

PRACTICE OBSERVED

Practice Research

Family doctors and innovation in general practice

NICK BOSANQUET, BRENDA LEESE

Abstract

Family doctors have been presented with changes in government policies and incentives in a recent white paper on primary care. Little work has been done, however, to find out how general practitioners respond to such measures. The response of general practitioners to professional and economic incentives was examined in relation to the location of the practice and the characteristics of the practitioners in seven different areas of England. The areas represented urban, rural, affluent, and deprived communities. The overall response rate was 74%, but the response varied among the areas, being poorest (64%) in an inner city area. Practices were subdivided as innovative, traditional, or intermediate, according to whether they employed a nurse and participated in the cost rent scheme and the vocational training scheme. Innovative practices were defined as fulfilling two of these criteria and traditional practices as fulfilling none; the remainder were classed as intermediate. The results showed that these three types of practice had distinct strategies that were related to financial constraints and the local population. Innovative practices had more partners and were often located in rural or affluent suburban areas; traditional practices had fewer partners and were more common in urban and working class areas. Innovative practices seemed to be in the best position to increase their services, and hence their incomes, in response to the recent proposals in the white paper. Practices in areas of developmental difficulty (predominantly urban but not necessarily inner city areas) had been less able to respond to existing incentives and had a smaller margin available for developing their services.

In view of the effect of local constraints of economics and population on the strategy of practices, concentrating resources for primary care in local budgets for working class and urban areas may be preferable to extending the system of charging fees for services provided by family doctors.

Introduction

Family doctors now face considerable changes in policies and incentives as a result of the white paper on primary care, but few data are available about how they take decisions on key issues such as premises, staffing, equipment, and the range of services they provide.¹ Practices have considerable discretion in making decisions about input to the production function—that is, the mix of capital and staff that they use. Decisions about the size of the partnership, the location of the practice, and the amount of capital in terms of buildings and equipment commit them well into the future and have consequences for the doctors' income, the degree of financial risk, and the distribution of the doctors' time between work and leisure.

We have reported the results of a pilot study of the strategy of one practice in the north of England.² We now present the results of a larger survey covering practices in the areas covered by six additional family practitioner committees in England. The aims of the study were to investigate the responses of practices to professional and economic incentives and to show how these might differ according to the location of the practice and the characteristics of the general practitioners. We examined the response from the doctors' point of view by collecting data on the strategies that practices follow in adjusting to their local environment.

We aimed at testing three hypotheses about the response to professional and economic incentives: that it is differential and consistent; that it is affected by the type of, and by changes in, the local population—that is, innovation is greater in affluent areas, especially if the population is expanding; and that the practices that have tried most to develop and improve their services face the greatest financial pressure.

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Methods

The study was carried out on a small area basis and cannot be extrapolated to a national sample. We considered using national sampling by post but thought that it was inappropriate as response rates were likely to be low, particularly as information about income and costs was requested. Instead we chose to study seven areas representing different social and environmental regions in England. We chose these areas on the basis of analyses by the Office of Population, Censuses, and Surveys of the distribution of population by type of area.³ The chosen areas and their characteristics were:

held by the family practitioner committees and obtained the agreement of the local medical committee in all cases. We took local advice about which partner in each practice listed with the family practitioner committee might be interested in participating in the study. We sent them a letter explaining the study and arranged by telephone to interview them. If a partner refused to be interviewed another was approached. We and local interviewers carried out interviews in six districts from October 1986 to May 1987. The interviews usually took place in the general practitioners' surgeries and were scheduled to take 45 minutes, although many took longer as doctors set out their views on general practice at some length.

TABLE I—Some social characteristics of areas studied*

| | North west suburban | London inner city | Thames valley | Eastern rural | North eastern industrial | Midlands urban | North of England mining |
|------------------------------------|---------------------|-------------------|---------------|---------------|--------------------------|----------------|-------------------------|
| Total resident population | 436 354 | 251 238 | 307 185 | 485 350 | 565 845 | 550 986 | 223 903 |
| % Of households: | | | | | | | |
| With head aged >65 | 13.85 | 13.24 | 11.76 | 17.79 | 11.31 | 13.20 | 13.51 |
| With elderly occupant living alone | 4.77 | 4.53 | 4.00 | 5.23 | 4.32 | 4.78 | 5.11 |
| With child aged <5 | 5.59 | 6.25 | 6.58 | 5.51 | 6.75 | 6.10 | 5.82 |
| With one parent | 1.39 | 3.13 | 1.77 | 1.41 | 2.28 | 1.89 | 1.79 |
| Unskilled | 3.69 | 4.36 | 3.03 | 3.15 | 7.41 | 4.63 | 3.94 |
| Unemployed | 7.13 | 10.22 | 5.73 | 7.65 | 16.89 | 13.95 | 10.46 |
| Lacking amenities | 3.24 | 5.50 | 3.09 | 3.28 | 3.00 | 4.96 | 2.34 |
| Overcrowded | 4.41 | 17.21 | 7.34 | 3.74 | 8.42 | 10.20 | 8.06 |
| In ethnic minority groups | 0.78 | 33.20 | 7.72 | 0.72 | 1.57 | 10.12 | 0.38 |

*Census 1981 Great Britain.⁴

TABLE II—Response rates for practices with two or more partners

| | Area | | | | | | |
|-----------------------------------|---------------------|-------------------|---------------|---------------|--------------------------|----------------|-------------------------|
| | North west suburban | London inner city | Thames valley | Eastern rural | North eastern industrial | Midlands urban | North of England mining |
| No of practices | 59 | 91 | 58 | 65 | 82 | 127 | 37 |
| No (%) of singlehanded practices | 8 (14) | 49 (54) | 12 (21) | 11 (17) | 17 (21) | 58 (46) | 8 (22) |
| No of practices with ≥2 partners | 51 | 42 | 46 | 54 | 65 | 69 | 29 |
| No (%) of responding partnerships | 41 (80) | 27 (64) | 32 (70) | 40 (74) | 47 (72) | 48 (70) | 25 (86) |

TABLE III—Structure and activity of practices. (Percentages of responding partnerships in parentheses)

| | Practices with ≥4 partners | Practices with average age of partners ≥50 | Practices with at least one partner a trainer | Practices participating in cost rent scheme |
|---------------------------------|----------------------------|--|---|---|
| North west suburban (n=41) | 27 (66) | 5 (12) | 20 (49) | 15 (37) |
| London inner city (n=27) | 5 (19) | 7 (26) | 9 (33) | 9 (33) |
| Thames valley (n=32) | 16 (50) | 4 (13) | 9 (28) | 6 (19) |
| Eastern rural (n=40) | 20 (50) | 1 (3) | 18 (45) | 30 (75) |
| North eastern industrial (n=47) | 26 (55) | 2 (4) | 9 (19) | 12 (26) |
| Midlands urban (n=48) | 14 (29) | 10 (21) | 9 (19) | 13 (27) |
| North of England mining (n=25) | 11 (44) | 5 (20) | 8 (32) | 9 (36) |

North west suburban—An area including two sizable towns with some light industry and engineering and with numerous small villages.

London inner city—An urban area with a high proportion of its population from ethnic minorities and a long history of deprivation. Some of its wards were among the poorest in England.

Thames valley—A fairly affluent area with many small towns, but also including a new town and some areas of urban deprivation.

Eastern rural—An area comprising one large town, several small market towns, and some seaside resorts.

North eastern industrial—An area including three large towns and some villages that depended on heavy manufacturing industry and had high unemployment.

Midlands urban—A mixed urban area on the edge of a large conurbation with a high proportion of its population from ethnic minorities. There was a large amount of council housing but also some affluent villages.

North of England mining—The area of the pilot study, comprising a medium sized town and its environs on the edge of the Pennines.² The area had a central core, working class estates, some suburban housing developments, and many small villages and was self contained, being some distance from other towns or cities.

We aimed at collecting information from all practices except singlehanded practices, in all of the areas. We consulted the lists of general practitioners

Results and discussion

Table I shows the populations and some of the social characteristics of the chosen areas; possibly the most notable indicators of the type of area were unemployment rate and degree of overcrowding.

Table II shows the response rates for the seven study areas. The overall response rate was 74%, which compares favourably with rates of 58-76% achieved in other surveys.⁵⁻⁷ The response rate was poorest in the London inner city area, and even after considerable efforts had been made to recruit general practitioners to the study the rate still reached only 64%. In other areas there was no reason to think that the survey was biased in particular directions; the survey in the London inner city area, however, may have covered more innovative practices. Cartwright and Anderson experienced particular problems in obtaining a response from practices with Asian doctors.⁶ Our results suggested that such doctors in London inner city areas, who often work under particularly difficult circumstances, may be reluctant to take part in surveys.

STRATEGIES OF PRACTICES

Table III shows some of the considerable differences in the structure of practices and the decisions made by practices among the areas. How far

might patterns in choice or in strategy adopted by practices in different areas help to explain the observed variations? On the basis of certain innovations, which are usually considered to be signs of professional quality we divided the practices into three distinct groups. The signs of innovation we chose were employing a practice nurse, participating in the cost rent scheme, and participating in the vocational training scheme. Employment of a nurse shows a willingness to incur costs and expand services because, although practices receive a reimbursement of 70% of a nurse's salary, the remaining costs have to be set against the perceived benefits. Practices that participate in the cost rent scheme show a willingness to invest in their premises. This improves the working environment but also leads to higher costs. Practices in the vocational training scheme face external audit and are required to maintain certain basic standards.

We designated practices that fulfilled two of the above criteria as innovative. Ninety nine practices were so designated and comprised four subgroups: 28 had a trainer and a nurse; eight had a trainer and participated in the cost rent scheme; 27 had a nurse and participated in the cost rent scheme; and 36 had a nurse and a trainer and participated in the cost rent scheme. Further analysis to test whether any important differences existed among the four subgroups showed that practices in all subgroups were more likely to have computers and, except for the second group, which was too small for analysis, they were more likely to have more partners. Grouping the practices in the four subgroups together as innovative was justified by their similarity in making decisions—that is, in deciding to employ nurses and participate in a training or a cost rent scheme. Practices operating from health centres were difficult to classify as they were unable, by their nature, to take part in the cost rent scheme. This was one reason why we designated innovative practices as having two of the three chosen characteristics, to allow some practices within health centres to be included in this group. Practices with none of the three characteristics were designated as traditional and the remaining practices as intermediate. The classification of traditional practices (previously designated low-investors) differed from that used in our pilot study,² and some of the data collected for the north of England mining area were recalculated to adjust for this difference. The results showed that the three types of practice had distinct strategies and characteristics.

Table IV shows the large differences in the proportion of innovative practices among the areas. Nineteen practices (46%) in the north west suburban area and 27 (68%) in the eastern rural area were classed as innovative. In other areas about one third (30-33%) of practices were innovative, the lowest proportion (23%) occurring in the midlands urban area. These differences were clearly related to the social characteristics of the areas. The proportion of traditional practices was much higher in the less affluent areas, such as the midlands urban and north of England mining areas. The Thames valley area did not seem to fit the pattern, but it was an area with a greater diversity of social groups than the north west suburban or eastern rural area as it comprised an urban area with some prosperous suburbs. Few innovative practices were seen in its urban area but many were seen in the suburbs.

The effect of the local environment was also examined by assessing the social background for each practice; this allowed for local variations in the social mix within the fairly large areas covered by the family practitioner committees. The north of England mining area of the pilot study was excluded. Analysis of the different types of practices on this basis emphasised the effects of the local environment; 22 practices (40%) in an affluent suburban environment were innovative and only nine (16%) were traditional, and 24 practices (57%) in rural areas were innovative and only seven (17%) traditional (table V). In other areas the three types of practices were equally distributed.

Innovation was related to the size of the practice (table VI): practices with four or more partners were more likely to be innovative than those with fewer partners, which were more likely to be traditional. Innovative practices were also related to the average age of the partners (table VII), being more common in partnerships with a younger average age. The effect was particularly noticeable in the London inner city area, where the average age of partners was 53 in traditional practices and 42 in innovative practices.

TABLE IV—Type of practice by area. (Percentages in parentheses)

| | Innovative | Intermediate | Traditional | Total |
|--------------------------|------------|--------------|-------------|-------|
| North west suburban | 19 (46) | 14 (34) | 8 (20) | 41 |
| London inner city | 9 (33) | 12 (44) | 6 (22) | 27 |
| Thames valley | 11 (34) | 13 (41) | 8 (25) | 32 |
| Eastern rural | 27 (68) | 8 (20) | 5 (13) | 40 |
| North eastern industrial | 14 (30) | 20 (43) | 13 (28) | 47 |
| Midlands urban | 11 (23) | 18 (38) | 19 (40) | 48 |
| North of England mining | 8 (32) | 6 (24) | 11 (44) | 25 |
| Total | 99 (38) | 91 (35) | 70 (27) | 260 |

TABLE V—Type of practice by social background.* (Percentages in parentheses)

| | Innovative | Intermediate | Traditional | Total |
|-------------------|------------|--------------|-------------|-------|
| Affluent suburban | 22 (40) | 24 (44) | 9 (16) | 55 |
| Working class | 26 (31) | 32 (38) | 26 (31) | 84 |
| Rural | 24 (57) | 11 (26) | 7 (17) | 42 |
| Urban | 18 (34) | 18 (34) | 17 (32) | 53 |

*Excluding north of England mining area.

TABLE VI—Type of practice by number of partners. (Percentages in parentheses)

| No of partners | Innovative | Intermediate | Traditional | Total |
|----------------|------------|--------------|-------------|-------|
| 2 | 12 (19) | 19 (30) | 33 (52) | 64 |
| 3 | 21 (27) | 32 (42) | 24 (31) | 77 |
| 4 | 22 | 19 | 9 | 50 |
| 5 | 21 (78) | 7 (26) | 1 (4) | 29 |
| 6 | 16 (64) | 7 (28) | 2 (8) | 25 |
| 7 | 5 | 4 | 1 | 10 |
| 8 | | 1 | | 1 |
| 9 | 2 | | | 2 |
| 10 | | 2 | | 2 |

TABLE VII—Average age (years) of partners in each type of practice in each area

| | Innovative | Intermediate | Traditional |
|--------------------------|------------|--------------|-------------|
| North west suburban | 42.8 | 43.5 | 44.6 |
| London inner city | 41.5 | 46.4 | 52.8 |
| Thames valley | 41.9 | 46.3 | 42.9 |
| Eastern rural | 43.5 | 39.9 | 46.3 |
| North eastern industrial | 40.0 | 42.8 | 43.5 |
| Midlands urban | 42.8 | 45.8 | 44.9 |
| North of England mining | 39.5 | 49.3 | 45.9 |

Differences in the age distribution of general practitioners among areas did not, however, explain the strategy of the practice. If young partners are more likely to be in innovative practices an area with a higher proportion of young partners might be expected to have more such practices. Two of the areas with the lowest proportions of innovative practices did indeed also have the highest proportions of practices in which the average age of the partners was over 50. But analysis of variance showed that the differences in strategy were greater than could be explained by differences in the age distribution of the partners.

The ethnic background of the partners may have been related to differences in strategy. Fewer general practitioners of Asian origin were in innovative practices (25 (21%) compared with 371 (49%) of British origin).

Thus the strategy of the practice seemed to represent a genuine difference in motivation, the local external environment and size of the practice being the main variables.

STRATEGIES OF PRACTICES IN RELATION TO PROFESSIONAL DECISIONS

Differences in strategy were reflected in a range of decisions about premises, staffing, and participation in the vocational training scheme. Innovative practices were more likely to participate in the cost rent scheme and also more likely to employ nurses and to take part in the vocational training scheme. The traditional practices by definition did none of these, and the intermediate practices responded to incentives to innovate mainly by employing nurses (table VIII). Innovative practices were also much more likely to employ practice managers; 79 (80%) innovative, 50 (55%) intermediate, and 25 (36%) traditional practices did so.

In terms of equipment the largest differences were in the extent to which practices used microcomputers (table IX). Smaller, but still important differences existed in the availability of the most common types of medical equipment. Improved record keeping and use of information technology are crucial to development of preventive care, so that the acquisition of a computer is an important sign of the intention to improve preventive care in a practice.

How far did the professional background of doctors differ in the innovative practices and the other practices? Family doctors in the innovative practices were more likely to have further qualifications; 68 (75%)

had further qualifications compared with 32 (54%) in the other types of practice. Membership of the British Medical Association was common in all practices but was more so among innovative practices. Larger differences were seen in membership of the Royal College of General Practitioners, 178 general practitioners (45%) in the innovative practices being members of the college compared with 40 (22%) in traditional practices.

The traditional practices were commonly found in rented premises whereas the innovative practices, especially if they participated in the cost rent scheme, were more likely to own their premises, usually on a collective basis (table X). The capital value of the premises estimated by the doctors at current market prices was higher for the innovative practices. The responses were checked against the interviewers' descriptions of the premises and local property prices and should be taken only as broad estimates.

TABLE VIII—Practices participating in cost rent scheme, training practices, and employment of nurse in innovative and intermediate practices by area. (Percentages in parentheses)

| | Practices participating in cost rent scheme | | Practices participating in training scheme | | Practices employing nurse | |
|--------------------------|---|--------------|--|--------------|---------------------------|--------------|
| | Innovative | Intermediate | Innovative | Intermediate | Innovative | Intermediate |
| North west suburban | 13 (68) | 2 (14) | 17 (90) | 3 (21) | 16 (64) | 9 (36) |
| London inner city | 5 (56) | 4 (33) | 7 (78) | 2 (17) | 9 (64) | 5 (36) |
| Thames valley | 6 (55) | | 9 (100) | | 11 (46) | 13 (54) |
| Eastern rural | 25 (93) | 5 (63) | 17 (63) | 1 (13) | 25 (89) | 3 (11) |
| North eastern industrial | 9 (64) | 3 (15) | 9 (100) | | 14 (45) | 17 (55) |
| Midlands urban | 6 (54) | 7 (39) | 7 (78) | 2 (11) | 11 (55) | 9 (45) |
| North of England mining | 7 (87) | 2 (33) | 6 (75) | 2 (40) | 5 (71) | 2 (29) |

Given the differences in the prices of property among the areas the most relevant comparison was between innovative and traditional practices within areas. The value of premises owned by the innovative practices was two to three times higher than the value of those of the traditional practices, except in the Thames valley area, where the price of all property was high (table XI). The differences in capital value per partner between the two types of practice were, however, less than the differences in total value; innovative practices were larger and therefore had more partners to share the risk.

TABLE IX—Practices having certain items of equipment by type.* (Percentages in parentheses)

| | Innovative (n=91) | Intermediate (n=85) | Traditional (n=59) |
|--------------------|-------------------|---------------------|--------------------|
| Microcomputer | 54 (59) | 30 (35) | 6 (10) |
| Electrocardiograph | 71 (78) | 50 (59) | 27 (46) |
| Haemoglobinometer | 27 (30) | 19 (22) | 11 (19) |
| Nebuliser | 87 (96) | 64 (75) | 39 (66) |
| Peak flow meter | 91 | 85 | 57 (97) |
| Proctoscope | 80 (88) | 70 (82) | 48 (81) |

*Excluding north of England mining area.

TABLE X—Ownership of practice premises by type. (Percentages in parentheses)

| | Personally owned | Collectively owned | Rented from health authority | Privately rented |
|---------------------|------------------|--------------------|------------------------------|------------------|
| All (n=259)* | 50 (19) | 104 (40) | 75 (29) | 30 (12) |
| Innovative (n=99) | 13 (13) | 61 (62) | 19 (19) | 6 (6) |
| Intermediate (n=91) | 17 (19) | 30 (33) | 29 (32) | 14 (15) |
| Traditional (n=70) | 20 (29) | 13 (19) | 27 (39) | 10 (14) |

*Data missing for one practice.

TABLE XI—Mean capital value (£) of premises owned by practices. (Number of responding practices in parentheses)

| | Innovative | Intermediate | Traditional | Total |
|--------------------------|--------------|--------------|-------------|--------------|
| North west suburban | 125 667 (15) | 75 143 (7) | 47 500 (4) | 100 039 (26) |
| London inner city | 137 800 (5) | 159 167 (6) | 65 000 (2) | 136 462 (13) |
| Thames valley | 183 750 (8) | 178 400 (5) | 132 000 (5) | 167 889 (18) |
| Eastern rural | 186 000 (24) | 96 500 (4) | 44 000 (2) | 164 600 (30) |
| North eastern industrial | 139 000 (9) | 95 000 (8) | 42 250 (4) | 103 810 (21) |
| Midlands urban | 77 875 (8) | 97 833 (12) | 49 875 (8) | 78 429 (28) |
| North of England mining | 115 000 (7) | 43 333 (3) | 24 429 (7) | 63 588 (17) |

The survey also examined how gross and net incomes differed among areas and types of practice (table XII). Gross income was defined as the gross income of the practice in fees and allowances for the most recent accounting year; it excluded income not paid by the family practitioner committees, such as that derived from hospital appointments and private work. Net income was the total income available for distribution among the partners before tax. Partners were asked to quote available figures from recent practice accounts. If the doctors were unwilling to disclose detailed figures they were asked to select the amount from a list of ranges of income presented by the interviewer, and some of these figures were later checked with the practices. The data on average incomes collected in our survey fitted closely with those set out in the report of the Review Body on Doctors' and Dentists' Remuneration.⁸

TABLE XII—Average gross and net income per partner by area and practice 1986-7.* (Numbers in parentheses are practices for which figures were available)

| | Gross income per partner (£) | Net income per partner (£) | Net: gross ratio |
|---------------------------|------------------------------|----------------------------|------------------|
| North west suburban: | | | |
| Innovative | 42 934 (19) | 27 846 (19) | 0.65 |
| Traditional | 38 011 (6) | 22 351 (7) | 0.59 |
| All | 40 992 (37) | 26 323 (39) | 0.64 |
| London inner city: | | | |
| Innovative | 38 256 (9) | 25 712 (9) | 0.67 |
| Traditional | 30 556 (6) | 22 267 (5) | 0.73 |
| All | 33 595 (27) | 23 332 (25) | 0.69 |
| Thames valley: | | | |
| Innovative | 44 772 (10) | 33 608 (10) | 0.75 |
| Traditional | 34 708 (8) | 22 774 (7) | 0.66 |
| All | 39 816 (29) | 29 216 (29) | 0.73 |
| Eastern rural: | | | |
| Innovative | 75 605 (23) | 34 574 (24) | 0.46 |
| Traditional | 48 532 (5) | 28 546 (5) | 0.59 |
| All | 71 960 (36) | 33 698 (37) | 0.47 |
| North eastern industrial: | | | |
| Innovative | 37 969 (13) | 27 490 (13) | 0.72 |
| Traditional | 38 059 (13) | 25 304 (13) | 0.66 |
| All | 38 942 (41) | 27 154 (41) | 0.70 |
| Midlands urban: | | | |
| Innovative | 40 392 (11) | 24 970 (11) | 0.62 |
| Traditional | 34 815 (18) | 23 343 (17) | 0.67 |
| All | 37 017 (46) | 23 922 (45) | 0.65 |
| All† | | | |
| Innovative | 50 407 (85) | 29 749 (86) | 0.59 |
| Traditional | 36 664 (56) | 23 991 (54) | 0.65 |
| All | 43 835 (216) | 27 286 (216) | 0.62 |
| North of England mining: | | | |
| Innovative | 36 250 (8) | 23 400 (8) | 0.65 |
| Traditional | 27 108 (10) | 20 667 (11) | 0.76 |
| All | 32 170 (22) | 22 741 (24) | 0.71 |

*Figures for north of England mining area are for 1985-6.

†Except north of England mining area.

The average net income of innovative practices was 23% higher in the Thames valley area and 27% higher in the eastern rural area than that achieved by all practices in all areas excluding the north of England mining area. In the London inner city area the average net income of innovative practices was 94% of the average, and in the midlands urban area it was 91%. Thus the financial returns to innovative practices varied greatly among the areas. Net earnings varied more by area among innovative practices than among traditional practices (table XII). In general, although the average earnings of partners in the innovative practices were higher, this was not a good indication of the returns to be expected from innovation in less affluent areas. The innovative practices in the Thames valley and eastern rural areas

had net incomes that were well above the averages achieved by all practices in the study and by all practices in their own areas. But for practices in the midlands urban and north eastern industrial areas innovation resulted in a high average net income only in affluent areas. Dispensing practices located mainly in the rural areas were also able to achieve high net incomes.

One other feature of the local environment was associated with innovation—namely, the degree of change in the local population (table XIII). Innovative practices were more likely to have experienced an increase in the local population. This association was clearest in the north west suburban, Thames valley, and midlands urban areas, in which 45-73% of the innovative practices had experienced an increase in the local population. In the eastern rural area an increase in the local population had occurred around all types of practice.

TABLE XIII—Practices in which local population had increased. (Percentages in parentheses)

| | Innovative | Intermediate | Traditional |
|--------------------------|------------|--------------|-------------|
| North west suburban | 11 (58) | 2 (14) | 2 (25) |
| London inner city | 1 (11) | 2 (17) | |
| Thames valley | 8 (73) | 4 (31) | 2 (25) |
| Eastern rural | 15 (56) | 5 (63) | 2 (40) |
| North eastern industrial | 2 (14) | 3 (15) | 2 (15) |
| Midlands urban | 5 (45) | 2 (11) | 1 (5) |
| North of England mining | 2 (25) | | 2 (18) |
| Total | 44 (44) | 18 (20) | 11 (16) |

Conclusions

Family doctors receive much good advice on how to improve and change their practices: national policy makers try to devise incentives to encourage them to do so, as in the recent white paper.¹ This study examined the differences in response among practices, which may give a guide to future development.

Our results suggest that the area in which the practice is located affects its strategy. Our two initial hypotheses—namely, that the response is differential and consistent, and that it is affected by the type of local population and changes therein—were supported. There were distinct differences in strategy, with a third or more practices taking decisions that allowed them to be described as innovative; but innovative practices were found disproportionately in affluent areas. The response to incentives was much greater in areas of an expanding population or a middle class population. Innovation was found typically in large practices in places that were environmentally attractive. The third hypothesis—that innovative practices experience the greatest financial difficulties—was more difficult to prove because of the complexity of the results. Innovation seemed to result in gains in affluent and rural environments, but the returns were much less clear in industrial areas, where there were few incentives for innovation.

The study examined whether differences in the ages of general practitioners could explain some of the variation in the choice of strategy, but the results did not support this idea.

This study supported the assumption of the white paper on primary care that special problems of development are concentrated in a few inner city areas.¹ The incentives for practices to innovate have had a weak impact throughout industrial areas. Even within the classification inner cities there are distinct differences between inner London and the Manchester-Salford area.⁹ Our results further strengthen the case for using a term such as “area of developmental difficulty” rather than inner city and for applying more explicit criteria for choosing such areas. Such criteria might cover both variables of need, such as indicators of social deprivation and variables of supply, such as the structure of practices and the degree of response to innovation within an area. Unless help in terms of management and resources is given to practices in such areas it seems unlikely that they will show greater responses to the new incentives than they did to the old ones.

Our results also have implications for the financial incentives advocated in the white paper, in which new fees were suggested for providing check up examinations for patients new to the NHS; for paediatric surveillance; and for regular care of the elderly. Innovative

practices in affluent areas are in a much stronger position to increase their income from such fees. They face a heavier demand for the services; are under less pressure from a high rate of consultations; and are better able to organise the recall and information system that are required to increase income from such fees, especially as our results showed that they are more likely to have computers. A swing towards charging fees for services is likely to mean a further widening of the differences in net income between practices in the affluent areas and elsewhere.

The white paper also suggested that capitation fees be increased and that the proportion of total remuneration derived from such fees be increased at least to 50% of total income. Practices would be in a much better position to benefit from this if they were in areas of expanding population, and practices in older industrial areas would be more disadvantaged.

In conclusion, our study has shown how the margin of development available to practices differs between areas in a systematic way. The strategy of a practice is affected by economic forces and constraints operating locally as well as by national policies. It may be more sensible to concentrate resources in local primary care budgets, which could be targeted on areas of developmental difficulty, rather than to extend the system of charging fees for service.

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ONE HUNDRED YEARS AGO

We have had to notice, not with approbation, the style and frequency of the circulars issued from the office of the Surgeon-General at Simla to medical officers under his orders, as well as their too often vexatious and trivial nature. We are glad to hear that these Simla “circular showers” are more intermittent than they were. This is something; but we must be allowed to ask whether the Surgeon-General cannot see his way to consult his own dignity and that of his profession, and the *amour propre* of his officers better than by (presumably at the suggestion of the apothecary it pleases him to substitute for the commissioned secretary supplied by the State) issuing a circular on the breakage of a hospital saltcellar, value some three farthings! We do not expect the apothecary-secretary to be familiar with the oft-quoted law maxim, *De minimis non curat lex*, but surely it cannot be strange to a man in the responsible position of the Chief Medical Officer of the army of India. When we reflect on the serious matters that should fill the minds of the Medical Staff of that army, it is with something more akin to sorrow than mere surprise that we see this highly-placed official thus taking “tithes of mint and cummin.” The impression throughout both medical services in India is that the tours of the Surgeon-General and his apothecary-secretary are more costly to the State than profitable to the sick, to say nothing of the irritation awakened in the minds of his highly-competent deputies, by this petty interference. If they cannot be trusted with the small details of hospital administration, on what principle can their pay, position, and authority be justified?

(*British Medical Journal* 1888;i:918)