Use and Abuse of Emergency Services in Riyadh Health Centres, Saudi Arabia

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A study was made of 1316 patients attending the emergency services in six primary health care centres in the Riyadh area. The purpose of the study was to find out what categories of patients are using such services and whether these services are appropriately utilized. Questionnaire/interview forms on patients’ characteristics at the time of the doctor–patient encounter were filled by nurses. The attenders were mainly young men whose major complaints were upper respiratory tract infections. The attending physicians found that 70% of the visits were for minor complaints that did not require emergency care.

Nationality and occupation, were associated with the doctors’ opinions on the seriousness of cases attending the emergency services. A large proportion of the patients (49%) came to the clinic more than 24 hours after the appearance of symptoms. The reason for such late visits was that the patients came to the clinic at times that were convenient to them. The prescribing rate was 86.4% and the referral rate was 4.6%.

The primary health care approach is a relatively new concept in the Kingdom of Saudi Arabia. In 1978 the Kingdom of Saudi Arabia adopted the strategy of ‘health for all by the year 2000’ and in 1984 it began the gradual implementation of a comprehensive plan of primary health care. This step was accompanied by an increase in the number of health centres all over the Kingdom.1-4 Recent reviews have shown that the Kingdom has successfully implemented primary health care.1 Individuals suffering from disturbed health are expected to seek help first from health centres. 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 the working hours, patients can either report to the nearest health centre providing such services or attend the emergency room at any one of the hospitals nearest to them.

The pattern of use of medical emergency services can be a point of friction between doctors and patients. Some doctors complain that they are being bothered by trivial complaints.5,6 Research workers in the UK have studied various aspects of problems
relating to such services such as doctor-centred classification of night calls, referral behaviour, triggers of consultation and duration of symptoms. Few studies, however, have been reported on primary health care centres in the Kingdom of Saudi Arabia as regards these problems.

The present study was carried out in order to find out the characteristics of patients attending the emergency services at health centres; the problems they presented with; and why the patients chose to attend at those particular times of the day.

Method
In the city of Riyadh, the capital of Saudi Arabia, 58 health centres which belong to the Ministry of Health are in existence. They provide primary health care services for about 0.8 million inhabitants of the city during working hours for 6 days a week (from 07.30 h to 12.30 h and then 16.30 h to 20.00 h except on Thursdays when only the morning session is run). In order to increase the availability and accessibility of these services, six health centres in various parts of the city were chosen to provide emergency services. These centres operate from 20.00 h to midnight. One of them is located in a densely populated area and far away from hospitals which provide accident and emergency services. There are always two doctors and two nurses at work per shift. The others are usually manned by a doctor and a nurse on a rotational basis. During emergency services, the main notes (family health records) are not available and laboratory services are restricted. No house calls are made.

A questionnaire/interview form was designed to be filled in by a nurse at the time of the doctor-patient encounter. The feasibility of obtaining information by using these forms was tested in a pilot study. The data collected consisted mainly of the following items: demographic data of patient’s reasons for attendance, type of management and the doctor’s opinion about the seriousness of the case. The possession of a family health record as well as the area of residence were always noted. All the six health centres which provided the emergency services participated in the present study. Twenty-three doctors took part and every fifth patient attending the health centres over a period of 6 weeks (12.2.90 to 25.3.90) was included.

Results
A total of 1316 attendances were analysed. Table 1 shows the demographic characteristics of the patients as characterized by the seriousness of the case according to the opinion of the doctor. About one-third of all cases were thought to be serious and it was reasonable for them to attend emergency services at the health centres regardless of their demographic characteristics. Age did not have a statistically significant effect on the proportion of patients attending the clinics regarding their classification by the doctor as being a true emergency case or otherwise.

The same was true for other patients' characteristics such as sex, education and marital status. However, in the case of non-Saudis, retired or unemployed patients there was a significant difference between these groups and the Saudis or other occupational groups regarding the classification of their cases as being emergency cases or not by the attending doctors (p<0.01). Only 30% of the cases were found to be justified in attending the emergency services. The rest should have been seen during the ordinary working hours. There was not much difference between the mean ages of the patients who had been classified as having serious or not so serious illnesses. Their mean ages were 14.3 ± 13.3 and 14.4 ± 13.2 years respectively.

The most common morbidity seen was upper respiratory tract infection (54.3%), bowel disturbance (11.2%), abdominal pain (7.8%) and the least common were wounds and burns (7.4%). Others included tonsillitis (4.5%), bronchial asthma (4.3%), acute otitis media (2.5%) and joint and back pain (2%). Patients complaining of headache, toothache, conjunctivitis or hypertension represented 6% of the cases. The majority of patients (95.4%) were managed at the health centres and only 4.6% were referred to hospitals. Of the referred patients 12% were admitted into hospital. The prescribing rate was 86.4%. The rest of the patients were either reassured and no medication was given to them or they were referred to hospitals. The patients who came with wounds and burns (7.4%) had their wounds dressed at the health centers.
centres and were then sent home either with or without medications. Simple analgesics were prescribed to 42.2% of the patients while antibiotics were prescribed to 31.9%. The other common medications prescribed were antihistamines (14.6%), vitamins (9.1%) and antispasmodics (5.6%). Drugs such as salbutamol, antacids, frusemide, glycerine suppositories and oral rehydration solutions in addition to others were prescribed to only a few patients.

Table 2 shows the area of residence of the patients as related to the seriousness of the case. Only 20% of patients coming from outside the catchment area of the health centres were thought to be seriously ill compared with 35% of patients coming from within the catchment area (p < 0.01).

Table 3 assesses the relationship between having a family health record and the seriousness of the case. It was thought that 22% of patients with no family health record presented with a genuine serious illness compared with 48% of patients who already had a family health record (p < 0.01).

Table 4 shows the relationship between the duration of symptoms and the seriousness of the case. Patients who attended within 24 hours or after 3 days were found to have less serious illnesses as only 18% and 16% of these patients respectively were thought to be justified in attending such services. However, 47% of the patients whose symptoms manifested for 2–3 days were found to present with a serious illness compared with those whose symptoms manifested for less than 24 hours (18%) or more than 3 days (16%) (p < 0.01). When the patients were asked about the reasons why they were calling late, 42.5% of them attributed this delay to difficulty in attending the clinics while at work. Transport was a problem for 31.5% of patients who were mainly women and children. Some patients (11.7%) came to the clinic because the onset or worsening of their symptoms happened late in the evening while 5.3% were not satisfied after their previous calls. A minority of patients (9.4%) admitted that they came

Table 3 Possession of family health record (FHR) by seriousness of the case (n = 1316)

<table>
<thead>
<tr>
<th>Family health record</th>
<th>Emergency (%)</th>
<th>Not emergency (%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>196 (48)</td>
<td>213 (52)</td>
<td>409</td>
</tr>
<tr>
<td>No</td>
<td>196 (22)</td>
<td>711 (78)</td>
<td>907</td>
</tr>
</tbody>
</table>

x² test p < 0.01.

Discussion

The present study showed that 70% of the patients reporting for emergency services were actually coming for minor complaints that did not require such services. These figures may be partly explained by an understanding of what triggers a consultation in Saudi Arabia. It is possible that 'social sanctioning' of a consultation or 'perceived interference of a symptom with social or personal relationship' becomes more prominent in the evening in this country. Another factor that might explain these figures may be the level of education of the patients. People who have a lower level of education have been found to use emergency services more and preventive services less than those who had a better education. Surprisingly, this finding has not been substantiated in this study. The large number of patients, presenting at this particular time of the day, represent an inappropriate use of the session.

The most common problems presented to primary care doctors were related to diseases of the upper respiratory tract, a condition most prevalent in the cool months of the year. Another possible explanation for patients to present with trivial complaints in this session may be the 'medicalization' of mild self-healing conditions. The habit of doctors prescribing for self-limiting conditions, i.e. antihistamines for colds and kaolin for mild diarrhoea may contribute to this. In addition, it may also be encouraged by a primary care organization that requires a doctor to be present all day long in several schools in case a child should become ill. This reinforces 'sickness behaviour' from a very early age. Also the fact that the majority (66%) of the patients came from the same catchment areas of the health centre, may be due to availability and accessibility of the service.

Those patients living nearest to emergency facilities tend to use it as a substitute for attending health centres during regular hours.
The demographic characteristics showed no big differential effect on seriousness except in cases of nationality and occupation. It was found that non-Saudis were less likely to present with serious problems. This may be explained by the fact that some of the non-Saudis try to bypass the eligibility system by appearing during emergency sessions where they will not be prevented from being seen by the doctor. This fact may find support from Table 3 where patients with no family health records were found to be the least likely to present with serious problems. Another group which was less likely to present with serious problems was the retired/unemployed group who are under the stress of not having a job and try to seek medical help for even minor complaints. It was found that the referral rate was reasonable but the prescribing rate was high with regard to minor complaints. As doctors were working without notes, the team structure was not functioning and there were inadequate pathology and radiology services at this time. This calls for the importance of educating patients to use these facilities properly.

Martin (1984) had reported similar findings when he studied the evening services of the primary care department at the Riyadh Military Hospital. Although his findings were concluded from studies in only one centre, a different pattern of morbidity was seen in patients that attended these emergency sessions compared with those who were seen during regular working hours. The most frequent complaints reported by Martin consisted of either abdominal or musculo-skeletal pain. Saeed (1987) reporting from another centre in Riyadh during ordinary work hours reached similar conclusions as those reported by Martin. Sebai et al. (1980) reported a similar pattern of morbidity to the present study where they surveyed three rural communities during ordinary working hours. Studies performed outside the Arab world have shown that upper respiratory tract infections were the most common complaints during either ordinary working hours or out of hours services, a result which is consistent with our present findings.

The pattern of attendance at this emergency session was similar to the pattern of attendance at UK accident and emergency departments reported by Platt. In both cases most of the patients were young men. This result was unexpected. It was thought that many of those attending in Saudi Arabia would have been women and children, since women cannot drive or leave home without a male escort. Furthermore, the husbands can take their wives and children to the primary health care centre after they had returned from work. In the UK, where Muslim women did not consult a doctor without their male relatives, this pattern had been seen in practices with a large Muslim population. In Denmark it has been found that where deputizing services are used, less responsible use is made of out of hours services. Patients who suffer from discontinuity of care, or who use discontinuity of care to gain drugs or episodic attention, are a high risk group in a population.

In conclusion, much of the use of the emergency session in the primary health care centres was found to be inappropriate and this situation could be changed by improving the health education of patients. Alternatively, it may be the nature of the session which is inappropriate to the working of the Saudi Arabian society and maybe a fuller service should be provided in the evening.

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References