UNIVERSITY
OF YORK

CENTRE FOR HEALTH ECONOMICS
HEALTH ECONOMICS CONSORTIUM

Rewarding Excellence?
Consultants' Distinction Awards and the Need for Reform

by Karen Bloor and Alan Maynard

DISCUSSION PAPER 100

REWARDING EXCELLENCE?

CONSULTANTS' DISTINCTION AWARDS

AND THE NEED FOR REFORM

by

Karen Bloor

and

Alan Maynard

Centre for Health Economics
University of York

September 1992

The Authors

Karen Bloor is a Research Fellow in the Centre for Health Economics (CHE) and Alan Maynard is a Professor of Economics and Director of CHE.

Acknowledgements

We would like to thank Ken Wright for comments on an earlier draft of this paper and Vanessa Waby for typing the manuscript.

Further Copies

Further copes of this document are available (at price £6.00 to cover the cost of publication, postage and packing) from:

The Publications Secretary
Centre for Health Economics
University of York
Heslington
YORK, YO1 5DD

Please make cheques payable to the University of York. Details of other papers can be obtained from the same address, or telephone York (0904) 433648 or 433666, or fax York 0904 433644.

Abstract

It is essential that excellence in the performance of doctors in the National Health Service is rewarded explicitly and efficiently. Unfortunately the existing system of Distinction Awards which, for the select few, can double a doctor's public sector pay is both secretive and of unproven efficiency.

Distinction awards have existed since 1948 and at present 34% of consultants receive them. They are payable at four levels: A+ at £46,500 per year, A at £34,260 p.a., B at £19,580 p.a. and C at £9,790 p.a. Since 1989 a few managers have been involved in the allocation of 'C' awards but all the other awards are determined by committees of consultants who meet in secret to decide who deserves reward for "distinction". The costs of these awards, in excess of about £80 million per year, have to be met by the hospital in which the consultants are employed.

Ideally these payments should be related to performance and their award should act as signals to NHS purchasers and customers regarding the excellence of the care that is available. Unfortunately a rationale for these payments is absent. It may be that their allocation reflects excellence in some way but this has not been demonstrated by the Advisory Committee on Distinction Awards. Indeed the secrecy of the award system and the difficulty of explaining the distribution of awards with available "indicators" works to sustain a conspiracy theory that the awards are made to "the boys" to inflate their income whilst in practice and their pensionable earnings after they retire. Such assertions do little to enhance efficiency and the development of effective clinical management.

The distribution of distinction awards between specialties and regions is described, and attempts are made to evaluate its efficiency. This statistical analysis shows that there is little relationship between the value of awards and available crude indicators of productivity.

Tens of millions of pounds are used annually to fund the system of distinction awards for NHS consultants[1]. Those who determine the use of these resources are not accountable for them and few NHS managers understand the system let alone recognise the need to reform it and facilitate the true reward of excellence. There is a need for the medical profession to deal explicitly with payment for excellence and also for them to realise that such a remuneration system will have to be controlled in conjunction with NHS managers. Both professional groups, clinicians and managers must move rapidly to reform the way in which clinical excellence is rewarded in the NHS.

[1]In response to a written Parliamentary Question (4 June, 1992), the Minister of Health argued that it was too complex and costly to determine the exact cost of this incentive system. We estimate the current cost to be approximately £83 million, plus transfer payments resulting from higher pensions.

Introduction

The effects of remuneration on the behaviour of doctors is of central importance as they are key decision makers in allocating the resources of the National Health Service. In 1990-91 there were 17,182 consultants in the Service in England and Wales and their decisions determined the use of £15,996 million of hospital and community health services current expenditure (IHSM 1991). An average consultant therefore commits nearly £1,000,000 of the taxpayer's money each year.

The responsibility for spending such funds is considerable and it is essential that rewards should reflect excellence in the use of these resources in treating patients. Efficiency can only be achieved if incentives are created (within the remuneration system) to reward the successful and penalise the less successful. Unfortunately in the NHS the doctor remuneration system is a product of history and trade union (BMA) lobbying (Bloor, Maynard & Street, 1992).

Hospital consultants in the UK National Health Service are paid on a salaried basis, with fixed salary scales applying across all specialties. The level of the salary scales are largely determined by the recommendations of the annual Review Body on Doctors' and Dentists' Remuneration, who consult with the Department of Health (DoH) and the British Medical Association (BMA) before making final recommendations to the DoH. A full-time consultant is at present paid between £37,905 and £48,945 (April 1992).

In addition to this, approximately 35% of consultants (December 1991) receive distinction

awards. These are additional payments to "the very best consultants" as defined by district, regional and national committees which are made up almost exclusively of doctors. The value of these awards can be as much as 95% of the highest consultant salary - £46,500 per year. There are four levels of award: A+ (£46,500), A (£34,260), B (£19,580) and C (£9,790). These awards are paid every year for the rest of the consultant's career. The average age of consultants receiving awards in 1991 was 47 years for a 'C' award, 50 for 'B' awards, 54 for 'A' awards and 57 for 'A+' awards, (DoH, personal communication). A consultant progressing through the award system at this rate could, at current levels of awards, have received £628,970 through the system by retirement (assuming this is at age 65). In addition, as pensions are calculated on the basis of the best year's salary in the final three years of a doctor's career, the awards can also considerably increase the pensions of award holders (as long as they work for three years in the NHS following the allocation or upgrading of an award). In December 1991, a total of 5,930 consultants in England and Wales held awards. 3,536 of these were 'C' awards, 1,526 'B' awards, 674 'A' awards and 194 'A+' awards (Advisory Committee on Distinction Awards, forthcoming). This resulted in an approximate cost to the NHS of over £83 million in 1992.[2] In addition there are transfers resulting from enhanced pension payments of approximately £42 million.[3]

Does this system reward excellence efficiently? The answer is that we do not know as the scheme is shrouded in secrecy. It is surprising that so little is known of the distinction award

[2]This figure is created by multiplying the number and value of each award by a fraction of whole-time equivalent consultants over the total number of consultants, taking into account the fact that part-time consultants are not paid the full value of the award.

[3]This assumes that consultants work in the NHS for approximately 40 years, and therefore receive half their distinction awards in increased pension payments.

system and the resulting distribution of awards. The history of the distinction award system since its inception in 1948 is described in Section 1. The present situation, in particular the criteria used to determine the allocation of awards, how the costs of awards are met, and the current distribution of awards by specialty and by region are outlined in Section 2. The efficiency and appropriateness of the system is analysed in Section 3, updating analysis carried out by Lavers and Rees (1972). This analysis considers the variation in the distribution of awards between specialties and regions, investigating a number of equity and efficiency criteria in an attempt to account for this variation. The policy implications of the award system in its current form, and proposals for reform are set out in Section 4.

The process of allocation of distinction awards has been criticised in the past, but despite the recent wide-ranging reforms of the NHS, the system has remained largely unchanged and unevaluated since 1948. The purchaser-provider separation now in place in the NHS, and particularly the introduction of NHS Hospital Trusts, with their increased budget awareness, means that the system of distinction awards will, in future, have to be managed more openly and more efficiently, so that corporate objectives of providing health care at least cost and highest possible quality are achieved.

1. The history and aims of the distinction award system

Distinction awards were introduced at the beginning of the National Health Service, on the recommendation of the Spens Committee (1948). This committee recommended that consultants, all with full clinical responsibility, should be paid on a single grade. However,

they also felt that "if the recruitment and status of specialist practice are to be maintained, specialists must be able to feel that more than ordinary ability and effort receive an adequate reward" and that "any satisfactory system of remuneration must involve differentiation dependent on professional distinction" (Inter-departmental Committee on the Remuneration of Consultants and Specialists, 1948). Their solution was therefore to have a basic salary scale, according to age and length of service, and to pay distinction awards on top of this to the very best consultants.

Distinction awards are not attached directly to particular posts and cannot therefore be used as incentive payments to encourage consultants to work in particular regions or specialties. They are not allocated by the NHS administration, but on the recommendation of the national Advisory Committee on Distinction Awards, and regional and district committees. The regional and specialist distribution of awards has been criticised as inequitable, and the system has been considered by various committees since its inception, but nevertheless remains almost unchanged.

The Pilkington Committee, in 1960, endorsed the award system: "Two common methods of securing differentiation [of income] are not open to the consultant so far as his Health Service work is concerned. Unlike some professional men in private practice he cannot vary his fees in accordance with his professional standing; and unlike the salaried employee in most fields he cannot look forward to promotion. In these circumstances we consider the awards system a practical and imaginative way of securing a reasonable differentiation of income and of providing relatively high earnings for the 'significant minority' to which the Spens Committee referred. We therefore unreservedly support the continuation of the system" (Royal

Commission on Doctors' and Dentists' Remuneration, 1960).

In 1979 the criteria for making awards were changed to include not only 'distinction' but also 'meritorious service' (Clayton 1979). This attempts to acknowledge outstanding service to the NHS as well as academic distinction.

The 18th Report of the Review Body on Doctors' and Dentists Remuneration (1988) expressed some concern about the awards system, stating that expenditure "should result as far as possible in a benefit to the NHS, as well as rewarding a practitioner for his or her individual effort" (Review Body 1988). Their recommendations were implemented in the 1989 NHS review, which made the following changes:

- the criteria for 'C' awards were modified so that in order to qualify for this award (and subsequently for higher awards) consultants must demonstrate not only clinical skills but also a commitment to the management and development of the NHS. Regional committees which make recommendations for 'C' awards, previously made up solely of doctors, must now be chaired by the RHA Chairman and include at least some senior managers in addition to the clinical members.

- a review procedure was introduced, so that whereas previously the awards were payable automatically for life, new awards are now reviewed every five years and could in theory be removed. This review process does not apply to awards granted prior to 1989.

- an age limit was introduced to avoid making awards close to retirement by making new or increased awards pensionable only if the practitioner works for another three years in the NHS.

These changes, while probably improvements to previous arrangements, are very minor, and leave the traditional award system relatively unscathed.

One aspect of the distinction award system which creates distrust is the secrecy which surrounds the process and the distribution of awards. Names of consultants holding awards are traditionally confidential - a rule introduced "to prevent patients, general practitioners, NHS authorities, or the Press, from making judgements on the status of consultants without understanding all the factors that relate to awards, and that the number available is limited" (Clayton 1979). The list of names of award holders in an NHS region can be inspected by any consultant in that region, but these are not published or available to members of the public or GPs. They cannot therefore be used as signals of superior practitioners to customers or purchasers. Also of concern is the secrecy regarding the process of allocation: the criteria for awards are not made clear, and in practice consultants may not know who in their hospital has awards and who does not. The secrecy surrounding the district, regional and national advisory committees prevents the correction of anomalies and creates understandable suspicion of the process.

The main aim of the distinction award system appears to be to reward 'excellence', however defined. The allocation of 'C' awards acknowledges meritorious service to the NHS, but higher awards still appear to be largely based on the academic reputation of a consultant - 'B'

awards tend to be allocated to consultants with a national reputation and 'A' awards to those with an international reputation (Loder 1982).

The appropriateness both of the current aims of the system and the process of achieving these aims is presently under review. The Department of Health recently asked the Doctors' and Dentists' Review Body for Remuneration to consider the case for performance related pay for doctors. This proposal was debated at the 1992 annual conference of the British Medical Association. Distinction awards are clearly an important area of discussion - their role in encouraging efficient practice could be considerably strengthened, adding to or even replacing the largely out-of-date views of 'excellence'.

2. The current situation

2.1 The committee structure

The Advisory Committee on Distinction Awards (ACDA) is a national committee which holds an annual meeting in January, and recommends all awards to the Secretary of State for Health. This committee makes recommendations largely on the basis of advice from regional 'C' award and higher award committees. In addition, recommendations can be made by the Royal Colleges and Faculties, the Medical Research Council and various specialist sub-committees (Clayton 1979). The 22 members of the central committee are nominated by the Royal Colleges and Faculties, the BMA Central Consultants' and Specialists' Committee and the Medical Research Council.

The most important recommendation for an individual consultant for a 'C' award comes from his District representative - a consultant on the Regional 'C' award committee who represents the views of the District about all consultants in all specialties. In addition, each district representative also represents the regional view about all members of his specialty throughout the Region. The way in which district representatives decide who to recommend varies considerably. Some just observe, collect general impressions and consult senior colleagues, others hold formal meetings of all award holders in the district and consider the record of each non-award holder in the District (Loder 1982). The majority of consultants are not told the criteria for choosing colleagues, and many do not even know who their representative is, although this information is available (de Lacey & Liberman 1988)

At the meeting of the Regional 'C' award committee, the claim of every consultant who does not yet hold an award is considered. A list is then drawn up and reported to the chairman of the central awards committee. Regional 'C' award committees consist largely of doctors, although it is now compulsory to have at least two managers present at the regional meetings.

Regional higher award committees officially consider only those who already hold 'C' awards, although occasionally special representations are made. The committee consists solely of consultants, all holders of higher awards. They are selected to represent all main disciplines, with some regard to geographical considerations (Clayton 1979). This committee also reports to the central advisory committee, who allocate and upgrade awards.

The committee structure set up to allocate distinction awards appears to be a hierarchy of doctors, with a token input from NHS managers. Managers have no real influence on the

allocation process.

2.2 Criteria for allocation of awards

Committees and representatives are not given clear criteria for the allocation of distinction awards. Any guidelines issued are deliberately vague, as it is felt that criteria "cannot be rigidly or uniformly defined" (Clayton 1979). The justification given for this is that specialties are not alike.

To secure a recommendation for a distinction award there should be "something more than an average effort or contribution, something beyond the ordinary expected duty of a consultant" (Clayton 1979). Awards for 'meritorious service' attempt to reward "hard work and outstanding service to the NHS" (ibid), including direct service to patients or their general practitioners, improvement of the service, training and teaching, and medical administration. Service to the NHS is usually sufficient only for a 'C' award, with higher awards recommended for:

> "Those who are evident leaders in a clinical or scientific field, including those with special skills.
>
> Those who contribute new ideas of proven worth.
>
> Those who are generally accepted as leaders of their profession in their Region or in the country as a whole." (Clayton 1979).

These vague criteria are often criticised as they mean that "usually the award is based on

prestige, rather than actual work done" (McCaig, in Dawe 1992). The distribution of awards resulting from the system of recommendations has also been heavily criticised. Bruggen and Bourne, in a series of papers in the BMJ between 1972 and 1985 showed repeatedly that the committees recommending awards have been biased in their composition towards certain specialties. In 1980, an average of 35.3% of consultants had awards. This however varied from 20.4% of consultants in genitourinary medicine and community medicine to 63.4% of cardiothoracic surgeons and 61% of neurosurgeons. This situation has altered little in recent years. The current distribution will be described in more detail in section 2.4, and in section 3 possible reasons for the uneven distributions between specialties and regions will be discussed. Lester (1980) also pointed out the uneven sex distribution of awards, with a total of 39.6% of male consultants and 15.5% of female consultants receiving awards of any grade at that time. The difference between the two groups also increased progressively with the grade of award.

2.3 Who pays?

Since the devolution of the budget for consultants' salaries to District level in 1983-84, the district treasurer in each health authority has also been responsible for paying consultants' distinction awards. With the introduction of NHS Trust Hospitals, responsibility is devolved still further. Whenever a consultant receives an award, money must be found within the budget of a DHA or a Trust hospital to pay for it. This causes concern among doctors that the payment of awards may "discourage the employment of potential leaders and .... encourage mediocrity within the service" (Dische 1987). This seems unlikely, at least in the first Trust hospitals which tended to be relatively prestigious hospitals, presumably employing

prestigious consultants. However, it is clear that hospital managers have effectively no influence on which consultants receive an award, or an the amount of awards allocated. Thus they cannot manipulate these awards to further the specific interests of the hospital and patients, for example the reduction of waiting times. This situation, with the increased budget-awareness of the Trust hospitals and their desire to manage resources efficiently, could provide the impetus for change in the distinction award system which has been so lacking up to now.

2.4 The current distribution of awards

The system of allocation does not result in an even distribution of awards. The current distributions of distinction awards by specialty and by region are shown in Tables 1 and 2.

The distribution of awards by specialty is unequal. 58.7% of immunopathologists and 58.5% of neurosurgeons receive distinction awards compared with only 12% of consultants in occupational medicine and 16.8% of mental health specialists. There is great variation around the average proportion (34.5%).

The regional distribution of awards is less variable, but still far from even. All the Thames regions have a higher proportion of awards than the national average, and the London Special Health Authorities have a much greater than average allocation (57.1%). The lowest numbers of awards per consultant are in Wessex (30.1%) and Mersey (30.8%).

Table 1: Distinction awards - distribution by type of award and specialty

31 December 1991, England and Wales

	Eligible practitioners		Total		Award Holders							
					A+		A		B		C	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
All specialties: Total	17,182	100.0	5,930	34.5	194	1.1	674	3.9	1,526	8.9	3,536	20.6
Accident & Emergency	218	1.3	44	20.2			3	1.4	8	3.7	33	15.1
Anaesthetics	2,217	12.9	644	29.0	23	1.0	40	1.8	156	7.0	425	19.2
Cardiology	187	1.1	89	47.6	4	2.1	19	10.2	22	11.8	44	23.5
Cardio-thoracic surgery	130	0.8	61	46.9	3	2.3	10	7.7	21	16.2	27	20.8
Clinical neurological physiology	62	0.4	21	33.9			2	3.2	3	4.8	16	25.8
Oral surgery	264	1.5	118	44.7	3	1.1	17	6.4	29	11.0	69	26.1
Orthodontics	155	0.9	53	34.2	1	0.6	4	2.6	11	7.1	37	23.9
Restorative dentistry	108	0.6	36	33.3	1	0.9	7	6.5	8	7.4	20	18.5
Public health dentistry	7	-	2	28.6							2	28.6
Dermatology	253	1.5	84	33.2			14	5.5	20	7.9	50	19.8
Diseases of the chest	116	0.7	61	52.6	1	0.9	7	6.0	12	10.3	41	35.3
General medicine	1,534	8.9	742	48.4	28	1.8	114	7.4	201	13.1	399	26.0
General surgery	1,241	7.2	566	45.6	24	1.9	70	5.6	149	12.0	323	26.0
Genito-urinary medicine	170	1.0	34	20.0			4	2.4	5	2.9	25	14.7

Continued ...

Table 1: Continued

	Eligible practitioners		Total		Award Holders							
					A+		A		B		C	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Geriatric medicine	576	3.4	130	22.6	1	0.2	10	1.7	26	4.5	93	16.1
Infectious diseases	39	0.2	18	46.2	1	2.6	2	5.1	3	7.7	12	30.8
Mental illness	1,298	7.6	371	28.6	11	0.8	36	2.8	93	7.2	231	17.8
Child & adolescent psychiatry	370	2.2	79	21.4	3	0.8	4	1.1	17	4.6	55	14.9
Forensic psychiatry	77	0.4	20	26.0	1	1.3	2	2.6	4	5.2	13	16.9
Mental handicap	173	1.0	29	16.8			4	2.3	4	2.3	21	12.1
Psychotherapy	102	0.6	22	21.6					8	7.8	14	13.7
Neurology	208	1.2	107	51.45	4	1.9	19	9.1	39	18.8	45	21.6
Neurosurgery	106	0.6	62	58.5	4	3.8	13	12.3	24	22.6	21	19.8
Nuclear medicine	31	0.2	16	51.6	1	3.2	5	16.1	8	25.8	2	6.5
Obstetrics & gynaecology	851	5.0	328	38.5	15	1.8	30	3.5	72	8.5	211	24.8
Occupational medicine	25	0.1	3	12.0					1	4.0	2	8.0
Ophthalmology	453	2.6	156	34.4	3	0.7	19	4.2	42	9.3	92	20.3
Orthopaedic surgery	790	4.6	284	35.9	8	1.0	23	2.9	61	7.7	192	24.3
Otolaryngology	406	2.4	150	36.9	1	0.2	12	3.0	30	7.4	107	26.4
Paediatrics	856	5.0	307	35.94	12	1.4	31	3.6	84	9.8	180	21.0
Paediatric surgery	52	0.3	23	44.2			5	9.6	12	23.1	6	11.5
Pathology: general	8	-	3	37.5			1	12.5	1	12.5	1	12.5
Blood transfusion	32	0.2	11	34.4	1	3.1	2	6.2	4	12.5	4	12.5

Continued ...

Table 1: Continued

	Eligible practitioners		Total		Award Holders							
					A+		A		B		C	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chemical pathology	184	1.1	63	34.2	3	1.6	10	5.4	18	9.8	32	17.4
Haematology	407	2.4	143	35.1	3	0.7	23	5.7	35	8.6	82	20.1
Histopathology	645	3.8	199	30.9	7	1.1	22	3.4	61	9.5	109	16.9
Immunopathology	46	0.3	27	58.7	2	4.3	7	15.2	12	26.1	6	13.0
Medical microbiology	330	1.9	118	35.8	3	0.9	16	4.8	37	11.2	62	18.8
Neuro-pathology	41	0.2	16	39.0			3	7.3	5	12.2	8	19.5
PHLS only	32	0.2	11	34.4			3	9.4	3	9.4	5	15.6
Public health medicine	535	3.1	157	29.3	8	1.5	16	3.0	41	7.7	92	17.2
Plastic surgery	124	0.7	43	34.7			4	3.2	15	12.1	24	19.4
Radiology	1,212	7.1	309	25.5	9	0.7	25	2.1	82	6.8	193	15.9
Radiotherapy	223	1.3	84	37.7	4	1.8	8	3.6	18	8.1	54	24.2
Rheumatology & rehabilitation	288	1.7	86	29.9	1	0.3	8	2.8	21	7.3	56	19.4

Source: ACDA, forthcoming Health Trends

Table 2: Distinction awards - distribution by type of award and region

31 December 1991, England and Wales

Region	Eligible Practitioners	Awards									
		A+		A		B		C		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Northern	1,074	8	0.7	27	2.5	98	9.1	212	19.7	345	32.1
Yorkshire	1,160	9	0.8	37	3.2	106	9.1	232	20.0	384	33.1
Trent	1,435	12	0.8	48	3.3	117	8.2	306	21.3	483	33.7
East Anglia	711	11	1.5	23	3.2	65	9.1	122	17.2	221	31.1
North West Thames	1,244	14	1.1	67	5.4	114	9.2	295	23.7	490	39.4
North East Thames	1,598	25	1.6	90	5.6	159	9.9	364	22.8	638	40.0
South East Thames	1,346	16	1.2	63	4.7	116	8.6	320	23.8	515	38.3
South West Thames	976	7	0.7	30	3.1	94	9.6	210	21.5	341	34.9
London SHAs	662	31	4.7	79	11.9	117	17.7	151	22.8	378	57.1

Continued ...

Table 2: Continued

Region	Eligible Practitioners	Awards									
		A+		A		B		C		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%
Wessex	890	4	0.4	34	3.8	66	7.4	164	18.4	268	30.1
Oxford	819	17	2.1	39	4.8	67	8.2	165	20.1	288	35.2
South Western	987	5	0.5	28	2.8	104	10.5	200	20.3	337	34.1
West Midlands	1,609	12	0.7	51	3.2	131	8.1	331	20.6	525	32.6
Mersey	843	6	0.7	31	3.7	69	8.2	154	18.3	260	30.8
North Western	1,422	13	0.9	45	3.2	112	7.9	273	19.2	443	31.2
Wales	935	13	1.4	33	3.5	96	10.3	183	19.6	325	34.8
Net Totals	17,182	194	1.1	674	3.9	1526	8.9	3536	20.6	5930	34.5

Note: Where a consultant serves more than one Region he has been included in each but appears only once in the net total.

Source: ACDA

Obviously the system of allocation is not intended to result in an even distribution of awards. However, to justify this highly unequal situation there must be agreed efficiency or equity criteria which determine allocation. With the vague and generalised guidelines issued to committees and representatives, these criteria appear to be absent. What possible equity and efficiency criteria might be used to evaluate the present system?

3. Evaluating the system

Despite the large amount of NHS expenditure devoted to distinction awards (over £80 million in 1992), the system has not been evaluated in recent years. As far as we are aware, the only attempt to consider possible equity or efficiency reasons for the highly uneven distribution of awards was carried out in 1972 by Lavers and Rees. They tried to account for the variations in the proportions of awards in different specialties and regions by reference to various rather crude equity and efficiency criteria. The following analysis is based on the methodology of Lavers and Rees, updated using the most recent information.

3.1 Distribution of awards by specialty

First, the proportion of consultants in each specialty who receive an award was converted into an estimated mean value (EMV) per consultant, by weighting each type of award by its value. Comparing each specialty with the mean value gives a 'standardised value of award ratio' (SVAR): thus in nuclear medicine, with a SVAR of 2.08, the EMV was more than double the average for all specialties. Results are shown in Table 3.

Table 3: Distribution of distinction awards - analysis by specialty

Specialty	Estimated mean value per consultant (EMV) (£)	Standardised value of awards ratio (SVAR)
A&E	2672	0.44
Anaesthetics	4355	0.71
Cardiology	9083	1.49
Cardio-Thoracic Surgery	8905	1.46
Clin Neur Phys	4579	0.75
Oral Surgery	7444	1.22
Orthodontics	4911	0.81
Restorative Dentistry	5914	0.97
Public Health Dentistry	2797	0.46
Dermatology	5378	0.88
Diseases of the Chest	7954	1.30
Gen Medicine	8507	1.39
Gen Surgery	7731	1.27
G-U Medicine	2822	0.46
Geriatric Medicine	3140	0.51
Infectious Diseases	7468	1.22
Mental Illness	4489	0.74
Child Psychiatry	3102	0.51
Forensic Psychiatry	4164	0.68
Mental Handicap	2433	0.40
Psychotherapy	2879	0.47
Neurology	9813	1.61
Neurosurgery	12329	2.02
Nuclear Medicine	12710	2.08
Obstetrics & Gynaecology	6111	1.00
Occupational Medicine	1566	0.26
Ophthalmology	5549	0.91
Orthopaedic Surgery	5360	0.88
Otolaryngology	5154	0.84
Paediatrics	5873	0.96
Paediatric Surgery	8942	1.47
Pathology - General	7954	1.30
Blood Transfusion	7266	1.19
Chemical Pathology	6238	1.02

Continued ...

Table 3: Continued

Specialty	Estimated mean value per consultant (EMV) (£)	Standardised value of awards ratio (SVAR)
Haematology	5935	0.97
Histopathology	5179	0.85
Immunopathology	13620	2.23
Medical Microbiology	6118	1.00
Neuropathology	6805	1.12
PHLS only	6577	1.08
Public Health Medicine	4904	0.80
Plastic Surgery	5369	0.88
Radiology	3936	0.65
Radiotherapy	6014	0.99
Rheumatology & Rehabilitation	4444	0.73
Average	6099.87	1.00

This table illustrates the wide range of values of awards in each specialty. The mean EMV of awards per consultant is £6,100, but the values range from £1,566 to £13,620. The highest EMV is therefore more than 8 times the lowest. Specialties receiving the highest value of awards are immunopathology (EMV = £13,620), nuclear medicine (EMV = £12,710) and neurosurgery (EMV = £12,329). Specialties receiving the lowest value of awards are occupational medicine (EMV = £1,566) mental handicap (EMV = £2,433) and public health dentistry (EMV = £2,797).

The overall coefficient of variation (ratio of the standard deviation to the mean) of the EMV is 0.44. Looking at the values of different types of award individually shows variation to be even higher. The coefficient of variation for A+ awards is 1.52, A awards 1.33, B awards 1.27 and C awards 1.29. This shows the relative variation between specialties of the different types of awards. Different types of award must therefore balance out to a certain extent, but the highest variation between specialties is in the higher value awards.

Lavers and Rees (1972), using 1968 figures, showed a higher overall variation in the value of awards. The standardised value of awards ratio ranged from 0.375 (venereology) to 3.403 (cardiology). This shows that the highest EMV was over 9 times the lowest. The coefficient of variation for all awards was 0.67, and again higher awards varied more than lower awards. The coefficient of variation for A+ awards was 1.26, A awards 1.28, B awards 0.76 and C awards 0.39. In Lavers and Rees's analysis the EMV was adjusted to account for differences in the age structures of consultants in different specialties. The current analysis has not included this adjustment for two reasons. Firstly, information on the ages of consultants in different specialties is not available, and secondly, Clayton (1979) stated that "seniority is not

ground for an award". If this is so, the age structures of consultants in different specialties should not be relevant to the distribution of distinction awards.

The distribution of distinction awards between specialties was therefore uneven in 1968 and 1991, both in terms of the proportion of consultants in each specialty receiving awards (see Section 2.3) and the value of awards held in each specialty. Accepting that distribution is not equal, it is important to consider whether the distribution is efficient and/or equitable.

3.1.1 Equity criteria

Lavers and Rees (1972) suggested two criteria that may measure equity within the distribution award system. The first was an indicator of the 'burden of responsibility'. This implies that "consultants in specialties which are relatively more favoured with awards could be expected to bear more responsibility than those in less favoured specialties if the distribution of awards is equitable" (Lavers & Rees 1972). The first measure of responsibility used was the ratio of junior medical staff to consultants. This is not an ideal measure as in some ways junior staff reduce the workload of consultants. However, consultants are ultimately fully responsible for patient care, and their supervisory responsibility may therefore justify the use of this measure.

Using data from Health and Personal Social Services (HPSS) Statistics (DoH 1991) it was possible to estimate the average number of junior medical staff allocated to each consultant by specialty (see Appendix I). If the distribution were equitable, a positive correlation between this variable and the estimated mean value (EMV) of distinction awards would be

expected. This however was not found to be the case - the correlation coefficient between these two variables was negative (-0.19). Lavers and Rees, using 1968 data, found a positive correlation (+0.40). Whilst this measure of 'responsibility' is obviously highly imperfect, the hypothesis that specialties relatively more favoured by awards bear more responsibility is not supported by 1991 data.

The second measure of 'responsibility' used by Lavers and Rees was the mean number of daily occupied beds per whole-time equivalent consultant. However, with the number of specialties requiring no beds (for example pathology) and recent initiatives to reduce occupied beds throughout the Service (for example the increase in day case surgery and minimally invasive techniques) this variable was thought to be an inappropriate measure of 'responsibility' in today's NHS.

The final criterion of equity adopted by Lavers and Rees was time spent working in the National Health Service. This implies that "the distribution of awards may be regarded as being more equitable if consultants in specialties which are relatively more favoured with awards spend on average a higher proportion of their time on NHS work, and vice versa" (Lavers & Rees 1972). Again, a positive relationship between this variable and the EMV of awards would be expected, and again a negative correlation coefficient was found in 1991 (-0.22). 1968 figures also showed a negative correlation (-0.12).

The ratio of whole time equivalent consultants to consultant numbers is also not an ideal measure, as differences between specialties may be due to differences in time spent in teaching and research. These activities may be rewarded by distinction awards. However,

if it is assumed that time spent in teaching and research varies little between specialties, the variable may be a valid equity criterion. It does not support the hypothesis that specialties where consultants spend more time treating NHS patients are relatively more favoured by awards.

3.1.2 Efficiency criteria

To investigate whether or not the distribution of distinction awards promotes efficiency, Lavers and Rees used a measure of 'prospects' for each specialty, from the 'Lancet table'. This was based on anticipated future consultant vacancies relative to senior registrar strength, assigned to each specialty. The nearest currently available data to this is the ratio of current consultant vacancies to the number of senior registrars in each specialty (see Appendix II, source Health Trends 1991). Use of this measure implies that "we would expect, if the distribution of awards is conducive to efficiency, that a more efficient distribution would obtain where those specialties with a higher 'prospects ratio' (i.e. those with a greater need for doctors) were relatively more favoured with awards" (Lavers & Rees 1972).

The correlation coefficient between the ratio of consultant vacancies to senior registrar strength and the EMV of distinction awards by specialty for the most recent data is 0.053. This is the expected sign, but a very small coefficient, suggesting a weak or insignificant relationship. Lavers and Rees (1972) found a negative relationship between their 'prospects ratio' and the EMV of awards (-0.33).

This analysis does not support the hypothesis that distinction awards promote efficiency by

favouring those specialties with a greater need for consultants. Again, ideally a more complete measure of prospects would be desirable, but quantified measures of prospects are difficult to find.

3.1.3 Multiple regression analysis

Inspection of the zero order correlation coefficients (ie. those calculated for single pairs of variables) gives no information about how the distribution of awards between specialties is related to the variables when considered together. Assuming the estimated mean value of awards (EMV) is a linear function of the measure of responsibility used, time spent by consultants in the NHS and prospects, the following equation was fitted (t statistics in parentheses):

$$\begin{array}{lcccccccc} EMV_i & = & 12104 & - & 319\ resp_i & - & 606 timeNHS_i & - & 134\ prospects_i \\ & & (1.97) & & (1.19) & & (0.87) & & (0.11) \end{array}$$

R squared = 0.096
Adjusted R squared = 0.014

where $resp_i$ = number of juniors per consultant in each specialty.

$timeNHS_i$ = ratio of WTE consultants to total numbers of consultants in each specialty.

$prospects_i$ = ratio of consultant vacancies to senior registrar strength in each specialty.

This equation shows all the variables to have the opposite sign to that expected if the distribution of awards was equitable and/or efficient. None of the variables reaches statistical significance at the conventional 5% level, and the overall fit of the model is very weak. Similar results were found by Lavers and Rees in 1972, except that they did find a significant

positive relationship between the EMV of awards and the ratio of junior doctors to consultants (a measure of responsibility).

Clearly the statistical analysis carried out here is highly simplistic, and the model estimated far from ideal. Measures of responsibility, time spent in the NHS and prospects are difficult to formulate and quantify, and the available proxies used in this analysis are imperfect. However, while no firm conclusions can be drawn from this model, it appears to suggest that there is no relationship between the distribution of distinction awards between specialties and any of the above equity and efficiency criteria.

3.2 Distribution of awards by region

The distribution of distinction awards between different hospital regions is also uneven, as illustrated in Table 2 above. The value of awards is again more accurately analysed by using the estimated mean value of awards per consultant (EMV). To account for consultants who are employed by more than one region the number of awards was multiplied by a fraction of the real number of consultants in all regions over the false total formed by adding together the numbers of consultants separately employed in each region. This assumes that multiple contracts are evenly spread between regions. This information was then used to calculate the EMV of awards per consultant which, for England and Wales health regions, is shown in Table 4.

Table 4: Distribution of distinction awards - analysis by region

Region	EMV per consultant	SVAR
Northern	4780	0.83
Yorkshire	5045	0.88
Trent	5063	0.88
East Anglia	5140	0.90
NW Thames	6291	1.10
NE Thames	6631	1.16
SE Thames	5987	1.05
SW Thames	5218	0.91
London SHAs	11602	2.03
Wessex	4631	0.81
Oxford	5986	1.05
South Western	5097	0.89
West Midlands	4890	0.85
Mersey	4833	0.84
North Western	4784	0.84
Wales	5609	0.98
Average	5724	1.00

Table 5: Expected value of awards per head of population, by region

Region	Population (000)	Expected value of awards per person
Northern	3073	1.67
Yorkshire	3645	1.61
Trent	4688	1.55
East Anglia	2045	1.79
NW Thames	3487	2.24
NE Thames	3782	2.80
SE Thames	3653	2.21
SW Thames	2968	1.72
London SHAs	-	-
Wessex	2934	1.40
Oxford	2537	1.93
South Western	3252	1.55
West Midlands	5216	1.51
Mersey	2407	1.69
North Western	4003	1.70
Wales	-	-
Mean	3406	1.81

The mean EMV of awards per consultant is £5724. This ranges from a low of £4631 (Wessex) to £6631 (North East Thames) and £11,602 for the London Special Health Authorities. The four regions with the highest EMV of awards are all London based, with the lowest rewarded regions being Wessex, Northern, North Western and Mersey. The coefficient of variation of the EMV of awards between regions is 0.28 overall. Variation tends to increase as the value of the award increases - the coefficients of variation for 'C' awards is 0.33, 'B' awards 0.25, 'A' awards 0.43 and 'A+' awards 0.55. The highest regional variation of the awards is therefore in the highest value awards.

Allowing for the size of regions does not remove the inequality of distribution. The expected value of awards per head of population in each region varies from £1.51 in the West Midlands to £2.80 in North East Thames (see Table 5). There is no reason why the distribution of awards between regions should be equal. Awards are intended to reward consultants on the basis of merit, and if meritorious consultants are unequally distributed between regions, distinction awards should also be unequally distributed. Certain regions may be considered 'centres of excellence' and may therefore be entitled to a higher than average share of awards.

Lavers and Rees (1972) considered a number of equity and efficiency criteria to try to explain the variation in the distribution of awards between regions. These included 'output', 'responsibility', time spent working in the NHS and a measure of 'scarcity' of consultants.

3.2.1 Equity criteria

It is extremely difficult to measure the 'output' of consultants, as ideally this should measure

improvements in patient health. Lavers and Rees did not attempt this. Instead they used two crude process measures, deaths and discharges per consultant and out-patients per consultant. These are poor proxies for outcome but used here in the absence of better measures. The current equivalent figures (from HPSS statistics, 1991) suggest a negative relationship between the EMV of awards per consultant and both in-patient cases treated (-0.07) and out-patient attendances (-0.33). Lavers and Rees (1972) also found a negative zero order correlation coefficient for deaths and discharges, but a positive relationship with out-patients.

Lavers and Rees considered 'responsibility' held by consultants to be measured by the number of occupied beds per consultant and the junior staff / consultant ratio. Using data from HPSS statistics (DoH 1991) it was possible to estimate the average number of junior medical staff per consultant by region (see Appendix III). The relationship between the EMV of awards per consultant and the junior staff / consultant ratio was found to be very weakly negative (correlation coefficient = -0.00026). Lavers and Rees also found a negative relationship (-0.57).

3.2.2 Efficiency criteria

Lavers and Rees considered that the distribution of awards could be regarded as efficient if there was a higher level in regions where consultants are 'scarce'. They used two measures of scarcity, deaths and discharges per consultant (already shown to have a weak negative correlation with EMV) and the number of persons per consultant in each region, which again shows a negative relationship (correlation coefficients of -0.44 with recent data and -0.55 in Lavers and Rees' analysis).

Data used by Lavers and Rees suggested a strong negative relationship between the EMV of awards per consultant and the size of hospital region (measured by population size). A negative relationship was also suggested by current data - a correlation coefficient of -0.47. This suggests that relatively large amounts of distinction awards are paid to the smaller regions. Lavers and Rees proposed two possible explanations for this: "The explanation could be that the more unfashionable regions are also the larger ones, but it also seems possible that the higher-value awards are rationed to some extent by region, so that, for instance, the most eminent gynaecologist in a region will be very likely to get an A or A+ award. If this does happen one would expect the smaller regions to be the relative beneficiaries" (Lavers and Rees 1972).

Multiple regression analysis using regional data is not illuminating due to the problem of multicollinearity in the independent variables.

3.3 The position of the Thames regions

The Thames regions are compared with other English Regional Health Authorities in Table 6.

This table shows the favourable position of the Thames regions as regards distinction awards, particularly when the London Special Health Authorities are included. Despite this, the consultants appear to perform less well in terms of 'output' per consultant and population coverage per consultant. This information illustrates the 'centre of excellence' problem. It is said (with little evidence) that the advantages of relatively high staffing levels in the

Table 6: Comparison of Thames and other regions on selected variables (England and Wales 1990-91)

	Thames RHAs	Other RHAs
% of all consultants with awards	41.9 (with SHAs) 38.1 (without)	32.6
EMV of awards per consultant (£)	7146 (with SHAs) 6032 (without)	5078
Value of awards per person (£)	2.24	1.64
In-patient cases per consultant	390	486
Out-patient visits per consultant	2134	2280
Junior staff per consultant	1.77	1.90
Population per consultant	2731	3075

Sources: Advisory Committee on Distinction Awards, 1992; HPSS statistics, DoH 1991.

Thames regions are cancelled out by the complexity of cases treated and the tendency of patients from outside the Thames regions to travel to 'centres of excellence' in London for treatment. This issue is beyond the scope of this paper, but clearly the higher allocation of distinction awards to the Thames regions adds to the already excessively high costs. Furthermore, the extent of private practice in the Thames areas is higher than the national average (for example as many as one third of all private sector cold elective procedures are carried out in the Thames regions). This means that the average expected net income of consultants in the south east is much higher than in the rest of the country.

3.4 Discussion

The above analysis illustrates that there are wide variations between specialties and regions in the distribution of distinction awards, both in terms of numbers and values of awards. These differences are not accounted for by the equity and efficiency variables suggested by Lavers and Rees (1972), and in fact results are usally either the reverse of those expected or insignificant. The variables used are imperfect proxies for equity and efficiency criteria, and the statistical analysis is simplistic and cannot indicate causation. However, the results do show that it is not possible to explain the highly unequal distribution of awards by the criteria suggested, and there is no evidence to suggest that any equity or efficiency factors do in fact determine distribution. There is also no evidence to suggest that a quota system, by specialty, is used in the award system, but it is possible that informal rules of this nature affect the allocation of awards. With the secrecy surrounding the distinction awards process it is impossible to clearly identify the factors which do determine distribution of awards.

4. Policy implications

The system of distinction awards and the distribution resulting from it has been heavily criticised in the past (Bruggen and Bourne 1982, De Lacey and Liberman 1988). Despite these criticisms little has changed. It appears however that there are a number of new issues which may result in reform of the system.

Of particular importance is the increased budget awareness resulting from recent NHS reforms. Purchasing authorities and particularly the NHS Hospital Trusts are now much more conscious of costs, and distinction awards place a heavy burden on the devolved budgets of DHAs and Trusts. Trust hospitals theoretically could refuse to allocate funds to distinction awards for consultants, instead using the funds for other purposes such as performance related pay. This raises issues of clinical versus managerial dominance within the Trust hospitals, and the exploitation of such opportunities could go some way towards redressing the highly uneven balance of power in favour of managers. This could however be at the risk of alienating clinicians who determine the success of the provider units. It is unlikely that managers will ignore these opportunities but their cautious exploitation will require care and skill.

The question of performance related pay has recently been raised by the Department of Health, who asked the Doctors' and Dentists' Review Body on Remuneration to consider this possibility in their next review. Distinction awards could be reformed to construct a more explicit performance related element.

Distinction awards are costly to the NHS, both in terms of direct payments to consultants and transfer payments resulting from higher pensions. Consultants' pensions are based on the highest year's income in their final three years work in the NHS. The government tried to reduce the problems of payments being awarded just before retirement by making awards pensionable only if consultants work for another three years in the Service, but this has not entirely removed the problem. It is still possible for consultants to have their pensions increased substantially by receiving a new award or an upgrading in the year of their 62nd birthday. The extent to which this happens is not clear due to the secrecy surrounding the allocation of awards.

Distinction awards are intended to reward NHS consultants for 'excellence' as they are unable to alter their fees as their reputation increases. However, in many cases consultants receiving awards also have substantial private practices, and in this case substantial awards may not be justified. It has been suggested that "any consultant earning more than £50,000 from private practice would be eligible for an award but it would be honorary so long as his non-NHS income was maintained" (Smith 1988).

The system of distinction awards for hospital consultants has long been in need of change. The implications of the NHS reforms and the introduction of Trust hospitals may provide the incentive to reorganise or replace this unfair and archaic system.

5. Conclusion: the need for reform

Perhaps the most important first step in reform of the awards system is to make the process of awards explicit, removing the unnecessary and damaging veil of secrecy which has surrounded both the award process and the final distribution of awards for far too long. An explicit process would require that clear criteria for awards are set and would enable evaluation of the system, allowing any anomalies to be corrected and identifying areas where the system is inefficient or inequitable. The secrecy surrounding the process serves only to encourage suspicion, and it should be removed without delay. There is no reason in principle why the identity of award holders should not be public. This would enable patients and purchasers to identify apparent excellence and determine whether they will fund it. Such explicitness is contrary to the usual secret procedure of British government and society but glasnost would facilitate peristroika!

How might the Distinction Awards system be reformed? There are a number of alternative approaches. The Hospital Consultants and Specialists Association (HCSA) acknowledges the need for change and suggests replacing the current system with a system of seniority awards. Under this scheme "consultants who did not blot their copy book would move up automatically every so many years into one of three seniority bands" (Dawe 1992). This does not appear an efficient alternative as it in no way relates reward to performance, and the only real improvement on the present sytem is that the criteria for awards are made explicit.

The Hospital Doctors Association has also considered the reform of merit awards, and they propose removing them and overhauling consultants pay and work patterns to fit in with the

shift system for junior doctors, paying consultants for being on call. The association would like to see "an open pay structure for consultants . . . [with] teams of specialists and not the present consultant firm structure" (Wrede, in Dawe 1992).

Performance related pay is an issue soon to be considered in the remuneration of hospital doctors. Distinction awards are an obvious area where payment could be more closely related to performance. There are obvious difficulties in measuring the performance of doctors. The output of a doctor should ideally be measured in terms of patient health, but this is difficult if not impossible to quantify. It is not however impossible to measure the performance of doctors in terms of their work input. The 'resource-based relative value scale' (RBRVS) constructed by Hsiao and colleagues at Harvard now forms the basis of the US Medicare Fee Schedule (Hsiao 1988). This system of remuneration measures the workload of doctors in different specialties and rewards them accordingly. Ideas in this system might perhaps be applied to UK doctors' payment, which at present lacks incentives for efficiency (Bloor, Maynard & Street 1992).

The distinction award system should be targeted to reward consultants for the efficient allocation of the resources they use. 'Excellence' should be rewarded, but this must be done in an explicit and efficient way rather than behind closed doors and with unknown efficiency. It is surprising that tens of millions of pounds are spent without accountability and these practices run counter both to the goals of the Government's health care reforms and to good management practice in the public sector. Clinicians and NHS managers need to reform the "black box" distinction award system to ensure that scarce NHS resources are used efficiently.

References

Advisory Committee on Distinction Awards. Distinction awards: Analysis by type of award, specialty and percentage distribution at 31 December 1991 - England and Wales. Health Trends (forthcoming).

Bloor, K., Maynard, A., and Street, A. How much is a doctor worth? Centre for Health Economics, Discussion Paper 98, University of York 1992.

Bourne, S. and Bruggen, P. Examination of the distinction award system. British Medical Journal 1975; i : 162-5.

Bruggen, P. and Bourne, S. The distinction awards system in England and Wales 1980. British Medical Journal 1982; 254 : 1577-80.

Clayton, S. Procedures and criteria for selection for Distinction and Meritorious Service Awards. Health Trends 1979; 11 : 73-6.

Dawe, V. Profession divided by its systems of rewards. Hospital Doctor 1992; 13 February : 33-5.

De Lacey, G. and Liberman, M. Disappearing distinction. The Lancet 1988; 26 March : 697-8.

Department of Health. Health and Personal Social Services Statistics for England. London : HMSO, 1991.

Dische, S. Who pays for distinction awards? British Medical Journal 1987; 294 : 116.

Hsiao, W. et al. Resource-based relative values - an overview. Journal of the American Medical Association 1988; 260 (16) : 2347-53.

Institute of Health Service Management. The Hospitals and Health Services Year Book 1991; London: IHSM, 1991.

Inter-departmental Committee on the Remuneration of Consultants and Specialists. Report, Cmd 7420. London: HMSO, 1948.

Lavers, R. and Rees, M. The distinction award systems in England and Wales. In McLachlan, G. (ed): Problems and Progress in Medical Care, 7th series, London: Oxford University Press, 1972.

Lester, E. Sex distribution of distinction awards. British Medical Journal 1980; 280: 198.

Loder, R. The anaesthetists and distinction awards. Anaesthesia 1982; 37 : 1126-9.

Medical Manpower and Education Division, DoH. Medical and dental staffing prospects in the NHS in England and Wales 1990. Health Trends 1991; 23 (4) : 132-41.

Review Body on Doctors' and Dentists' Recommendation. 18th Report 1988; London : HMSO.

Royal Commission on Doctors' and Dentists' Remuneration 1957-1960. Report Cmnd 939 1960; London : HMSO.

Smith, P. (Letter). The Lancet 1988, 23 April ; 941.

APPENDIX I - Equity Considerations - by Specialty (1990)

Specialty	Number of consultants	Whole-time equivalent consultants	Percentage of time spent working in the NHS	Number of junior medical staff	Juniors per WTE consultant
A&E	193	191.8	99.38	2239	11.60
Anaesthetics	2039	1951.8	95.72	2882	1.41
Cardiology	144	127.3	88.40	395	2.74
Cardio-Thoracic	120	111.8	93.17	253	2.11
Clin Neur Phys	53	45.7	86.23	17	0.32
Oral Surgery	255	211.54	82.96	502	1.97
Orthodontics	134	120.5	89.93	117	0.87
Rest Dentistry	103	66.1	64.17	103	1.00
Dermatology	227	204.7	90.18	518	2.28
Gen Medicine	1251	1142	91.29	4167	3.33
Gen Surgery	943	890.5	94.43	2796	2.97
G-U Medicine	159	151.2	95.09	366	2.30
Geriatric Med	490	471.5	96.22	1897	3.87
Inf Diseases	37	29.9	80.81	69	1.86
Mental Illness	1190	1100.1	92.45	2828	2.38
Child Psych	343	310.3	90.47	191	0.56
Forensic Psych	50	46.5	93.00	27	0.54
Mental Handicap	174	166.7	95.80	425	2.44
Psychotherapy	90	66.1	73.44	78	0.87
Neurology	185	161.1	87.08	304	1.64
Neurosurgery	93	85.9	92.37	167	1.80
Nuclear Med	26	23	88.46	18	0.69
Obs & Gynae	783	729	93.10	2625	3.35
Occup Med	29	22.5	77.59	113	3.90
Ophthalmology	450	412.4	91.64	1085	2.41
Ortho Surgery	717	674	94.00	1669	2.33
Otolaryngology	384	363	94.53	749	1.95
Paediatrics	743	678.8	91.36	1736	2.34
Paed Surgery	45	39.5	87.78	106	2.36
Blood Trans	32	30.5	95.31	197	6.16
Chem Path	176	148.9	84.60	119	0.68
Haematology	373	339.7	91.07	375	1.00
Histopathology	591	530.6	89.78	331	0.56
Immunopathology	40	28.2	70.50	15	0.38
Med Microbiol	296	241.4	81.55	177	0.60
Neuropathology	31	24.8	80.00	16	0.52
Public Health Med	321	280	87.23	302	0.94
Plastic Surgery	96	92.2	96.04	159	1.66
Radiology	1077	1026.7	95.33	527	0.49
Radiotherapy	207	190.2	91.88	310	1.50
Rheum & Rehab	234	211.2	90.26	456	1.95

Source: HPSS statistics, DoH 1991.

APPENDIX II - Efficiency Considerations - by Specialty (1990)

Specialty	Consultant Vacancies	Number of senior registrars	Number of vacancies per senior registrar
A&E	9	55	0.16
Anaesthetics	4	373	0.01
Cardiology	4	39	0.10
Cardio-Thoracic	3	27	0.11
Clin Neur Phys	10	7	1.43
Oral Surgery	3	54	0.06
Orthodontics	3	40	0.08
Rest Dentistry	3	31	1.00
Dermatology	5	50	0.1
Gen Medicine	-	238	-
Gen Surgery	3	175	0.02
G-U Medicine	7	50	0.14
Geriatric Med	3	91	0.03
Inf Diseases	12	7	1.71
Mental Illness	11	336	0.03
Child Psych	9	90	0.10
Forensic Psych	-	11	-
Mental Handicap	17	44	0.3
Psychotherapy	6	21	0.29
Neurology	3	42	0.07
Neurosurgery	3	26	0.12
Nuclear Med	0	4	0
Obs & Gynae	3	141	0.02
Occup Med	3	4	0.75
Ophthalmology	8	97	0.08
Ortho Surgery	4	141	0.03
Otolaryngology	7	63	0.11
Paediatrics	5	159	0.03
Paed Surgery	0	17	0
Blood Trans	-	5	-
Chem Path	4	60	0.07
Haematology	4	106	0.04
Histopathology	4	162	0.02
Immunopathology	12	9	1.33
Med Microbiol	5	91	0.05
Neuropathology	0	11	0
Public Health Med	-	-	-
Plastic Surgery	11	20	0.55
Radiology	3	249	0.01
Radiotherapy	4	55	0.07
Rheum & Rehab	34	57	0.60

Source: HPSS Statistics, DoH 1991.
Medical Manpower and Education Division; Health Trends 1991.

APPENDIX III - Equity Considerations - by Region (1990)

Region	Medical Staff	Number of Consultants	Junior Medical Staff per Consultant
Northern	3018	1074	1.81
Yorkshire	3460	1160	1.98
Trent	4154	1435	1.89
East Anglia	1911	711	1.69
NW Thames	3564	1244	1.86
NE Thames	4301	1598	1.69
SE Thames	3808	1346	1.83
SW Thames	2634	976	1.70
London SHAs	-	662	-
Wessex	2743	890	2.08
Oxford	2404	819	1.94
South Western	2988	987	2.03
West Midlands	4668	1609	1.90
Mersey	2269	843	1.69
North Western	4314	1422	2.03
Wales	-	935	-
Total Net Total		17711 17182	

Source: HPSS statistics, DoH 1991.