Perceived versus actual consultation patterns in an inner city practice

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SUMMARY. Consultation patterns in a practice with no appointment system, situated in a socially deprived area, were examined to confirm or refute one doctor's perception that the consultation rate was much higher than average. Seventy five per cent of a sample of patients (n = 394) had consulted in the previous year. The mean annual consultation rate was 3.8 (range 0 to 29) but the median was 3.0 and the mode 0. Among 222 patients consulting over one month the mean annual consultation rate was 10.0 (range 0 to 47) with a median of 9.0 and a mode of 6. The duration of consultation (n = 506) varied from one to 25 minutes (with mean, median and modal values of 5.3, 4.0 and 4 minutes respectively) and 53% of patients received between one and four minutes. The overall consultation rate was not high, particularly in view of the socioeconomic deprivation of the practice population, and the doctor's perception of excessive consultation was explained by the high consultation rate among attenders. The consultation pattern, particularly of males, was not conducive to a preventive approach. The mean was a poor descriptor of the average consultation rate or duration.

Introduction

THIS study reports an audit of the pattern of consultation in one of the most socially deprived inner city areas in Glasgow.[1] People living in such areas have high morbidity and high consultation rates with general practitioners.[2,3] The study practice has no appointment system and patients see doctors or practice nurses on demand. Observations on the case notes of patients consulting one of the doctors suggested that the consultation rate was two to three times higher than the national average. The main aim of this study was to examine the consultation patterns at the practice to see if this was true, and if not, to seek an explanation for the doctor's subjective view. Data on consultation length were also collected as an important dimension of the consultation.

Method

The practice is in an area where several indices of deprivation lie above the 90th percentile in a ranking of Glasgow communities,[1] for example in 1981 42% of males were unemployed, 29% of the population were of social classes 4 and 5, 88% lived in local authority housing, and 91% were without a car. Four partners care for some 7600 patients. A personal list system is in operation and an estimated 1700 patients were registered with one of the authors (J.S.B.). The primary care team includes three part-time practice nurses, one district nurse, one midwife, two health visitors and three receptionists. Each partner undertakes eight surgeries of two hours duration per week.

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To calculate the annual consultation rate of the whole practice population the medical records of 386 patients registered with J.S.B. were examined. The sample was obtained by taking every fourth record held on the shelves. The number of times each patient had consulted in the preceding year was noted. This group will be called the case notes review group. For surgery attenders the number of times each patient had consulted in the preceding year was noted for 222 consecutive patients.

During 35 surgery sessions in one month 515 face-to-face consultations took place (206 with males, 309 with females) and for 506 of these the duration (to the nearest minute) was recorded. For 222 consecutive patients the number of times each patient had consulted in the previous year was noted. Patients consulting more than once were included on each attendance. This group will be called the surgery attenders group.

The mean, median (the middle value) and mode (the most frequently observed value) were calculated for consultation rates and duration. Analysis was performed manually except for the Mann Whitney test for non-parametric data which utilized the SPSSX statistical computer package.[4]

Results

The age and sex distribution of the case notes review group was comparable to the population of the area.[1] Fifteen per cent of J.S.B.'s consultations were with patients of his partners. The consultation pattern of the two groups is shown in Table 1. Figure 1 shows the skewed distributions of the consultation rates and compares the surgery attenders group with the case notes review group. For the sample of the whole population ($n = 386$) the mean annual consultation rate was 3.8 (females 4.6, males 3.2) with a range of 0 to 29. The median value was 3.0 and the mode 0. By contrast, among the sample of surgery attenders ($n = 222$) the mean annual consultation rate was 10.0 (females 12.0, males 8.0), with a range of 0 to 47. The median value was 9.0 and the mode 6.

The distribution of consultation length for 506 consultations was also skewed, with a range from 1–25 minutes and mean, median and modal values of 5.3, 4.0 and 4 minutes, respectively. Over half of the patients (53%) received four minutes or less. Females received a mean of 5.8 minutes and males 4.9 minutes, but this difference did not reach statistical significance with the Mann-Whitney test.

Table 1. Consultation rates of case notes review group and surgery attenders.

	Male	Female	All patients
Case notes review group (187 males, 199 females)			
Mean annual consultation rate	3.2	4.6	3.8
Proportion (%) of patients consulting in previous year	*68*	*82*	*75*
Surgery attenders (96 males, 126 females)			
Mean annual consultation rate	8.0	12.0	10.0

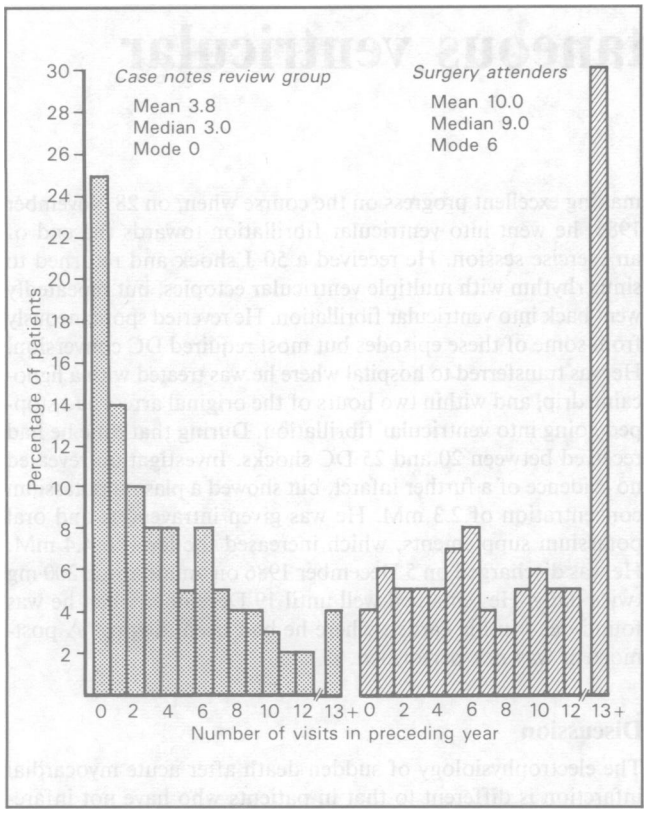

Figure 1. *Consultation rates in the preceding year for the case notes review group (n = 386) and surgery attenders (n = 222).*

Discussion

The general practitioner's impression that the consultation rate of his patients was unusually high proved to be incorrect. The mean annual surgery consultation rate was a little higher than estimated by the national studies[5-7] but on a par with practices of this list size[8,9] and lower than reported in several studies in Scotland.[10] As people in social classes 3, 4 and 5 consult more frequently than those in classes 1 and 2 it can be inferred that the consultation rate was typical.[3] The consultation length in this study was also comparable with Butler's estimate of 5.0 to 6.5 minutes.[5]

General practitioners' subjective impressions of the consultation pattern are likely to be strongly influenced by patients who attend the surgery, particularly those whose case notes are thick. As Figure 1 illustrates, the consultation behaviour of these patients was quite different from that of the whole practice population. The subjective impressions of other practitioners may also require careful interpretation.[11]

Other studies have recorded the variation in and skewed distribution of both consultation rates and consultation duration in general practice[5,12-14] but with one exception[15] have not emphasized it. As this study shows, the mean can mislead and is an appropriate measure of the average only for normal distributions. In their study of attendance patterns, which also showed a marked skew in the distribution of consultations, Freer and colleagues stated that the median rate provides a more meaningful estimate of 'typical' attendance than mean rates.[15] They also note the benefits of using the median in the face of incomplete data. In this study, for both the consultation rate and consultation length the median and the mode were substantially lower than the mean and this is likely to be true for most practices.[5,12,14,15] What are the implications of this finding?

First, the view that the average patient receives 20 to 40 minutes attention from the general practitioner per year[13] is too simplistic.[16] In fact, some receive substantially more while most receive less. Secondly, where many patients consult only twice or less per year (49%) and receive four to five minutes per consultation, it is difficult to provide effective health education or opportunistic screening for all, as shown by Morrell and colleagues.[14] Men, who consult less, may also receive less time. Patients may be low consulters or high consulters over a period of years[15] and as a result may miss out on preventive health measures. Thirdly, studies of consultation patterns should provide the statistical distribution from which the range, median, mode and mean can be derived.

Raising the quality of inner city practice requires more than centrally mediated organizational change.[17] The sense of strain felt by many inner city practitioners needs to be reduced and this requires an understanding of its cause. The knowledge that, overall, patients in this practice did not consult more than in other practices has allowed attention to be directed to other sources of pressure: the stress of working in a multiply deprived area; the time pressure created by having no appointment system; the frustrations of caring for repeat attenders; and the discord created by the differing expectations and attitudes of professional doctors and their working class patients. In addition, patients need to make full yet appropriate use of services; understanding their consultation patterns is one step towards helping patients achieve this goal.

References

1. Greater Glasgow Health Board. *Information services unit. Census (1981), statistics for community medicine areas — Possilpark.* Glasgow: Greater Glasgow Health Board, 1981.
2. Townsend P, Davidson N. *Inequalities in health. The Black report.* Harmondsworth: Penguin, 1982: 61-63.
3. Blaxter M. Equity and consultation rates in general practice. *Br Med J* 1984; **288:** 1963-1967.
4. SPSS Inc. *SPSSX users guide.* New York: McGraw-Hill, 1983.
5. Butler JR. *How many patients? Occasional papers on social administration 64.* London: Bedford Square Press, 1980: 86-99.
6. RCGP, OPCS and DHSS. *Morbidity statistics from general practice. Second national study 1970–71.* London: HMSO, 1974.
7. RCGP, OPCS and DHSS. *Morbidity statistics from general practice 1981–82. Third national study.* London: HMSO, 1986.
8. Wilkin D, Metcalfe DHH. List size and patient contact in general practice. *Br Med J* 1984; **289:** 1501-1505.
9. Butler JR, Calnan MW. List sizes and use of time in general practice. *Br Med J* 1987; **295:** 1383-1386.
10. Hicks D. *Primary health care.* London: HMSO, 1979: 193.
11. Jarman B. Underprivileged areas: validation and distribution of scores. *Br Med J* 1984; **289:** 1587-1592.
12. Buchan IC, Richardson IM. *Time study of consultations in general practice.* Edinburgh: Scottish Home and Health Department, 1973.
13. Fry J. In defence of the 5-10 minute consultation. *Update* 1987; **34:** 211-212.
14. Morrell DC, Evans ME, Morris RQ, Roland MO. The 'five minute' consultation: effect of time constraint on clinical content and patient satisfaction. *Br Med J* 1986; **292:** 869-873.
15. Freer CB, Boyle P, Ryan MP. A study of attendance patterns in general practice over three years. *Health Bull (Edinb)* 1986; **44:** 75-80.
16. Bhopal JS, Bhopal RS. The 5–10 minute consultation. *Update* 1987; **34:** 211-212.
17. Butler JR. Primary care in the inner cities. *Br Med J* 1986; **293:** 1519-1520.

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