

# Night calls: an Irish dimension

BRIAN COFFEY, MB, MRCCP

General Practitioner, Cork, Republic of Ireland

**SUMMARY.** Night calls made by 17 general practitioners in Cork in the Republic of Ireland in 1980 were analysed and compared with similar studies in the UK. There were 323 night calls: 11 per cent were classified as irresponsible, 59 per cent of which involved patients in social classes IV and V who make up 26.5 per cent of the population of Cork. Young children and the elderly had more calls than expected, and significant sex differences emerged in all age groups apart from the 45–65 age group. The incidence of night calls done comes towards the lower range of studies in the UK.

## Introduction

ALMOST all the studies on night calls published in the UK refer to the National Health Service.<sup>1-5</sup> This study compares night calls in a neighbouring country, the Republic of Ireland, where the health care system is different. The study was carried out in Cork, the second largest city in the Irish Republic, with a population of almost 140,000; it has a port and many light industries.

In 1980, 37 per cent of the population of Cork were entitled to General Medical Services (GMS). This scheme, which allows people to receive completely free medical services and drugs, is based on income and is means tested, hence it basically covers the poorer section of the community. Night calls were classified using Lockstone's classification of night calls.<sup>1</sup>

The aims of the study were:

1. to assess the urgency of night calls;
2. to find out whether a fee-paying patient was more or less likely to request a night call than a non-fee patient;
3. to analyse the patients by social class, age and sex.
4. to determine the incidence of night calls.

## Method

Seventeen general practitioners took part in the study, about a quarter of all general practitioners in the city of Cork. They were not randomly selected, but were chosen on a geographical basis so that every area was adequately covered. Seven doctors were in single-handed practices, the remainder in two-partner groups. All night calls—that is, calls requested between 23.00 and 07.00 hours—these doctors made in 1980 were recorded. After each call, printed questionnaires were

filled in with the patient's code number, address, age, sex, marital status and occupation; time and date of call; how the request was made and who made it; whether the patient was a GMS patient or not; the diagnosis; the exact treatment given, including non-drug therapy; the outcome; the time taken for the visit.

The calls were categorized according to Lockstone's criterion of urgency:<sup>1</sup>

*Group 1: Genuine emergencies.* A genuine emergency was defined as a serious condition clearly requiring urgent treatment to save life, to prevent further unacceptable and potentially serious deterioration or to alleviate severe pain and distress. Patients found dead on arrival or who died under treatment were included in this group.

*Group 2: Unnecessary but reasonable calls.* Calls were placed in this group if the doctor felt that on examination the patient proved not to be a genuine emergency—that is, he/she would not have died or deteriorated without immediate treatment—but did have a problem requiring a fairly urgent medical opinion and therefore the call was regarded as reasonable.

*Group 3: Irresponsible calls.* No treatment was given in this group.

## Results

There were 323 night calls in 1980, involving 325 patients: 122 calls (34.7 per cent) were classified as genuine emergencies, 176 (54.5 per cent) as unnecessary but reasonable calls and 35 (10.8 per cent) as irresponsible.

Out of the 323 calls, 90 (28 per cent) were to GMS patients and the remainder to private (non-GMS) patients. Eight (9 per cent) of the 90 GMS calls were classified as irresponsible, compared with 27 (12 per cent) of the non-GMS calls, but a corrected chi-square test showed no significant difference ( $\chi^2 = 0.25$ ,  $df = 1$ ,  $P = 0.62$ ).

The social class of 287 out of 323 patients was determined, based on the occupation of the chief wage-earner in the family. A breakdown between social class and degree of urgency is shown in Table 1. A statistical test of the overall table including all three categories in the analysis showed a significant difference in the type of call by social class ( $P < 0.05$ ): social classes I and II together had more emergency calls than any other kind of call. Social class III had more reasonable calls than other types of call. Social classes IV and V together had more irresponsible calls than other kinds of call.

Regarding the time of the night that the calls came in, over half had occurred by 01.00 hours—34 per cent up to midnight, and a further 18 per cent between midnight and 01.00 hours. Similar numbers of calls were made on

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the different days of the week. May was the busiest month (40 calls) and October the quietest (13 calls). The calls were fairly constant throughout the remaining months (range 21 to 30 calls).

Table 2 shows the distribution of calls by age and sex of patients. Comparing all patients seen the age structure is clearly different from the overall population ( $\chi^2 = 139.26$ ,  $df = 4$ ,  $P < 0.001$ ). Higher rates of consultation are apparent at the extremes of the age spectrum.

The 1980 census in Ireland showed the general population of Cork to have a 50:50 male to female ratio for each age group up to 65 years; over 65 years of age the male to female ratio was 37:63. Table 2 shows that night calls involved a high male to female ratio for ages 0-4 years and 5-14 years, a low male to female ratio for ages 15-44 years and male to female ratio of close to 50:50 for ages 45-64 years. In the over 65 years age group, the low male to female ratio expected from the population structure is certainly not found here, as 55 per cent (31 calls) of the total calls involved elderly males, although they represented 37 per cent of the population.

The 113 emergency calls were classified into 'medical', 'surgical' and 'other'. Table 3 shows the 87 medical emergencies. The remaining emergencies are shown in Table 4.

In attempting to determine the incidence of night calls per 1,000 patients per year it was necessary to restrict the analysis to GMS patients, as they were registered with their individual doctors, unlike the non-GMS (private) patients. There were 90 calls made for a GMS

**Table 3.** Night calls classified as medical emergencies.

Diagnosis	Number of cases
Asthma	11
Myocardial infarction	8
Acute left-sided ventricular failure	7
Pneumonia	6
Died	5
Acute congestive cardiac failure	5
Acute lower respiratory tract infection	5
Acute upper respiratory tract infection	4
Epilepsy	4
Croup	4
Febrile convulsion	3
Gastroenteritis	3
Diabetic ketosis	2
Acute abdomen	2
Subarachnoid haemorrhage	2
Haematemesis	2
Accidental overdose	2
Acute gastritis	2
Coronary ischaemia	2
Jaundice	1
Abdominal colic	1
Pancreatitis	1
Urinary tract infection	1
Stroke	1
Cor pulmonale	1
Severe back pain	1
Septicaemia	1
Total	87

**Table 1.** Distribution of night calls according to social class of patient and classification of degree of urgency.

Social class	Number (%) of night calls			Total
	Emergency	Reasonable	Irresponsible	
I and II	30 (31)	43 (27)	4 (14)	77 (27)
III	35 (36)	70 (43)	8 (27)	113 (39)
IV and V	32 (33)	48 (30)	17 (59)	97 (34)
Total	97 (100)	161 (100)	29 (100)	287 (100)

$\chi^2 = 20.25$ ,  $df = 10$ ,  $P < 0.05$ .

**Table 2.** Distribution of night calls by age and sex of patients (Figures in parentheses are percentages.)

Age (years)	Males	Females	Total	Cork general population 1980 (n=138,267)
0-4	45	35	80 (25)	(9)
5-14	26	11	37 (11)	(21)
15-44	31	62	93 (29)	(44)
45-64	30	29	59 (18)	(17)
65+	31	25	56 (17)	(10)
Total	163	162	325 (100)	(100)

population of 9,068, giving an incidence of 9.9 calls per 1,000 GMS patients per year. Table 5 shows how this compares with similar studies in the UK.

### Discussion

The main conclusion from this study is that the great majority of requests for night calls are not unreasonable, and this agrees with similar studies in the UK.<sup>1-5</sup> There were slightly more irresponsible calls in Cork, but this may reflect doctors' attitudes to night calls. Some doctors in Ireland feel that irresponsible calls are more likely in GMS patients than private patients, but this is certainly not borne out here. Furthermore, the incidence of calls is much lower in Cork compared with the two city studies in Sheffield and Glasgow (Table 5), both of which were in deprived urban areas.

Communication may be a factor in the greater number of irresponsible calls in social classes IV and V than other social classes, since—as the survey showed among other things—in only 5 per cent of cases did the doctor speak directly with the patient when the call was requested. There is a belief (among doctors) that relatives often exaggerate the symptoms, especially if they think the doctor might be unwilling to come. It could be argued that a call to a patient requiring no treatment but fairly urgent medical opinion could at present be classified under either 'irresponsible' or 'unnecessary but

**Table 4.** Night calls classified as surgical emergencies.

Diagnosis	Number of cases
<i>Surgical emergencies</i>	
Renal colic	4
Biliary colic	2
Acute retention	2
Acute abdomen	2
Appendicitis	1
Acutely inflamed knee	1
Fractured rib	1
Head injury	1
<i>Other emergencies</i>	
Suicidal patient	2
Threatened abortion	2
Inevitable abortion	2
Premature labour	1
Postpartum haemorrhage	1
Pyrexia of unknown origin	1
Paranoid and violent patient	1
Violent with hallucinations	1
'Queer breathing' child	1
Total	26

reasonable'. During this survey the author discussed every call deemed 'irresponsible' with the particular doctor concerned. To this extent, there is a greater degree of reliability about the final classification. In only two cases did the author disagree with a colleague: in one of these the doctor agreed that he was perhaps being hard in regarding a particular call as irresponsible; in the other case the author accepted the classification of irresponsibility when the background circumstances were explained in detail to him. It is an undeniable fact, however, that some doctors find difficulty in regarding any night call as irresponsible. For instance, does genuine though inappropriate anxiety about a physically trivial problem constitute irresponsibility? Perhaps the time has come to review Lockstone's rather rigid classification.

A definite pattern found in other surveys<sup>6-11</sup> is apparent when night calls are recorded in order of time. The early peak over the first two hours is common to all studies, varying from 43 per cent to 52 per cent of the total. It seems that patients and their relatives feel the need for reassurance from the doctor before they settle down for the night.

Many surveys have shown a high demand for night calls among the elderly; <sup>6,8-11</sup> one difference here is the high incidence of calls to young children (aged 0-4 years)—25 per cent of all calls to a group representing nine per cent of the population (Table 2). Brotherston<sup>11</sup> has the only comparable data from 1959, with 11 per cent of his calls to this age group, although they represented only 10 per cent of his practice population. Are parents today more anxious about their young children's health? More recent figures would be interesting to compare.

Burrows in 1967<sup>9</sup> found that males in the age groups

**Table 5.** Comparison of the incidence of night calls per 1,000 patients per year in UK surveys with the Cork survey.

Reference	District	Annual incidence of night calls
Cunningham (1973-77)	Yorkshire (rural)	23.9 per 1,000
Barley (1979)	Sheffield (urban)	20.8 per 1,000
Riddell (1977)	Glasgow (urban)	16.8 per 1,000
Horton (1977)	North Berwick (seaside town)	15.9 per 1,000
Lockstone (1974)	Whitby (seaside town)	10.7 per 1,000
Crowe (1973-74)	Leicestershire (semi-rural)	9.7 per 1,000
Coffey (1980)	Cork (urban)	9.9 per 1,000*

\* General Medical Services patients only.

up to 20 years and over 50 years required more calls than females, and this pattern is repeated here. In the age group 5-14 years, 70 per cent of 37 calls were to boys. There seems no obvious reason for this: the same common illnesses occurred in each—gastroenteritis, upper and lower respiratory tract infections, and intestinal colic. On looking at the figures for the admission of children to hospital in the Hospital In-Patient Enquiry report,<sup>13</sup> it is interesting to note that in both of the age groups 0-4 years and 5-14 years boys outnumbered girls by 3:2. Burrows also found that in the 20-50 years age group only 27 per cent of night calls involved men. Even if we exclude nine calls related to pregnancy, we still have 31 males and 53 females. It may be that women at this time of life are subject to greater emotional stress and are unable to escape easily from family ties and responsibilities.

Although this study confirms that really unnecessary night calls are in a minority, these calls can still be frustrating and time consuming. We believe, however, that they owe more to an unhealthy level of risk consciousness than to a deliberate abuse of the system, and agree with Clyne<sup>12</sup> who said: 'A night call is so generally a manifestation of emotional disturbance and anxiety that it offers both the opportunities and the challenge to undertake some form of psychotherapy concurrently with treatment of the purely medical symptoms.'

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## COMPUTERS IN PRIMARY CARE Occasional Paper 13

Computers are coming. More and more general practitioners are computerizing aspects of their record systems in general medical practice.

*Computers in Primary Care* is the report of a working party of the Royal College of General Practitioners which describes the possibilities currently available and looks into the future, discussing both technical and financial aspects.

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## CLASSIFICATION OF DISEASES, PROBLEMS AND PROCEDURES 1984

### Occasional Paper 26

The new College classification of health problems from the Manchester Research Unit of the Royal College of General Practitioners is a major academic event. This is the first time that the old College classification has been blended thoroughly with the *International Classification of Disease* and that it has been made available in both electronic and printed form.

The printed version, published as *Occasional Paper 26*, describes the background of the classification, offers guidance on its use, and gives the classification in full, first in code order and then in alphabetical groups.

Approved by the Council of the College in 1983, this is likely to be the definitive text on classification in general practice for many years.

*Classification of Diseases, Problems and Procedures 1984, Occasional Paper 26*, can be obtained from the Publications Sales Office, Royal College of General Practitioners, 8 Queen Street, Edinburgh EH2 1JE, price £4.75 including postage. Payment should be made with order.

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### Address for correspondence

Dr Brian Coffey, Medi-Group, Cathedral Road, Cork, Republic of Ireland.

## Alcohol consumption and cancer

The relation between alcohol consumption and the subsequent occurrence of the five most frequent cancers in Japanese men in Hawaii (cancer of the stomach, colon, rectum, lung, and prostate) was analysed in a prospective study of 8,006 subjects. Information on alcohol consumption was obtained through interviews in the mid-1960s, and the cohort has been followed since then. The analysis, which was adjusted for the effects of age and cigarette smoking, revealed a positive association between consumption of alcohol and rectal cancer, accounted for primarily by an increased risk in men whose usual monthly consumption of beer was 500 oz (15 litres) or more (relative risk, 3.05;  $P < 0.01$ , as compared with those who did not drink beer). A significant positive relation between alcohol consumption and lung-cancer incidence was also found, accounted for primarily by an increased risk among subjects who consumed larger amounts of wine or whisky, as compared with the risks among nonconsumers of these beverages (relative risk, 2.19, [ $P = 0.03$ ] and 2.62 [ $P < 0.01$ ], respectively). No significant relation between alcohol consumption and the incidence of the other three cancers was found.

Source: Pollack ES, Nomura AMY, Heilbrun LK, *et al.* Prospective study of alcohol consumption and cancer. *N Engl J Med* 1984; 310: 617-621.