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: RAWPing Primary Care

: RAWPing the United Kingdom

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STEPHEN BIRCH and
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DISCUSSION PAPER 19

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Acknowledgements

The authors would like to thank Sally Baker and Sal Cuthbert whose patience in deciphering our hand written manuscript is only exceeded by that of meeting our unreasonable deadline. Alan Maynard would also like to acknowledge the support of the Economic and Social Research Council.

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ABSTRACT

In late 1985 the Secretary of State for Health and Social Services set up a review of the resource allocation formula created by the Resource Allocation Working Party (RAWP) in 1976 (1). This review may be completed early in 1987 and will raise major issues about the efficiency of the NHS and equality of access to health care.

Two issues seem likely to be omitted from this Review. The first is the consideration of the equity aspects of primary care. The Family Practitioner Services' budget is open ended and demand determined. It was excluded from the RAWP process because of the nature of the general practitioners'contract and has led to the continuation of great inequalities in access to health care. These inequalities are analysed in the first part of this paper which shows the effects of applying the RAWP formula to the primary care budget.

A second issue ignored by the RAWP review is the maintenance of great inequalities on access to health care in the constituent parts of the United Kingdom. The health services of England, Scotland, Wales and Northern Ireland are funded independently. Although each country has its own RAWP-type formula, the initial allocations are not RAWPed. As a consequence the Scots and the Irish have resource allocations in excess of those in England. The second part of the paper shows that if the aggregated UK health care budget was allocated using the RAWP formula, Scotland and Northern Ireland would lose significant amounts of resources.

RAWPing the English Family Practitioner Services Budget: some preliminary estimates

I Introduction

The report of the Resource Allocation Working Party (1) led to the introduction of a budget formula for the allocation of the hospital and community health services (HCHS) budget in England, the purpose of which was to provide equal access to health care for equal need. This formula has now been in use for nearly ten years and it is anticipated that in 1986-87 all regions except North East and North West Thames will be within 4 per cent of their RAWP revenue target incomes. In late 1985 the Government set up a group to review the RAWP formula and report its findings by the end of 1986. The review is to consider ways of "improving the way in which the national RAWP formula measures relative need for the hospital and community health services".

Ten years ago the authors of the RAWP report noted that the HCHS budget was only part of the NHS management system and advocated its integration with the processes of priority setting, manpower planning and the provision of care by the Family Practitioner Services (FPS), Local Authority (Personal) Social Services (LASS) and other carers. This integration has not occurred. The component parts of the National Health Service tend to operate in isolation from each other and inefficiency may be produced in response to the incentives inherent in the respective "compartments" of the National Health Service in the form of shifting demands between these 'compartments'. (2) Despite this failure to integrate the RAWP process into a comprehensive management system for the entire National Health Service, the issues associated with the allocation of FPS and other budgets are very pertinent to the present RAWP review process. Indeed, if anything, the interactions of the RAWPed and cash

limited HCHS budget with the non-cash limited (demand determined) FPS expenditure have increased with inter alia, the accelerated development of community care for the elderly, the mentally ill and the mentally handicapped in particular. To finance these policies successive governments have sought to squeeze "efficiency savings" from the acute care sector by advocating cost effective care and shorter lengths of stay.

The increased burdens placed on the FPS by these policies emphasise the RAWP, review. Given the interdependence of the two sectors this failure to consider the FPS in any RAWP-like discussion of equalising access to care between Regional Health Authorities is likely to result in inefficient policy recommendations. The purpose of this paper is to offer some preliminary estimates of the effects of RAWP-type policies on the FPS and to discuss the implications for the RAWP, review. If FPS expenditure were to be RAWPed who would gain and who would lose?

II Methods

The objective of the exercise is to compare the FPS expenditure by Regional Health Authorities in England with expected expenditure, given the age and sex distributions and mortality experiences of Regional populations. Two alternative methodologies are used to estimate relative needs using data for 1983. Sensitivity of the results to the particular methodologies used are considered in the next section.

The first method is 'expenditure based'. Expected expenditure by region is calculated by applying the average age and sex specific FPS expenditure per head for England to age and sex specific regional populations. Differential "needs" are introduced by weighting the sex

specific standardised mortality rates (SMRs) for each region. Sex specific expected expenditure on births is weighted by the ratio of the regional perinatal mortality rate to that for the whole country.

The second method used is 'utilisation based'. The average utilisation rates of FPS services for England are applied to Regional populations. The particular approaches used for each FPS service are

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

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

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

III Results

The data in table 1 show the effects of allocating FPS resources on the expenditure basis for 1983-84 data. "Northern" regions Trent, Northern, Yorkshire, the West Midlands, Merseyside and the North West would gain from the RAWPing of the FPS budget at the expense of the remaining southern regions, already well endowed with HCHS resources.

Table 1 : RAWPing FPS resources : Needs based on 'expected expenditure', allocation of expenditure by region.

Region	Target (%)	Actual (%)	Amount of gain or loss in terms of % of nat exp	% of act exp	£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
East Anglia	3.74	4.20	-0.46	-10.95	-12.75
North West Thames	6.78	7.68	-0.90	-11.71	-24.95
North East Thames	7.65	7.74	-0.09	-1.16	-2.49
South East Thames	7.33	7.72	-0.39	-5.05	-10.81
South West 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
South West	6.31	7.19	-0.88	-12.24	-24.40
West Midlands	11.47	10.71	+0.76	+7.09	+21.07
Merseyside	5.58	5.17	+0.41	+7.93	+11.37
North West	9.72	8.80	+0.92	+10.46	+25.50

Applying these results to general practice manpower (table 2) implies that considerable changes in the Regional distribution of GPs would be required for FPS resources to be allocated in relation to "need" as estimated here. It can be seen that the Northern and North Western Regions would gain 203 and 345 GPs or 13.9 and 18.4 per cent of their present GP stocks respectively. On the other hand North West Thames and South Western Regions would lose 310 and 230 GPs or 16.7 and 13.8 per cent of their stocks respectively.

Estimating resource needs in terms of expected utilisation generates similar results as shown in table 3. Trent and Northern Regions would gain over 7 per cent of actual expenditure, while North West Thames and South Western are again the main losers (cuts of 9 per cent and 12 per cent of present expenditure respectively).

Applying the expected utilisation of GPs element of the formula to manpower allocations, (see table 4) has similar effects to those in table 2. The North West Thames and South Western Regions would lose and the North West, Trent and Northern Regions would gain.

IV Discussion

The purpose of this paper has been to present preliminary estimates of the effects of using a RAWP-type allocation formula on Family Practitioner Service expenditure and GP manpower. The results, which are not sensitive to the method of need estimation used, show that the inequalities in HCHS allocations are mirrored in FPS expenditure by region. However, whereas the use of the RAWP formula has narrowed the HCHS inequalities, as yet little attempt has been made by Governments to mitigate these FPS inequalities, either by the use of explicit allocational formula and

Table 2 : RAWPing resources : Needs based on 'expected expenditure' allocation of general practitioners by region.

Region	Target (%)	Target Number	Actual Number (1982)	Amount below (above) target	
				Number	As % 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
East Anglia	3.74	852	918	(66)	(7.19)
North West Thames	6.78	1545	1855	(310)	(16.71)
North East Thames	7.65	1743	1849	(106)	(5.73)
South East Thames	7.33	1670	1785	(115)	(6.44)
South West Thames	5.87	1337	1428	(91)	(6.37)
Wessex	5.51	1255	1361	(106)	(7.79)
Oxford	4.56	1039	1117	(78)	(6.98)
South West	6.31	1438	1668	(230)	(13.79)
West Midlands	11.47	2613	2459	154	6.26
Merseyside	5.58	1271	1167	104	8.91
North West	9.72	2215	1870	345	18.45

Table 3 : RAWPing FPS resources: Needs based on 'expected utilisation' allocation of expenditure by region

Region	Target (%)	Actual (%)	Amount of gain or loss in terms of % nat exp	% act exp	£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
East Anglia	3.93	4.20	-0.27	-6.42	-7.48
North West Thames	6.97	7.68	-0.71	-9.24	-19.68
North East Thames	7.71	7.74	-0.03	-0.39	-0.83
South East Thames	7.37	7.72	-0.35	-4.53	-9.70
South West 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
South West	6.32	7.19	-0.87	-12.09	-24.11
West Midlands	11.40	10.71	+0.69	+6.44	+19.13
Merseyside	5.49	5.17	+0.32	+6.19	+8.87
North West	9.37	8.80	+0.57	+6.48	+15.80

Table 4 : RAWPing FPS resources: Needs based on 'expected utilisation' allocation of general practitioners by region

Region	Target (%)*	Target Number	Actual Number	Amount below (above) target	
				Number	As % of actual
Northern	7.32	1668	1458	210	14.40
Yorkshire	8.09	1843	1742	101	5.80
Trent	10.07	2294	2109	185	8.77
East Anglia	3.74	852	918	(66)	(7.19)
North West Thames	6.84	1559	1855	(296)	(15.96)
North East Thames	7.66	1745	1849	(104)	(5.62)
South East Thames	7.34	1672	1785	(113)	(6.33)
South West Thames	5.85	1333	1428	(95)	(6.65)
Wessex	5.46	1244	1361	(117)	(8.60)
Oxford	4.60	1048	1117	(69)	(6.18)
South West	6.27	1429	1668	(239)	(14.33)
West Midlands	11.49	2618	1459	159	(6.47)
Merseyside	5.61	1278	1167	111	(9.51)
North West	9.68	2206	1870	336	(17.97)

* Target allocations derived from target GP expenditure as percentage of total GP expenditure (i.e. based on GP expenditure only from previous table, excludes dentists, opticians and pharmacists).

budgetary control of FPS resources, or by the introduction of allowances for FPS expenditure on HCHS needs.

One major obstacle to including the FPS in the RAWP process is the contractual status of general medical and dental practitioners. GPs are self-employed practitioners with lifetime contracts with local employing agencies, the Family Practitioner Committees, who pay them for their work according to centrally determined criteria.

It is likely that the British Medical Association (BMA) and British Dental Association (BDA) would oppose any change in this contractural status, particularly if change was directed at a RAWP-type process. This is to be expected, since both the BMA and the BDA are registered trade unions concerned with their member's incomes and terms and conditions of employment rather than the efficient and equitable use of NHS resources.

Nevertheless the Government is currently showing considerable interest in the performance of the FPS (3) and is proposing that these services become more consumer orientated and more efficient, a goal to be pursued with the use of "good practice allowances" which would enable good quality care when identified to be rewarded. However it is not clear at this moment whether this interest extends beyond the traditional barriers of health care expenditure budgets, or is to give overdue consideration to the efficiency of use of health care resources as a whole.

V Conclusion

There are many complex issues associated with the equitable distribution of the FPS budget and the implications for the design of an efficient GP contract. There is a risk that the separate debates generated about the current RAWP review and the much needed reform of general practice will ignore these issues. It is essential that this outcome be avoided if policies are to be designed and implemented to improve the efficiency and equity of not just the hospital service but also of a major user of its services and provider of care, the primary care sector. Myopia may be politically convenient when elections are in the air but such behaviour is always and everywhere inefficient.

RAWPing the United Kingdom: applying the resource allocation formulae to the constituent parts of the UK

Over the last decade fomulae have been designed and implemented to determine the distribution of the financial capacity to provide health care within the four constituent parts of the United Kingdom. These formulae, referred to by their acronyms, RAWP (1), SHARE (4), SCRAW (5) and PARR (6), share the common objective of equalising access to health care for those in equal need. To achieve this target national health care budgets are allocated between regions in proportion to populations weighted by national rates of utilisation of existing services and standardised mortality rates (SMRs - the ratio of observed mortality rates to mortality rates expected given the age and sex distribution of the regions' population). The formulae are only applied to the Hospital and Community Health Services (HCHS) element of the health care budgets (with the exception of Northern Ireland where personal social services are also included) however this forms by far the largest element of NHS expenditure (72 per cent in England, 1984-5). The effect of these formulae is to deprive areas such as the Thames (London) regions in England and the Greater Glasgow Health Board in Scotland so that additional resources can be allocated to the North of England (especially Northern, North West and Trent regions) and neighbouring deprived boards in Scotland.

The minor differences in the allocational formulae of the constituent nations can be defended in terms of decentralisation and autonomy and is not a matter of major concern. However what are of concern are the considerable differentials in the national budgets to which the formulae are applied which give rise to marked differentials in per capita expenditure on health care across the countries. Table 5 records the

effects of applying the RAWP formula to the total UK HCHS budget (i.e. the sum of the four separate HCHS budgets) in 1984-5 and 1985-6.

Table 5 Actual and Target Allocation for Each Country 1984-5 and 1985-6 (£m)

	1984-5		1985-6	
	Actual	Target	Actual	Target
England	9,155	9,528	9,676	10,074
Wales	584	595	627	629
Scotland	1,395	1,122	1,470	1,186
Northern Ireland	415	303	438	320

Footnote:

The target shares are derived from gross revenue resources only for the seven main service areas; inpatients, outpatients, community health services, mental handicap, mental illness, HQ administration and ambulance services. Teaching costs are excluded. Details of the derivation of these data can be obtained from the authors. Discrepancies in total UK target and actual allocation due to rounding.

England's actual allocation of the total budget was 79.3% and 79.2% respectively but its RAWP target share was 82.5% in each year, i.e. if the RAWP formula had been applied to the UK NHS budget in 1984-5 and 1985-6, England's share of the total budget would have been over 3% higher, an additional £373 million in 1984-5 and an additional £398 million in 1985-6. Wales would have gained little (£11 million in 1984-5 and £2 million in 1985-6) from the national application of one resource allocation formula and Scotland and Northern Ireland would have lost a large slice of their budgets (e.g. in 1985-6 Scotland would have lost £284 million and Northern Ireland £118 million).

The percentage changes in allocations for 1977-8 (9), 1984-5 and 1985-6 are set out in table 6. Whereas in the late 1970's England and Wales would have benefitted from the national application of RAWP, by 1985-6 only England is a major beneficiary. However to fund England's gain of 4.11% of its present allocation the Scots would have to lose 19.32% of their budget and the Irish 26.94% of theirs. Furthermore the magnitude of the Scottish and Irish advantages have increased over the 1977-8 to 1985-6 period.

Table 6 Change as a Percentage of Actual Revenue Allocation 1977-8 and 1985-6

	1977-8	1984-5	1985-6
England	+ 2.27	+ 4.07	+ 4.11
Wales	+ 7.56	+ 1.88	+ 0.32
Scotland	-14.94	-19.57	-19.32
Northern Ireland	-13.65	-26.99	-26.94

Sources (7) and authors' calculations.

Explanations of the unequal budgets

One explanation of the unequal national budgets could be the inferior health indicators and hence greater needs of the celtic fringes. However the RAWP formula is designed to take account of differential needs in determining allocations. While the use of populations weighted by utilisation rates and SMRs may be criticised as a poor indicator of needs, the response should be to improve the formulae, not to defend budget differentials which bear no systematic relation to needs estimates of any kind.

A second explanation could be that health care is given a greater priority in the ranking of public expenditure programmes in Scotland and Northern Ireland. But why should this be the case and what effects have these additional resources had? It has been argued previously (7) that the higher per capital budgets received by Scotland and Northern Ireland might be the price of maintaining the celtic fringes in the Union and, since 1977-8, the Welsh have been successful in remedying their inferior position.

It is difficult to assess the consequences of unequal funding on either the health status of the populations or on the levels of service provided. Even at the individual country level it is not clear how the RAWP, SHARE, SCRAW or PARR gaining authorities have spent their additional monies (10). Have these resources gone into nursing or medical manpower inputs? Which client groups have experienced greater access to health care? To what extent has this increased access generated improvements in the length and quality of life? Perhaps access and outcome effects might not be expected, particularly within such a short space of time as a decade, especially if the arguments of McKeown (8) (9) and others are valid, and the impacts of non-health care measures (such as diet and income) on health are larger than the impacts of health care produced by the NHS. However it would have been useful to evaluate the effects of "gaining" and "losing" status on health care activities (e.g. occupancy rates and length of stay) and outcomes (10). Such essential management data, like most other information in the NHS, is noticeable by its absence.

Attempts to examine the use of greater per capita budgets in Scotland as compared with England suggest that the additional funding for Scotland is reflected in greater per capita real resources (hospital beds and medical staff) of the order of 40-50 per cent in most specialties (11).

However further investigation by the authors shows that these health care inputs appear to be used less intensively than in England. Throughput per bed and per medical practitioner are lower in Scotland than in England while average length of inpatient stay is higher. In other words it appears that the extra resources allocated to Scotland, which are difficult to substantiate on anything other than political grounds, are being used relatively inefficiently. A reallocation of resources to England would not only be a movement towards realligning resources with estimated needs, but might also improve the efficiency of resource utilisation, i.e. both an equitable and efficient reallocation.

Policy Implications

The policies which led to the adoption of allocation formulae in the late 1970s were compartmentalised into 4 national activities but articulated at the time with care. The rationale of having separate allocation formulae and, as a result, providing, for instance in Scotland, higher levels of health care provision as shown in staffing and other measures, has not been challenged except in the Lancet (7). This challenge was used by Welsh policy makers to negotiate very successfully an increased allocation which added a substantial sum of money to NHS resources in the Principality. However, the rationale of the "over-funding" of Scotland and Northern Ireland has not been established. Given the objectives of the 1946 legislation these inequalities require careful evaluation and defence.

Whether such inequalities can be justified or not, the policies of resource allocation require comprehensive re-evaluation. With cash limits and only small real increases on NHS expenditure planned for the next three years, the competition for resources will intensify within and between the

constituent parts of the United Kingdom. However, appraisal of this process should not be dominated by concern about financial "slices of the cake" but about how these resources are used to provide health status. More consideration of financial flows has led to policy formulation which has not integrated manpower and capital programmes into the RAWP process, as envisaged in 1976, (1) and has isolated large sections of the NHS budget, such as expenditures on Family Practitioner Service and Local Authority Social Services, from the resource allocation process. Furthermore these sectors have increased in importance in the last decade with the development of community care policies for the elderly, the mentally ill and the mentally handicapped. This failure to integrate health care management processes coupled with the failure to evaluate the resource allocation formulae themselves has contributed to a situation where, apart from crude indicators of resource allocation, the effects of these radical innovations are unknown.

Whilst policy making without evaluation is an accepted way of past NHS planning, the Griffith Managers may not be satisfied with either the processes or outcomes of the resource allocation process. Perhaps the English Regional Managers will challenge the funding of the Scottish and Irish NHS systems because if such challenges are successful in redistributing marginal resources towards English regions, their managers' roles will be made easier. However the effects of such redistributions if they were made, on the Scottish and Irish managers might be substantial. In Scotland the problems faced by the Greater Glasgow Health Board would be worsened and shared amongst the other Boards.

Even though marginal changes in allocations may be possible, the limiting factor will be political repercussions. Simple economic theories of voting suggest that politicians will manipulate policies to purchase

the political support of the marginal voter (12). Even if a conservative government, whose Scottish support is already very limited, switched resources to England, the effect of RAWP is to redistribute such moves to the "Labour" North of England. Whether the present or any alternative Government has the political power to ensure that sub-regional allocations are directed at the defence of marginal constituencies (e.g. York) is doubtful. However such doubts are reduced by the observed high correlation between marginal political constituencies and decisions to build new hospitals (13).

The use of NHS resources to purchase political support is a process which requires more extensive analysis. Such behaviour may be made much more difficult by explicit resource allocation rules such as those in RAWP which make political favouritism much more obvious.

Conclusion

The application of the English RAWP allocation formula to the total NHS budget of the constituent parts of the United Kingdom would result in a substantial shift of resources away from Scotland and Northern Ireland and towards England in particular. If the Irish budget is defended in relation to the "troubles" then the extra additional funding should be provided as a supplement to a RAWP allocation from another (e.g. defence or law and order) budget perhaps. The Scottish budget cannot be defended by the "special needs" of Scotland, associated with the poor diet and high alcohol use, because the RAWP formula, like its Scottish parallel SHARE, seeks to take account of relative need by the SMR and utilisation rate weights. The movement of resources to England would make the achievement of the RAWP targets in England much easier.

The RAWP formula continues to generate heated debate in England, recently with the re-emergence of the cross boundary flow arguments as Griffiths managers seek to maximise their authorities' incomes and the announcement by the Department of Health of a review of the RAWP formula. Its application to the United Kingdom would generate even more argument. Such insular, largely English debates, are not adequate reasons for shirking the policy question: why is it that some countries, for instance Scotland, are very much more highly funded to provide NHS services than England?

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Technical Appendices

Appendices describing how the results obtained in this paper were calculated, can be obtained from the Centre for Health Economics.