

# Care of patients with selected health problems in fundholding practices in Scotland in 1990 and 1992: needs, process and outcome

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## Introduction

**A**FTER a period of stability in the structure of funding of general medical services, the years since 1990 have been characterized by considerable and rapid change. The implementation of the 1990 contract for general practitioners coincided with the introduction of the internal market in health care, an important component of which has been the holding of funds by general practitioners. An increasing amount of literature describing the impact of fundholding is now appearing in refereed journals.<sup>1-8</sup> Much of the literature refers to work at the interface between primary and secondary care,<sup>9-11</sup> about changes in prescribing patterns<sup>12-14</sup> and about the setting of fund allocations.<sup>15-17</sup>

At the time of the introduction of the concept a number of potential benefits and concerns about fundholding were debated, in particular whether advantage to some groups of patients might be at the expense of others. In 1990, the Department of General Practice at the University of Edinburgh was commissioned by the Scottish Office to carry out an independent evaluation of the early implementation of fundholding.<sup>18</sup> As part of this evaluation an exploration was undertaken of the needs, processes and outcomes experienced by patients with a range of marker conditions. Prescribing, referral and investigation rates for patients with these marker conditions have been reported elsewhere.<sup>11,13</sup> A separate paper has described changes in clinical care of patients reporting joint pain.<sup>19</sup> This work concluded that the quality of care for this group of patients had remained relatively stable in terms of the appropriateness of consultation times given to patients in 1990 compared with 1992. However, it was noted that the number of patients with social problems had increased and that for this category of patients, consultation lengths were generally shorter, raising the question of whether this represented disadvantage to them, and was thus a potential cost of fundholding.

The present paper extends that work to cover the full range of marker health problems studied and describes changes in needs, processes of care (in terms of consultation length) and outcome (patient responses to six enablement questions) between September 1990 and March 1992.

## Method

The study took place in six practices in Grampian (who between them looked after 65 000 patients and formed five fundholding groups) and three practices in Tayside (who between them looked after 19 000 patients and who joined together to become one fundholding group). Three data sets were collected about patients attending surgery consultations in these practices in September 1990 (pre-budget baseline), September 1991 (at the end of holding a six-month 'shadow' budget) and March 1992 (at the end of the first real budget period of six months).

During each data collection period the 53 participating doctors had the choice of recording data for two weeks or 250 consecutive surgery consultations. All attenders aged 16 years and over

## SUMMARY

**Background.** At the time of the introduction of fundholding, a number of potential benefits and concerns about fundholding were debated.

**Aim.** A study was undertaken to compare process and outcome of care in patients with different levels of physical, social and psychological need in 1990 and 1992 in six fundholding groups in Scotland.

**Method.** Patients aged 16 years and over consulting with a range of marker conditions in 1990 and 1992 completed a pre-consultation health status questionnaire asking about physical, social and psychological problems, and a post-consultation satisfaction/enablement questionnaire asking about their ability to cope, and understand their illness. Main outcome measures were consultation length and satisfaction/enablement score.

**Results.** Of patients attending in the study period, 39% consulted for one or more marker condition. The proportion of patients reporting social problems rose between 1990 and 1992 for 11 out of 12 conditions. Overall, consultation lengths remained constant. Patients wanting to discuss social problems had significantly longer consultations than those reporting no social problems or problems they did not wish to discuss. The proportion of patients expressing enablement dropped for eight conditions and rose for four between 1990 and 1992. The decrease in the proportion expressing enablement remained after controlling for the rise in the percentage reporting social problems. Patients who had social problems they did not wish to discuss but a general health questionnaire score of five or more were the group reporting lowest enablement. Significantly more patients with pain, skin problems and digestive problems reported social problems and significantly fewer of them reported enablement in 1992 compared with 1990. Patients with diabetes, angina, chronic bronchitis and problems seeing fared relatively well over the study period. Some patients with psychosocial problems fared poorly (they had relatively short consultations and were unlikely to express an ability to cope/understand their illness).

**Conclusion.** The issue of whether benefits to some patient groups from recent health service changes may be matched by disadvantage to other groups, for example those with clinical problems with no financial incentive to provide pro-active care or with psychosocial difficulties, is discussed.

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completed a pre-consultation health status questionnaire and a post-consultation patient satisfaction/enablement questionnaire in the waiting room (the questionnaires are available from the authors; a background paper on the development of the project has been published elsewhere<sup>18</sup>). The general practitioner completed information on consultation length, noting the time the patient entered and left the consulting room. Patients attending more than once during the sampling period were included each time they attended.

The pre-consultation health status questionnaire collected information on two areas — a series of physical marker conditions, and a series of social and psychological problems.

The purpose of the marker condition part of the study was to compare the management of patients with selected physical health problems over time. Patients were asked if they had any of 17 marker conditions and whether they were visiting the doctor today about the problem. In this paper, only patients responding yes to both of these questions are reported. Thus patients who had marker conditions but who did not wish to discuss them at the index consultation were excluded from analysis. Four marker conditions (pain in back, neck, hip, and shoulder) were amalgamated into a single category, as were indigestion, ulcer, and hiatus hernia. The tables presented thus cover 12 clinical categories. The conditions studied were selected to give a broad cover of health problems presented to general practitioners and to correlate with the main drug groups whose use over the two-year period of the study has been previously reported.<sup>13</sup>

Patients were asked if, in the two weeks prior to consultation, they had had problems with money, with their partner or family, with housing, or with work or unemployment. The four dimensions were added together and patients were first divided into those with and without social problems. Those with social problems were further divided to identify those stating that they wished to discuss them at their consultation. In 1992 patients also completed the 12-item version of the general health questionnaire.

The post-consultation satisfaction/enablement questionnaire consisted of six questions about patients' ability to cope after having seen the doctor, using a three-point scale. The questions had been found to be discriminating in a previous study.<sup>20</sup> Patients reporting 'much better able' scored two, 'better' scored one, and 'same or less' scored 0 for each of the six questions. Adding these scores made it possible to attain a score between 0 and 12. A score of six or more was defined as indicating enablement/ability to cope following the consultation.

### Statistics

Differences in results between categories and across time periods were tested for significance using the chi square test. Consultation lengths were compared using the *t*-test. For comparisons over time the data for September 1990 and March 1992 have been used to give the best before and after statistics available to the study and the September 1991 data set has not been used in this paper. The sample sizes for different clinical conditions varied widely, making interpretation of the meaning of differences found using traditional tests of statistical significance difficult. In the tables, the findings and the statistical differences calculated are reported; in the discussion section, our interpretation of their clinical meaning is presented.

### Results

Eighty one per cent of eligible patients (all consulters aged 16 years and over) completed the pre-consultation questionnaire in 1990, and 78% did so in 1992. Seventy three per cent of eligible patients completed the post-consultation questionnaire in 1990, and 65% did so in 1992.

### Needs

The proportion of patients consulting with each of the 12 marker conditions, ranked according to relative frequency in 1990, is shown in Table 1. Pain was the most common condition (reported by 15% of patients) and was approximately double that of the next most common marker condition, skin problems (8%). Few patients consulted with diabetes (1%). The rank order of marker conditions remained relatively stable between 1990 and 1992. In absolute terms, patients with period problems and with difficulties seeing rose significantly. In 1990 and 1992, 39% of patients had one or more of the 12 marker conditions, with 6% reporting more than one marker condition (Table 1).

The mean age of the population studied was 44 years in both 1990 and 1992, and the distribution of ages remained constant. Patients with angina were the oldest group in 1990 and 1992 (mean of 63 years) and those reporting period problems the youngest group (33 years). The percentage of women in the study population (where sex data were available) was 61.8% of 2982 in 1990 and 64.5% of 2468 in 1992. There were no significant changes over time in the percentage of women with each of the 12 marker conditions. With the obvious exception of patients with period problems, the group reporting difficulty passing urine had the highest proportion of women (75.3% of 215 in 1990 and 78.0% of 150 in 1992). The groups of patients with chronic bronchitis and angina had significantly lower proportions of women than the overall proportions for the groups (chronic bronchitis 46.3% of 123 and 51.6% of 95 in 1990 and 1992, respectively; angina 36.7% of 166 and 44.9% of 118, respectively).

The percentage of patients consulting with each condition reporting social problems is shown in Table 2. There was a significant overall increase in the proportion of the study population

**Table 1.** Proportion of all eligible patients consulting with marker conditions in 1990 and 1992.

Condition	% of patients (95% CI) consulting with condition in	
	1990 (n = 8092)	1992 (n = 6814)
Pain	15.5 (14.7 to 16.3)	14.7 (13.9 to 15.6)
Skin problems	7.9 (7.3 to 8.4)	7.9 (7.3 to 8.6)
Digestive problems	4.1 (3.7 to 4.6)	4.4 (3.9 to 4.9)
Period problems	3.6 (3.2 to 4.0)	4.5 (4.0 to 5.0)**
Asthma	3.1 (2.7 to 3.5)	2.8 (2.4 to 3.2)
Difficulty passing urine	2.8 (2.4 to 3.2)	2.3 (1.9 to 2.7)
Problems hearing	2.2 (1.9 to 2.5)	2.5 (2.1 to 2.8)
Angina	2.1 (1.8 to 2.4)	1.9 (1.6 to 2.2)
Chronic bronchitis	1.6 (1.3 to 1.9)	1.5 (1.2 to 1.8)
Difficulties seeing	1.3 (1.0 to 1.5)	1.7 (1.4 to 2.0)*
Varicose veins	1.2 (0.9 to 1.4)	1.1 (0.9 to 1.3)
Diabetes	1.1 (0.8 to 1.3)	1.1 (0.9 to 1.4)
Total <sup>a</sup>	46.4 (45.3 to 47.5)	46.4 (45.3 to 47.6)
<i>No. of conditions reported</i>		
0	61.3 (60.2 to 62.4)	60.9 (59.7 to 62.1)
1	32.7 (31.7 to 33.7)	33.1 (32.0 to 34.2)
2	4.9 (4.4 to 5.4)	5.0 (4.5 to 5.5)
3	0.8 (0.6 to 1.0)	0.7 (0.5 to 0.9)
4+	0.3 (0.2 to 0.4)	0.2 (0.1 to 0.3)

*n* = number of patients attending during study period. CI = confidence interval. <sup>a</sup>Where patients reported more than one condition each is counted separately.  $\chi^2$  for difference between 1990 and 1992: \**P*<0.05, \*\**P*<0.01.

**Table 2.** Proportion of patients with each marker condition reporting social problems.

Condition	% of patients (95% CI) with condition reporting social problem in		Difference in % between 1990 and 1992
	1990	1992	
Pain ( <i>n</i> = 1253/1005)	25.2 (22.8 to 27.6)	36.8 (33.8 to 39.8)	+11.6***
Skin problems ( <i>n</i> = 636/541)	29.1 (25.6 to 32.6)	36.6 (32.5 to 40.7)	+7.5**
Digestive problems ( <i>n</i> = 334/301)	21.9 (17.5 to 26.3)	30.2 (25.0 to 35.4)	+8.3*
Period problems ( <i>n</i> = 294/304)	38.4 (32.8 to 44.0)	46.4 (40.8 to 52.0)	+8.0*
Asthma ( <i>n</i> = 251/189)	25.1 (19.7 to 30.5)	39.7 (32.7 to 46.7)	+14.6***
Difficulty passing urine ( <i>n</i> = 226/157)	31.4 (25.3 to 37.5)	36.3 (28.8 to 43.8)	+4.9
Problems hearing ( <i>n</i> = 176/169)	23.9 (17.6 to 30.2)	34.9 (27.7 to 42.1)	+11.0*
Angina ( <i>n</i> = 172/128)	15.1 (9.7 to 20.5)	18.8 (12.0 to 25.6)	+3.7
Chronic bronchitis ( <i>n</i> = 131/103)	25.2 (17.8 to 32.6)	30.1 (21.2 to 39.0)	+4.9
Difficulties seeing ( <i>n</i> = 103/115)	27.2 (18.6 to 35.8)	27.0 (18.9 to 35.1)	-0.2
Varicose veins ( <i>n</i> = 95/75)	13.7 (6.8 to 20.6)	33.3 (22.6 to 44.0)	+19.6**
Diabetes ( <i>n</i> = 85/78)	27.1 (17.7 to 36.5)	30.8 (20.6 to 41.0)	+3.7
Total ( <i>n</i> = 3134/2661) <sup>a</sup>	25.9 (24.4 to 27.4)	34.1 (32.3 to 35.9)	+8.2***

*n* = number of patients consulting with marker condition in 1990/1992. CI = confidence interval.  $\chi^2$  for difference between 1990 and 1992: \**P*<0.05, \*\**P*<0.01, \*\*\**P*<0.001. <sup>a</sup>Total *n* values are less than the sum of the *n* values for all individual marker conditions as patients reporting more than one marker condition included only once.

reporting social problems (26% of patients in 1990 rising to 34% in 1992, *P*<0.001). A rise was noted in all marker conditions except difficulties seeing where the percentage of patients reporting social problems remained stable (decreased by only 0.2%). There were non-significant increases (of 5% or less) between 1990 and 1992 in the proportion of patients reporting social problems among those with angina, diabetes, difficulty passing urine, and chronic bronchitis. For all other conditions the rises in the proportion of patients with social problems (of 8% or more) were significant. Although varicose veins was the marker condition with the smallest proportion of patients with social problems in 1990 this group had the highest increase (20%) over the two-year period. Of patients with social problems, 19.8% of 813 in 1990 and 20.2% of 908 in 1992 wished to discuss them at their consultation. In 1992, 30.4% of 675 patients who stated that they did not wish to discuss their social problems had a general health questionnaire score of five or more.

### Process

Mean consultation lengths for patients with each marker condition in 1990 and 1992 and for patients reporting no social problems, and for those reporting social problems which they did or did not wish to discuss are shown in Table 3.

The mean consultation length for patients consulting with marker conditions remained stable between 1990 and 1992 at a mean of 7.5 minutes. Patients consulting with diabetes had the longest consultations in both 1990 and 1992 (a mean 8.5 and 9.0 minutes, respectively). Patients with skin problems had the shortest consultations in 1990 (a mean of 6.8 minutes) and those with problems hearing had the shortest consultations in 1992 (a mean of 6.6 minutes). The mean length of consultations for hearing problems decreased significantly between 1990 and 1992 (*P*<0.05). Patients with diabetes and with period problems had longer mean consultations in 1992 compared with 1990 but the increase was not statistically significant.

Mean consultation length among patients with marker conditions who did not have social problems remained constant (7.4 minutes in both 1990 and 1992). For patients with social problems which they did not wish to discuss, the mean consultation length was lower (7.2 in 1990 and 7.1 minutes in 1992). The difference between those without social problems and those with problems they did not wish to discuss was not significant. In

1992 patients in the latter category who had general health questionnaire scores of five or more had a mean consultation length of 7.6 minutes compared with 6.9 minutes for those with a score below five. Patients with social problems which they wished to discuss had significantly longer mean consultation lengths com-

**Table 3.** Mean consultation lengths for patients consulting with marker conditions and with and without social problems.<sup>a</sup>

Condition	Mean length of consultation (minutes) (95% CI) in	
	1990	1992
<i>Condition</i>		
Pain ( <i>n</i> = 1187/944)	7.6 (7.5 to 7.7)	7.7 (7.6 to 7.8)
Skin problems ( <i>n</i> = 595/508)	6.8 (6.7 to 6.9)	6.9 (6.7 to 7.1)
Digestive problems ( <i>n</i> = 317/289)	7.9 (7.7 to 8.1)	7.9 (7.7 to 8.1)
Period problems ( <i>n</i> = 283/286)	7.9 (7.7 to 8.1)	8.5 (8.3 to 8.7)
Asthma ( <i>n</i> = 234/185)	7.4 (7.1 to 7.7)	7.4 (7.1 to 7.7)
Difficulty passing urine ( <i>n</i> = 212/149)	7.2 (6.9 to 7.5)	7.1 (6.8 to 7.4)
Problems hearing ( <i>n</i> = 163/157)	7.6 (7.3 to 7.9)	6.6 (6.3 to 6.9)*
Angina <i>n</i> = 163/125)	8.2 (7.9 to 8.5)	7.8 (7.5 to 8.1)
Chronic bronchitis ( <i>n</i> = 122/98)	7.6 (7.3 to 7.9)	7.5 (7.1 to 7.9)
Difficulties seeing ( <i>n</i> = 96/110)	8.2 (7.8 to 8.6)	7.6 (7.2 to 8.0)
Varicose veins ( <i>n</i> = 87/70)	8.4 (8.0 to 8.8)	7.3 (6.9 to 7.7)
Diabetes ( <i>n</i> = 79/71)	8.5 (8.0 to 9.0)	9.0 (8.5 to 9.5)
Total ( <i>n</i> = 2955/2517) <sup>b</sup>	7.5 (7.4 to 7.6)	7.5 (7.4 to 7.6)
<i>Presence of social problems</i>		
No ( <i>n</i> = 2117/1639)	7.4 (7.3 to 7.5)	7.4 (7.3 to 7.5)
Yes, would not like to discuss ( <i>n</i> = 615/682)	7.2 (7.0 to 7.4)	7.1 (7.0 to 7.2)
GHQ score <5 ( <i>n</i> = 448) <sup>c</sup>	-	6.9 (6.7 to 7.1)
GHQ score 5+ ( <i>n</i> = 188) <sup>c</sup>	-	7.6 (7.3 to 7.9)
Yes, would like to discuss ( <i>n</i> = 152/169)	8.7 (8.4 to 9.0)	9.6 (9.3 to 9.9)

*n* = number of patients consulting in 1990/1992. CI = confidence interval. GHQ = general health questionnaire. <sup>a</sup>Total *n* values are lower than those in earlier tables as data missing for some consultation lengths. <sup>b</sup>Total *n* values are less than the sum of the *n* values for all individual marker conditions as patients reporting more than one marker condition included only once. <sup>c</sup>General health questionnaire only completed by patients in 1992. *t*-test for difference between 1990 and 1992: \**P*<0.05.

pared with those with no social problems and those with problems they did not wish to discuss ( $P<0.001$  in both categories in both years). Although the mean consultation length for those with problems they would like to discuss was longer in 1992 compared with 1990 this difference was not statistically significant.

### Outcome

The proportion of patients consulting with marker conditions, and with and without social problems scoring six or more on the enablement questionnaire in 1990 and 1992 is shown in Table 4. The overall percentage of patients with marker conditions reporting enablement following the consultation decreased significantly between 1990 and 1992, from 35% to 30% ( $P<0.001$ ). There were statistically significant decreases between 1990 and 1992 in the percentage of patients reporting enablement among those with pain, skin problems and digestive problems. There were similar decreases which fell short of statistical significance for patients with period problems, asthma, difficulty passing urine, problems hearing, and varicose veins.

There were non-significant increases between 1990 and 1992 in the proportion of patients reporting enablement among those with angina, chronic bronchitis, difficulties seeing and diabetes. In 1992 the largest proportion of patients with a marker condition scoring six or more on the enablement questionnaire were those with diabetes, and the smallest group were those with varicose veins.

The proportion of patients with marker conditions not reporting social problems who scored six or more on the enablement questionnaire decreased by 6% between 1990 and 1992. The general downward trend shown in Table 4 was mirrored in nine of the 12 marker conditions; for chronic bronchitis and difficulty seeing enablement stayed the same and for angina enablement

rose, although not significantly. In 1990, a significantly smaller proportion of patients with social problems they did not wish to discuss expressed an ability to cope compared with those reporting no social problems (27% versus 37%, respectively,  $P<0.001$ ). In 1992, 20% of patients with social problems they did not wish to discuss and with a general health questionnaire score of five or more had a score of six or more on the enablement questionnaire, compared with 29% of those whose general health questionnaire score was below five ( $P<0.05$ ). Of patients with social problems they wished to discuss, 32% in 1990 and 30% in 1992 scored six or more on the enablement questionnaire.

### Discussion

The concepts of quality and the methods used to explore them have been described and discussed in previous papers.<sup>19,20</sup> Our definition of quality includes:

'Listing the needs of a patient at a consultation, deciding on the priority for dealing with these needs, and giving care that meets the need or needs selected for attention. The care delivered should improve health or halt its deterioration; offer support where deterioration is inevitable; or identify an appropriate channel through which services can be provided. The needs to be addressed should be negotiated between doctor (or carer) and patient (or family); they may include physical and psychosocial problems or education on health behaviour or health promotion. Needs can be short term or longer term. Patients should normally feel satisfied by the consultation, although occasionally conflict may exist between meeting needs and patients' expectations, leading to dissatisfaction. The care delivered should improve patients' understanding and increase their ability to cope with the problem. Needs may be identified and met

**Table 4.** Percentage of patients consulting with marker conditions and with and without social problems scoring six or more on the satisfaction/enablement questionnaire, that is expressing enablement.<sup>a</sup>

Condition	% of patients (95% CI) scoring 6+ on satisfaction/enablement score		Difference in % between 1990 and 1992
	1990	1992	
<i>Condition</i>			
Pain ( $n = 919/740$ )	34.3 (31.2 to 37.4)	29.1 (25.8 to 32.4)	-5.2*
Skin problems ( $n = 482/399$ )	32.4 (28.2 to 36.6)	25.1 (20.8 to 29.4)	-7.3*
Digestive problems ( $n = 245/227$ )	45.7 (39.5 to 51.9)	32.2 (26.1 to 38.3)	-13.5**
Period problems ( $n = 209/221$ )	36.8 (30.3 to 43.3)	31.2 (25.1 to 37.3)	-5.6
Asthma ( $n = 187/144$ )	39.0 (32.0 to 46.0)	29.2 (21.8 to 36.6)	-9.8
Difficulty passing urine ( $n = 169/122$ )	30.8 (23.8 to 37.8)	23.0 (15.5 to 30.5)	-7.8
Problems hearing ( $n = 132/127$ )	40.2 (31.8 to 48.6)	29.9 (21.9 to 37.9)	-10.3
Angina ( $n = 135/113$ )	34.1 (26.1 to 42.1)	37.2 (28.3 to 46.1)	+3.1
Chronic bronchitis ( $n = 99/73$ )	31.3 (22.2 to 40.4)	34.2 (23.3 to 45.1)	+2.9
Difficulties seeing ( $n = 76/86$ )	27.6 (17.5 to 37.7)	34.9 (24.8 to 45.0)	+7.3
Varicose veins ( $n = 71/56$ )	31.0 (20.2 to 41.8)	21.4 (10.7 to 32.1)	-9.6
Diabetes ( $n = 65/60$ )	40.0 (28.1 to 51.9)	46.7 (34.1 to 59.3)	+6.7
Total ( $n = 2329/2005$ ) <sup>b</sup>	34.6 (32.7 to 36.5)	29.8 (27.8 to 31.8)	-4.8***
<i>Presence of social problems</i>			
No ( $n = 1648/1321$ )	36.9 (34.6 to 39.2)	31.0 (28.5 to 33.5)	-5.9***
Yes, would not like to discuss ( $n = 486/548$ )	26.7 (22.8 to 30.6)	27.0 (23.3 to 30.7)	+0.3
GHQ score <5 ( $n = 363$ ) <sup>c</sup>	-	29.2 (24.5 to 33.9)	-
GHQ score 5+ ( $n = 152$ ) <sup>c</sup>	-	19.7 (13.4 to 26.0)	-
Yes, would like to discuss ( $n = 134/120$ )	32.1 (24.2 to 40.0)	30.0 (21.8 to 38.2)	-2.1

$n$  = number of patients in 1990/1992. CI = confidence interval. GHQ = general health questionnaire.<sup>a</sup>Total  $n$  values are lower than those on earlier tables as data missing for some enablement scores and general health questionnaire scores.<sup>b</sup>Total  $n$  values are less than the sum of the  $n$  values for all individual marker conditions as patients reporting more than one marker condition included only once.<sup>c</sup>General health questionnaire only completed by patients in 1992.  $\chi^2$  for difference between 1990 and 1992: \* $P<0.05$ , \*\* $P<0.01$ , \*\*\* $P<0.001$ .

over a series of interactions (which may occur over a long time) rather than at a single meeting. More efficient primary care involves carrying out the above processes at lower cost. Thus quality is a relative rather than an absolute concept.<sup>19</sup>

The methods of measuring need are holistic and patient-generated and the process variable used in this paper as a proxy measure of quality (consultation length<sup>20</sup>) has been retested in the setting of this project and again shown to be correlated with a higher likelihood that comorbidity will be recognized and dealt with, that psychosocial ill-health will be recognized and dealt with and that health promotion will be offered.<sup>20</sup>

The marker conditions were selected to cover a range of common or important clinical presentations and cover the content of nearly 40% of consultations.

The decision not to include control practices has been discussed previously.<sup>6,18,19</sup> The main reason was the belief that test and control practices would differ in other organizational and attitudinal factors as well as whether they were part of the fundholding experiment. The absence of funding to support data collection in control practices and the unacceptability to the volunteer practices of the option of random allocation into a fundholding and a control group were other relevant issues. The practices used as controls in a previous study on prescribing<sup>13</sup> all subsequently became second wave fundholders, confirming the view that it would have been difficult to design a true experiment during a time of multiple change in systems of and in attitudes towards delivery of primary care. Instead the practices were used as their own controls over time.

The scoring system used for the outcome measure (satisfaction/enablement questionnaire) develops previous work.<sup>20</sup> The decision to categorize patients who had scored six or more points out of 12 as able to cope, meant that only patients who answered 'better' uniformly to each of the six questions or who in general favoured 'much better' over 'same or less' were classified as enabled.

Patients consulting with pain, skin problems and digestive problems were the three largest groups studied and together these patients accounted for 27% of the population attending in the study periods. The proportion of patients in each of these three groups reporting social problems increased significantly between 1990 and 1992 and significantly smaller percentages of these patients reported enablement in 1992 compared with 1990. Mean consultation lengths remained constant. When the influence of social problems was excluded, the falls in enablement across time remained significant.

Considering patients consulting with period problems, asthma, difficulty passing urine, problems hearing or varicose veins, the proportion reporting social problems increased significantly between 1990 and 1992, except for those with difficulty passing urine. However, although the decrease in the proportion reporting enablement between 1990 and 1992 was of similar magnitude to the group of patients with pain, skin problems and digestive problems, the decreases fell short of statistical significance owing to the smaller numbers involved. Consultation lengths remained constant between 1990 and 1992 for asthma patients and patients with difficulty passing urine. Consultation lengths for patients with varicose veins decreased; these patients were the smallest group of patients expressing enablement. For patients with hearing problems, consultation length decreased significantly between 1990 and 1992; the proportion of patients in this group reporting enablement decreased by 10% between 1990 and 1992. Consultation length increased for patients with period problems; the proportion of patients in this group reporting social problems increased by 8% between 1990 and 1992. Once again, the downward trends in enablement over time per-

sisted for each of these conditions after controlling for the effect of social problems.

Relatively high proportions of patients with angina, chronic bronchitis, difficulties seeing and diabetes reported enablement and these proportions increased over the study period, although they did not reach statistical significance. The proportion of patients in these groups reporting social problems was relatively small, and any increases over time were small. Consultation times again remained relatively constant, except for patients with diabetes (who had the longest consultations) where mean consultation length rose from 8.5 minutes in 1990 to 9.0 minutes in 1992 and patients who had difficulties seeing, where mean consultation length decreased. Again, these findings were maintained after controlling for social problems.

Patients with social problems they wished to discuss had significantly longer consultations compared with patients without social problems. Patients with social problems they did not wish to discuss could be divided into two groups: those with a general health questionnaire score of five or more (indicating potential psychiatric ill-health) had longer consultations than did those with scores of less than five. However, their consultation lengths remained well below those of patients stating they had problems they wished to discuss. Patients with social problems they did not wish to discuss scoring five or more on the general health questionnaire were the smallest group expressing enablement in the study (20%). In the absence of general health questionnaire data for 1990 it is not possible to discuss trends across time.

On the basis of the work presented in this and previous papers, a number of conclusions can be drawn, some of which may be generalizable beyond fundholding practices and beyond Scotland.<sup>6,11,13,18,19</sup> Each matched data set around which this paper has been written equates to the workload of one doctor with an average list size for one year. During a period where several fundamental changes in health care provision have overlapped, and societal changes have been an added uncontrolled variable affecting our action research, it appears that the physical needs presented to general practitioners have remained constant but that the reported social problems accompanying physical problems have increased. Although there is no matched data on psychological well-being across the time period of the study, the 1992 data show that psychological ill-health is greater in patients with social problems than in those without.<sup>19</sup>

In general it appears that quality (as measured by consultation length) has remained constant for the care of individual marker conditions and for different categories of psychosocial well-being, and that doctors have allocated more time to those with the more explicit psychosocial needs. However, it also appears that patients' satisfaction with care (in terms of gain in their ability to cope with and understand their health problems) after consultation has fallen in many of the areas studied.

It is noticeable that patients with conditions which attract financial incentives to provide more pro-active care (diabetes, cardiovascular disease, chronic respiratory disease) fared better than average. These are also conditions which are proving more amenable than others to the construction of clinical guidelines and also have a relatively low prevalence and are associated with below-average levels of social problems. Two categories of patients with social problems (those wishing to discuss them and those not wishing to discuss them but reporting high general health questionnaire scores) were each more prevalent than around half the pathologically based clinical categories. Of these, patients with social problems they wished to discuss had relatively long mean consultation lengths, and similar proportions expressed enablement in 1990 and 1992. Among patients not wishing to discuss their social problems who had high general health questionnaire scores, consultations were only of average

length, and only a small proportion (20%) expressed enablement (compared with 47% of patients with diabetes).

The internal market has been associated with significant changes in care, particularly in the use of outpatient services.<sup>20</sup> During the same time, financial incentives have been introduced to promote specific areas of health care perceived as deserving particular focus. During the research described in this paper, too many variables have been at work to allow attribution of cause to benefits or dis-benefits. However, a case exists for expressing concern at the relative dis-benefit to some patients with prevalent but non-incentive bearing clinical problems (for example, patients with pain) and to others with social and psychological difficulties. We believe that the interests of these important groups of patients need to be addressed as part of the further developments of the health service reforms.

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