Out of hours workload of a suburban general practice: deprivation or expectation

John Pitts, Margaret Whitby

Abstract

The out of hours workload of a training practice in a suburban and semirural area on the south coast of England was studied for one year. An overall rate of contact of 273/1000 patients was found, which indicated a workload greater than that reported in most other studies. The duty doctor received over 35 telephone calls from patients during some Saturdays (1200 Saturday to 0800 Sunday) and Sundays (0800 to 0800 Monday), up to five being between 2300 and 0700. Of the patients who contacted a general practitioner, 44% were given advice by telephone and 4·9% were admitted to hospital. The admission rate was lower than that given in other studies. A considerable proportion of the workload arose from doctors covering the casualty department of a cottage hospital. Patients having a high expectation of 24 hour care by general practitioners in an area of comparative affluence (Jarman indices −13·8 to 1·7) may account for this aspect of the workload.

Introduction

Thousands of general practitioners continue to be responsible for the 24 hour medical[5] care of their patients throughout their careers. Some doctors find that such a commitment conflicts with personal and family life and choose to subcontract a proportion of their out of hours workload to a commercial deputising service. Those who do not contract the work out often share it through a local rota system. A problem of a rota system is that although the number of nights doctors work is reduced, the number of patients they cover when on duty is proportionately larger, thus increasing the chance of interrupted sleep and leading to greater fatigue if they have to work next day.

Few accurate assessments have been made of the out of hours workload in general practice. Contacts may require the doctor to visit the patient or to give advice over the telephone if he or she does not think it appropriate to see the patient at that time. Information about out of hours workload, however, is often based on visits carried out between 2300 and 0700 rather than on all the contacts with patients. In addition, the visiting rate of each doctor differs, and a varying but appreciable proportion of the out of hours workload may be unreported.

Despite working in an area with little social deprivation we thought that the out of hours workload of this practice was high. Thus we carried out a study to define the true workload of the doctors in this practice in terms of the overall rate of contact by patients and the subsequent management by the doctors.

Practice and methods

The practice, which is approved for training and has seven partners (five full time, two part time), is situated in a residential and semirural area by Southampton Water. Its list size was 13 309 on 1 April 1988, with 1863 patients aged ≥65. The doctors are based in two medical centres, one at Hythe and the other at Blackfield, and one trainee is attached to each centre. Several outlying villages in the New Forest are covered by the practice, which covers an area of about 80 km^2. The site of Hythe medical centre houses four independent practices and Hythe Hospital, a cottage hospital with a general practitioner maternity unit and a 24 hour casualty department. The doctors of each practice are responsible for the medical care of patients they have registered in the hospital, and there is a duty rota for attending patients who are non-resident. A commercial deputising service is not available. A morning surgery for patients who consider that they require emergency treatment is held at both medical centres from 0900 to 1200 on Saturday mornings.

The area is not one of high social deprivation: the Jarman indices for the five main residential areas covered by the practice were −13·8, −6·5, −3·12, −1·43, and 1·7. As well as indicating deprivation, the Jarman scores have been associated with the workload of general practices.[1]

All doctors in the practice, including the attached trainees, took part in the study. Over the 12 months from 1 July 1988 to 30 June 1989 the doctor on duty recorded on a log sheet the time that each patient contacted him or her, whether the patient was given advice by telephone or visited, and whether the consultation resulted in the patient being admitted to hospital or referred to an accident and emergency unit. All telephone contacts with the doctor on duty were recorded whether they were for advice or to request a visit. Contacts with, and visits to, the casualty department of Hythe Hospital at the request of the duty nurse were specifically indicated.

Results

During the year's study record sheets were completed for 229 of the 254 weekday nights (excluding bank holidays), 51 of the 52 Saturdays, and 55 out of the 59 Sundays and bank holidays. A total of 3383 patient contacts were recorded outside normal working hours. Mean values were used to compensate for missing data, and this gave a corrected figure of 3638, indicating a contact rate of 273/1000 patients/year. In 44% of cases the patient was given advice over the telephone and in 56% the patient was visited, giving a visiting rate of 152/1000 patients/year. Table I shows the mean out of hours workload for a weekday, a Saturday, and a Sunday or bank holiday subdivided into whether or not the contact was made within the night visit period (2300-0700). During night visit periods the contact rate was 37/1000 patients/year and the visiting rate 20/1000 patients/year; advice was given over the telephone in 46% of cases, the remaining patients

Hythe Medical Centre, Hythe, Southampton, Hampshire SO4 5ZB
John Pitts, MRCGP, *general practitioner*
Margaret Whitby, MRCGP, *general practitioner*

Correspondence to: Dr Pitts.

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TABLE I—*Out of hours workload of general practitioners in one of the four practices in the Hythe and Blackfield medical centres. All values are mean numbers of patient contacts made each day (range)*

	Night during week (1830-0800)	Saturday (1200-0800)	Sunday or bank holiday (0800-0800)
Outside night period*	5·1 (0-16)	13·6 (5-32)	20·8 (8-35)
Night period*	1·2 (0-6)	1·8 (0-5)	1·5 (0-5)

*Night period defined as 2300 to 0700.

TABLE II—*Comparison of workload of general practitioners in different practices. Figures are numbers of contacts with patients/1000 patients/year*

	Total contact rate	Total visiting rate	Contact rate at night	Visiting rate at night
This study:				
All data	273	152	37	20
Excluding casualty work	214	107	34	17
London, 1987-8[2]	219	128	31·8	18·8
Southampton, 1986[3]	132	95	22	18
Inverclyde, 1985[4]				35·2
Stockton on Tees, 1984[5]	130	48	23	10
Nottingham, 1981[6]				15·5
Portsmouth, 1980-3[7]	153	135		25
Kent, 1979[8]	122	75	16	8
Sheffield, 1978[9]				20·8
North Berwick, 1977[10]			16·4	15·9
Glasgow, 1977[11]		83·3		16·8
Whitby, 1974[12]			13	11
Hovingham, 1973-7[13]				23·9
Leicestershire, 1973-4[14]		61·5		7·8

TABLE III—*Method used by general practitioners to manage patients who contacted them outside normal working hours. Figures are percentages of total number of contacts*

	This study	London, 1987-8[2]*	Southampton, 1986[3]	Stockton on Tees, 1984[5]	Kent, 1979[8]
Advice by telephone	44	24	28	59	39
Patient visited	56	76	72	41	61
Admission to hospital	5		10	9	13

*Includes patients seen in surgery on Saturday morning.

being visited. Thirty per cent of the visits and 12% of the telephone calls giving advice were to the casualty department of Hythe Hospital. After the contacts with the hospital were excluded the total contact rate was 214/1000 patients/year and the total visiting rate 107/1000 patients/year. The mean rate of admission to hospital after all contacts was 4·9%.

The doctors' visiting rates varied, ranging from 41% to 78% of calls received. Trainees generally gave advice over the telephone less often than the partners.

Discussion

The out of hours workload recorded by this practice during 1988-9 was greater than most of those that have been reported (table II). This may be partly due to casualty work, the proportion of which varied in the other studies.[3-15] When casualty work was excluded the total contact rate remained high, with only a study of a deputising service recording a higher visiting rate.[7] The contact rate at night was also high, with an average of one to two contacts each night. The General Medical Services Committee states that the average general practitioner carries out 35 night visits each year[16]; we found a disturbance rate of almost double this figure.

Excluding the casualty work from our figures probably underestimates the true workload of the general practitioners because patients, rather than telephoning the duty doctor, often go directly to the casualty department at Hythe Hospital expecting to find a resident doctor. A casualty department in a cottage hospital makes a considerable contribution to the workload of general practitioners and merits consideration in discussions on how to maximise the role of the general practitioner.

The proportion of calls outside normal working hours managed by giving advice over the telephone has been included in some studies (table III), and in one recent study 59% of calls were managed in this way.[5] Advice is often given over the telephone in other countries.[17] Medical defence organisations believe that all patients who contact a doctor should be seen, as failure to visit is a common reason for formal complaints being made to family practitioner committees about general practitioners and the potential for error in diagnosis over the telephone is likely to be higher than if the patient is seen. This advice, however, does not take account of the fact that some patients telephone doctors specifically for advice, and that by visiting patients perhaps unnecessarily doctors may not be available to attend a true emergency—another reason for complaints being made.

The overall rate of admission to hospital after a contact was 4·9%. This suggests either that the doctors were competent at managing medical emergencies without recourse to hospital services or that some calls were not emergencies.[10 12 13] Other studies found higher rates of admission,[4 5 8] and our rate may be related to the higher rate of contact in our study.

The high out of hours workload poses the question of how doctors and their families are affected by it and whether they can cope. Fatigue and deprivation of sleep are known to cause errors in cognition and an increase in negative attitudes.[18-20] Little research has been done on the effects of fatigue on older doctors. With normal daytime working included, a night on call entails a continuous period of duty of 33 hours and a weekend on call, which is followed by a half day on Monday, entails a continuous duty period of 51 hours. The worst case that could be derived from our figures would be a weekend on duty during which a doctor had to deal with 32 calls during the day on the Saturday, five calls that night, 35 calls during the day on the Sunday, and five calls on the Sunday night. The doctor would be unlikely to perform well in surgery the morning after.

What measures can be taken to help practices unable or unwilling to subcontract work to deputising services? There is evidence in our practice and others that doctors attend to their perceived awareness of fatigue[21]: an increasing number of weekends are shared by two doctors, one covering each day. In addition, general practitioners in this practice are allowed a half day off after a weekend on call. This could be extended to become a full day, but would decrease the number of appointments available for patients during normal surgery hours.

Action to reduce doctors' hours of work has been called for as a result of concern about the health of general practitioners,[22] and many articles, letters, and editorials have been written on the subject of stress and hours of work. Alternative arrangements in general practice have been suggested.[23] The contractual aspects of out of hours work have usually been considered in terms of how the work should be remunerated rather than whether such hours are advisable.[16] If the 24 hour commitment is to be continued after the proposed reforms are instituted perhaps sufficient manpower should be made available to allow doctors to have a rest period after a night on call without adversely affecting the day to day running of the practice. Whatever the cause, there seems to be anecdotal evidence that more work is being undertaken outside normal working hours, and general practitioners will therefore need to formulate plans for coping with this demand for the good of their patients, themselves, and their families.

We found that doctors' sleep is disturbed during most nights when they are on call, although the pattern is, by the nature of this work, unpredictable. Calls outside normal hours can constitute a considerable part of the workload of general practitioners over and above a normal working week.

It has been claimed that a high rate of out of hours

contacts is associated with practices in deprived areas.[2 24] This study clearly shows that high rates also exist in more privileged areas, and we believe that this phenomenon is due to patients expecting a 24 hour general medical service.

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Health checks in general practice: another example of inverse care?

Deborah Waller, Martyn Agass, David Mant, Angela Coulter, Alice Fuller, Lesley Jones

Abstract

***Objective*—To assess attendance at and the characteristics of patients attending health checks for cardiovascular disease offered in a general practice over a period of five years (1984-9).**

***Design*—Medical record audit and postal questionnaire survey.**

***Setting*—One general practice in Oxfordshire with a socially diverse population.**

***Participants*—1101 Men and 1110 women aged 35-64 registered with the practice.**

***Main outcome measures*—Age, sex, marital state, social class, smoking habits, alcohol consumption, and diet.**

***Results*—Of the 2211 men and women in the target age group (35-64) in 1989, 1458 (65·9%) had been offered screening and 963 (43·6%) had attended for a health check. Attenders were more likely to be women, aged ≥45, married, non-smokers, and of higher social class than patients who did not respond to the invitation. The relative likelihood of non-attendance was 1·24 for smokers, 1·20 for the overweight, 1·16 for heavy drinkers, and 1·28 for those with a less healthy diet, even after adjustment for age, sex, marital state, and social class.**

***Conclusions*—After five years of offering health checks, opportunistically (to men) and in the context of cervical smear tests (to women), less than half of the eligible patients had attended. The likelihood of acceptance of an invitation to attend was inversely related to the patient's cardiovascular risk for all factors measured except age. A coherent strategy to reduce cardiovascular disease depends on more careful targeting of scarce health service resources and more emphasis on public health measures (such as dietary regulation and tobacco taxation). Doctors should be careful not to absolve the government of its public health obligations by substituting unproved preventive interventions aimed at the individual patient.**

Berinsfield Health Centre, Berinsfield, Oxford OX9 8NE
Deborah Waller, MB, *general practice trainee*
Martyn Agass, MRCGP, *general practitioner*

Imperial Cancer Research Fund Practice Research Group, University Department of Community Medicine and General Practice, Gibson Building, Radcliffe Infirmary, Oxford OX2 6HE
David Mant, MRCGP, *clinical lecturer in general practice*
Alice Fuller, BSC, *research officer*
Lesley Jones, BA, *computer scientist*

Unit of Clinical Epidemiology, University of Oxford, Oxford
Angela Coulter, MSC, *primary care research officer*

Correspondence to:
Dr Mant.

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Introduction

The government has made it clear in its white paper *Promoting Better Health* that it will require general practitioners to participate further in preventive care and health education.[1] The new contract states that general practitioners will be obliged, under their terms of service, to provide preventive services for all patients aged 16-74 years.[2] Sessional fees will be introduced for health promotion clinics (for example, well person, heart disease, antismoking, alcohol control, diet management, stress management, and diabetes). The value of these activities remains a matter of debate, but even in subjects that are comparatively uncontroversial, such as screening for hypertension, there is apprehension that Hart's inverse care law[3] will prevail and that patients at highest risk will not take up the services offered. Pill *et al* have characterised those who attend preventive clinics as "the worried well."[4 5]

At Berinsfield Health Centre the treatment room nurses have been offering health checks to men and women aged 35-64 years for five years. The protocol for these checks is based on the model of opportunistic screening for cardiovascular risk factors that was developed at the Oxford Centre for Prevention in Primary Care[6 7] and has since been adopted by many general practices in Oxfordshire and further afield. One of the fundamental tenets of this model is that opportunistic invitations to patients attending their general practitioner for routine consultations are an effective means of providing preventive services to all patients.

A record has been kept at the health centre of all invitations to attend a health check during the past five years, and therefore it has been possible to assess whether this assertion is true. Berinsfield has two advantages (other than good record keeping) that have helped in characterising attenders and non-attenders at health checks. Firstly, the practice, which lies about 16 km south of Oxford, has a diverse population. About half of the patients live in Berinsfield itself, which was developed as a local authority housing estate in the early 1960s on the site of a disused airfield. Residents of this estate are mainly from social classes III and IV, which contrasts with the bias towards social classes I and II of the remaining practice population, which is distributed among 10 villages within a 6 km radius of Berinsfield. Secondly, a lifestyle survey was sent to all patients in 1987 asking them about their smoking and