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Equity in Primary Care

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EQUITY IN PRIMARY CARE

by

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and

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Abstract

The allocation of funding and the distribution of the workforce in primary care is very unequal in England. Whilst hospital resources have been allocated in relation to a weighted capitation formula in each of the component parts of the United Kingdom since the late 1970s, there have been minimal efforts to equalise the distribution of general practitioners and the budgets which finance them and the services they provide.

The purpose of this paper is to illustrate both the existing inequalities in the distribution of primary care funding and the impact of alternative, simplistic but illustrative formulae which could be used as a basis for achieving more equitable funding of primary care in England.

These calculations show that a weighted capitation formula would have a significant impact on the old fourteen regions of the English NHS with major losses in funding and staffing levels in the South, particularly the South West, and major gains in the North of England. For example, using one of the models, the South West would have lost 14 per cent and the Northern region gained over 9 per cent of FHSA expenditure with 'RAWPed' primary care budgets in 1990-91.

The pursuit of greater equity in primary care funding may require a radical change in the GP contract, perhaps with it being replaced by franchises for primary care which are let to multi-disciplinary teams of providers. Such change requires careful evaluation to

ensure that the hospital gatekeeper role of the GP is maintained and the incentives to ensure efficient use of scarce primary care resources are improved.

Introduction

For over a quarter of a century Labour and Conservative Governments have sought to reduce the inequalities in the financial capacity of health districts in the component parts of Great Britain. However the remarkable characteristics of this policy have been firstly that inequalities in financial capacity especially between England, Wales Scotland and Northern Ireland have been maintained and, secondly, that these policies have been focused on hospital and community health services (HCHS). No attempt has been made to devise and use a formula to allocate primary care resources. Thus whilst the distribution of the hospital budget has been equalised in relation to need, with the RAWP formula (Department of Health and Social Security 1976) and in future with a partially implemented and improved new formula (Carr-Hill et al 1994a, Carr-Hill et al 1994b, Peacock and Smith 1995), primary health care funding and the services they provide are allocated with marked inequalities.

The purposes of this paper are firstly to explore the extent of the inequalities in the allocation of primary care funding by applying a tentative RAWP-type formula to the primary care budget in England, and secondly to discuss the implications of the adoption of a formula allocation policy in primary care for the employment of providers and the organisation of primary care.

1. RAWPing the Primary Care Budget

1.1. Background

In 1976, the report of the Resource Allocation Working Party (RAWP) (Department of Health and Social Security 1976) introduced a weighted capitation formula for the allocation of hospital and community health services revenue funds to Regional Health Authorities. This formula attempted to equalise opportunity of access to health care resources between geographical regions. Populations were weighted according to demographic characteristics, and Standardised Mortality Ratios (SMRs) were used as an index of morbidity and therefore as a proxy for health care need. The RAWP formula (and equivalent formulae in Wales, Scotland and Northern Ireland) was used to generate revenue 'targets' for each RHA, and funding was gradually shifted away from RHAs above target to those below target over a number of years. Many of the inequalities that existed in HCHS funding that existed in 1976 have now been reduced significantly. The 1989 internal market reforms changed the form of the RAWP formula slightly, and a recent review has resulted in the partial acceptance of a new HCHS budget formula (Carr-Hill et al 1994a, Carr-Hill et al 1994b, Smith et al 1994, Peacock and Smith 1995).

The hospital and community health services (HCHS) sector of the NHS has extensive experience of using formulae to distribute health care resources between geographical areas, and the use of such formulae since 1977 has reduced differences in financial capacity quite

considerably. The principles of weighted capitation proposed by the RAWP have been widely accepted. However, it is inconsistent to apply this approach only to the secondary care system. If equality of access to health care resources for equal need is a Government goal, it is reasonable to assert that this goal can only be achieved if primary care resources are allocated by a formula which addresses current inequalities. This principle was clearly established in the original RAWP report, which advocated integration of the HCHS with processes of priority setting, workforce planning and the provision of care by family practitioner services, local authority social services and other carers. This advocacy has largely been ignored.

The equalisation of funding in primary care has been discussed at length. Bevan and Charlton (1987) investigated inequalities in expenditure on general medical services using statistics comparing spending by health authorities and expenditure per head on general medical services by corresponding family practitioner committees. Their results showed considerable variation in the provision of resources for both services, with no clear relation between the variations in spending on each services. The authors suggested that RAWP's aim of equality of opportunity of access to health care resources may be achieved only if general medical services are included in the equation: "if general practitioners are the gatekeepers to hospitals it is important for everyone to have good access to the gatekeeper" (Bevan and Charlton 1987).

Interaction between the HCHS budget and budgets for primary care has accelerated in recent years, particularly with the Care in the Community initiative (Department of Health 1989). Primary and secondary care sectors are (at least to some extent) interdependent, and the failure

to consider primary care budgets in discussions of equalising access to care between RHAs is likely to lead to inefficient policy recommendations (Birch and Maynard 1986). HCHS budgets, primary care budgets and community care budgets should all be subject to RAWP type formulae simultaneously. This paper however concentrates on primary care budgets only, considering allocation of FHS budgets to Regions. Sub-regional allocation from RHAs to FHSAs and then to GPs requires considerable further research.

If primary care budgets were allocated on the basis of a weighted capitation formula, which regions would gain and which would lose? This paper replicates methods developed in the 1980s by Birch and Maynard (1986, 1987) to apply a RAWP type formula to primary care budgets in RHAs in England, and develops these methods to incorporate other proxies for 'need'.

1.2 Methods

The aim of this paper is to compare primary care expenditure by Regional Health Authorities in England with expected expenditure, given the demographic characteristics and mortality and morbidity experiences of regional populations. Three alternative methodologies are used to estimate relative needs. All data are from 1990-91 and include the 1991 census, health service indicators, key population and vital statistics and health and personal social services statistics (Office of Population Censuses and Surveys 1993, Department of Health 1992, Office of Population Censuses and Surveys 1991 and Department of Health 1992). The first two methods

follow those of Birch and Maynard (1986, 1987). In all three methods, weighting is assumed to be equal, following the original RAWP formula. This means that, for example, SMRs are given a weighting of 1 - that is, a 10% increase in the SMR increases the weighting of that region, and hence the revenue target, by 10%. This applies also to perinatal mortality ratios, to relative levels of utilisation and to the proxy measures of 'need' in the third method.

The first method, following Birch and Maynard (1986) is 'expenditure based'. Expected expenditure by region is calculated by applying the average age specific FHSA expenditure per head for England (age bands under 1, 1-4, 5-14, 15-64, 65-74 and 75+) to age specific regional populations. Differential 'needs' are introduced by weighting with standardised mortality ratios (SMRs) for each region, with an SMR of 100 being given a weight of 1. Expected expenditure on the under 1 age group is weighted by the ratio of the regional perinatal mortality rate to that for the whole country (overall average is given a weight of 1).

The second method is 'utilisation based'. The average utilisation rates of FHSA services for England in 1990-91 are applied to regional populations using the following approaches:

(a) For general medical services, age specific average numbers of GP consultations per head for England are applied to regional age specific populations and weighted by regional SMRs (SMR of 100 = weight of 1).

(b) For pharmaceutical services the average number of prescriptions per head for England is applied to regional populations and weighted by regional SMRs.

(c) The average number of dental treatment courses per capita and NHS sight tests per capita for England are applied to regional populations to estimate expected utilisation of the general dental and ophthalmic services respectively.

The third method of reallocating budgets is based on 'need' proxied by four measures. The introduction of the UPA8 scores (Jarman 1993) as a modification to the RAWP formula suggests that a measure of deprivation should be included in any allocation formula. In addition, previous work by Carr-Hill et al (1990) suggests that SMRs are not ideal proxies for morbidity in regional populations.

The method used here weights age-specific average FHSA expenditure per head by four factors. Each factor is assumed to be of equal importance to certain age groups, and given a weight of 1. The overall average of each score is given a weight of 1, and regions are weighted relative to this (for example, a region with 10% above average in any of the factors is given a weight of 1.1). The weights are applied to the relevant age groups' average expenditure levels:

(a) proportion of population suffering from a limiting long term illness

(b) proportion of economically active males who are unemployed (applied to 15-64 age groups)

(c) proportion of households which are not owner occupied

(d) proportion of households with one pensioner living alone (applied to 65+ age groups).

These factors are relatively simple proxies of 'need' based on socio-economic and health related factors. Further research is required to address the factors most likely to affect use of primary care. These factors are however similar to those identified by Ben-Shlomo et al (1992) and Balarajan et al (1992) as important predictors of general practice workload. A more detailed analysis could use the predictors in these studies (derived from Townsend, Carstairs and Jarman indices) to predict the shift of funds which would occur from an allocation formula for primary care. The model presented here is simplified and used to illustrate the likely magnitude of the reallocation of expenditure.

1.3 Results

The results of these calculations are very method specific and the results are illustrative rather than definitive. Table 1 shows the effects of allocating total FHSA resources (including FHSA administration) on the expenditure basis for 1990-91 data. 'Northern' regions Trent, Yorkshire, Northern, West Midlands, Mersey and North Western would gain from the RAWPing of the FHSA budget at the expense of the Southern regions. The two most extreme regions are Northern, with 9.6 per cent below its target expenditure, and South Western, with 14 per cent above its target.

Estimating resource needs in terms of expected utilisation (excluding FHSA administration expenditure) generates similar results, as shown in Table 2. Northern regions, particularly North Western and Northern would gain, at the expense of Southern regions, particularly South Western, North West Thames and East Anglian regions.

Table 3 applies the results of expected utilisation of general medical services to general practice unrestricted principal numbers. This is a crude illustration of the possible staffing effects. The data are for GP staff (not whole time equivalents) and do not reflect their quality (e.g. the opening hours of surgeries and the appropriateness of their services). However, results imply that considerable changes in the regional distribution of GPs would be required for FHSA resources to be allocated in relation to 'need' as estimated here. North Western and Northern regions would gain 371 and 218 GPs, or 18 and 13 per cent of their stock respectively, whereas South Western and North West Thames would lose 304 and 302 GPs, or 15 per cent of their stock each.

Table 4 shows the results of applying weights derived from socio-economic variables (unemployment, owner occupation, elderly living alone) and limiting long term illness. In this example the range above and below target levels of expenditure is even greater, with Northern RHA 17.4 per cent below target, requiring a gain of £62.4 million and Oxford 18 per cent above target, liable to lose £49.7 million.

Table 1 Expenditure based method

Region	Actual expenditure (£m)	Target expenditure (£m)	Gain/ loss (£m)	Actual expenditure (%)	Target expenditure (%)	Gain/loss (% of actual expenditure)	Gain/loss (% of national expenditure)
Northern	358.2	392.6	34.43	6.63	7.26	9.61	0.64
Yorkshire	418.0	430.3	12.28	7.73	7.96	2.94	0.23
Trent	524.3	546.7	22.39	9.70	10.11	4.27	0.41
E Anglian	233.0	216.3	-16.70	4.31	4.00	-7.17	-0.31
NW Thames	393.9	359.5	-34.42	7.29	6.65	-8.74	-0.64
NE Thames	424.9	408.9	-15.98	7.86	7.56	-3.76	-0.30
SE Thames	408.3	400.1	-8.24	7.55	7.40	-2.02	-0.15
SW Thames	319.2	310.7	-8.49	5.91	5.75	-2.66	-0.16
Wessex	320.9	311.9	-9.03	5.94	5.77	-2.81	-0.17
Oxford	271.2	264.5	-6.68	5.02	4.89	-2.46	-0.12
S Western	405.1	348.5	-56.57	7.49	6.45	-13.97	-1.05
W Midlands	574.0	613.9	39.86	10.62	11.36	6.94	0.74
Mersey	286.2	294.3	8.05	5.30	5.44	2.81	0.15
N Western	468.1	507.2	39.11	8.66	9.38	8.36	0.72

Table 2 Utilisation based method

Region	Actual expenditure (£m)	Target expenditure (£m)	Gain/ loss (£m)	Actual expenditure (%)	Target expenditure (%)	Gain/loss (% of actual expenditure)	Gain/loss (% of national expenditure)
Northern	350.7	383.6	32.89	6.63	7.25	9.38	0.62
Yorkshire	410.8	420.8	10.01	7.77	7.96	2.44	0.19
Trent	514.0	534.2	20.18	9.72	10.10	3.93	0.38
E Anglian	229.1	211.9	-17.12	4.33	4.01	-7.47	-0.32
NW Thames	383.2	350.9	-32.24	7.25	6.64	-8.42	-0.61
NE Thames	414.3	400.2	-14.14	7.83	7.57	-3.41	-0.27
SE Thames	398.6	393.1	-5.53	7.54	7.43	-1.39	-0.10
SW Thames	311.2	305.1	-6.17	5.89	5.77	-1.98	-0.12
Wessex	315.7	306.2	-9.47	5.97	5.79	-3.00	-0.18
Oxford	264.3	257.2	-7.09	5.00	4.86	-2.68	-0.13
S Western	399.3	342.6	-56.61	7.55	6.48	-14.18	-1.07
W Midlands	559.7	599.4	39.65	10.58	11.33	7.08	0.75
Mersey	280.0	287.4	7.40	5.29	5.43	2.64	0.14
N Western	457.6	495.8	38.22	8.65	9.38	8.35	0.72

Table 3 Allocation of GPs (unrestricted principals) by region
Needs based on utilisation

Region	GPs Target	GPs Target	GPs Actual	Amount below or above target	
	%	number	number	number	% of actual
Northern	7.24	1857	1639	-218	-13.31
Yorkshire	7.95	2040	1953	-87	-4.47
Trent	10.08	2587	2402	-185	-7.71
E Anglian	4.02	1031	1112	81	7.29
NW Thames	6.61	1696	1998	302	15.11
NE Thames	7.57	1943	2050	107	5.21
SE Thames	7.49	1921	1947	26	1.33
SW Thames	5.80	1489	1576	87	5.53
Wessex	5.82	1494	1591	97	6.07
Oxford	4.81	1235	1357	122	8.98
S Western	6.53	1676	1980	304	15.34
W Midlands	11.29	2898	2736	-162	-5.94
Mersey	5.42	1390	1249	-141	-11.28
N Western	9.36	2403	2032	-371	-18.26

Table 4 'Needs' based method

Region	Actual expenditure (£m)	Target expenditure (£m)	Gain/ loss (£m)	Actual expenditure (%)	Target expenditure (%)	Gain/loss (% of actual expenditure)	Gain/loss (% of national expenditure)
Northern	358.2	420.6	62.35	6.63	7.78	17.41	1.15
Yorkshire	418.0	420.0	1.97	7.73	7.77	0.47	0.04
Trent	524.3	551.4	27.12	9.70	10.20	5.17	0.50
E Anglian	233.0	213.9	-19.07	4.31	3.96	-8.18	-0.35
NW Thames	393.9	368.9	-25.08	7.29	6.82	-6.37	-0.46
NE Thames	424.9	467.7	-42.80	7.86	8.65	10.07	0.79
SE Thames	408.3	434.7	-26.42	7.55	8.04	6.47	0.49
SW Thames	319.2	284.0	-35.26	5.91	5.25	-11.04	-0.65
Wessex	320.9	296.1	-24.82	5.94	5.48	-7.73	-0.46
Oxford	271.2	221.5	-49.73	5.02	4.10	-18.34	-0.92
S Western	405.1	348.1	-56.99	7.49	6.44	-14.07	-1.05
W Midlands	574.0	590.8	16.78	10.62	10.93	2.92	0.31
Mersey	286.2	302.0	15.79	5.30	5.59	5.52	0.29
N Western	468.1	485.8	17.71	8.66	8.99	3.78	0.33

1.4 Overview

These preliminary estimates show the potential effects of applying a RAWP-type allocation formula to Family Health Services expenditure and GP numbers. The methods of estimating 'need' are first order, but they do give an indication of the impact of allocating primary care resources based on a weighted capitation formula.

The first two methods used follow those of Birch and Maynard (1986, 1987). The similarity between the results in the 1990s and those based on 1983 data is striking (see Tables 5 -8), and illustrates how incremental budgeting perpetuates inequalities in resourcing. Incorporating ideas which have been developed since the initial RAWP formula, such as deprivation factors and limiting long term illness (Table 4) shows an even wider interval between target and actual expenditure. To improve these estimates, investment in better data is essential. For example, it may be possible to use cohort studies to relate utilisation data to a measure of 'need' or morbidity.

The results illustrate considerable inequalities in FHS expenditure by region. Whereas the use of the RAWP formula and subsequent weighted capitation formulae has narrowed inequalities in HCHS expenditure, no parallel narrowing in FHS expenditure differences is evident (as illustrated by the similarity of 1983 and 1990 data in the tables). The use of the Underprivileged Area scores (UPA8) to reimburse general practitioners in deprived areas, and attempts by the Department of Health to earmark areas to equalise the distribution of GPs appear to have had little effect in equalising access to GP services between regions. Allocating GPs according to need requires considerable shifts between regions.

Table 5 Expenditure based method, 1983 data

Region	Target (%)	Actual (%)	Gain/loss (% of national expenditure)	Gain/loss (% of actual expenditure)	Gain/loss (£m)
Northern	7.29	6.71	0.58	8.63	16.08
Yorkshire	8.12	7.70	0.42	5.45	11.64
Trent	10.06	9.30	0.76	8.17	21.07
E Anglian	3.74	4.20	-0.46	-10.95	-12.75
NW Thames	6.78	7.68	-0.90	-11.71	-24.95
NE Thames	7.65	7.74	-0.09	-1.16	-2.49
SE Thames	7.33	7.72	-0.39	-5.05	-10.81
SW Thames	5.87	6.25	-0.38	-6.02	-10.53
Wessex	5.51	5.93	-0.42	-7.08	-11.64
Oxford	4.56	4.88	-0.32	-6.56	-8.87
S Western	6.31	7.19	-0.88	-12.24	-24.40
W Midlands	11.47	10.71	0.76	7.09	21.07
Mersey	5.58	5.17	0.41	7.93	11.37
N Western	9.72	8.80	0.92	10.46	25.50

Source: Birch and Maynard (1986)

Table 6 Allocation of GPs (unrestricted principals) by region
Needs based on expected expenditure, 1983 data

Region	GPs Target	GPs Target	GPs Actual	Amount below or above target	
	%	number	number	number	% of actual
Northern	7.29	1661	1458	-203	-13.92
Yorkshire	8.12	1850	1742	-108	-6.2
Trent	10.06	2292	2109	-183	-8.68
E Anglian	3.74	852	918	66	7.19
NW Thames	6.71	1545	1855	310	16.71
NE Thames	7.65	1743	1849	106	5.73
SE Thames	7.33	1670	1785	115	6.44
SW Thames	5.87	1337	1428	91	6.37
Wessex	5.51	1255	1361	106	7.79
Oxford	4.56	1039	1117	78	6.98
S Western	6.31	1438	1668	230	13.79
W Midlands	11.47	2613	2459	-154	-6.26
Mersey	5.58	1271	1167	-104	-8.91
N Western	9.72	2215	1870	-345	-18.45

Source: Birch and Maynard (1986)

Table 7 Utilisation based method, 1983 data

Region	Target (%)	Actual (%)	Gain/loss (% of national expenditure)	Gain/loss (% of actual expenditure)	Gain/loss (£m)
Northern	7.21	6.71	0.5	7.44	13.86
Yorkshire	7.97	7.70	0.27	3.50	7.48
Trent	10.01	9.30	0.71	7.63	19.68
E Anglian	3.93	4.20	-0.27	-6.42	-7.48
NW Thames	6.97	7.68	-0.71	-9.24	-19.68
NE Thames	7.71	7.74	-0.03	-0.39	-0.83
SE Thames	7.37	7.72	-0.35	-4.53	-9.70
SW Thames	5.93	6.25	-0.32	-5.12	-8.87
Wessex	5.57	5.93	-0.36	-6.07	-9.98
Oxford	4.74	4.88	-0.14	-2.87	-3.88
S Western	6.32	7.19	-0.87	-12.09	-24.11
W Midlands	11.40	10.71	0.69	6.44	19.13
Mersey	5.49	5.17	0.32	6.19	8.87
N Western	9.37	8.80	0.57	6.48	15.80

Source: Birch and Maynard (1986)

Table 8 Allocation of GPs (unrestricted principals) by region
Needs based on expected utilisation, 1983 data

Region	GPs Target	GPs Target	GPs Actual	Amount below or above target	
	%	number	number	number	% of actual
Northern	7.32	1668	1458	-210	-14.40
Yorkshire	8.09	1843	1742	-101	-5.8
Trent	10.07	2294	2109	-185	-8.77
E Anglian	3.74	852	918	66	7.19
NW Thames	6.84	1559	1855	296	15.96
NE Thames	7.66	1745	1849	104	5.62
SE Thames	7.34	1672	1785	113	6.33
SW Thames	5.85	1333	1428	95	6.65
Wessex	5.46	1244	1361	117	8.60
Oxford	4.60	1048	1117	69	6.18
S Western	6.27	1429	1668	239	14.33
W Midlands	11.49	2618	2459	-159	-6.47
Mersey	5.61	1278	1167	-111	-9.51
N Western	9.68	2206	1870	-336	-17.97

Source: Birch and Maynard (1986)

The need for incorporating primary care budgets into a RAWP type formula has been advocated for over two decades, but continues to be ignored by Government. There are signs that the Government accepts the need for change and the application of a RAWP type formula to primary care funding. They now face not only the challenges of devising an acceptable formula but also of dealing with the consequences of that formula for the provision of primary care.

2. The Policy Implications of RAWPing Primary Care

2.1 Introduction

The equalisation of primary care funding would, like RAWP, have to be implemented cumulatively and slowly because of the large changes needed to move funding, staff and capital to relatively deprived areas. Probably the better resourced areas of the South, particularly the South West of England, would have to have near zero funding over the period of equalisation.

At present the Department of Health seeks to control GP levels by a policy of "negative direction". This policy involves the closing of "over-doctored" areas to new entrants. It is apparent that whilst this policy may have had marginal effects on the distribution of GPs, it has done little to reduce the existing inequalities in workforce distribution. The adoption of a RAWP-type formula in primary care will require radical changes in the GP contract.

2.2 The Existing GP Contract

The average target net income of GPs in 1995-96 is £43,165 (Review Body on Doctors and Dentists Remuneration 1995). This is made up of capitation payments, which provide about 60 per cent of the total, fees per item of service related to performance targets for a set of core activities (e.g. vaccination, immunisation and cervical cytology) and other payments (see Table 5).

Often GPs own the premises in which they work and their development of their facilities is often supported by public funding. General practitioners are self employed and contract with their local Family Health Services Administration (FHSA) to provide services. The rigour of FHSAs in administering this contract seems very uneven, with some managers acting more like "quartermasters" (Carr-Hill et al. 1987), anxious to ensure GPs get all their fees promptly rather than the managers of society's scarce resources.

The existing contract requires GPs to provide medical cover for the patients on their list all the year round (i.e. for 24 hours, 365 days per year). With apparent rising demand for out of hours services this aspect of the GPs contract has become contentious and the focus of discussion about the reform of contractual terms and conditions.

Out of hours services can be provided by the responsible GP, co-operatives of GPs, NHS and privately organised locum services, or more radical alternatives. For instance, a 24 hour

Table 9 The GP Payment System 1995-96

Gross income		£64,648.00
Target net income		£43,165.00
Basic practice allowance (maximum)		£6,912.00
Capitation payments:	patients under 65 patients 65-74 patients over 75	£14.80 £19.55 £37.80
Cervical cytology:	higher lower	£2415.00 £805.00
Health promotion:	band one band two band three	£435.00 £1175.00 £2085.00
Immunisation target payment:	higher lower	£2145.00 £715.00
Vaccination and immunisation:	higher lower	£5.20 £3.60
Contraception:	ordinary IUCD fee	£13.70 £45.90
Night visits:	higher rate lower rate	£48.45 £16.15

Source: Review Body on Doctors' and Dentists' Remuneration, 1995.

primary care shop in urban areas or the development of primary care in NHS Trust A&E facilities may be more cost effective than locum services.

However, the adoption of such alternatives would affect the workload of GPs and precipitate a debate about how they should be paid in future. A pertinent policy choice for Government is whether to increase funding within the existing contract or change that contract.

The advantages of a changed GP contract seem in principle to be considerable. With existing FHSAs all too willing to be passive money conduits rather than the active purchasing managers of primary care services, the case for competitive tendering for these services cannot be ignored. At present, once established in a practice, GPs have a contract for life and only gross misdemeanours causing them to be "struck off" by the General Medical Council, can lead to the loss of their livelihood. The ways in which primary care is delivered has changed considerably but unevenly in recent decades, within this relatively secure contract. The move from individual to group practice has led to the recruitment, subsidised generously by the NHS, of large numbers of nurses and other staff. For instance, the number of practice nurses in employment was around 16,000 in 1992 (10,000 whole-time equivalents) (Audit Commission 1992). This number had more than trebled over the six years from 1985 to 1991 (Stilwell 1991), and has continued to grow with the introduction of the GP contract in 1990 (Atkin et al. 1993). Many of these nurses are now performing what were previously seen as uniquely medical tasks.

From available but very limited evidence (Richardson and Maynard 1995), it is possible that between 30 and 70 per cent of the tasks carried out by medically trained practitioners (i.e. doctors) could be done by varying types of nursing and support staff. The implication of this is, using the 30 per cent substitution assumption, that the doctor-patient ratio could be increased from its current level (less than 1 to 1800) to 1 - 3000 with the resource savings (approximately £300 million) being used to increase the employment of nurses in primary care. The issue of substitution is however complex, involving an evolving range of staff and tasks, against the background of changes in the balance between primary and secondary care. Data on the skill mix in primary care is currently being collected at York, following a previous study on skill mix and nursing care (Carr-Hill et al. 1992).

The scope for substituting other support staff for both doctors and nurses is even more poorly evaluated than that for doctors and nurses. The cost effectiveness of using, for instance, counselling skills in primary care is not known (Tolley and Rowland 1995). Despite this lack of an evidence base, substitution is taking place almost randomly but very vigorously: it is unfortunate that this behaviour is not accompanied with random allocation in a robust trial design to determine cost effectiveness!

2.3 A New Primary Care Contract

Against this background of limited evaluative research and much change in the means of delivering health care, notions of "the primary health care team" and a "primary health care led

NHS" have emerged. The meaning in principle and practice of these terms is less than clear but they are central elements in the policy rhetoric of ministers and managers. The delivery of primary care has become a GP led team activity (Pringle, 1992). However there is much heterogeneity in these models and little evaluation of the cost effectiveness of alternative models.

The contracts for the provision of primary care services are remarkable in that the internal NHS market reforms, in particular the use of the purchaser-provider split, has had little impact. The FHSA could be transformed from a passive to an active purchaser of primary care services, by being required to define the local contract more explicitly and in relation to local population needs. Such a contract could then be put out to tender with competing groups of providers offering different combinations of skill mix and expenditure subject to performance criteria related to the quality of service and patient satisfaction.

The architects of such a tendering process would have to define the contract with care. This would not be an easy task. Prior to the 1990 contract, GPs were required to render those services provided by the average GP. National data on what the individual GP did, let alone what the average GP did were unavailable and thus monitoring of performance was very difficult. The 1990 GP contract plucked a range of targets from the air and imposed them on the profession with very little rationale (see e.g. Scott and Maynard 1991).

Any new contract would, inevitably, have to be defined largely in terms of process rather than outcome: tasks and obligations would be set out, even though evidence of cost effectiveness would be absent in most cases. The process of defining such a contract should not repeat the 1990 experience (arbitrary but well intentioned definition of the 'core' tasks of GPs) but might be given to the representatives of primary care groups who would be obliged to define the contract within a set period of time.

Their work would be informed by research evidence (e.g. it seems clear that the vaccination of the elderly against influenza is very cost effective (Nichol et al 1994, Govaert and Springer 1994, Mullooly et al 1994), yet the Department of Health provides no payment incentives for provision of this service. The efficiency of this type of incentive would depend upon whether or not payment improved the targeting of vaccination. However, with an evidence base absent for most primary care activity, the majority of the primary care contract would have to be based on consensus and opinion. Such definitions would focus research and development investments and, as R&D efforts identified the costs and effects of the components of the contract, the contract could be refined.

Such change would, of course, be difficult. Services initially included in a contract, which research subsequently demonstrated to produce low benefits, may have both consumer and provider groups with vested interests in their continuity. At present the cost effectiveness of annual screening of the over 75 year olds has not been demonstrated but the removal of this service would be politically difficult.

The existing GP contract could be replaced by a contract (or franchise) for primary care services won by teams of providers, GPs, nurses and groups, after competitive tender. This would be let with a weighted capitation system of resource allocation. Such a contract would in principle facilitate flexible skill mixes and greater performance monitoring. These teams would employ staff on explicit contracts which would be related to performance and the needs of the local population.

Conclusions

The funding of primary care in England is unequal, and the effect of the adoption of a weighted capitation formula on the distribution of general practitioners and funding would be substantial. The South, in particular the South West, would lose whilst the North would gain resources.

The adoption of a weighted capitation formula in primary care would improve the equity of funding nationally and would probably require the reform of the GP contract. This would be contentious and would be best driven by the medical and other professions in the primary care team. An agreed national contract for primary care let by competitive tender and with clear performance targets might ensure that a more equally distributed primary care budget was used more efficiently for patients' benefit.

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