated that patients aged over 75 constitute 10–14% of accidents and emergency attendances consuming more time and resources than adult patients [9].

About 83.1% of our patients were not considered as urgent cases and could be managed in primary health care centers. This high number could be attributed to the lack of primary health care centers and to the poor understanding of people of the fact that the Emergency Department should only receive urgent cases. This figure is higher than what was found at Prince Hashim Ben Al-Hussein Hospital by Odwan *et al* they found that 71% of the cases attending the Emergency Department were not real emergencies [7]. Dale J *et al* found that 41% of new patients at Emergency Departments were suitable for management by a general practitioner [10].

The most common cause for attendance to the Emergency Department in this study was respiratory complaints (51.9%). It constituted 33.9% of the urgent cases. On the other hand, 73.1% of traumatic patients were urgent and needed emergency department attendance. Although respiratory and gastrointestinal complaints were the most common causes (51.9%, 18.5%), they constituted the least two urgent causes of attendance (11%, 12%). These figures were slightly more than those obtained from other studies, where respiratory problems constituted between 4.1% and 6.5% of Emergency Department attendees and gastrointestinal complaints ranged from 3.4% to 5.9% of those who visited the Emergency Department [2,10]. The overcrowding and low socioeconomic status is possible explanations for this trend.

A retrospective analysis of the Emergency Department activities at Prince Zeid Ben Al-Hussein Hospital during the year 2003 showed that 93.8% of cases were not urgent. This figure is considered to be high although it was taken from the medical records only.

The role of primary health care centers and general practitioners is important in managing non-urgent cases especially at daytime. General practice cooperatives are a comparatively new and successful provision of out of hour's primary care in the United Kingdom. In these cooperatives, groups of general practitioners combine resources to provide emergency cover for their practices. As primary care attendees to the Emergency Department can be managed more appropriately and more economically by the general practitioners services [11]. General practitioners working in an accident and Emergency Department manage non-emergency patients safely and use fewer resources than usual accident and emergency staff do [12]. The important role of health care centers quality and quantity wise is well established as well as the role general practitioners can play in dealing with none emergent complaints. In UK or USA, general practitioners can do the job well as they are specialists (family doctors). This emphasizes on the importance of employing family doctors in our Emergency Departments rather than traditional general practitioners.

Against the background of increasing demands on accident and Emergency Departments, the debate on how to deliver health care appropriately to attendees who are neither accidents nor emergencies has focused on

initiatives to encourage patients to present to their general practitioner, or employing general practitioner in Emergency Departments to manage the primary health care component effectively and at more or less cost than hospital doctors [13].

One of the recommended measures that can remedy this problem or at least mitigate its effect on health care delivery system is to classify the cases that attend Emergency Department according to their severity and to deal with none urgent cases in separate section by a general practitioner who further manages or refers these cases. Another important measure is to commence community educational programs to increase public awareness about the important role of the Emergency Department in the management of urgent cases only.

A number of studies identify alcohol and homelessness as factors associated with frequent and often inappropriate attendance at Emergency Departments, the second group of patients often using Emergency Departments as a substitute for primary care [14,15]. Keeping in mind that these two factors are not common in our community further indicates that the figures obtained in our study are far exceeding those in western communities.

We think that the absence of primary health care centers in our region especially at evening and night hours is a major cause for attendance of non-urgent cases the Emergency Department. Therefore it is important to establish sufficient number of primary health care centers, and to employ general practitioners in Emergency Departments to deal with non-urgent cases.

Table I. Age and gender distribution.

Age (years)	Males	Females	Total
0-14	144	192	336
15-29	207	382	589
30-44	452	561	1013
45-59	469	377	846
60 and above	120	296	416
Total	1392	1808	3200

Table II. Causes of attendance to the Emergency Department.

Cause of attendance	Number of patients	Percentage
Respiratory	1662	51.9
Gastrointestinal	593	18.5
Cardiovascular	234	7.3
Renal	216	6.8
Trauma	156	4.9
Orthopedics	96	3.0
Neurology	82	2.6
Rheumatology	38	1.2
Ophthalmology	16	0.5
Dental	12	0.4
E.N.T	9	0.3
Others	86	2.7
Total	3200	100

Table III. Urgent cases attending the Emergency Department.

Cause	Number of patients	Number of admissions
Respiratory	183	61
Trauma	114	41
Gastrointestinal	71	19
Cardiovascular	57	17
Renal	37	15
Orthopedics	27	13
Neurology	25	9
Dental	8	2
Rheumatology	7	1
Ophthalmology	6	2
E.N.T	5	2
Total	540	182

Table IV. The percentages of main urgent cases from total urgent cases and from patients complaining of the same system complaint.

Cause	Total urgent cases (%)	Patients of same system complaint (%)
Respiratory	33.9	11.0
Trauma	21.1	73.1
Gastrointestinal	13.1	12.0
Cardiovascular	10.6	24.4
Renal	6.85	17.1
Orthopedics	5.0	28.1
Neurology	4.63	30.5
Others	4.81	34.7
Total	100	16.9

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