

GENERAL PRACTICE

Family doctors and change in practice strategy since 1986

Brenda Leese, Nick Bosanquet

Abstract

Objectives—To investigate the changes in practice strategy that have taken place since 1986.

Design—Comparison of practices in 1986 and 1992.

Setting—93% of group practices (26 practices) in a single family health services authority.

Main outcome measures—Changes in staffing, premises, equipment, clinic services, and incomes between 1986 and 1992.

Results—In 1986, 28% of practices employed a nurse; in 1992, 92% did so. Between 1986 and 1992, 14 cost-rent schemes costing more than £10 000 had been started. Certain practices, designated innovators, were more likely to possess specified items of equipment than other practices. Computer ownership was widespread: 77% of practices had a computer, compared with 36% in 1986. In 1992, 16 practices had a manager, compared with 10 in 1986. Clinic services provided by more than half of practices were well established services (antenatal, for example), new services for which a payment had been introduced (such as diabetes, asthma, minor surgery), or the more readily provided “new” clinic services (diet, smoking cessation). Gross income increased, but so did practice costs, especially for innovators. Practices in the more affluent area of the family health services authority were still more likely to invest in their premises and staff, and to provide more services than those in the declining area. In the more affluent area, practices had higher costs but also higher incomes.

Conclusion—Between 1986 and 1992, practices in this area invested heavily in equipment and services, but differences remain, depending on the location of the practice. Investment has increased, particularly in the more deprived part of the area, so that the inconsistency in standards has been much reduced. Practice incomes have risen, but so also have workload and costs.

Introduction

Since our earlier study in 1986,¹ general practice has been subject to intensive change.^{2,4} These changes have caused much controversy and considerable dissatisfaction,⁵ with widespread modification of working practices. The changes have meant that general practitioners have had to review their methods of working, take on new staff, provide new services, and review their practice infrastructure, so placing increased pressure on financial resources.

Previous research⁶ examined how practices responded locally to the earlier generation of national and local initiatives, including the rules set out by the Review Body on Doctors' and Dentists' Remuneration.⁷ This research showed how local factors might modify or affect the influence of national policies on practice decisions about premises, staffing, and activity. How has the balance of national and

local influence changed in the new environment?

Our previous study showed the strong impact of local variables on practice strategy. There was a clear division in response to incentives between practices designated innovators and traditionalists and between areas with different proportions of such practices. We revisited the practice areas after a period of rapid change in incentives. The signals from the national contract have become more insistent; at the same time, family health services authorities have acquired greater management control over funds for premises, and wider terms of reference for promoting cost effective local services. Practices also have the additional option of becoming fundholders. Our data can be used to chart change in process inconsistencies in general practice.

In 1986 our first study of general practice structure and organisation measured how economic considerations influenced practice decisions at the local level.^{1,6,8} In 1992 the second study was carried out in the same areas. This paper reports changes in a single family health services authority area and provides data that can be used as a guide to changes in decisions and the new attitudes emerging as a result of the primary care reforms.

Methods

The family health services authority selected as the pilot area for an evaluation of the changes that have taken place in general practice structure and organisation was the same one that had formed the pilot study area for a similar study carried out in 1986.⁹ This family health services authority, designated North Mining to preserve anonymity, consisted of a medium sized town and its environs in the north of England, with a total population of approximately 200 000. For the 1992 study, one partner from each group practice was asked to take part in an interview during which a structured questionnaire was completed. The interviews were carried out by the authors between September and December 1992. The results of this study will be compared, where appropriate, with the results from the 1986 study in the same family health services authority area.

Although both studies took place in the same family health services authority area, some practices had changed between the two dates. Moreover, some practices that took part in the earlier survey did not do so in the later study, and vice versa. This study should therefore be regarded as representing the situation in a single family health services authority over time, but not necessarily of the same practices.

Results

STUDY AREA CHARACTERISTICS

Some characteristics of the study area, compared with England as a whole, are set out in table I. The mean underprivileged area score for North Mining,

Centre for Health Economics, University of York, York YO1 5DD
Brenda Leese, research fellow

Health Policy Unit, St Mary's Hospital Medical School, University of London, London W2 1PG
Nick Bosanquet, professor

Correspondence to:
Dr Leese.

BMJ 1995;310:705-8

TABLE 1—Service indicators 1986-7 and 1990-1 for one family health services authority and for England

Indicator	North Mining		England	
	1986-7	1990-1	1986-7	1990-1
SMR*	113.8	114.1	99.0	99.67
Mean underprivileged area score	-11.86	-11.89	0.00	0.00
General medical services expenditure per 10 000 population (£000)	214	264.5	239	308.9
% Of lists < 1000	2.7	6.42	1.74	2.57
% Of lists > 2500	15.32	23.85	14.28	9.80
% Singlehanded	7.21	9.17	8.77	11.61
No of nurses per general practitioner (whole time equivalent)	0.05	0.24	0.10	0.30
% With high immunisation target		51.38		70.86
% With low immunisation target		39.45		16.26

*Standardised mortality ratio, deaths under 65 years (average over 5 years).

-11.86, was considerably below that for England (0.00), meaning that despite the visible deprivation, no general practitioners received deprivation payments.

The study area had a lower expenditure on general medical services per 10 000 people than did England as a whole; it had a higher percentage of general practitioners with lists below 1000 or above 2500 patients, but it had a slightly lower than average number of singlehanded general practitioners. The number of practice nurses per general practitioner was also below the average for England, as was the percentage of general practitioners achieving higher (but not lower) level immunisation targets.

RESPONSE RATE

In the 1992 study there were 28 group practices, of which 26 (93%) took part in the study. There were also 12 singlehanded general practitioners, one of whom declined to complete a postal questionnaire. In the earlier study, 25 (86%) of 29 group practices participated. Of the eight singlehanded practices, four took part in the study. This paper will discuss the findings relating to the group practices only. Eighteen group practices took part in both studies.

PARTNERSHIP AND LIST SIZES

In 1986 there were 87 participating doctors in the study area and in 1992 there were 103. The average number of partners per practice had increased slightly, from 3.48 in 1986 to 3.54 in 1992. Mean list size per doctor was 2258 in 1986, decreasing to 2164 in 1992. Of the 26 practices in the 1992 study, 13 (50%) had experienced no change in partnership size over five years, 10 (38%) had an increased number of partners, and three practices had fewer partners. The new incentives have already, to some degree, meant an increase in the numbers of partners.

PRACTICE STATUS

In 1992, when the second study was carried out, there were no fundholders, but four practices were to take up this option in the third wave in April 1993. In the earlier study, practices were divided into groups on the basis of three criteria: employment of a practice nurse, use of the cost-rent scheme, and participation in the vocational training scheme¹; they were designated innovators, intermediates, and traditionalists.^{6,8} Innovators had two or three of the criteria, intermediates had one, and traditionalists none. In the earlier study there were eight innovator practices, 11 intermediates, and six traditionalists; in the 1992 study, 16 were innovators, eight intermediates, and two traditionalists.

The upgrading of practices is largely accounted for by the increase in employment of practice nurses. The new incentives have narrowed the differences in key

aspects of practice responses and activity, leading to the virtual disappearance of traditionalists. In 1986, only seven (28%) of the 25 practices employed a nurse. By 1992, all but two practices employed a practice nurse, representing 92% of all the group practices.

In the earlier study, seven of the eight innovator practices had taken part in the cost-rent scheme, as had two other practices. Between 1986 and 1992 a further 14 cost-rent schemes (costing more than £10 000) had been started. This was a considerable change from the previous take-up. The cost of the work ranged from £65 000 to £330 000.

The number of training practices had decreased from eight in the earlier survey to six in 1992. Only one of the training practices was to become a third wave fundholder. Clearly the impact of the new incentives has made the training scheme less attractive.

PRACTICE EQUIPMENT

In the earlier study, additional criteria distinguished innovator practices from the others. It was found that innovators were more likely than others to possess an electrocardiography machine, as well as other items of diagnostic equipment. From the list of 14 items of equipment specified in the questionnaire (word processor, electrocardiography machine, blood glucose measurement equipment, nebuliser, peak flow meter, proctoscope, desktop analyser, fetal heart monitor, minor surgery equipment, steriliser, sigmoidoscope, cautery, defibrillator, microtympanometer), the seven innovator practices from the earlier study had 60 out of a possible 98 items (61%); the nine intermediates had 71 out of a possible 126 items (56%); and the five traditionalists had 38 out of 70 items (54%). The 16 practices qualifying as innovators in 1992 had 135 out of a possible 224 items (60%) and the 10 intermediates and traditionalists combined had 68 out of 140 items of equipment (49%). Thus, there were still considerable differences between practices in access to equipment.

Computer ownership has increased for all practices between 1986 and 1992. Six (23%) of the 26 practices were not computerised, although three of these were to purchase a computer in 1993. In all, 20 (77%) practices had a computer. Thirteen practices (50%) purchased their computer in 1989 or 1990, either immediately before or around the time that the new contract was introduced. Computer use for age-sex registers (95%), repeat prescriptions (90%), and recall information (80%) was widespread in the later study. However, less than a third of practices used their computer for patient notes and less than a quarter for research purposes. Eight practices (40%) used their computer in consultations. All seven of the innovator practices responding both times had computers (100%); 68% of the remaining practices were computerised. Of 16 innovators in 1992, 14 (88%) had a computer and eight (50%) had an electrocardiography machine.

PRACTICE MANAGERS

In 1986, 10 practices had managers, six of which were in innovator practices. By 1992, 16 practices had a practice manager. The group of 16 innovators had 11 managers (69%), compared with 50% of other practices (5).

CLINIC SERVICES

The 1990 contract initiated payment for clinic provision. This study was carried out before the introduction of health promotion bands. In the survey, general practitioners were asked whether they provided specific services as clinics or opportunistically, and whether these services had been provided only since 1990. Table II shows the results.

Services most likely to be provided opportunistically were family planning (58%), smoking cessation (58%),

TABLE II—Clinics and patient services provided by general practitioners in 26 practices. Values are numbers (percentages)

Type of service	Provided in 1992		Provided only since 1990
	Clinics	Opportunistically	
Antenatal	25 (96)	1 (4)	4 (15)
Immunisation	15 (58)	3 (11)	6 (23)
Child health	16 (62)	1 (4)	5 (19)
Well woman	8 (31)	1 (4)	2 (22)
Cytology	9 (35)	2 (22)	5 (19)
Family planning	7 (27)	15 (58)	3 (12)
Hormone replacement	2 (22)	0	1 (4)
Well man	5 (19)	0	3 (12)
Diabetes	19 (73)	3 (12)	11 (42)
Geriatrics	6 (23)	9 (35)	6 (23)
Heart and coronary heart disease	17 (65)	6 (23)	9 (35)
Minor surgery	17 (65)	6 (23)	11 (42)
Antismoking	3 (12)	15 (58)	2 (22)
Alcohol	0	14 (54)	1 (4)
Diet	17 (65)	9 (35)	9 (35)
Stress	5 (19)	6 (23)	5 (19)
Exercise	3 (12)	8 (31)	2 (22)
Asthma	16 (62)	6 (23)	11 (42)

alcohol control (54%), and geriatrics (35%). More than half of the practices provided antenatal clinics, immunisation, well baby or child health clinics, family planning, diabetes care, geriatric services, heart disease clinics, minor surgery, smoking cessation, diet clinics, and asthma clinics. These were well established services (antenatal clinics, for example), new services for which specific payment has been introduced (diabetes, asthma, minor surgery), or the more readily provided "new" clinic services (diet, smoking cessation). Many services have been provided only since 1990—particularly diabetes and asthma clinics and minor surgery. There has been a considerable rise in activity in all types of practice (data not shown).

IMMUNISATION AND CERVICAL CYTOLOGY TARGETS

The general practitioners generally found cervical cytology targets easier to reach than immunisation targets. The immunisation booster at age 5 was particularly difficult to achieve at the higher level. The results presented here refer to immunisation target levels for 2 year olds. Lower immunisation targets were achieved by 10 (38%) practices and the higher level by 16 (61%) practices. For cervical cytology screening, corresponding figures were four (15%) and 22 (85%).

Table III sets out the immunisation target levels reached by practices that were innovators, intermediates, or traditionalists in 1986 and in 1992.

TABLE III—Practices achieving higher and lower level immunisation targets in 1992. Values are numbers (percentages)

Practice type	No (%) achieving lower level	No (%) achieving higher level
All practices (n=26)	10 (38)	16 (62)
1986 Status:		
Innovators (n=8)	1 (13)	7 (87)
Intermediates (n=9)	1 (11)	8 (89)
Traditionalists (n=5)	5 (100)	0
1992 Status:		
Innovators (n=16)	4 (25)	12 (75)
Intermediates or traditionalists (n=10)	6 (60)	4 (40)

Practices that were innovators or intermediates in 1986 were much more likely than those that were traditionalists to have achieved the higher target levels in 1992, although numbers were small. Practices qualifying as innovators in 1992 were also more likely to have achieved higher targets (75%) than those designated intermediates or traditionalists (40%). The results show that the characteristics of practices identified in 1986 are still evident in 1992, despite incentives such as targets and additional fees.

INCOMES

General practitioners were asked to provide their practice's net and gross incomes for the last full accounting year. The results are presented in Table IV as gross and net incomes per general practitioner. Mean gross income per general practitioner was £77 108 (range £35 000 to £156 500) and mean net income was £40 982 (£22 500 to £72 200). These compare with the review body's target incomes of £40 010 (net) and £59 977 (gross).

TABLE IV—Income characteristics by practice type

Practice type	Mean income per general practitioner (£)		Ratio net:gross	Cost as % of gross income
	Gross	Net		
All practices (n=26)	77 108	40 982	0.531	47
1986 Status:				
Innovators (n=7)	89 073	43 042	0.483	52
Intermediates (n=8)	75 093	45 680	0.608	40
Traditionalists (n=4)	57 556	37 084	0.644	36
1992 Status:				
Innovators (n=16)	81 415	43 015	0.528	47
Intermediates or traditionalists (n=10)	65 623	37 731	0.575	43
Area:				
West-central (n=14)	83 653	42 630	0.510	49
East (n=12)	67 654	39 060	0.577	42

In 1986, the ratio of the North Mining area's mean net income to the review body's target income for that year was 0.905; for gross income it was 0.878. In 1992, corresponding figures were 1.024 and 1.286. Changes since 1986 have significantly improved incomes. In 1986 innovator practices had higher gross incomes per general practitioner than the other two groups, but they also had higher costs. In 1992 their costs were 52% of gross income, compared with 36% for traditionalists and 47% for all practices combined. In the earlier study, costs for innovator practices were also high at 35% of gross income, compared with 33% for intermediates and 25% for traditionalists. These results show that costs have increased for all practices since the earlier study, but more so for the innovators.

LOCAL VARIATIONS

In 1986 the services provided by general practitioners in the east (an old mining area) differed from that by practices in the more prosperous west-central area of the family health services authority.¹ These two areas of the family health services authority will be considered separately.

Twelve of the responding practices were located in the declining eastern area and 14 in the more prosperous west-central area. Unemployment in 1992 was higher in the east (16.3% v 10.6%). In the east there were 37.5 whole time equivalent general practitioners in the 12 practices, with 3.13 general practitioners per practice and a mean list size per practice of 2199 (table V). These figures compare with a higher number of general practitioners in the west-central area (50.83),

TABLE V—Comparisons between less affluent (eastern) and more affluent (west-central) areas of North Mining Family Health Services Authority

Variable	Eastern area (n=12)	West-central area (n=14)
Total No of general practitioners	37.5	50.8
No of general practitioners per practice	3.13	3.63
Mean list size per practice	6694	7096
Mean list size per general practitioner	2199	2206
% Becoming fundholders	17	14
No of nurses per practice	0.94	1.11
No of nurses per general practitioner	0.30	0.30
% Using cost-rent scheme	42	64
% Trainers	8	36
% Computerised	58	93
% With practice manager	42	79
% With higher immunisation targets	50	71
% With higher cytology targets	83	86

with a slightly higher partnership size of 3.63 and a mean list size per practice of 7096 and per general practitioner of 2206. These practices were therefore larger and had higher list sizes than those in the east of the area. The number of practice nurses per general practitioner (0.30) was the same in both areas, but on a per practice basis there were 0.94 in the east and 1.11 in the west-central area (table V). Moreover, 79% (11) of the west-central practices had a practice manager, compared with 42% (5) in the east.

There was greater use of the cost-rent scheme in both areas. In the west-central area, 64% (9) of the practices had used the scheme since the earlier study, compared with 42% (5) in the east (table V). There was still a disparity in 1992, but the activity in the east contrasts with the complete lack of response with no cost-rent schemes in the earlier study.

Five (36%) of the practices in the west-central area were in the vocational training scheme, compared with only one (8%) in the eastern area.

There were differences in ownership of items of equipment between the areas. Although 77% of all practices had a computer, 93% (13) did so in the west-central area, compared with 58% (7) in the east.

Seventy one per cent (10) of the practices in the west-central area had reached the higher target for immunisation, compared with 50% (6) in the east. Cervical cytology targets differed less; 83% (10) reached the higher target in the east and 86% (12) did so in the west-central area (table V).

General practitioners in the west-central area (table VI) had more polarised views than those in the east. In the east, general practitioners were more likely (42%) to have no strong view about the new contract than those in the west-central area (21%). However, a higher percentage of general practitioners in the west-central area were likely to be in favour of the reforms (29% v 25% in the east); general practitioners in this area were also more likely to be "opposed" or "strongly opposed" to the changes (50% v 33% in the east).

General practitioners in the east were much more likely to agree that the quality of their service provision had "considerably improved" or "improved" as a result of the 1990 contract than were general practitioners in the west-central area (67% v 36%). There was little difference between the two areas in terms of administrative workload, with almost unanimous agreement that this had "considerably increased" or "increased."

Practices in the east achieved lower net and gross incomes per general practitioner than both the mean for all practices and for practices in the west-central area. Ratios of net to gross incomes also differed, and those practices in the west-central area had costs of 49% of gross compared with 42% in the east. Taken together, these data indicate that practices in the poorer industrial area to the east, although catching up with the other practices, still had some way to go. Practices in the more affluent west-central area were still more likely to invest in their premises and staff and to provide more services than those in the declining eastern area. These practices had higher costs but also higher incomes.

Discussion

The data presented here indicate that, since 1986, practices invested heavily in equipment and services, but differences remained, depending on the location and philosophy of the practice. Changes in process since 1986 have begun to challenge the inverse care

law,¹⁰ with a rise in process standards in the more deprived section of the family health services authority; but disparities remain in reaction to a moving standard. The practices in the more deprived area have caught up with yesterday's innovators, but the innovators have moved on.

The 1986 innovators still had higher levels of equipment and service provision in 1992 than the other practices. Being a traditionalist in 1986 was still an indicator for lower investment in 1992. These differences extended to clinic provision and the achievement of immunisation and cervical cytology targets.

The income figures show that innovator practices, so designated in both 1986 and 1992, had higher mean net and gross incomes than other practices, but they also had higher costs. This was the case in 1986 and was even more marked in 1992. Costs have increased for all types of practices, but much more for innovators as a proportion of income. The data for practice costs suggest that practices in the more affluent areas of the family health services authority (west-central) achieved higher incomes, have access to more equipment, provide more services, and are more likely to achieve higher targets, but they also have much higher practice costs.

Since the study in 1986, family doctor "enterprises" within this older industrial area have made major changes. The pace of improvement has increased and there has been much more investment in new premises and in practice teams. In many respects there has been more improvement in the period 1985-92 than in the previous two decades of the family doctor charter. There are still some inconsistencies in standards, but they have been much reduced. The new range of incentives has proved powerful and effective in securing change in process within the family health service authority.

Practices also face increased pressures. Their incomes have risen, but so has their workload and their costs. They are having to manage much more intensively in order to achieve the target income. Family doctors show ambivalence in their reactions to all of these changes. They oppose the principle of the new contract, but they conclude, on balance, that it has improved patient care. In the more deprived eastern area the positive view of the new contract was particularly striking, with 67% seeing it as having improved service quality. The results suggest some conflict between professional identity and a sense of the public interest.

We thank the ESRC for funding this study. We are also grateful to Dr Caroline Taylor for help with data preparation and Debbie Hart for providing information.

- 1 Bosanquet N, Leese B. Family doctors; their choice of practice strategy. *BMJ* 1986;293:667-70.
- 2 Department of Health. *General practice in the NHS: a new contract*. London: HMSO, 1989.
- 3 Department of Health. *Practice budgets for general medical practitioners*. London: HMSO, 1989. (Working paper 3.)
- 4 Holliday I. *The NHS transformed. A guide to the health reforms*. Manchester: Baseline Books, 1993:19.
- 5 Leese B, Taylor C, Bosanquet N. The impact of the 1990 contract on practice strategy and business organisation. In: Malek M, ed. *Setting priorities in health care*. Chichester: Wiley, 1994: 263-73.
- 6 Bosanquet N, Leese B. *Family doctors and economic incentives*. Dartmouth: Gower, 1989.
- 7 Review Body on Doctors' and Dentists' Remuneration. *Seventeenth report*. London: HMSO, 1987. (Cmd 127.)
- 8 Bosanquet N, Leese B. Family doctors and innovation in general practice. *BMJ* 1988;296:1576-80.
- 9 Leese B, Bosanquet N. High and low incomes in general practice. *BMJ* 1989;298:932-4.
- 10 Hart JT. The inverse care law. *Lancet* 1974;i:405-12.

(Accepted 23 January 1995)

TABLE VI—Views of general practitioners from more affluent (west-central) and less affluent (eastern) areas on the 1990 contract and its effects on service quality and administrative workload. Values are numbers (percentages)

	West-central area (n=14)	Eastern area (n=12)
Views of contract:		
Strongly in favour	0	0
In favour	4 (29)	3 (25)
No strong view	3 (21)	5 (42)
Opposed	5 (36)	3 (25)
Strongly opposed	2 (14)	1 (8)
Effect on service quality:		
Considerably improved	0	2 (17)
Improved	5 (36)	6 (50)
No change	7 (50)	2 (17)
Deteriorated	2 (14)	0
Deteriorated considerably	0	0
Cosmetic only	0	2 (17)
Effect on administration:		
Considerably increased	9 (64)	10 (83)
Increased	4 (29)	2 (17)
No change	0	0
Decreased	0	0
Decreased considerably	1 (7)	0