PRACTICE OBSERVED

Practice Research

Provision of first contact care out of hours in four urban areas in England

B T WILLIAMS, R A DIXON, J P NICHOLL

Abstract

In a typical two week period in 1984 in three urban areas with general practitioner deputising services roughly 40% of first contact patient encounters out of hours were with hospital accident and emergency departments, and only a quarter were with general practitioner deputising services, although 47%, 64%, and 97% of general practitioners in the areas had permission to use such services. Roughly a third only of the encounters were with the practices themselves, and even fewer occurred overnight (11 pm-7 am). In a fourth urban area where 68% of general practitioners formed an out of hours cooperative rota a third of the encounters were with the accident and emergency department and half (more over) were with the rota. The presence of a woman practitioner in a practice and large partnerships of four principals or more were associated with an increased proportion of encounters with the practice itself.

Under prominence may have been given to the role of deputising services in out of hours care. Paradoxically, the use of general practitioner cooperatives may result in even less personal care being given by the patient's own practice.

Introduction

In 1983 public disquiet about some of the commercial general practitioner deputising services led to a government review of their operation.¹ A year later the Department of Health and Social Security issued revised guidelines on the standards of performance required and on the extent to which general practitioners might use them. At 1 October 1983 just over half of general practitioners in the areas of England and Wales were members of commercial deputising services operated with permission to use them. DHSS, personal communication). There is, however, no information published routinely on the extent to which they are used.

In some areas in England and Wales general practitioners form cooperative rotas (cooperatives), for out of hours care, each general practitioner being on call relatively infrequently. The cooperatives operate like deputising services but are non-profit making. In a cooperative cover is provided by general practitioner principals. Hospital accident and emergency departments provide first contact (primary) care around the clock. These are entirely appropriate for some problems—for example, injuries from road traffic accidents. For others, the clinical problem may have been within the scope of the general medical services.

Although out of hours contact rates with one or other of these agencies have been reported separately for different areas from time to time, there is no record of the way out of hours care is apportioned among them. First contact care out of hours was therefore studied in four large urban areas in the Midlands and the north of England, having a combined population of 1.3 million, in October 1984 at the time family practitioner committees began to implement the new DHSS guidelines for deputising services. Areas A and B were served by the same commercial deputising service and area C by a different one. Of the 271 general practitioner principals in area A, 175 (64%) had permission to use a deputising service as did 106 (97%) of the 110 principals in area B and 63 (47%) of the 135 principals in area C. Area D was the main urban centre of an

Medical Care Research Unit, Department of Community Medicine, University of Sheffield Medical School.

B T WILLIAMS, MD, FRCP, senior lecturer and unit director.

R A DIXON, BSc, PhD, senior lecturer in medical statistics.

J P NICHOLL, BA, MSc, statistician.

Correspondence to: Professor B T Williams, Department of Community Medicine, Beech Hill Road, Sheffield S10 2BQ.

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administrative county. It had no commercial deputising service, but 55 (67%) of the town's 82 general practitioner principals formed a cooperative. Area A had three hospital accident and emergency departments (one in a children's hospital); the other areas each had one.

This paper reports the apportionment of first contact care in the four settings.

Method

"Out of hours" was defined for this study as 1900 to 0800 Monday to Friday, and 12 noon Saturday to 0800 Monday. A two week period in October 1984 was selected as a typical non-vacation period with an average morbidity pattern.

All general practitioner principals and their assistants and trainees were asked to record data in a standard form on each call received in the relevant time periods when they were on call (including those received for them by, for instance, a family member or receptionist). The doctor recorded the patient's name, sex, and age, the time that the call was received but no clinical data, and whether he or she visited the patient and whether he or she dealt with the call entirely or referred it elsewhere. The expected duty rosters for the two week period were obtained in advance from the practices. All practices were reminded by telephone about recording out of hours contacts immediately before and during the study period.

The identifying data (but no clinical data) and the time of contact were abstracted from the records of the deputising services or cooperatives for patients of general practitioners in the survey areas. Patients who attended the accident and emergency departments in the relevant time periods were identified from the department registers. Those who attended again by arrangement and those who presented for arranged admissions were excluded. Non-clinical data were collected for patients of the general practitioners in the survey areas who were identified from the registers, clinical records, or, subsequently, from the files of the family practitioner committees. Patients whose clinical problems could realistically have been dealt with only in an accident and emergency department ("hospital only" cases) were defined as those who were incapacitated in a public place (such as the street or workplace), those who were in road traffic accidents, and those who were brought by ambulance from an outdoor location. Patients who did not fit these criteria were considered to have been theoretically available for contact with the general medical services ("non-hospital" cases). Those for whom the records gave insufficient data to judge were termed "unclassified."

Details of the general practitioners and their practices were obtained from published sources and inquiries to the family practitioner committees. The practice and not the practitioner was chosen as the unit for analysis as, in many practices, patients do not identify with a particular doctor and vice versa. This meant that all the general practitioners in a practice had to participate throughout the two week period for the practice to be classified as fully participating. The DHSS provided aggregated numbers of patients for practices in each area, at 1 October 1984, according to the size of the partnership and whether the practice had fully participated. A "first contact" was arbitrarily defined as the only contact made by a patient with any of the agencies in any particular out of hours period, or one for which a previous out of hours contact had occurred more than six hours before.

Results

COOPERATION

Of the 644 eligible general practitioners in the survey, 602 were principals and the remainder were assistants or trainees. Only 32 of the 644 (5%) refused from the survey to participate, but a further 58 (9%) withdrew during the survey, and for a further 21 (3%) participation was incomplete—for example, forms were not returned for some of the calls received. So 533 doctors (83%) cooperated fully (inter area range 71%-94%). The participation rate for general practices was, for reasons explained above, inevitably lower. Of the 224 eligible practices, 163 (72%), with 910 000 patients, participated fully (inter area range 64%-88%).

PATIENT CONTACTS

There were 9466 recorded contacts with any location in the four areas during the two week period. Of these, 3170 were first contacts by patients of fully participating practices in the defined out of hours periods. Table 1 gives reasons for excluding the other 4296 contacts.

Of the 5170 first contacts in the four areas, 1424 (27.5%), were with a general practice, of which 92 were with practices other than the patient's own; 1409 (27.2%) were with a deputising service or cooperative, and 2337 (45.2%) were with an accident and emergency department. Among the last group 288 patients were classified as hospital only cases (see above), and another 357 were unclassified. These 357 cases were assumed to be non-hospital cases. Excluding just the 288 hospital only cases, therefore, the apportionment of the other 4882 first contacts in the four areas was: general practitioners 29%, deputising services or cooperative 29%, and accident and emergency departments 42%.

TABLE 1—Numbers of recorded contacts with general practitioners, deputising services, or cooperatives, or accident and emergency departments in four areas

Location of contact	Number	%
Not included	4296	45.8
Not fully participating practices	2220	23.5
Not out of hours	726	7.6
Second or subsequent contact	100	1.0
Identical time for two previous contacts*	100	1.0
Patients of non-hospital practice	288	3.0
Patients not registered with a general practitioner	60	0.6
Patients' general practitioner not known	220	2.3
Patients' practice not known	15	0.2
Not first contacts out of hours studies	1570	16.4

*For 5170 contacts by general practitioners there were 4296 contacts for the same patients in deputising service records. These do not include cases where the general practitioner was not on duty. In such cases the deputising service would have recorded the contact and transferred data onto their own forms from copies received of all calls to their by the deputising service.

In each of the areas with a commercial deputising service (A, B, and C) a higher proportion of contacts was with a practice (29%-41%) than with the deputising service (20%-26%); table III) despite the wide variation in the proportion of doctors in these towns who were permitted to use a deputising service. More than half the contacts in area D were with the cooperative and only 13% with the patient's practice. Altogether, however, only a third of the contacts in area D were with hospital doctors, a lower proportion than anywhere else.

During the night (2300-0700) the practices had proportionately fewer of the contacts than in the remainder of the out of hours period, except in area D, where there was little difference. In areas A, B, and D, where two thirds or more of the general practitioners used deputising services or a cooperative, these agencies had appreciably more of the night contacts than did the practices. In area C, where a minority of general practitioners had permission to use the deputising service, the shift at night was towards the accident and emergency department.

Area A had the highest first contact rate out of hours (574/100 000 population), and nearly half these contacts were with accident and emergency departments compared with one third in area D, which had the lowest contact rate (470/100 000).

Table III examines three possibly interrelated characteristics of the practice partnerships: sex, age, and number of partners; for their influence on the proportion of first contacts made with the practices. Multiple logistic regression was used to confirm the following associations apparent in the table. When the other tabulated characteristics of the practice are held constant practices with at least one female principal are associated with a higher proportion of first contacts being made with the practices ($\chi^2=78.1$, df=1, $p<0.001$). The association must be indirect, however, since in these practices with at least one female principal the 39% of doctors who were women received a quarter of all the first contacts made with the practices, less than their expected share.

Practices with four or more principals were associated with a higher proportion of first contacts being made with the practices ($\chi^2=29.1$, df=1, $p<0.001$). "Older" practices, in which half or more of the principals first qualified before 1968, did not differ from "younger" practices in this respect ($\chi^2=1.1$, df=1, $p>0.1$).

Estimates of the completeness of the coverage of first contacts by the patients of the fully participating practices (other than with accident and emergency departments) were made using claims for fees for night visits (2300-0700) made during the two week period. The aggregate number of first contacts with general practitioners (on home visits only) and first contacts with a deputising service or cooperative slightly exceeded the number of claims received by the family practitioner committees in three of the four areas as follows: area A 327 contacts and 219 claims; B 99 contacts, 86 claims; C 78, 89; D 111, 94. After allowing for the small proportion of calls to a deputising service that were known not to result in a visit—about

9% on average—the concordance in those three areas would have been even greater.

The possible bias in apportionment introduced through the loss of non-participating practices was explored in three ways. Firstly, since the failure of only one general practitioner to participate fully led to the exclusion of the entire practice, the risk of underrepresentation of practices with several doctors was greater. This, however, did not transpire, and overall, 42 (70%) of the 60 one doctor practices participated fully as did 34 (65%) of 52 practices with two doctors, 36 (77%) of 47 practices with three doctors, and 44 (68%) of 65 practices with four or more doctors.

Secondly, the first contact rates with deputising services in the entire out of hours period were consistently higher among non-participating than participating practices (table IV). The total level of demand in the non-participating practices may simply have been altogether higher. Alternatively, a higher proportion of demand may have been met by the deputising services, which would mean that the contribution of the deputising service may have been underestimated in our study of participating practices only. Thirdly, first contact rates with accident and emergency departments were also slightly higher among non-participating practices, so

we may similarly have underestimated the true contribution of these departments.

Finally, aware of the adverse publicity given to some deputising services, participating general practitioners may, under surveillance, have used deputising services to a lesser extent than usual. We cannot verify this, but if it is true it suggests that we have further overestimated the contribution of the practices.

Discussion

Cartwright and Anderson found that out of hours cover that is organised within the practice is the most popular option with patients, followed by cover from other practices, and, least popular, cover from deputising services.² In all four areas studied only a minority of first contacts were made with the patient's own practice, but in the three areas with deputising services the practices nevertheless handled more contacts than the deputising services in

TABLE II—Apportionment: % of 4882 first contacts out of hours, excludes hospital only cases

	Area A		Area B		Area C		Area D	
	2300-0659	All out of hours	2300-0659	All out of hours	2300-0659	All out of hours	2300-0659	All out of hours
General practice	22	31	29	25	33	35	42	41
Deputising service or cooperative	17	20	24	22	26	18	20	58
Hall or more of patients qualified	41	48	47	35	41	47	38	36
Accident and emergency departments	44	16.7	21.8	16.7	49.9	19.7	79.2	48.9
Total No. 100%								
First contact rate per 100 000 population in two week period	120	154	174	104	185	121	528	387
Proportion of fully participating practices	87/121		23/35		29/42		67/88	
% of all general practitioners in area permitted to use a deputising service or a cooperative	64		97		67		68	

TABLE III—Percentages and numbers they are based on, of first contacts* made with the practices, according to characteristics of the practice

	Area A		Area B		Area C		Area D	
	No. of principals	%	No. of principals	%	No. of principals	%	No. of principals	%
Age structure of partnership								
More than half of principals qualified before 1968 ("younger" practice)	1	32	143	42	100	100	1	1
Half or more of principals qualified before 1968 ("older" practice)	4	12	14	10	4	12	4	12
Number of principals								
1	1	32	143	42	100	100	1	1
2	4	12	14	10	4	12	4	12
3	1	3	1	1	1	1	1	1
4 or more	1	3	1	1	1	1	1	1
Sex of principals								
At least one female principal	1	32	143	42	100	100	1	1
All male principals	4	12	14	10	4	12	4	12

*All 4882 contacts by patients of fully participating practices in which all characteristics are known. All male principals in one of more women, appear partly in percentages in which one or both has a dagger. In these cases those patients in which one of both percentages is based on zero first contacts have, necessarily, been excluded from the multiple logistic analysis.

TABLE IV—Comparison of fully participating (FP) and other practices

	Area A		Area B		Area C		Area D	
	FP practices	Others	FP practices	Others	FP practices	Others	FP practices	Others
Aggregate first contact rate per 100 000 population in two week period	160.2	146.7	160.3	99.2	147.1	108.6	196.1	24.6
First contact rate per 100 000 population in two week period								
Deputising service or cooperative	14.7	15.6	14.0	20.1	10.8	16.0	NA	NA
Accident and emergency departments	26.9	27.4	22.4	29.6	20.8	22.9	15.9	16.8

NA, not applicable. In area D all practices using the cooperative were fully participating. No non-participating practices others used the cooperative.

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the out of hours period as a whole. On this evidence the proportion of general practitioners in an area who have permission to use a deputising service is not a true indicator of the use that general practitioners make of the service.

From the one example included in this study it appears that where such a cooperative operates the patient is least likely to see a doctor from his or her own practice, although presumably the patient will see a general practitioner principal, which may not be the case if a deputising service is used. Yet the use and operation of deputising services are governed by a nationally applied code of practice though none governs a cooperative.

As the proportion of women medical graduates approaches 50% can we expect an effect on the apportionment of first contact care, perhaps on the grounds that family commitments in the early years will limit the woman doctor's capacity to provide a personal service? It seems not to matter. In all four areas the practices with at least one female principal met higher proportions of the demand from their patients than practices in which the doctors were men, although the women met less than their expected share. It seems, therefore, that practices that are more committed to personal doctoring tend to include a female principal despite this smaller contribution.

The compulsory retirement of general practitioners at 65 is seen as a way of reducing the number of doctors who resist organising into group practices and who depend excessively on deputising services. There were too few elderly general practitioners in the survey areas to observe reliably how their patients received out of hours care. The age structure of a practice was not decisive, however, in determining the proportion of the demand met by the practice itself. In particular, youthfulness was not associated with the provision of the service by the practice itself. This may in part be explained by more and more young recruits to urban general practice expecting that personal out of hours commitments shall not be large.

Patients have sometimes preferred to obtain primary care from hospital accident and emergency departments, especially in circumstances of social predicament.³ Again, there are some conditions which they believe that general practitioners cannot handle effectively, and some also believe that it is inconsiderate to trouble general practitioners out of hours or that they would not be available

anyway. In each of the areas studied the accident and emergency department was the point of first contact on at least one third of occasions. This will exercise those who organise training for the specialty of emergency medicine and those general practitioners who try to educate their patients to use medical services with discrimination.

Out of hours care must be seen in perspective, however. Though the amount of primary care handled by the accident and emergency departments during normal hours is not known, if we assume an annual rate in general practice of three consultations per patient the fully participating population of 910 000 in the four areas would have had a total of 105 000 consultations in the two week period of the survey. Compared with the 4882 out of hours first contacts by the patients of these practices with any of the agencies this is a ratio of 21.5 to 1.

In the light of this and the other issues of out of hours first contact care it has been raised by these findings it may seem that undue prominence has been given by critics to deputising services, though it is important that the standards of deputising services' operations should be assured.

We are grateful for the cooperation of the general practitioners, directors of deputising services and the cooperative rota, consultants in charge of the accident and emergency departments, administrators of the family practitioner committees, and the local medical committees concerned.

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Unhelpful remarks

Miss G, a 47 year old woman, had spent the best part of her life caring devotedly for her aged mother. She was devastated when her mother died. The process of grieving had been long and painful. Five months after her bereavement I asked Miss G to discuss the comforting words of well-meaning friends and relatives. She produced a list of 22 "unhelpful remarks." For example:

The philosophical
We all have to go sometime.
God goes and I will take care of you.
It's just one of those things.

About the dead
You never forget them.
They're at peace and not in any more pain.
It's worse for them than it is for you.
Oh well, they had a good innings' after asking me:

The older
You must put yourself together or you'll crack up.
You mustn't cry, you'll make yourself ill.
You must think of yourself now, that's what they would want.
You must go out and enjoy yourself, you never know when it's your turn.
Stay in for a few weeks without seeing anyone.

The last things
You can't grieve forever, sad after three weeks.
You've got to get on with your life.
Oh well, it's all for the best, you needed the break.

Miss G's list is a salutary reminder for anyone trying to comfort the recently bereaved.—JANE MURRAY, general practitioner, London.

Multicultural medicine

Fever—Lancasters were expected to recover from a cold fairly rapidly, and little sympathy was extended to the sufferer. But if a day or so the conditions persisted it became a "fever" and as such was a much more serious condition. The treatment changed from the sweat it out and feed it regime to starvation tactics. A fever was not supposed to be fed, simple eating pleasures were not allowed, and tepid sponging became the prescribed action. If this failed a second opinion was sought from a knowledgeable neighbour, and this very often meant that a second principle was invoked, which was the necessity of ridding the system of the offending poison. A break purgative was therefore the remedy. What terror! No wonder we all recovered rapidly at that point.

Cough—The Lancashire climate, among other things, generated a prolific variety of cough cures. The main resource was of course, a "bottle"—usually containing an opium product and often fairly addictive. But more homeopathic cures were available—for instance, inhalations of "Trass's balm," gone grass rubbed liberally on the chest, and an onion in a sock pushed under the nose. My parents believed in the efficacious effect of tar fumes, and I well remember on a summer holiday by the sea spending most of my time sniffing noxious fumes in a gas works to finally "cure" my persistent cough.

Colds—As a boy in Lancashire the accepted wisdom for treating a cold was to sweat it out. This was achieved by hot drinks, sometimes alcoholic, but more often in our house a ginger bread concoction which was almost undrinkable and labelled "firewater." Hot baths, extra bedclothes, and built up fires kept the process. It was also considered necessary to feed the cold, often with invalid food such as gruel made from oatmeal flour and "grouts" simmered with milk. Barley water was the preferred fluid, with occasional freshly made "berry" served in an old brown beef tin.

F. B. WILLIAMS, professor of general practice, Nottingham.