

Out of hours attendance in an army practice

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SUMMARY. *There is some evidence that rates of out of hours calls in army general practices are higher than the average for the NHS. In an attempt to reduce out of hours demand a programme of preventive and educational initiatives for patients was introduced at an army practice in Hohne, West Germany early in 1985. This included regular child development clinics, well woman clinics, a practice booklet and leaflets about the management of simple illnesses, a library of books and videos for patients and health education videos in the waiting room. The project was complemented by an audit of doctors' prescribing habits followed by drawing up agreed protocols for the treatment of common disorders such as sore throat.*

Annual attendance rates per registered patient were recorded for 1984–86 to compare use of out of hours services by patients before and after the introduction of the project. Out of hours attendance rates fell by 35% (from 0.17 per annum to 0.11 per annum) overall and by 61% in young children. The total annual attendance rate dropped by 14% (from 5.13 to 4.43) during the same period, but fell by only 1% over the same period at a similar practice in Osnabruck. The decrease was particularly marked for out of hours attendances which the doctor classified as lower urgency: attendances classed as very low urgency decreased by 78% between 1984 and 1986 but those classed as medium urgency decreased by only 2%.

This study suggests that time spent on education and prevention by a well organized team operating agreed protocols can appreciably modify patients' help seeking behaviour and lead to more appropriate use of the health care system by patients.

Introduction

THE annual consultation rate in army practices varies between 4.4 and 7.2 consultations per patient (personal communication, headquarters, British Army of the Rhine), and this is higher than the average figure for the National Health Service of 3.4.¹ The high rate has traditionally been thought to be related to the youthful and fertile nature of the population who are living away from familiar circumstances and the fact that fathers are regularly absent from the family home. In 1971 Hoyte² reported a six month study of out of hours calls in Osnabruck and commented on the abuse of the system by demanding patients.

The aim of this study was to assess the extent to which health seeking behaviour may be affected by educational and preventive interventions.

Method

Setting

The study was undertaken at the army group practice for soldiers and their families in Hohne, a rural area in West Germany. The

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practice is staffed by five army general practitioners, one or two army medical assistants and two civilian nurses. The practice population numbers approximately 9000 drawn predominantly from social classes 4 and 5 (Registrar General's classification). The mean age of the population is 22 years and there are 2000 children under the age of 12 years.

Patients are seen at the medical centre during working hours and at a separate location, the medical reception station, out of hours. The medical centre is open from 07.30 hours until 17.00 hours Monday to Friday. The medical reception station has beds for up to 25 soldiers, operates a casualty department and is staffed by trained civilian nursing staff 24 hours per day 365 days per year.

A nurse is normally the first point of contact for a patient out of hours. The on call doctor is readily available by telephone or 'bleep' and can be contacted after the nurse has made an initial assessment of the patient. Transport is readily available for the minority of patients who do not have their own car. A request for a home visit is relatively unusual but is passed to the duty doctor for further action.

Educational and preventive health programme

In January 1985 a programme was initiated in Hohne with the aim of introducing more health prevention and health education measures for patients. Regular child development clinics jointly held by doctors and health visitors were started. Three nurses who were trained in family planning and cervical cytology commenced their own well woman clinic, embracing health education about smoking, diet, exercise and stress management. Uptake rates for cervical smears were determined for the three year period. A comprehensive library of leaflets, cassettes, videos and books was established for loan to patients. In the first 12 months of the programme 250 items were loaned out and many advice leaflets were given to patients to keep. A television showing a mixture of amusing and educational videotapes was installed in the waiting room and proved very popular. An attractive practice booklet was distributed to all patients giving clear instructions on how to use the practice facilities most effectively and how to manage some simple childhood ailments. Protocols and patient handouts were produced for common conditions such as cystitis and diarrhoea. A questionnaire was given out in June 1986 to 100 consecutive patients which asked about use of the practice booklet in relation to attending the practice and self-treatment of minor illness.

The programme for patients was complemented by improved education for the practice staff and audits of the doctors' prescribing and management habits. All practice nurses including staff at the medical reception station commenced a training programme. This involved not less than one hour of protected teaching time per week and each nurse was given a training log to be signed upon adequate completion of each topic. The prescribing habits of the doctors were audited and a more consistent approach to the treatment of common disorders such as sore throat was encouraged by the use of agreed protocols.

Effect of the programme on out of hours attendance

All out of hours attendances are well documented at the medical reception station. For the years January 1984 to December 1986 inclusive all out of hours contacts with patients seen after 17.00 hours and before 07.30 hours seven days a week were analysed

with reference to age, sex and the category of illness. Total attendances in and out of normal hours were calculated from the monthly morbidity returns stored in the automated management information system mainframe computer at the headquarters of the British Army of the Rhine (BAOR). Similar figures for total attendances were also obtained for a comparable army practice 70 miles distant in Osnabruck. The data in this practice, however, did not allow attendances in working hours to be distinguished from out of hours attendances and thus overall attendance figures are presented.

Out of hours attendances at Hohne were classified by the author into one of four categories of urgency, according to the seriousness of the problem: (a) high urgency (genuine emergencies); (b) medium urgency; (c) low urgency; or (d) very low urgency (unreasonable calls). While these categories were defined retrospectively from records made at the time of consultation, every attempt was made to give the patient the benefit of the doubt and several records were randomly assessed blind by a second doctor. These showed an excellent correlation between the two doctors' classifications.

Results

Out of hours attendance rates

Table 1 shows the population figures and consultation rates in Hohne and Osnabruck for the three year period studied. Between 1984 and 1986 the overall attendance rate in Hohne, where the preventive care programme was carried out, fell by 14% (from 5.13 to 4.43 attendances per registered patient per annum) while the out of hours attendance rate dropped by over 35% (from 0.17 to 0.11). There was no increase in the daytime workload recorded during the same period. The total attendance rate in Osnabruck remained constant at approximately 5.2 attendances per registered patient per annum over the same period. Small rises in total registered population occurred in both practices; this increase was slightly greater in Hohne.

Table 2 records the annual number of attendances by age and sex of patient. Reductions in out of hours attendances were seen for all groups, except for adult males who had not received the benefit of many of the schemes aimed specifically at women and children. There was an impressive reduction in attendances by children, particularly in those under 12 months old.

The category of illnesses presenting (Table 3) shows that the largest fall in attendance out of hours was for respiratory disease.

Table 4 shows the out of hours attendances classified by urgency. There were reductions in all categories of attendance, especially those classed as low (52%) or very low urgency (78%), indicating that high and medium urgency cases do not appear to have been put off attending.

Table 2. Out of hours attendance figures in general practice in Hohne 1984-86.

Category	No. of out of hours attendances			% change 1984-86
	1984	1985	1986	
<i>Adults</i>				
Male	301	319	354	+18
Female	320	287	188	-41
<i>Children</i>				
0-1 years	231	97	91	-61
1-5 years	502	457	302	-40
Over 5 years	103	95	71	-31
<i>Total</i>	1457	1275	1006	-31

Table 3. Principal categories of out of hours attendance in general practice in Hohne 1984-86.

Category	No. of out of hours attendances			% change 1984-86
	1984	1985	1986	
Respiratory	744	604	419	-44
Trauma	203	162	197	-3
Gastrointestinal	181	168	147	-19
Obstetric/gynaecology	67	73	82	+22
Others	262	168	161	-39
<i>Total</i>	1457	1275	1006	-31

Table 4. Categories of urgency for out of hours attendances in general practice in Hohne 1984-86.

Urgency of attendance	No. of out of hours attendances			% change 1984-86
	1984	1985	1986	
High	250	181	220	-12
Medium	503	493	491	-2
Low	539	489	258	-52
Very low	165	112	37	-78

Table 1. Population and attendance figures in general practices in Hohne and Osnabruck for 1984-86.

	Hohne			Osnabruck		
	1984	1985	1986	1984	1985	1986
Practice population	8790	8977	9164	11512	11666	11651
(% change from 1984)	-	(+2)	(+4)	-	(+1)	(+1)
Total number of attendances	45128	44134	40576	60213	60719	60218
Total number of attendances per registered patient	5.13	4.92	4.43	5.23	5.18	5.17
(% change from 1984)	-	(-4)	(-14)	-	(-1)	(-1)
Number of out of hours attendances ^a	1457	1275	1006	-	-	-
Number of out of hours attendances per registered patient	0.17	0.14	0.11	-	-	-
(% change from 1984)	-	(-18)	(-35)	-	-	-

^a Data not available for Osnabruck.

Success of the educational programme

Discussions between doctors and health visitors showed that the child development clinics were seen as a valuable opportunity to discuss child health with mothers at a leisurely pace at a time when the child was perceived to be well. Working together in this way was a mutual learning process for the doctor and nurse and the advice given became more consistent from individual members of the primary care team.

During the three years studied cervical smear uptake rose from below 60% of 2851 adult women patients in 1984 to over 90% of 2920 women in 1986.

Three consecutive monthly audits in May, June and July 1985 demonstrated falls in antibiotic prescribing during normal surgery hours by the five doctors in cases of upper respiratory tract infection. For the highest prescriber the proportion of cases of upper respiratory tract infection that received a prescription fell from 90% to 80%, for the lowest prescriber it fell from 40% to 10% and the biggest fall was from 80% to 20%.

The patients' questionnaire was returned by 82 of the 100 patients. This indicated that the majority of patients had looked at the booklet and found something of value in it. Only one patient felt that it was inappropriate for doctors to educate patients to help themselves.

Discussion

This study has reported a reduction in out of hours attendance in one army practice in West Germany. The nature of this study means that it is not possible to show statistically for the period studied that this fall was only related to the health education and preventive care initiatives introduced in the practice. However, the greater reductions did occur in those areas most targeted by the interventions. For example, the largest fall in attendance was for respiratory disease and it seems likely that education of patients about the common cold and increasing diagnostic awareness of asthma were largely responsible for this. The reduction in attendances classed as 'high urgency' (12%) may also be related to a substantial improvement in asthma management owing to improved patient education and awareness by doctors.

The fact that the largest fall in out of hours contacts was for the under one year olds suggests that the paediatric clinics held with the health visitors have been a major factor in improving total patient care and education, reinforcing the evidence of Curtis Jenkins² that a scheduled screening programme gives the opportunity to prevent problems and reduce the attendance rate for acquired disorders. It should be stressed that the 'softer' benefits of these clinics such as better teamwork, shared enjoyment and opportunistic education were seen by the primary care team to be as important as the 'hard' benefits of case finding in physical terms.

The overall attendance figures for a comparable practice in another town do not show any such reduction during the same period, although separate out of hours attendance rates were not available. At the time of Hoyte's study³ the out of hours attendance rate in Osnabruck was comparable to that recorded in Hohne prior to the introduction of the new initiatives.

It has been shown that there is great variation in night call rates in the NHS.⁴ There are many factors which affect patients' tendency to call at night, not least the continuity of doctors⁵ and the doctors' use of deputizing services. In Hohne the senior doctor had been in post for the unusually long period for the army of five years and there is no deputizing service. It is suggested that this continuity backed up by agreed protocols and consistent primary care team advice and attitudes increased patients' self confidence and produced a more effective

use of the medical services available to them. Following these changes the out of hours attendance rate in this army practice was similar to out of hours visit rates reported in NHS practices.⁷

It has been reported that 49% of late callers can be adequately dealt with by a practice nurse.⁷ This supports the experience of army general practitioners where a well supported, practice trained nurse is usually the patient's first point of contact out of hours.

Jacob⁸ investigated the personal characteristics of late callers and found them to be young and of low occupational status. These characteristics are very representative of an army practice population. This study suggests that such patients are still amenable to change by encouraging a positive attitude and applying consistent management principles. It could be argued that the decrease in out of hours attendances at Hohne was due to patients seeking help elsewhere. There is no evidence to support this and in Hohne the only alternative is the German health care system. The cultural and language difficulties and not least the cost make this a relatively unattractive and little used option. There was no corresponding increase in daytime workload at Hohne and the small decrease in high and medium urgency calls relative to the large decrease in low and very low urgency calls suggests that genuine needs for out of hours care are being met.

There is evidence that increasing numbers of patients are dissatisfied with out of hours care⁹ and this is only one indicator of the perceptions held by our patients about their health. Inappropriate use of health services, particularly primary care, can be due to anxiety, lack of medical awareness and lack of self confidence, compounded by poor continuity of care by members of primary care teams. Valentine¹⁰ has concluded that overuse of the medical services owes more to an unhealthy level of risk consciousness than to deliberate abuse of the system.

This study suggests that time spent on education and prevention by a well organized team operating agreed protocols can appreciably modify patients' help seeking behaviour and lead to more appropriate use of the health care system by patients.

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