

A comparison of self-referred patients to accident and emergency departments between an urban district and a rural district

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SUMMARY. Patients referring themselves to accident and emergency departments in two districts were compared: West Somerset, a sparsely populated semi-rural district with 113 general practitioners, and Islington, a densely populated, deprived urban district with 86 general practitioners. It was found that an Islington resident is twice as likely to attend the accident and emergency department. A slightly higher proportion of Islington attenders came with a general practitioner's referral letter and there were many more unregistered attenders, which probably reflected a much more mobile population. Interesting comparisons were found between the registered and unregistered attenders in Islington. Islington attenders were two and a half times more likely to come with a non-emergency. The West Somerset attender was nearly twice as likely to arrive with a genuine accident.

Introduction

A MAJOR problem facing accident and emergency departments is that of self-referral (Bainbridge, 1972). It is a familiar complaint, especially in urban areas, that patients abuse accident departments, using them as a substitute for general practice.

Aim

The aim of this study was to find any differences in the use made of the accident and emergency departments in two contrasting districts, one urban and the other rural.

Method

Islington and West Somerset were the districts chosen. West Somerset is a rural district of 777 square miles.

Its population is 224,000, with an average of 288 people per square mile. There is an almost exclusively stable British population with little fluctuation apart from an influx during holiday periods. The study was designed to take place outside those times.

Islington is a densely populated North London borough with 191,000 people living in 6.7 square miles. It is nearly 100 times more populated than West Somerset with an average of 28,500 people per square mile. It has all the problems of a deprived inner city area with a large fluctuant student and 'bed-sit' population. The community is multi-racial with a high proportion of immigrants, the majority of whom are Irish, West Indian, and Cypriot.

The age distribution of people in both districts is similar (Figure 1) but there are more under 16 and over 60 in West Somerset. Islington has a higher population in the 16 to 60 age group.

There are more general practitioners in West Somerset than in Islington but there are only 0.14 general practitioners per square mile in West Somerset against 12.8 per square mile in Islington. The average list is slightly higher in Islington, where each general

Figure 1. Age distribution of total populations.



Table 1. General practitioner profiles. (Percentages in brackets.)

	West Somerset	Islington
Number of general practitioners	113	86
Average list size	1,993	2,176
Single-handed general practitioners	16 (14)	27 (31)
General practitioner in partnership	97 (86)	59 (69)
Total practices	80	51
Appointments systems	22 (27.5)	13 (25.5)

practitioner has on average 183 patients more than his West Somerset counterpart. There are many more single-handed general practitioners in Islington (more than double that in West Somerset) and fewer practices have appointment systems in Islington (Table 1).

The accident department for West Somerset is in the East Reach branch of the Taunton and Somerset Hospital in Taunton. Both districts have full-time accident and emergency consultants.

The study took place at both centres during a three-day period from 31 January to 2 February 1978. A questionnaire was completed by the administrative (casualty clerk or duty nurse) and medical staff for each attender and the results were analysed. A small number of questionnaires were incorrectly completed and as the numbers were similar for each district they were ignored for the purposes of the study. At the time of the study the Islington accident department consisted of two units of about equal size. These were situated one mile apart at the Royal Northern and Whittington Hospitals and for the purposes of the study were regarded as one.

Results

In West Somerset 159 new patients were seen in the study period, 19 (12 per cent) with a general practitioner's letter. In Islington 255 new patients were seen, 45 (18 per cent) with a referring letter. Only those attending without a referral letter were analysed. There were 140 in West Somerset and 210 in Islington. During the study period, 0.07 per cent of the total West Somerset population attended its accident department compared with 0.13 per cent in Islington.

Times of attendance

There was very little difference in the ratios attending during day or night in each district (Figure 2).

Ambulance cases

The proportion of patients arriving by ambulance was almost identical for both districts but almost all came by day in Islington (Table 2).

Table 2. Patients taken to hospital by ambulance. (Percentages in brackets.)

	West Somerset	Islington
Total	20 (14)	35 (17)
Day	15	33
Night	5	2

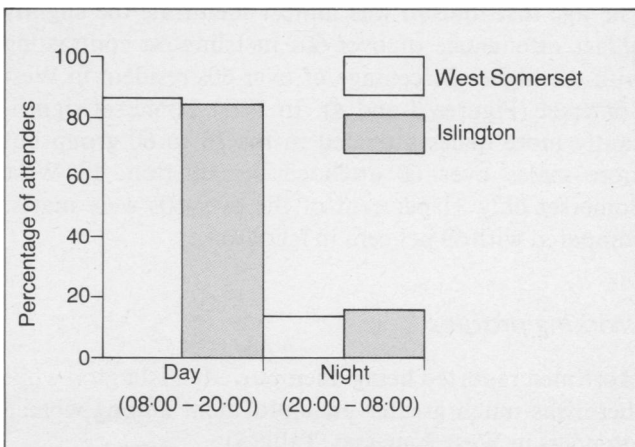
Table 3. Reasons for attending.

	West Somerset (per cent)	Islington (per cent)
Accident	60	42
'General practice closed'	14	19
'General practice too far'	9	11
Second opinion	6	7
'Appointment too long'	3	1
Dental	0.7	0

Table 4. Unregistered and registered attenders in Islington. (Percentages in brackets.)

	Unregistered N=25	Registered N=185
Day	20 (80)	157 (85)
Night	5 (20)	28 (15)
Male	18 (72)	110 (59)
Female	7 (28)	75 (41)
Age 0-16	3 (12)	45 (24)
16-20	20 (80)	115 (62)
60+	2 (8)	25 (14)
Unemployed	6 (30)	4 (2)
Accidents	10 (40)	94 (51)
Non-emergency	15 (60)	72 (42)
Admit	1 (4)	21 (11)
Hospital follow-up	3 (12)	73 (39)
Discharged	21 (84)	56 (30)

Figure 2. Time of attendance.



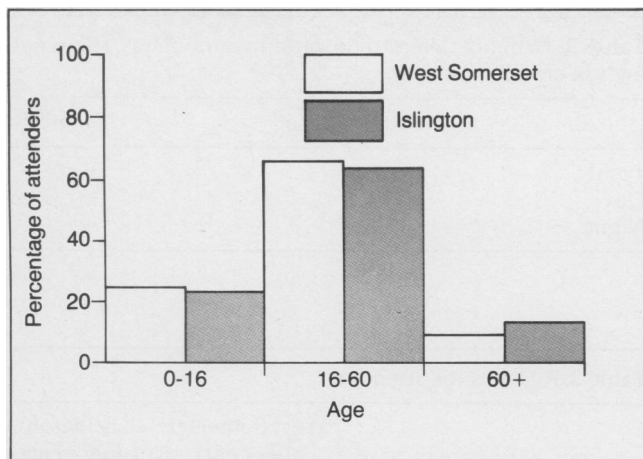


Figure 3. Age distribution of attenders.

Reasons for not visiting general practitioner

Most patients said they had had a genuine accident which they thought would receive prompt and appropriate treatment at the accident department (Table 3). A very small percentage attended for second opinions about conditions for which they had already been treated by their general practitioners. A similar proportion in both districts said their general practitioner was too far away or the surgery was closed. Complaints about appointment systems were few in both districts in contrast with earlier findings (Holohan *et al.*, 1975).

Unregistered patients

A big difference between the districts was shown in the relative numbers of unregistered patients attending (Table 4). There was only one in West Somerset and 25 in Islington, representing 0.7 per cent and 12 per cent of total attenders. In Islington there is a male and working age predominance in this group and six out of 10 were unemployed. The discharge rate was 84 per cent.

Age and sex distribution

The age distribution was almost identical, the slightly higher attendance of over-60s in Islington contrasting with the higher percentage of over-60s resident in West Somerset (Figures 3 and 4). In West Somerset significantly more males attended in the 16 to 60 group but more males over 60 attended in Islington. In West Somerset only 31 per cent of the over-60s were males, compared with 69 per cent in Islington.

Working profiles

More men reported being unemployed in Islington while there was much greater unemployment among women attenders in West Somerset (Table 5).

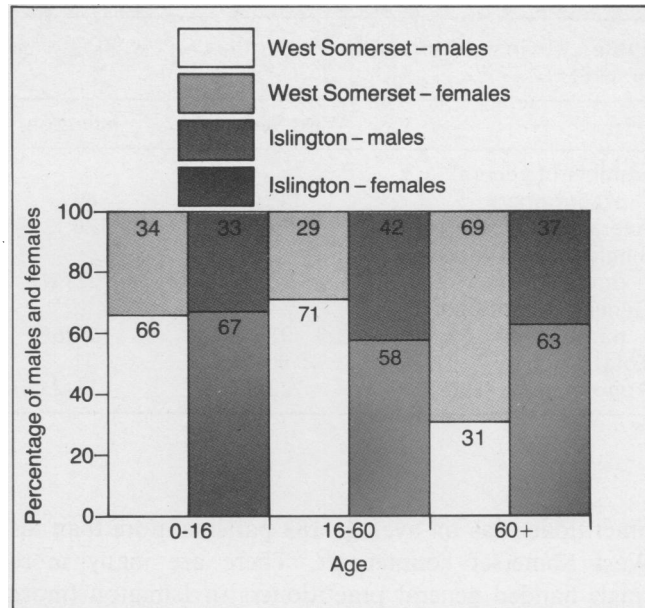


Figure 4. Sex distribution according to age.

Reasons for attending

In West Somerset 83.5 per cent of patients attended for accidents, compared with only 49.5 per cent in Islington (Table 6). The percentage of patients attending for non-urgent conditions in West Somerset was 12 per cent and in Islington 44 per cent. In West Somerset one patient had a dental abscess and two patients were dead on arrival; in Islington there were no dental patients and one was dead on arrival. A very small percentage of patients in both districts went with medical or surgical emergencies.

Management

More patients were discharged in Islington and fewer were followed up by the hospital or general practitioners than in West Somerset (Table 7).

Discussion

The mobility of people in London must have meant that a number of Islington residents sought emergency treatment in neighbouring areas. However, it was felt that they were balanced by a similar influx from outside Islington. In West Somerset this cross movement would be minimal because of the distance to other accident departments outside the district.

It is clear that the floating, unregistered population in Islington uses the accident and emergency department as a substitute for primary care and creates an enormous amount of unnecessary work, as demonstrated by the high discharge rate. This probably reflects the fact that there was a higher percentage of accidents in West Somerset and a higher proportion of non-emergencies in Islington. This can be verified by the admission rates in

Table 5. Unemployment. (Percentages in brackets.)

	West Somerset	Islington
Total	7 (5)	10 (5)
Males (16-60)	3 (5)	7 (9)
Females (16-60)	4 (15)	3 (5)

Table 6. Reasons for attending. (Percentages in brackets.)

	West Somerset	Islington
Accident	117 (83.5)	104 (49.5)
Non-emergency	17 (12)	93 (44)
Medical emergency	3 (2)	9 (4)
Surgical emergency	0	3 (1.4)
Dead on arrival	2 (1.5)	1 (0.5)
Dental	1 (0.7)	0

Table 7. Management. (Percentages in brackets.)

	West Somerset	Islington
Hospital follow-up	61 (43.6)	76 (36)
Discharged	34 (24.3)	77 (36.7)
General practitioner follow-up	35 (25)	34 (16)
Admit	22 (10.5)	8 (5.7)

that the ratio of admissions was twice as high in West Somerset as in Islington.

The fact that many of the accidents were of a minor nature and could have waited for the next general practice surgery seems to indicate that the population as a whole has come to expect accident departments to deal with all accidents, however minor.

Conclusion

I conclude that patients in urban districts do make more use of accident and emergency departments for primary care than do patients in rural districts.

References

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