

# Telephone advice for out of hours calls in general practice

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**SUMMARY.** Telephone advice in out of hours general practice consultations has been infrequently described in the United Kingdom. Data from 13 general practices (77 doctors) in north London were collected over four-week periods. Of the 970 calls recorded, 86% were managed directly by the practice, and 14% by a deputizing service. The percentage of calls managed by telephone advice varied from 5% to 57% (mean 37%). Use of deputies increased at night, but general practitioners remaining on call maintained their telephone advice rates. In all but one practice trainees also gave telephone advice, but the overall proportion of calls managed by trainees (33%) was lower than that of principals (48%). Children and adults under 60 years, more frequently received telephone advice than elderly patients, as did patients noted by the general practitioners as habitual callers compared with other patients.

## Introduction

STUDIES of out of hours visits by general practitioners and comparisons with visits by deputy doctors from a cooperative rota or a commercial service<sup>1-3</sup> have shown substantial, and largely unexplained, variations in rates; but they have described the visits, that is the response rather than the requests for care. Differences in the use of telephone advice has been suggested as an explanation for variations in night visiting rates between practices,<sup>4</sup> but differences between practices in both visiting and telephone advice have not been studied. Marsh has commented that 'the use of telephone advice is almost undocumented in the UK'.<sup>5</sup> This report describes the use of telephone advice during one month in 13 north London practices associated with University College and Middlesex School of Medicine.

## Method

As part of a study of patients' views of out of hours care,<sup>6</sup> 59 general practitioner principals and 18 trainees agreed to record data on their out of hours calls in each of the 13 practices. The data were collected during four-week periods between January and June 1986. Data for each patient were recorded by the general practitioners on an A5 card, similar in design to that used by Cubitt and Tobias.<sup>7</sup> Items recorded included: the stated reason for the call, whether telephone advice or a visit from the general practitioner or deputy was made, the doctor's assessment of the problem, the treatment and advice given, whether the patient was known to the general practitioner (yes, no or by repute only) and whether the patient habitually called out of hours. The necessity of the call was rated on a five point scale from 1 (absolutely necessary) to 5 (completely unnecessary). The

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researcher (M.B.) supervised the return of the cards from the general practitioners on call at night or at the weekend. Data were also obtained about the calls transferred from the practices to four London deputizing services for the same periods.

Out of hours calls were defined as being from when the surgery closed in the evening (or Saturday morning) until it reopened in the morning. When surgeries were not open, all the practices had calls intercepted by answering services and rerouted to the duty doctor or to a deputizing service. Some practices would identify the name of the caller from the answering service before deciding whether to accept the call or pass it to the deputizing service.

The data were coded, and analysed using SPSS-PC.<sup>8</sup> Calls were grouped for analysis: by age (children 0-15, adults 16-59, elderly 60+ years); by time (daytime Saturdays and Sundays 07.00 to 18.59, evenings 19.00 to 22.59, nights 23.00 to 06.59); and by management of the call (general practitioner visit, general practitioner telephone advice or deputy visit). Statistical analysis used chi square tests.

## Results

A total of 970 calls were made, averaging 74.6 per practice per month and 16.4 per general practitioner principal per month (12.6 per general practitioner including trainees). Practices showed marked differences in call rates. Telephone advice ranged from 5% to 57% of calls, with a mean of 37%; general practitioner visits from 20% to 65% of calls, with a mean of 49%; and deputy visits from no calls to 75%, with a mean of 14% (Table 1). All practices gave telephone advice at some time. Practices with a high use of telephone advice used deputizing services less than practices rarely giving telephone advice. Two of the three practices which never used deputizing services handled more than half of the consultations by telephone, while the other practice gave telephone advice to one in three out of hour callers (Table 1).

General practitioner principals answered 580 calls (60%), trainees 250 (26%) and deputies 140 (14%). Although there were

**Table 1.** Management of out of hours calls by practices.

Practice	Total no. of calls	% of calls managed by:			No. of calls per GP in the practice <sup>a</sup>
		Telephone	GP visit	Deputy visit	
A	50	6	50	44	12.5
B	72	32	61	7	8.0
C	193	54	46	0	21.4
D	152	57	43	0	16.9
E	99	35	65	0	11.0
F	21	10	24	67	3.5
G	21	38	48	14	4.2
H	62	53	29	18	10.3
I	52	29	56	15	13.0
J	40	5	20	75	10.0
K	98	28	56	16	19.6
L	38	18	39	42	9.5
M	65	23	65	12	7.2
All	963 <sup>b</sup>	37	49	14	12.2

<sup>a</sup> General practitioner principals and trainees. <sup>b</sup> Data missing for seven calls.

fewer trainee general practitioners than principals, they did relatively more on-call work: 13.9 calls per trainee per month, compared with 9.8 calls per month for principals. Trainees gave telephone advice in all but two practices (Table 2), but they made less use of telephone advice than principals, using it in 33% of the calls they managed compared with 48% ( $P < 0.001$ ). Practices with a higher proportion of calls managed by trainees had fewer calls overall.

**Table 2.** Management of out of hours calls by general practitioner principals and trainees.

Practice	Total no. of calls	Principals		Total no. of calls	Trainees	
		% managed by:			% managed by:	
		Tele- phone	GP visit		Tele- phone	GP visit
A	20	10	90	8	13	87
B	29	45	55	38	26	74
C	147	59	41	46	37	63
D	108	60	40	44	48	52
E	61	36	64	38	34	66
F	3	67	33	4	0	100
G	2	100	0	16	38	62
H	47	66	34	4	50	50
I	44	34	66	0	0	100
J	3	0	100	8	25	75
K	63	35	65	19	26	74
L	16	31	69	6	33	67
M	37	30	70	20	20	80
All	580	48	52	250	33	67

The use of deputies changed with the time of the call (Table 3). Daytime calls to all ages of patients were usually covered by the practices themselves, but deputizing visits rose from 11% of calls during the daytime and 10% in the evenings to 26% at night. Telephone advice was relatively stable at 35–42% of all calls throughout the three time periods; but as a proportion of those patients handled directly by the general practitioner, telephone advice rose from 39% in the daytime, through to 47% in the evenings and 47% at night. General practitioner principals and trainees took similar proportions of calls over the three time periods.

Out of hours calls were most common for children (41%), while 21% of calls were for elderly patients. For both groups, these were higher proportions of consultations than might be expected in the general population. Children (38%) and adults (40%) were proportionately more likely to receive telephone advice than elderly patients (27%), who in turn were more likely than other age groups to receive a general practitioner visit. The pattern of care changed over time most markedly for elderly patients: deputy visits rose from 9% during the day to 29% at night, while general practitioner visits fell from 64% to 49% (Table 3).

Some data were recorded only about the 830 patients in contact with general practitioners, and not with the deputizing services. The general practitioners noted that they knew less than half of the patients they visited or advised by telephone. However, telephone advice was given as often to patients known to the general practitioner (43%) as to those not known (41%). Children were slightly more likely and elderly people were much more likely to be visited and less likely to receive telephone consultations if they were unknown to the general practitioner, than were adults of working age (Table 4).

Eighty four (10%) of the patients were classified by their doctors as habitual callers; they were of all ages (35 children, 20

**Table 3.** Management of out of hours calls by age group of patient and time of call.

Patients' age group and time of call	Total no. of calls	% of calls managed by:		
		Tele- phone	GP visit	Deputy visit
<i>All ages</i>				
Day	374	35	55	11
Evening	362	42	48	10
Night	227	34	40	26
All times	963	37	49	14
<i>0–15 years</i>				
Day	137	33	51	16
Evening	160	43	47	10
Night	84	37	33	30
All times	381	38	45	17
<i>16–59 years</i>				
Day	133	42	51	7
Evening	126	40	46	13
Night	95	36	42	22
All times	354	40	47	13
<i>60+ years</i>				
Day	95	26	64	9
Evening	63	32	65	3
Night	41	22	49	29
All times	199	27	61	12

NB: For 'All ages' data missing for seven calls. For age breakdown data missing for 36 calls.

**Table 4.** Management of out of hours calls by age group of patient and whether patient known to general practitioner.

Patient's age group and whether known to GP	Total no. of calls	% of calls managed by:	
		Telephone	GP visit
<i>All ages</i>			
Patient known to GP	366	43	57
Patient not known	400	41	59
<i>0–15 years</i>			
Patient known to GP	148	47	52
Patient not known	154	44	56
<i>16–59 years</i>			
Patient known to GP	121	43	57
Patient not known	174	47	53
<i>60+ years</i>			
Patient known to GP	97	38	62
Patient not known	72	22	78

NB: Data missing for 64 calls.

adults, 22 elderly, data missing for seven patients). Habitual callers received more telephone advice than other patients, but the difference was not significant (54% compared with 42%). Habitual callers received telephone advice and general practitioner visits as often at night as in the day (Table 5). Thus, habitual callers did not contribute to the overall fall in general practitioner visiting rates at night time. Data were not available to assess whether the habitual callers contributed to the increased proportion of deputy visits at night.

The general practitioners noted on the record card that they advised 66 of the patients that they managed (8.0% of 830 patients, excluding those visited by a deputy) to go to hospital. The majority of these (50) were patients who received general

**Table 5.** Management of out of hours calls by habituality of caller and time of call.

Regularity of caller and time of call	Total no. of calls	% of calls managed by:	
		Telephone	GP visit
<i>Habitual callers</i>			
Day	33	52	48
Evening	27	56	44
Night	24	54	46
All times	84	54	46
<i>Other callers</i>			
Day	300	37	63
Evening	299	46	54
Night	145	46	54
All times	744	42	58

NB: Data missing for two calls.

practitioner visits, but some (16) were patients who were given telephone advice only ( $\chi^2 = 9.78$ ,  $df = 1$ ,  $P < 0.01$ ). Trainees referred 23 of the patients they dealt with (9%) to hospital and principals referred 43 of the patients they managed (7%, difference not significant); trainees and principals referred similar proportions of patients directly at a visit and via telephone advice only.

## Discussion

The range of responses to out of hours calls reflects variations that have been reported in other areas of primary care — for example, prescribing and use of hospital services. Nevertheless, we recognize the limitations in interpreting the results of the present study. Teaching practices could be among the better organized in north London and thus have lower than average use of deputizing services; age, socioeconomic differences and sampling variation within a relatively short period of data collection could explain some of the differences in rates found between practices; and, despite considerable effort spent in encouraging general practitioners to complete and return their forms, we cannot be sure that all calls were recorded.

Patients normally contact their general practitioner out of hours by telephone. We discussed out of hours policies informally with members of the practices. Some had rules for patient groups, for example, always visiting children under one year. Some expect their trainees to consult with their trainers if they do not intend to visit. Other practices aimed to teach patients to learn to cope with self-limiting illness and to gain from that experience, within the bounds of safe practice.

We found that overall half of the patients received a visit from the general practitioner, one third received telephone advice, and one sixth a visit from a deputy. The proportion of calls managed with telephone advice only varied between practices from 5% to 57% of calls. Two reports from single practices in the UK indicate higher rates. Marsh<sup>5</sup> in a northern urban practice, recorded telephone advice for 58% of calls, and Hobday,<sup>9</sup> in a rural southern practice for 74% of calls. Our study is probably more representative of ordinary urban general practice. We found that, during the night, visits by deputies for the 13 practices together were for a lower proportion (26%) of calls than the national average of 40%.<sup>10</sup>

Our data confirm the suggestion, made by Sheldon and Harris,<sup>4</sup> that telephone advice is less frequently used the more that deputizing services are used. General practitioners often gave telephone advice when answering night calls, compared with the standard practice of deputizing services to send a doctor for all calls. The overall rate of hospitalization for patients managed by the general practitioners, 8.0%, was close to the level of 8.8% recorded by Marsh,<sup>5</sup> and we also found, as expected, that pa-

tients receiving general practitioner visits were more likely to be admitted to hospital than those receiving telephone advice.

In a recent population based survey in the north west of England, Allen and colleagues<sup>11</sup> found that patients would like more telephone access to their doctors during ordinary hours, and they see this as one of the most important improvements a practice could offer. If telephone access during the daytime is difficult, some patients may learn to use the general practitioner on call at the evening and weekends as an 'advice service'. Differences in practice style that contribute to the variations observed may exist even between practices sharing the same premises.<sup>3</sup>

Patients do not always find it easy to contact their doctor out of hours. Only two thirds of inner London practices use telephone answering services to receive calls,<sup>12</sup> but all the practices in our study did so. Patients who have telephones can have their call returned by the duty general practitioner, but a call from a public telephone box may require the general practitioner to make a visit. Nevertheless, 80% of adults in the north west of England have a telephone in their house,<sup>11</sup> and we can expect this proportion to continue to rise.

The results of our study highlight the disadvantages of deputizing services. Deputy managed calls lead to higher night visiting rates than general practitioner managed calls, partly because deputies do not give telephone advice. There is little disincentive to visiting since the cost of the deputy visit is generally recovered from the night call fee, resulting in higher costs to the health service. Practices also receive substantial additional income for having a trainee,<sup>13</sup> and their trainers benefit by needing to answer fewer calls. We found that practices using deputizing services appeared to provide fewer opportunities for training in out of hours care. Perhaps the relationship between financial incentives and training needs in out of hours care should be reconsidered.

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