

Consultation length and outcome in two group general practices

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SUMMARY. Two group general practices were located which, while similar in a number of important respects, differed in the number of appointment consultations arranged per hour, and data was collected to see if corresponding differences in consultation outcome could be found. Information on all appointment consultations offered during a four-week period was analysed, and the number of patients returning for further attention in a subsequent four-week period was also determined. The practice offering longer consultations had a lower proportion of appointment consultations ending with a prescription, required a lower proportion of patients to return for a follow-up appointment, and had a lower proportion of patients themselves returning to seek a further appointment within four weeks of presenting with a new illness episode.

Introduction

MANY commentators have expressed concern at the brevity of the typical NHS consultation, suggesting that a longer interview would benefit both doctor and patient (Hopkins, 1973; Stevens, 1974; Hart, 1976). Dunnell and Cartwright (1972) reported that 52 per cent of doctors thought they would write fewer prescriptions if more time was available, and Mapes and Williams (1975), noting the increasing tendency to prescribe certain drugs, suggested that scripts are often offered when extra time spent on advice would be more appropriate. Of course, many practitioners would consider that any reduction in prescribing costs that might result from longer average consultations would be associated with an unacceptable workload. Yet there have been suggestions that a more extended initial consultation might save time in the long run by resolving the problems of a certain group of patients who would otherwise be prone to return again and again (Mapes and Williams, 1975; Murray *et al.*, 1978; Ryde, 1979).

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To date there has been little systematic investigation of possible relationships between consultation length and either prescribing behaviour of doctors or the frequency of return visits by patients in the period following an initial presentation. During an analysis of general practice teaching in a Scottish university medical school, Murray *et al.* (1978) noted that a relationship existed between the average number of patients a tutor saw in a teaching session and his prescribing behaviour. One group of three doctors had an average consultation time of 18 minutes while the consultations offered by the remaining six doctors lasted an average of 27 minutes, and the authors found that 39.8 per cent of the longer consultations compared with 23.7 per cent of the shorter consultations ended without a prescription being written. However, in a study of his own consultations with 200 patients for whom no diagnosis could be made, Thomas (1978) was unable to find a significant relationship between interview length or initial treatment and the tendency of patients to return for further attention in the following month.

This is the report of a pilot study on consultation length in general practice. Two practices were located which, while similar in many respects, were known to arrange appointment consultations of differing average length, and data was collected to see if corresponding differences in consultation outcomes could be found.

Method

The two group practices examined were housed in a single health centre in a South Wales town. Each practice had three full-time partners and its own ancillary staff, but they shared a common waiting area and reception office, and made use of the same treatment room nurse. The ages of the Practice 'A' doctors were 48, 30, and 28 years, while those of the Practice 'B' group were 54, 44, and 28 years. All the practitioners were Caucasian, with five being natives of Wales, and the remaining Practice 'B' partner originating from Northern Ireland. None of them had had any recent involvement with research.

Throughout the period of data collection, the medical staff of Practice 'A' also included a trainee, while Practice 'B' engaged a trainee only after the main consultation data had been collected. Scrutiny of the record cards of 100 patients

randomly selected from each practice revealed no significant differences in the age and social class (occupational) structures of the patient populations. At the time of the study Practice 'A' had a rather larger list size, having approximately 9,700 patients in comparison with a figure of 8,050 for Practice 'B'. A further difference was that the Practice 'B' partners held a larger number of part-time 'outside' appointments than their colleagues (mainly as factory medical officers). The practices had similar appointment systems and record-keeping methods, with the difference that Practice 'A' normally arranged consultations of 10 minutes duration while Practice 'B' normally arranged consultations at five-minute intervals. Both practices provided nine appointment surgery sessions per normal week, but also made arrangements to see quite large numbers of patients at the surgery as 'emergencies'.

The differing number of appointment slots per surgery session appeared to account for a further practice difference that was noted in the length of the wait involved before a patient seeking an appointment could hope to see a doctor. Length of wait for appointments varied over time and between doctors, but during the study period was always shorter in Practice 'B'. The shortest wait noted for the 'least popular' doctor was one day in Practice 'B' and four days in Practice 'A', but at times it rose to four days in Practice 'B' and seven days in Practice 'A'. The steps in data collection were:

1. Appointment consultations in both practices were timed over 12 surgery sessions during a four-week period, to determine whether differences in length of appointment slot were reflected in differences in length of face-to-face contact.
2. After analysis had established that the average lengths of face-to-face consultation did indeed differ significantly, doctors were asked to record certain details of consultations arranged by appointment in a further four-week period. A printed sheet was produced to replace the list of patients to be seen in a session that was normally prepared by reception staff. Reception staff entered names and addresses in the usual way and doctors recorded the following information in prepared spaces:
 - a) Whether or not a new illness episode was involved.
 - b) Whether or not a further consultation was arranged.
 - c) Whether or not the patient was referred to another doctor.
 - d) The number of items prescribed.
 - e) The diagnosis or diagnoses. (Doctors were instructed to be as specific as possible in recording diagnoses, and specific conditions were then coded using the RCGP classification of morbidity (RCGP, 1974).)

This information, together with details of practice, doctor, and patient's sex, was coded for 1,652 consultations, and cross tabulations were produced and analysed using an SPSS computer program.

3. Numbers of patients in each practice seeking further attention at the surgery in the four weeks following attendance with a new illness episode were compared. Names and addresses of all 'new episodes' seen in the appointment consultations during the four-week period were checked against dated lists prepared by reception staff of (i) non-appointment cases seen in that period and (ii) all patients seen in the following four weeks.

Results

Analysis of the lengths of 221 appointment consultations in Practice 'A' and 299 consultations in Practice 'B' spread over an equal number (12) of surgery sessions during the initial four-week period showed that, al-

Table 1. Descriptive statistics for distributions of consultation times in two general practices over 12 surgery sessions.

	Practice 'A'	Practice 'B'
Mean length*	8 min 4s	5 min 18s
Modal length*	6 min to 6 min 30s 7 min to 7 min 30s	3 min to 3 min 30s
Standard deviation*	3 min 48s	2 min 40s
Number of consultations	221	299

*Based on grouped data.

Table 2. Items prescribed in appointment consultations during a four-week period. (Number of patients in brackets.)

Prescription items	Consultations*		
	Practice 'A' (per cent)	Practice 'B' (per cent)	Total (per cent)
None	48.5 (310)	37.4 (379)	41.7 (689)
One	35.7 (228)	44.2 (448)	40.9 (676)
Two or more	15.8 (101)	18.4 (186)	17.4 (287)
Total	100.0 (639)	100.0 (1,013)	100.0 (1,652)

* $\chi^2 = 20.332$, $df = 2$, $P < 0.01$.

though nominal differences in appointment slot lengths were diminished, significant differences in face-to-face consultation times remained (Table 1).

Although distributions of consultation lengths in both practices were skewed positively, the 't' test was considered to be sufficiently 'robust' to be applicable, and the differences between mean consultation lengths were shown to be statistically significant ($t = 9.75$, $df = 518$, probability that samples were from the same population < 0.001). However, in view of the skewed nature of the distributions, modal consultation lengths may represent the most meaningful 'average' figure, and this information is also included.

The data on appointment consultations in the second four-week period supported the hypothesis that the practice offering longer consultations would prescribe less. Table 2 shows a particularly marked difference in the proportion of consultations ending with no prescription, with the figure being 48.5 per cent in Practice 'A' compared with 37.4 per cent in Practice 'B'.

There was little difference in the numbers of patients referred to specialists for attention, with the proportion being 8.8 per cent of appointment cases in Practice 'A' and 8.4 per cent in Practice 'B'. However, doctors in the practice offering longer consultations asked a smaller proportion of patients to return for a follow-up consultation at the surgery (Table 3).

During this period 429 patients (67 per cent) in Practice 'A' and 527 patients (52 per cent) in Practice

Table 3. Consultations in which further visits were arranged over a four-week period. (Number of patients in brackets.)

	Consultations*		
	Practice 'A' (per cent)	Practice 'B' (per cent)	Total (per cent)
Further visits	28.5 (182)	34.3 (347)	32.0 (529)
No further visit	71.5 (457)	65.7 (666)	68.0 (1,123)
Total	100.0 (639)	100.0 (1,013)	100.0 (1,652)

* $\chi^2 = 5.987$, $df = 1$, $P < 0.02$.

'B' presented at appointment consultations with new illness episodes, and this group was monitored over a further four weeks so that numbers returning to seek further appointments or be seen as 'emergencies' could be noted. There were no significant practice differences in proportions returning as 'emergencies', with the figure being 6.5 per cent in Practice 'A' compared with 4.7 per cent in Practice 'B'. However, a significantly higher proportion of patients in Practice 'B' (the 'five-minute practice') returned to seek a further appointment (Table 4).

Differences in practice prescribing behaviour were most apparent in consultations where no further visit was arranged. Practice 'A' was more likely than Practice 'B' to send away patients in this category without a prescription (Table 5), although patients who were told to return had a similar probability of being offered a script in both practices (Table 6).

Data on conditions diagnosed in appointment consultations over the four-week period showed no significant practice differences. Presentations associated with mental or psychological problems accounted for 7.5 per cent of Practice 'A' consultations and 7.1 per cent of Practice 'B' consultations. Since there is some evidence that general practitioners may spend more time with psychoneurotic patients (Westcott, 1977), the attendance of larger numbers of patients with such problems needed to be excluded as a possible explanation of the longer consultation times and lower prescribing rates found in Practice 'A'. The fact that the practices diagnosed similar percentages of patients as suffering from psychoneurotic problems also tends to rule out the possibility that the longer consultations and lower prescribing rates of Practice 'A' arose from any special interest in the use of psychotherapeutic approaches to general practice.

Discussion

Data on appointment consultations in two group general practices revealed differences in consultation outcomes that the author has been unable to relate to any organizational feature apart from length of appointment slots. The study consequently lends support to the

Table 4. Further appointments sought by patients within four weeks of presenting with a new illness episode. (Number of patients in brackets.)

Further appointment	Consultations*		
	Practice 'A' (per cent)	Practice 'B' (per cent)	Total (per cent)
Yes	7.2 (31)	12.9 (68)	10.4 (99)
No	92.8 (398)	87.1 (459)	89.6 (857)
Total	100.0 (429)	100.0 (527)	100.0 (956)

* $\chi^2 = 8.205$, $df = 1$, $P < 0.01$.

Table 5. Prescribing in consultations where no further visit was arranged. (Numbers of patients in brackets.)

	Consultations*		
	Practice 'A' (per cent)	Practice 'B' (per cent)	Total (per cent)
Prescription issued	45.5 (208)	63.2 (421)	56.0 (629)
Advice only	54.5 (249)	36.8 (245)	44.0 (491)
Total: no further visit	100.0 (457)	100.0 (666)	100.0 (1,123)

* $\chi^2 = 35.237$, $df = 1$, $P < 0.01$.

Table 6. Prescribing in consultations where a further visit was arranged. (Number of patients in brackets.)

	Consultations*		
	Practice 'A' (per cent)	Practice 'B' (per cent)	Total (per cent)
Prescription issued	66.5 (121)	61.4 (213)	63.1 (334)
Advice only	33.5 (61)	38.6 (134)	36.9 (195)
Total asked to return	100.0 (182)	100.0 (347)	100.0 (529)

* $\chi^2 = 1.129$, not significant.

hypotheses that length of consultation is associated with frequency of drug prescribing and with numbers of patients seeking a further appointment within four weeks of presenting with a new illness episode. The inverse relationship between consultation length and tendency to prescribe noted by Murray *et al.* (1978) in the general practice teaching situation held in a very different health centre setting, even though consultations of shorter duration were involved, and the difference in the average consultation length offered by the two practices was smaller in absolute terms than that found between the two groups of tutors.

Admittedly, a pilot investigation can hardly be more than suggestive of such associations, and one cannot wholly exclude the possibility that undetected practice differences may have had some effect in the kind of 'real practice' comparison attempted here. The two

practices examined appear to have been well matched in terms of location, physical settings, the number, age, and nationality of full-time partners, the size of ancillary staffs, and many details of day-to-day organization. However, there were known differences in list size and the nature of part-time appointments held by partners, and other variables such as the psychological characteristics of practitioners and the attitudes and expectations of patient populations which might have had relevance are difficult to incorporate within the framework of small comparative studies. It would be unwise to be complacent in the face of these difficulties, but given the initial problem of establishing whether any general association exists between consultation length and outcome, and the fact of the endless variability of the general practice situation, concern with exhaustive matching of practices in every respect seems less important than replication of research in a number of broadly comparable settings.

In view of these limitations, speculation about the mechanisms that underlie observed practice differences would be largely premature. However, it should be noted that, since the present study compares practices which both offer consultations of relatively short duration, the findings cannot be related to the kinds of advantages that many commentators feel would arise from using very long interviews. Practice differences cannot be linked, for example, with the idea that 10-minute interviews present a greatly increased opportunity for the exploration and resolution of non-obvious patient problems, in the way that might be possible in the 45-minute interviews favoured by the Balint group (Hopkins, 1973). The phenomenon at issue may be not so much changes that occur as interviews get longer, as changes that occur when their duration becomes very short. It may be less the case in these interviews that an extra few minutes of discussion and advice offers significant benefits, than that consultations a few minutes shorter become so brief that participants no longer find it possible to view the meeting in terms of discussion and advice at all.

Interpretation of the findings should also recognize the possibility that differences in appointment slot length may influence certain outcome factors in ways that have little to do with the consultation itself. The fact, for example, that the differing number of appointment slots available in a surgery session meant that Practice 'A' patients faced a longer wait for an appointment, suggests one alternative mechanism. The lower numbers of patients seeking further appointments in Practice 'A' may simply reflect the difference in their perception of the time and trouble that will be involved before a doctor is seen.

There is an urgent need for further investigation of the implications of differences in outcome in appointment consultations for other aspects of practice organization. Limits on the author's research access and resources meant that he was unable to develop the study

of appointment consultations into the kind of exhaustive inter-practice comparison that would have had undoubted advantages. It remains to be seen, for example, whether, firstly, differences in prescribing in appointment consultations have implications for levels of ancillary prescribing, and whether, secondly, longer consultations and lower numbers of available consultation slots have implications for demand for other practice services, such as emergency consultations and attention from a treatment room nurse. Answers to questions such as these might go some way to providing a detailed picture of the likely consequences of changes in appointment slot length, and may turn out to be among the most important considerations in the debate over the advantages and disadvantages of longer consultations.

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Aspirin

The EPSIM Research Group concluded that aspirin, in the dosage of 0.5 g three times a day, is probably not different from oral anticoagulants in affecting mortality and morbidity after a myocardial infarction.

Source: EPSIM Research Group (1982). A controlled comparison of aspirin and oral anticoagulants in prevention of death after myocardial infarction. *New England Journal of Medicine*, **307**, 701-708.