Practice organization before and after the new contract: a survey of general practices in Sheffield

DAVID R HANNAY

TIM P USHERWOOD

MARIA PLATTS

SUMMARY. In order to assess the effects of the new contract on practice organization, all general practices in Sheffield were surveyed just before the new contract came into effect in April 1990, and again one year later. Of the 120 practices, 57% responded in 1990 and 61% in 1991, with 47% responding in both years. There were significant increases in the mean number of clinics and employed staff for the practices responding to both questionnaires and in the proportion of these practices which had a computer. These changes represent a response to the incentives and stated aims of the new contract.

Keywords: practice organization; GP services; practice profiles; workload; conditions of service.

Introduction

THE new contract for general practice was introduced in April 1990[1] and gave practical effect to proposals for change contained in the government's white paper *Promoting better health.*[2] These changes placed an emphasis on health promotion and disease prevention, with remuneration being related to the provision of such services. The new contract was explicitly more performance related than previously and encouraged developments in practice organization. Some of these developments were already starting to happen, such as the use of microcomputers and an increase in ancillary staff, whereas others, such as health promotion clinics, were given far greater prominence than before.

The aim of this study was to assess the effect of the new contract on practice organization, by surveying the same group of practices just before the new contract came into effect, and again one year later.

Method

All 120 practices in Sheffield were sent a questionnaire on practice organization during the four week period 18 February to 18 March 1990, and again a year later during the equivalent four weeks 17 February to 17 March 1991. These questionnaires were part of a workload study for individual general practitioners,[3] but only one questionnaire was sent to each practice irrespective of its size. The questionnaire could be completed by either a principal or a practice manager/receptionist, and was identified only by a code number to ensure confidentiality. The study was supported by the local medical committee and family health services authority. In both years the questionnaire was preceded by an explanatory letter to Sheffield general practitioners, and was followed by a second letter to encourage a high response rate.

The questionnaire asked for information about appointment systems, practice computers, clinics and staff. The results were analysed on a microcomputer using the software package *SPSS-PC.* There were considerable variations between practices, so that statistical comparisons between years were made only for those practices which responded in both years.

Results

Of the 120 practices in Sheffield, 68 (57%) responded in 1990 and 73 (61%) a year later. Fifty six practices (47%) responded in both years.

There was a slight increase in list size for responding practices between 1990 and 1991 and a higher proportion had complete appointment systems and practice computers in 1991 (Table 1). Most of the new computer systems that had been installed were *Microdoc* systems (six of the 31 practice computers in 1990 and 17 of the 47 in 1991). Both the smallest and largest practices were among the respondents in both 1990 and 1991. Table 1 also shows the number of different types of clinic run by the practices in the two years. The results are for different types of clinics which were listed in free text by the practices concerned. These descriptions were aggregated into the same group when the wording seemed to indicate the same kind of clinic. Larger practices might have the same type of clinic more than once a week. There was a noticeable increase in the number of health promotion clinics being offered with the main growth being in asthma, chiropody, diet, heart disease, hypertension, minor surgery, occupational health, stress, well person and well retirement clinics. Other clinics which had previously been popular continued to be so, such as antenatal, child health, diabetes and well woman clinics. The total number of clinics run by the practices increased from 366 to 607 and the mean number of clinics in each practice from 5.4 to 8.3 (Table 1).

Table 2 shows the numbers of employed and attached staff working in both years, with the mean number of hours worked each week for employed staff, and the numbers fully attached for attached staff. There was a noticeable increase between the two years in the number of receptionists and practice nurses employed and also in the number of computer operators and occupational health workers. There was also more direct employment for a few nurse practitioners, health visitors and midwives in 1991 compared with 1990. There was little change in the numbers of attached staff, although there was an appreciable increase in the number of attached health visitors. Some of the practices which gave details of list size, computers and clinics, did not provide information about employed or attached staff, so that the number of practices in Tables 1 and 2 are different.

Direct comparisons between the two years are difficult because, although similar proportions of practices responded, these were not all the same practices in each year. Table 3, therefore, compares the list size, appointment systems, practice computers, clinics and staff, for the 56 practices which responded to the questionnaire in both years. There was a slight increase in the mean list size between the two years, and a significant increase in the percentage of practices with computers and in the mean number of clinics held. There was also a significant increase in the mean number of employed staff.

D R Hannay, MD, PhD, FRCGP, FFCM, professor; T P Usherwood, MD, MRCGP, MRCP, senior lecturer; and M Platts, SEN, research assistant, Department of General Practice, University of Sheffield.
Submitted: 17 February 1992; accepted: 23 April 1992.

Table 1. List size, appointment systems, use of computers and clinics offered in Sheffield practices in 1990 and 1991.

	1990 (*n* = 68)	1991 (*n* = 73)
Mean list size (SD)	5426 (2812)	5577 (3243)
Median list size (range)	4650 (1260–13 500)	4900 (1350–18 500)
Number (%) of practices with appointment system		
None	13 *(19)*	14 *(19)*
Partial	16 *(24)*	12 *(16)*
Complete	39 *(57)*	47 *(64)*
Number (%) of practices with practice computer	31 *(46)*	47 *(64)*
Number (%) of practices offering clinic:		
Antenatal	60 *(88)*	63 *(86)*
Alcohol/drug	1 *(1)*	1 *(1)*
Anti-smoking	4 *(6)*	11 *(15)*
Asthma	10 *(15)*	42 *(58)*
Baby/child health/paediatric assessment/surveillance	56 *(82)*	*60 (82)*
Child immunization/vaccination/ preschool injection	26 *(38)*	18 *(25)*
Cervical cytology/smear	6 *(9)*	6 *(8)*
Chiropody/foot clinic	0	9 *(12)*
Counselling/psychosexual	0	3 *(4)*
Depot psychiatric/chronic mental illness	1 *(1)*	2 *(3)*
Diabetic	39 *(57)*	36 *(77)*
Diet/exercise	5 *(7)*	23 *(32)*
Epilepsy	1 *(1)*	2 *(3)*
Family planning	10 *(15)*	11 *(15)*
Geriatric screening	4 *(6)*	10 *(14)*
Health promotion	1 *(1)*	0
Heart disease/cholesterol/lipids	4 *(6)*	20 *(27)*
Hypertension/blood pressure	27 *(40)*	50 *(68)*
Hypnosis	1 *(1)*	1 *(1)*
Minor operations/surgery	7 *(10)*	15 *(21)*
New patient	4 *(6)*	1 (1)
Nurse	4 *(6)*	1 *(1)*
Obesity/weight watchers	3 *(4)*	5 *(7)*
Occupational health	4 *(6)*	13 *(18)*
Physiotherapy/manipulation and traction	5 *(7)*	2 *(3)*
Postnatal	7 *(10)*	10 *(14)*
Sports injuries	1 *(1)*	0
Stress management/relaxation	4 *(6)*	17 *(23)*
Tetanus/other immunization	0	2 *(3)*
Ulcers	0	1 *(1)*
Warts	3 *(4)*	5 *(7)*
Well man	9 *(13)*	19 *(26)*
Well person/health checks/ lifestyle	9 *(13)*	44 *(60)*
Well retirement	1 *(1)*	*25 (34)*
Well woman/menopause/hormone replacement therapy	48 *(71)*	56 *(77)*
Other	1 *(1)*	3 *(4)*
Total number of clinics	366	607
Mean number of clinics in each practice	5.4	8.3
Median number of clinics in each practice (range)	5 (0–12)	9 (0–16)

n = total number of responding practices. SD = standard deviation.

Discussion

Although the same 120 practices were circulated in both years, over the period of the study one or two practices were splitting up or amalgamating, so that the number of practices on the family health services authority list for 1 April 1990 was 122 and for 1 April 1991, 118. The questionnaire was sent out up to six weeks before these quarter days, so that practices who were changing may have been among the non-respondents.

The mean list size in Sheffield on these quarter days was 4386 in 1990 and 4590 in 1991,[4] which is lower than the mean list size of responding practices in this study. Thus, smaller practices were less likely to have returned the questionnaire and are under-represented in these results. This was particularly so for the 56 practices who responded in both years, representing almost half the practices in the city.

It is possible, therefore, that these results overestimate the number and different types of clinic per practice, because there might be fewer clinics held in smaller practices. However, almost half of all practices responded in both years, enabling a direct comparison to be made before and after the new contract. This comparison included both the smallest and largest practices in 1990 (list sizes 1260 and 13 500) and 1991 (list sizes 1350 and 18 500).

Full appointment systems are considered by some to be a more efficient use of time in general practice.[5] However, in this study the increase in the proportion of practices with complete appointment systems was not due to the pressure of more patients per doctor, because although the mean practice list size of the study practices increased between 1990 and 1991, there were more doctors in Sheffield as a whole in April 1991 than a year previously — the mean size of a partnership had increased from 2.43 to 2.58 principals and the number of patients per doctor had decreased slightly from 1801 to 1782.[4] The number of single handed practices in the city remained about the same at 36 in 1990 and 35 in 1991, representing about 12% of all general practitioners or 30% of practices.[4]

The new contract accelerated an existing trend by giving financial incentives for practice computers either directly, or indirectly through the need to monitor target figures for immunization and cervical cytology. These developments should provide the basis for improving the quality of general practice data.[6] Most of the new computers installed were the *Microdoc* system, which had been developed locally and was becoming known at a national level.[7]

The new contract brought in payments for health promotion clinics and it was not surprising that the number and range of these had grown considerably over the year in question. This reflected a dramatic national increase in such clinics[8] although there is considerable variation in different parts of the United Kingdom.[9] In this study there was an increase in both the range and the overall numbers of clinics being offered. The apparent reduction in child immunization clinics was probably due to these being absorbed into new child health clinics. In Sheffield as a whole, the cost of health promotion clinics increased fourfold during the year since the end of June 1990.[4]

The main increase in employed staff was in the number of receptionists and practice nurses. Most practices already employed practice managers who have played an increasingly important role in general practice.[10] It is likely that the managerial aspects of this role were being enhanced by relieving practice managers of reception duties. Although the hours worked by practice managers showed little change, there was a considerable increase in the hours worked by receptionists. The increased number of occupational health workers was due to a specific project in some local practices which expanded during

Table 2. Employed and attached staff working in Sheffield practices in 1990 and 1991.

Job description	Total no. of employed staff		Mean no. of hours each member of employed staff works each week		Total no. of attached staff		No. of fully attached staff	
	1990 (*n* = 64)	1991 (*n* = 69)	1990 (*n* = 64)	1991 (*n* = 69)	1990 (*n* = 58)	1991 (*n* = 61)	1990 (*n* = 58)	1991 (*n* = 61)
Practice manager	52	54	33.0	33.8	0	0	0	0
Receptionist	253	298	22.4	24.0	0	0	0	0
Secretary/typist	60	57	25.3	26.5	0	0	0	0
Computer operator	6	20	34.8	28.5	0	0	0	0
Practice nurse	102	126	22.8	21.7	0	0	0	0
Nurse practitioner	2	7	23.5	24.1	0	0	0	0
District nurse	0	0	0	0	133	133	8	9
Health visitor	1	4	2.0	9.5	94	129	5	14
Midwife	0	2	0	3.0	64	62	2	7
Community psychiatric nurse	0	0	0	0	64	64	0	1
Social worker	0	0	0	0	33	23	3	2
Counsellor/psychotherapist	13	15	11.0	11.1	2	3	0	0
Clinical psychologist	1	1	2.0	2.0	7	4	0	0
Physiotherapist	2	3	8.0	7.0	30	29	0	3
Occupational health worker	5	31	11.0	4.4	7	6	0	0
Chiropodist	0	7	0	2.6	10	13	0	1
Other	19	26	12.0	16.6	6	3	0	0

n = total number of responding practices.

Table 3. Comparison between 1990 and 1991 for the 56 Sheffield practices responding in both years.

	1990	1991	Wilcoxon test statistic[a]	2-tailed *P* value
Mean list size	5679	5777	0.574	0.566
Number (%) of practices with appointment system				
None or partial	25 *(45)*	20 *(36)*	–	0.125
Complete	31 *(55)*	36 *(64)*		
Number (%) of practices with practice computer	24 *(43)*	32 *(57)*	–	0.001**
Mean number of clinics in each practice	5.6	8.3	5.322	<0.001**
Mean number of employed staff in each practice	8.5	9.7	3.681	0.002**
Mean number of hours each member of employed staff works each week in each practice	23.6	22.9	0.628	0.530
Mean number of attached staff in each practice	8.1	7.6	0.999	0.318
Mean number of fully attached staff in each practice	0.3	0.4	0.445	0.657

** Significant result at $P<0.01$. [a] Proportions of practices with complete appointment systems, and with computers, compared using the McNemar test, with the *P* value calculated from the binomial distribution.

the study year. There was little change for attached staff, apart from an increase in the number of health visitors. Overall there was a tendency for more health visitors, midwives, and physiotherapists to be fully attached, but a year after the new contract this still applied to only about 10% of these staff.

The 56 practices who replied in both years tended to be the larger practices, but the increase in their mean list size between the two years was not a significant difference. There was no significant increase in the percentage of practices with complete appointment systems but significantly more practices had practice computers. By the end of 1991, nine months after the study, about 90% of practices in Sheffield would have had a computer.[4] Those practices responding in both years had a slightly greater number of clinics than all respondents in 1990 (mean of 5.6 versus 5.4) but reflected all the 1991 respondents with an average of 8.3 clinics, which was a significant increase.

Between 1 April 1990 and 1 April 1991 the number of whole-time equivalents for employed practice staff per principal in Sheffield increased from 2.0 to 2.2.[4] As indicated in Table 3, this represented a significant increase in the total numbers of employed staff, rather than individuals working longer hours during the week. A survey of 42 local medical committees in 1990 just before the introduction of the new contract reported 1.7 whole-time equivalent employed staff per general practitioner.[11]

In the past employed staff tended to be secretaries or receptionists, whereas attached staff were more likely to be nurses or paramedical staff.[12] To a certain extent this is still true with the exception of employed practice nurses. Previous surveys of workload in general practice suggest that attached staff may have previously carried out a wider range of duties,[12] and that doctors' workload for General Medical Services activities increases with the number of whole-time equivalent staff employed per principal.[13] In the practices in this study the increase in employed staff has been matched by an increase in workload for general practitioners, as reported elsewhere.[3]

The increases in the percentage of practices having a computer, in health promotion clinics, and in employed staff since the new contract represent a reasonable response to the incentives and stated aims of the contract. The contract was intended to change the terms of service so that 'health promotion and disease prevention fall within the definition of General Medical Services'.[1] In order to do this, general practice has had to reorganize itself along the lines indicated in this study, so that

not only the individual but the practice population can be managed as a patient. Whether this emphasis on preventive care for the population, especially for some health promotion activities, brings as much benefit to individual patients as is sometimes claimed, is another question.[14]

References

1. Department of Health and the Welsh Office. *General practice in the National Health Service. A new contract.* London: HMSO, 1989.
2. Secretaries of State for Social Services, Wales, Northern Ireland and Scotland. *Promoting better health. The government's programme for improving primary health care (Cm 249).* London: HMSO, 1987.
3. Hannay DR, Usherwood T, Platts M. General practitioner workload before and after the new contract. *BMJ* 1992; **304:** 615-618.
4. Sheffield Family Health Services Authority. *Annual review for region 1990 and 1991.* Sheffield: Sheffield FHSA, 1991.
5. Roland M. The efficient use of time in general practice. *Br J Gen Pract* 1989; **39:** 485-487.
6. Pringle M, Hobbs R. Large computer databases in general practice. *BMJ* 1991; **302:** 741-742.
7. Daniels A, Coulter A. How to choose a general practice computing system: comparison of commercial packages. *BMJ* 1988; **297:** 838-840.
8. National Health Service Management Executive. *Integrating primary and secondary health care.* London: NHS Management Executive, 1991.
9. Sefton C. Huge variations over number of GP clinics. *Pulse* 1991; **51** (14 September): 7.
10. Pringle M. The practice manager. *BMJ* 1991; **303:** 146-147.
11. General Medical Services Committee, British Medical Association. *Monitoring the new contract.* London: BMA, 1990.
12. Department of Health and Social Security. *General medical practitioners workload. A report for the doctors and dentists review body 1985/86.* London: DHSS, 1987.
13. Department of Health. *General medical practitioners workload survey 1989-90. A report prepared for the doctors and dentists review body.* London: DoH, 1991.
14. Rosser WW, Lamberts H. Do our patients receive maximum benefit from preventive care? A North American perspective. *Br J Gen Pract* 1990; **40:** 426-429.

Acknowledgements

We are grateful to all those Sheffield practices who responded to the questionnaire on organization, to the Sheffield family health services authority, to the local medical committee, to George Walker for his valuable advice, and to Diane Allen for secretarial assistance.

Address for correspondence

Professor D R Hannay, Department of General Practice, Medical School, University of Sheffield, Beech Hill Road, Sheffield S10 2RX.