

*Report*

# Who uses the emergency room services?

A.M. Abdallat,<sup>1</sup> I. Al-Smadi<sup>1</sup> and M.D. Abbadi<sup>1</sup>

**SUMMARY** This study aimed to clarify whether patients attending an emergency room generally had non-urgent problems. A study was made of 2841 patients attending the emergency room of Prince Zaid Ben Al-Hussein military hospital (south Jordan) over a 1-month period using data from the registration book. Patients were classified into four classes of urgency (life-threatening, urgent, non-urgent, trivial). The attendees were mainly children (26.4%). The admission rate was 3.2% and non-urgent conditions accounted for 91% of cases. Much of the use of emergency services was found to be inappropriate, a situation which should be changed.

## Introduction

The most important function of an emergency room (ER) is to provide access to treatment for patients in urgent need of hospital care and facilities.

Individuals suffering illness are expected to seek help first from health centres, and primary health care teams usually manage most of these cases and refer only a few to secondary care centres. In case the need arises to consult a doctor outside working hours, patients can either report to the nearest health centre providing such services or attend the emergency room at a hospital nearest to them.

A review of the literature has shown that emergency services are used to a varying extent by patients with colds and trivial problems which should be dealt with at a clinic [1,2]. In Jordan, although relevant data are limited and there are no national medical statistics, there is a general feeling among medical professionals that patients

attending ERs often have non-urgent problems.

This study aimed to quantify these perceptions by describing how many patients attended the ER, their characteristics and the types of problems with which they presented.

## Methods

The setting was the ER of Prince Zaid Ben Al-Hussein military hospital in the south of Jordan. This hospital serves principally military personnel and their dependents, but it also provides services for other civilian citizens if needed. The ER is open 24 hours a day.

Our study covers all patients recorded in the ER registration book over a 1-month period (1–31 December 1997). Data included information about age, sex, day of the week, hours of attendance, diagnosis, admission and referral.

<sup>1</sup>Royal Jordanian Medical Services, Amman, Jordan.

Received: 24/10/99; accepted: 26/03/00

Patients were routinely classified by ER residents and family practitioners into four classes of urgency on the basis of their problems — I: life-threatening; II: urgent; III: non-urgent; and IV: trivial or clinic cases.

## Results

A total of 2841 patients attended the ER over the 1-month period. The male-to-female ratio was 1.5:1. The attendees were mainly children (26.4%), followed by the age group 41–65 years (24.0%). Table 1 shows the age distribution of the patients.

The admission rate was 3.2% and 8 patients were referred (less than 0.3%). In all, 2591 cases presented with non-urgent conditions (classes III and IV) (91%). Table 2 shows the classification of cases according to their urgency and Table 3 shows the classification according to medical specialty.

The study showed that Saturday was the busiest day of the week and the busiest time of the day was between 09.00 and 12.00, with another period between 17.00 and 22.00. The least busy period of the day was between 24.00 and 08.00.

## Discussion

In the area of the study, there are three primary health care centres, which manage most of the cases during working hours until 16.00. Then, two of them are closed and one is kept open with two general practitioners until the next morning.

Our study showed that the most common problems presented to the ER were related to diseases of the upper respiratory tract, a condition most prevalent at the time of the study, which also explains why most of the attendees were children. Complaints

of the chest and abdomen, such as chest pain, abdominal pain and urinary tract symptoms, were seen frequently in the ER, which

Table 1 Age distribution of patients

Age group (years)	No.	%
0-12	760	26.1
13-20	576	20.3
21-40	660	23.2
41-65	681	24.0
> 65	174	6.1
Total	2841	100

Table 2 Classification of cases according to their urgency

Class	No.	%
I: life-threatening	12	0.4
II: urgent	238	8.4
III: non-urgent	2125	74.8
IV: trivial (clinic)	466	16.4

Table 3 Reasons for attendance

Reason	No.	%
Internal medicine	843	29.67
Paediatric	750	26.40
Surgical	653	22.98
Gynaecological/ obstetric	329	11.58
Dental	85	2.99
Ear, nose and throat	135	4.75
Eye	9	0.32
Psychiatric	35	1.23
Skin	2	0.07

may explain why the age group 41–65 years was the second most common age group.

Our study shows an abuse and overuse of emergency services since the vast majority of patients presenting at the ER actually came for minor complaints that were not urgent in terms of "a threat to life or limb". It has been suggested that geographical, social and psychological factors may play a role in choosing ER services for non-urgent illnesses. In our study, these figures may be partly explained by the level of education of the patients. Although we did not measure the level of education in our study, it has been reported that people who have a lower level of education use emergency services more and preventive services less than those with a better education [3]. Another possible explanation for patients to present with trivial complaints may be "medicalization" of mild, self-healing conditions as a result of the habit of doctors prescribing drugs for self-limiting conditions, e.g. antihistamine for colds and kaolin for mild diarrhoea. It has also been found that retired/unemployed people who are under the stress of not having a job or who have too much free time try to seek medical help for even minor complaints. At the same time, there is a small group of patients, called heavy users or "repeaters", who are responsible for a disproportionate amount of ER visits and costs. These patients solicit deeper clinician involvement because of their familiarity and their often intractable medical and social problems [4].

Our study showed that Saturday was the busiest day of the week. Because Friday is the usual weekend day (occasionally Thursday and Friday), patients who had trivial medical problems during the week-

end may tend to wait until Saturday to seek medical advice, and patients living nearest to emergency facilities tend to use them as a substitute for attending health centres and clinics during regular morning hours.

In Kuwait, Shah et al. [5] found that 61% of the visits to the ER did not require emergency care while in Saudi Arabia, this proportion was found to be 70% [6].

In conclusion, much of the use of emergency session in the ER was found to be inappropriate. Thus, the following management options merit consideration.

- Educating patients about the inappropriate use of the services is one of the best management options for this problem. This can be achieved through information leaflets, posters and the mass media. Members of the working team, e.g. nurses and receptionist, can be of great help in this matter.
- A separate primary care clinic, for both paediatric and medical cases, could be kept open, if not 24 hours a day, 7 days a week at least during the hours when the regular clinics are closed.
- Efforts to change the behaviour of heavy user patients (repeaters) would be of greater value than biomedical-oriented interventions. Further studies are urgently needed to investigate the reason for this type of patient's behaviour and to define cost-effective and humane solutions.
- A carefully thought-out triage system staffed by registered nurses experienced in handling emergency cases could be established, with non-urgent cases being turned away from the emergency department as the last management option.

### References

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Violence in all its forms is an infringement of human rights affecting families of all social strata and cultures. In order to address the problem, there must be collaboration across disciplines, borders and cultures. Several organizations in Jordan are involved in anti-violence activities, including the Jordan River Foundation and the Jordanian Women's Union. The Jordanian efforts to lessen domestic violence are directed through family protection units, in which the Ministries of Health and Social Development (family protection programme and social defence programme) and nongovernmental organizations play a part.

Source: The work of WHO in the Eastern Mediterranean Region. Annual Report of the Regional Director. 1 January-31 December 2000. Page 83.