

# Quality and the use of time in general practice: widening the discussion

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## Abstract

To examine the association between different consulting styles in general practice (defined according to the average length of doctor-patient contact time in surgery consultations) and the process of care for those patients presenting with new episodes of respiratory illness, 1787 consultations conducted by 85 general practitioner principals in Lothian from November 1987 to May 1988 were analysed. Short as against long consultations resulted in less attention being given to psychosocial issues that the doctor recognised as relevant. When psychosocial problems were dealt with prescribing of antibiotics decreased. In this volunteer sample of doctors the process of care seemed to reflect decisions as to how time was allocated rather than inherently different patterns of clinical behaviour.

Organisational and contractual changes will shift the mix of financial and professional incentives for general practitioners in ways that could lead to doctors reallocating their time towards shorter consultations; such a reallocation could have important implications for patient care.

## Introduction

The National Health Service is facing its most significant overhaul in its 40 year history. Two white papers and eight working documents raise points of principle, structure, and detail that are in need of thoughtful but urgent debate; but this is complicated by a shortage of clearly apposite data.<sup>1,2</sup>

The debate is made more difficult by the problem of defining quality or goodness of doctoring. Much of the important research in primary care in recent years has focused on the issues of list size and the use of time. The green paper that preceded the white paper on primary care pointed to the absence of consistent and substantial evidence that list size was related to quality of care,<sup>3</sup> although recently it has been shown that doctors with smaller lists generally have longer consultations.<sup>4</sup> Other work has shown that longer consultations include more health education<sup>5</sup> and are associated with different prescribing decisions.<sup>6</sup>

We have recently completed the main data collection in a 12 month study exploring variables that may link or intervene between the quality and quantity of care. We looked at "consulting style" (defined as average time doctors spent in face to face consultation), length of consultation, and quality of care. We used as proxies for quality the extent to which psychosocial problems that had been identified as relevant were explored at consultations for respiratory problems and how antibiotics were prescribed. The first six months of data were used for this paper; decisions taken relating to those patients who consulted with new episodes of respiratory illness were used for comparisons.

## Subjects and methods

Eighty five (of 496) general practitioner principals in Lothian recorded information on their work on one

day in 15 for a year. (A Monday recording day was followed progressively by a Tuesday, a Wednesday, and so on). Information was collected about features of practice organisation both generally and in relation to individual recording days. The flow of patients into and out of the consulting room was noted, as was the time of patients' arrival at the doctors' surgeries and, when relevant, their actual appointment times. Doctors recorded details of the patients' problems and their management on separate cards.

All diagnoses recorded were classified by experienced coders using the Royal College of General Practitioners' classification.<sup>7</sup> For this study "respiratory illnesses" included all patients in the respiratory illness section of the classification together with those diagnosed as having a cough, sore throat, otitis media, streptococcal sore throat, and viral illness not otherwise specified. Patients diagnosed as having asthma or chronic bronchitis were excluded.

The psychosocial component of each consultation was categorised by the doctors into one of four options: none relevant, present but not dealt with, dealt with a little, or dealt with in depth. This classification was arrived at after a pilot study that sought to strike a balance between detail and conciseness. The names of drugs prescribed were recorded by the doctor and coded using a classification based on the *British National Formulary*.<sup>8</sup>

Doctors taking part were volunteers and constituted 17% of all general practitioners in the Lothian area and represented 43% of practices in the area. Twenty one of the 85 doctors were women, and all kinds of practice (from singlehanded to six doctor partnerships) were represented. In most large practices the doctors restricted the number of partners taking part to reduce the load on their clerical staff.

The average time each doctor spent on individual consultations was calculated for the first six months of the study (November 1987 to May 1988). Nineteen doctors consulting for an average of nine minutes or more per patient were categorised as "slower" doctors, 25 doctors consulting for six minutes or less as "faster", and the remaining 41 as "intermediate."

The 19 slower doctors recorded information on 2131 surgery consultations on 141 recording days. The 25 faster doctors recorded information on 4380 surgery consultations on 200 days, and the 41 intermediate doctors recorded information on 5313 surgery consultations on 301 days. Two doctors forgot to record on one of their study days, and five other days were not recorded because of new reception staff. Weekends off duty, weekdays off in lieu, and holidays accounted for most days when the doctors did not record; sickness and study leave accounted for the few remaining days.

The stated personal list sizes of the faster doctors averaged 1837 (SD 737, median 1925) whereas that for the slower doctors averaged 1512 (SD 717, median 1700). When we assessed an average figure for the practices they worked in, making allowances for all part time assistance available, the average list size of each principal in the practices of the faster doctors was 1829 and the slower doctors 1873. Four of the faster

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doctors were in partnership with four of the slower doctors.

The difficulty of arriving at an average list size was compounded in that only three of the doctors in group practices claimed to operate a personal list system. None the less table I shows an association between stated personal list size and the average length of consultation with patients. This shows a gradient running from 2169 for the doctors seeing patients for five minutes or less each to 1476 for the doctors seeing patients for nine minutes or more each.

TABLE I—Average length of consultation and size of personal list of doctors in Lothian

Average length of consultation	No of doctors	Average size of personal list
≤5 minutes	8	2169
-6 minutes	17	1679
-7 minutes	17	1698
-8 minutes	20	1756
-9 minutes	9	1517
>9 minutes	9	1476
Missing data	5	

The information in this paper centres on individual timings of consultations with patients, which were likely to be accurate and were constrained for error by checks against overall starting and finishing times and statements of clinical events, clinical processes, and management decisions, which required either single ticks of appropriate statements or short entries of, for example, a diagnosis or prescription.

## Results

Of 11 824 consultations, 1787 (15%) were for new episodes of respiratory illnesses in the categories defined; 711 of these were undertaken by the faster doctors (16% of their consultations), 790 by the intermediate group (14% of consultations), and 286 by the slower doctors (13% of consultations). (Inconsistent denominators are due to missing information.) The results presented focus on patients seen by the faster and slower doctors.

### LENGTH OF CONSULTATIONS

Of the 711 patients who saw the faster doctors, 469 (65%) had consultations that lasted six minutes or less compared with 88 (30%) of the 286 patients seen by the slower doctors. In contrast, 48 (6%) patients of the

faster doctors had consultations which lasted nine minutes or more compared with 84 (29%) patients seeing slower doctors. Indeed, 13% of the consultations with the faster doctors lasted three minutes or less compared with less than 1% for the slower doctors.

### PSYCHOSOCIAL COMPONENT

Table II shows the distribution of statements about the handling of psychosocial problems by all three groups of doctors. Faster doctors and slower doctors saw similar proportions of patients whom they regarded as having no relevant psychosocial problem (72% and 67% respectively). Where a relevant psychosocial problem was recognised faster doctors were less likely than slower doctors to deal with it in depth (11% v 20%;  $p=0.09$ ).

### PRESCRIBING OF ANTIBIOTICS

Of 701 patients seen by the faster doctors, 397 (56%) received an antibiotic compared with 141 (50%) of 277 seen by the slower doctors. In consultations lasting six minutes or less 298 of 513 (58%) patients seen by faster doctors and 49 of 95 (52%) seen by slower doctors received antibiotics. In consultations lasting nine minutes or more 27 of 56 (48%) patients of the faster and 49 of 102 (48%) patients of the slower doctors received antibiotics. Of 769 patients in the intermediate group, 383 (50%) received antibiotics; overall 921 of 1747 (52%) patients received antibiotics.

### INTERRELATION OF CONSULTATION STYLE, LENGTH OF CONSULTATION, PSYCHOSOCIAL CARE, AND PRESCRIBING OF ANTIBIOTICS

Table III shows that there was a significant threefold difference in the chance of a recognised psychosocial problem being dealt with at a long consultation compared with a short consultation. There were no differences between faster and slower doctors for either long or short consultations.

Overall, the percentage of illnesses treated with antibiotics was significantly higher in patients with either no relevant psychosocial problem or a problem that was recognised but not dealt with (772 of 1418; 54%) than in patients in which the problem was recognised and dealt with (149 of 329; 45%;  $p<0.05$ ) (table IV). This trend was particularly noticeable for the slower doctors.

## Discussion

### CLINICAL AND ORGANISATIONAL IMPLICATIONS

This study looked separately at doctors' consultation style, length of consultation, management of what the doctor saw as psychosocial problems, and prescribing of antibiotics.

Patients attending a faster compared with a slower doctor were twice as likely to have a short consultation; patients attending a slower doctor were five times as likely to have a long consultation. At long consultations a higher proportion of the psychosocial problems that were recognised were dealt with. Patients were more likely to receive antibiotics when either no psycho-

TABLE II—Identification and managements of psychosocial problems in patients presenting with respiratory illnesses to general practitioners with different consulting styles

Consulting style of general practitioner*	No (%) of patients with no relevant psychosocial problems	Psychosocial problems dealt with in consultation (No (%) of patients):		
		Not at all	A little	In depth
Faster	506/701 (72)	76/195 (39)	98/195 (50)	21/195 (11)
Intermediate	532/770 (69)	89/238 (37)	126/238 (53)	23/238 (10)
Slower	188/281 (67)	32/93 (34)	42/93 (45)	19/93 (20)
Total	1226/1752 (70)	197/526 (37)	226/526 (51)	63/526 (12)

\*Faster=average length of consultation ≤6 minutes; intermediate=7-8 minutes; slower=≥9 minutes.

TABLE III—Management of psychosocial problems in consultations of different lengths by general practitioners with different consulting styles

Consulting style of general practitioner*	No of patients having short consultation (≤6 mins)		No of patients having intermediate consultation (7-8 mins)		No of patients having long consultation (≥9 mins)		Total No of patients seen
	Problem not dealt with	Problem dealt with	Problem not dealt with	Problem dealt with	Problem not dealt with	Problem dealt with	
Faster	50	60	20	40	6	19	195
Slower	10	15	13	19	9	27	93
Total	60	75†	33	59†	15	46†	288

\*Faster=average length of consultation ≤6 minutes; slower=≥9 minutes.

† $\chi^2_{trend}=6.7$ ,  $df=1$ ,  $p<0.01$ .

TABLE IV—Presence and management of psychosocial problems and general practitioners' consulting style among patients prescribed antibiotics for respiratory illness. Denominators are numbers of patients with respiratory illness

Consulting style of general practitioner*	No (%) of patients with psychosocial problem not dealt with in consultation			No (%) of patients with psychosocial problem dealt with in consultation
	No relevant problem	Problem present	Total	
Faster	299/506 (59)	45/76 (59)	344/582 (59)	53/119 (45)
Intermediate	269/531 (51)	41/89 (46)	310/620 (50)	73/149 (49)
Slower	100/187 (53)	18/29 (62)	118/216 (55)	23/61 (38)
All doctors	668/1224 (55)†	104/194 (54)†	772/1418 (54)	149/329 (45)†

\*Faster=average length of consultation ≤6 minutes; intermediate=7-8 minutes; slower=≥9 minutes.  
†χ<sup>2</sup>=9.0, df=2, p=0.011.

social problem was thought relevant or a problem that was recognised was not dealt with than when a psychosocial problem was recognised as relevant and dealt with. This was particularly so for slower doctors.

When the way in which perceived psychosocial problems are handled and how antibiotics are prescribed for patients presenting with respiratory illness are used as proxy measures of quality, short consultations seem to be less good than long consultations and faster doctoring to be associated with short consultations just as slower doctoring was associated with long consultations. Overall, faster and slower doctors recognised psychosocial problems with similar frequency. When working in short consultations they dealt similarly with these problems and prescribed similarly, and this also held true when they worked in long consultations. It thus seems reasonable to argue that quality (as defined in this paper) is a function of how competing demands on time are met rather than a function of inherently different clinical insights and behaviours.

Research into patients' views of general practice has shown that although most patients were generally satisfied with the care they received from their doctors, they complained mainly of not having enough time with the doctor and of the doctor not listening or not explaining things properly.<sup>9</sup> Our conclusions seem to substantiate the subjective experience of patients.

At this early stage in the analysis of a large and complex data set it is too soon to comment in depth about what determines a fast consulting pattern. A fuller understanding of the consequences of different uses of time over a doctor's full range of activities in a working day is, however, needed before different

options for the organisation or reorganisation of general practice services can be compared with regard to patients' benefit.

#### AUDIT AND PERFORMANCE INDICATORS

This study confirms the value of looking at information about what doctors do and predicts that it will be difficult to draw valid conclusions about quality from analysis of administrative data such as prescribing and referral statistics that are routinely collected at present. In this study an analysis of prescribing on its own would have provided little understanding of the implications of alternative strategies for providing care. Even when a fairly substantial commitment to data collecting was undertaken by a volunteer group problems of small numbers quickly handicapped analysis—for example, it would have been logical to analyse tables III and IV further in terms of each other.

More thought will be required before audit can be widely used to evaluate care in a discipline like general practice where the concepts of measurability and importance are often uneasy bedfellows.

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