

Distribution of NHS funds between fundholding and non-fundholding practices

Jennifer Dixon, Marion Dinwoodie, David Hodson, Sue Dodd, Toni Poltorak, Chris Garrett, Peter Rice, Ivan Doncaster, Maureen Williams

Abstract

Objectives—To estimate the amount spent on specific hospital care by health agencies in 1993-4 and compare it with the resources allocated to patients registered with fundholding practices for the same type of care. To investigate whether fundholding practices and health agencies pay different amounts for inpatient care.

Design—Examination of hospital episode statistics, 1991 census data, and family health services authority and health agency records.

Setting—Health agencies and fundholding practices in the former North West Thames Regional Health Authority.

Main outcome measures—Amount per capita allocated to inpatient and outpatient care for patients registered with fundholding and non-fundholding practices. Average specialty cost per finished consultant episode for health agencies and fundholding practices.

Results—The ratio of per capita funding for patients in non-fundholding practices to those in fundholding practices ranged from 59% to 87% for inpatient and day case care and from 36% to 106% for outpatient care. Average specialty costs per episode were similar for fundholding practices and health agencies.

Conclusions—Fundholding practices seem to have been funded more generously than non-fundholding practices in North West Thames.

(J Wilkinson, Public Health Alliance conference on monitoring equity in the NHS, May 1994). The concern is also shared by many fundholding practices in the region.

This study sought to determine whether fundholding practices were funded more generously than non-fundholding practices in North West Thames. We estimated the money spent by each of the seven health agencies (groups of district health authorities located in one family health services authority) in North West Thames region for patients registered with non-fundholding practices and compared this with the money allocated to patients registered with fundholding practices for hospital care in the financial year 1993-4 (the third year of the fundholding scheme). We studied health agency expenditure for only the specific hospital care that fundholders are given funds for (roughly 100 elective treatments and most outpatient care).² Since fundholding practices and health agencies may pay different prices for these services we also investigated prices.

The project was part of a programme in the region to develop other methods of funding fundholding practices based more on the need for care. The programme was coordinated by two multidisciplinary teams made up of staff from the regional health authority, the health agencies, and fundholding general practitioners. Much of the work was done in collaboration with the health agencies, partly because the information available on costs and activity varied widely and partly to encourage wider ownership of the project. The results were intended to help to set budgets for fundholders for 1994-5.

North Thames (West) Regional Health Authority, London W2 3QR

Jennifer Dixon, *senior registrar in public health*

Marion Dinwoodie, *primary care manager*

David Hodson, *information officer*

Sue Dodd, *project accountant*

Chris Garrett, *information specialist*

Peter Rice, *regional information officer*

Ivan Doncaster, *primary and community care accountant*

Maureen Williams, *regional nurse advisor*

Kings Health Care NHS Trust, London SE5 9RS

Toni Poltorak, *head of financial services*

Correspondence to:
Dr Dixon.

Introduction

Worries about the way budgets are set for fundholding practices have existed since the scheme began in 1991. Though fundholders are given a budget to cover four aspects of care—hospital care, prescribing, staffing, and community services—concern has centred on the methods used to fund hospital care. There are two main reasons for this. Firstly, budgets for hospital care for fundholding practices and for health authorities (who buy care for non-fundholding practices) are set differently. Fundholders are funded according to the historical use of care by their patients, irrespective of total funds available. Health authorities' funds are decided by using a capitation formula to divide up the fixed amount of money allocated to regions.¹ Secondly, funds for hospital care allocated to fundholding practices are taken out of the budgets of district health authorities. If fundholders are overfunded, less is available for health authorities to purchase for non-fundholding practices, and vice versa.

In North West Thames region (now contained mainly in North Thames (West) region) some health authorities reported that after funds for fundholders were taken out of their budget insufficient was left to buy elective hospital care for non-fundholding practices

Methods

We estimated the resources available per capita for patients registered with non-fundholding or fundholding practices in each health agency and then estimated prices for hospital care for health agencies and fundholding practices.

North West Thames region provided data on funds allocated to first, second, and third wave fundholding practices in 1993-4 for inpatient, day case, and outpatient care. Some practices, however, served patients from more than one health agency. To take account of this we identified the proportion of the fundholding population resident in each health agency using the postcode in the family health services authorities' practice registration data. The funds allocated to each practice for inpatient, day case, and outpatient care were divided according to the proportion of patients resident in each health agency and then summed for each health agency.

Family health services authority data often overestimate the population registered with practices³ (the denominator for the per capita calculations), particu-

larly in London. To adjust for this, census data for 1991 were obtained on residents of each health agency, grouped by electoral ward, and then compared with data in the most recent population register (June 1993) from the family health services authorities. These data had also been grouped by health agency of residence, by practice, and then by electoral ward. The ratio of census population to family health services authority registered population within each ward was applied to the family health services authority registered population in each ward (in each practice and in each health agency) to obtain an adjusted population for each practice. From this adjusted population, the population in each health agency registered with a fundholding practice was extracted and used as the denominator population to calculate the per capita allocations for inpatient, day case, and outpatient care.

Health agencies cannot identify the funds allocated to inpatient and outpatient care of non-fundholding patients for those procedures which fundholding practices have budgets for because these services are not costed separately. We therefore had to disaggregate these "fundholding activities" from all other care. Different methods were required for inpatient and day case care and for outpatient care.

INPATIENT PER CAPITA ALLOCATIONS

The seven health agencies were asked to extract from the hospital episode statistics the finished consultant episodes occurring in 1992-3 for all their residents registered with a non-fundholding practice. No general practitioner code was recorded for 6.4% of episodes, and these were apportioned to fundholding and non-fundholding practices pro rata. Procedure codes were used to identify and extract data on fundholding care. About 9% of episodes had no clinical codes recorded, and these were apportioned to fundholding and non-fundholding activities pro rata. Data were excluded on episodes that followed an emergency admission, episodes from third wave practices (which entered the scheme in April 1993), and episodes from special health authorities (since these were paid for directly by the Department of Health).

The total fundholding activity was then grouped by specialty and by hospital before the cost of the activity could be calculated. The cost of fundholding activity was weighted to reflect the length of stay in hospital as follows.

Each health agency was asked how much it spent on inpatient day case care in each specialty for every hospital with which it had a contract in 1992-3. The average cost per specialty per hospital day was calculated by dividing the amount spent by the number of days in hospital recorded in each specialty. The total cost of fundholding activity in each specialty was a product of the average cost per day per specialty and the number of days of fundholding activity per specialty.

The costs of fundholding activity in each specialty and in each hospital were summed for each health agency. The costs of extracontractual referrals for fundholding activity were then estimated and added in. Since we were studying allocations in 1993-4 the funds estimated for 1992-3 were increased by 1.9% (reflecting the extra funds given to health agencies for inflating between 1992-3 and 1993-4).

The final step was to derive the per capita allocations for inpatient and day case care for the residents of each health agency who were registered with a non-fundholding practice. The population registered with a non-fundholding practice was obtained from the family health services authority register (as of June 1993) and adjusted to allow for potential list inflation as described above.

PER CAPITA OUTPATIENT ALLOCATIONS

Because outpatient data are poorly recorded and incomplete, health agencies were asked to identify fundholding activities from hospital contracts for 1992-3. If health agencies were unable to do this (because contract information was not specific enough) the number of outpatient attendances in fundholding specialties was estimated by multiplying the number of inpatient and day case episodes by a regional ratio for each specialty. This regional ratio was based on the average number of outpatient attendances associated with each inpatient or day case episode in each specialty in North West Thames, using Körner data from 1990-1. An estimate of fundholding outpatient activity for each specialty and in each hospital was therefore identified.

The cost of an outpatient attendance has been estimated to be one twelfth that of an inpatient episode.⁴ The total fundholding attendances per specialty in each hospital were divided by 12 and multiplied by the average specialty cost per inpatient episode (calculated by dividing the actual amount spent in each specialty by the number of inpatient episodes occurring). The total cost of fundholding outpatient activity for patients of non-fundholders in each health agency was calculated by adding together the specialty costs for each hospital where the agency had a contract. The figure was increased by 1.9% to reflect inflation, and the cost of extracontractual referrals was added to estimate total spending on fundholding outpatient activity in 1993-4.

The per capita allocations were then calculated as described for the inpatient allocations, with the adjusted population registered with non-fundholding practices in each health agency as a denominator.

PRICES OF HOSPITAL CARE FOR HEALTH AGENCIES AND FUNDHOLDING PRACTICES

Since health agencies are not quoted prices for each activity (except for extracontractual referrals) we could not directly compare prices. Instead, the average specialty cost for fundholding activity was estimated for the relevant specialties and compared for 12 acute hospitals.

For health agencies the average specialty cost per episode was estimated by dividing the funds spent in each specialty in 1992-3 (the last full year for which data were available) by the number of episodes occurring in 1992-3. The cost per episode was adjusted to reflect the length of stay in hospital recorded for each episode, as described above. For simplicity the adjusted average specialty costs per episode were calculated only for the health agency in which the hospital was located. The costs were increased by the inflation rate (1.9%) to give an estimate of those in 1993-4.

To estimate the equivalent average cost per episode for fundholding practices the inpatient and day case episodes for fundholding activities in patients registered with fundholding practices were extracted (for each specialty in each hospital) from the hospital episode statistics for 1992-3. Prices quoted to fundholders for procedures in 1993-4 were available from each hospital. Each inpatient episode was multiplied by an inpatient price according to the main procedure recorded in the episode. Each day case episode was multiplied by a day case price. The costs of inpatient and day case episodes in each specialty were then totalled and divided by the total number of episodes in the specialty to estimate the average specialty cost per episode in each hospital.

Though outpatient prices were available for fundholding practices, the quality of the cost and activity data required to estimate prices for health agencies was thought to be too poor to allow meaningful price comparisons.

Results

Table I shows the total funds spent on inpatient and outpatient fundholding activity for patients registered with non-fundholding practices in the seven health agencies. The proportion of funds spent on outpatient care relative to inpatient care is also shown. The proportion varied widely among health agencies—from 154% in Hertfordshire to 36% in Ealing, Hammersmith, and Hounslow.

The figures for Ealing were low, reflecting the greater use of a special health authority hospital (Hammersmith Hospital) than in other health agencies. In 1992-3 there were no fundholding practices located near the Hammersmith Hospital and the greater use by non-fundholding practices is reflected in our results. The proportion of funds spent by Ealing, Hammersmith, and Hounslow in 1993-4 was roughly 22% of the current budget for hospital and community health services (North Thames (West) Regional Health Authority, unpublished data). Because of this effect, we have excluded data from Ealing from our subsequent calculations. Elsewhere in the region the amount spent on special health authority hospitals is less than 6% of the total and is unlikely to have had much effect on the results.

In all agencies except Hertfordshire and Hillingdon spending on outpatient care was much less than on inpatient care. How much of this variation is real rather than a result of local deficiencies in cost and activity data is difficult to quantify, but the variation is likely to reflect the crude methods used to estimate the number and cost of outpatient attendances.

Table II shows the estimated per capita allocations for inpatient and outpatient fundholding activity for patients registered with a fundholding or non-fundholding practice by health agency. The per capita allocations were calculated by using the adjusted registered population. For inpatient care these data show that the per capita funds allocated to patients in fundholding practices were greater than the estimated per capita funds spent on patients in non-fundholding practices in all health agencies in 1993-4. The per capita allocation to non-fundholding patients for inpatient care as a percentage of per capita allocations to fundholding patients is also shown in table II. The proportion varied from 59% to 87% between health agencies.

TABLE I—Estimated total allocations in 1993-4 for fundholding inpatient and outpatient care for patients registered with non-fundholding practices by health agency of residence

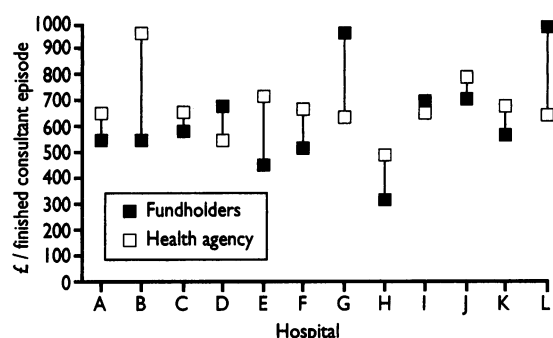
Health agency	Inpatient care (£m)	Outpatient care (£m)	Outpatient allocation as % of inpatient allocation
Bedfordshire	12.1	6.4	53
Hertfordshire	12.1	18.6	154
Barnet	7	4.5	64
Brent and Harrow	13.2	5.5	42
Ealing, Hammersmith, and Hounslow	10.5	3.8	36
Hillingdon	5.3	5.2	98
Kensington, Chelsea, and Westminster	8.2	5.5	67

TABLE II—Estimated per capita allocations in 1993-4 for fundholding inpatient and outpatient care for patients registered with non-fundholding or fundholding practices by health agency of residence (from adjusted practice populations)

Health agency	Inpatient and day case care			Outpatient care		
	Non-fundholders (£)	Fundholders (£)	Per capita allocation to non-fundholders as % of per capita allocation to fundholders	Non-fundholders (£)	Fundholders (£)	Per capita allocation to non-fundholders as % of per capita allocation to fundholders
Bedfordshire	29.2	37.9	77	15.4	29.6	52
Hertfordshire	22.8	38.8	59	35.0	32.9	106
Barnet	26.1	42.6	61	16.9	31.6	53
Brent and Harrow	35.4	51.7	68	14.8	41.0	36
Hillingdon	26.2	36.5	72	25.3	29.0	87
Kensington, Chelsea, and Westminster	29.6	34.0	87	19.7	45.7	43

The per capita allocations for outpatient care varied more than those for inpatient care. This probably reflects the poorer quality of cost and activity data available. However, the broad pattern was similar—patients of non-fundholders were allocated less money than patients in fundholding practices. Two health agencies—Hertfordshire and Hillingdon—fit less well into this pattern, perhaps because the resources available for fundholding outpatient activity were over-estimated (as suggested in table I).

The figure summarises the results of our limited analysis to compare prices. For simplicity the graph shows the estimated average specialty costs only for general surgery because this is the specialty in which the greatest volume of fundholding activity occurs. Prices quoted to fundholders were higher than those paid by health agencies in some hospitals and lower in others—no pattern was obvious. The other six specialties analysed showed a similar random pattern.



Comparison of estimated average cost per episode of care in general surgery between fundholding practices and health agencies in 12 acute hospitals in North West Thames region, 1993-4

Discussion

The methods were complex largely because of the difficulty in identifying the money spent on fundholding activities by health agencies and the poor quality of outpatient data. The availability and quality of financial and activity data varied considerably in each health agency and in each hospital. Because of this, staff in some agencies were unable to follow the methods exactly and had to make estimations and assumptions, although these related mainly to outpatient care. The main assumptions are described below.

NUMERATOR ASSUMPTIONS

Our calculations for the number and cost of outpatient attendances were based on two assumptions—that the number of outpatient attendances after an inpatient episode in each specialty was the same as the regional ratio used and that the cost of an outpatient attendance was one twelfth of an inpatient episode. The allocations estimated for outpatient care should therefore be viewed cautiously, and the assumptions underlying them need to be tested further.

To estimate the cost of inpatient fundholding activity

paid for by health agencies we assumed that the cost per day in hospital was the same for fundholding and non-fundholding activities. Health agencies will have to work closely with hospitals to investigate whether this assumption is true.

We used hospital episode statistics to estimate activity and derive costs. Since these data were not fully coded for general practitioner or for diagnostic and procedure codes we apportioned uncoded episodes to fundholding or non-fundholding practices or activities pro rata. However, since hospitals have a greater incentive to code the activity for patients from fundholding practices the uncoded episodes may relate more to patients from non-fundholding practices. This needs to be investigated further.

Our approach relied on the health agencies to estimate their expenditure on non-fundholding practices. The health agencies were aware of the purpose of the work—to investigate equity. There may have been an incentive to underestimate spending on non-fundholding practices because this could strengthen their argument that fundholders have been overfunded. However, regional staff worked closely with health agencies, and their results were carefully scrutinised and sometimes challenged. We believe that the scope for underestimation was limited and that the results are the best estimate that could be made from the available data.

DENOMINATOR ASSUMPTIONS

We assumed that the list size of practices (as indicated by the family health services authority population register) were inflated and adjusted for this by using data from the 1991 census. In doing so we assumed that 1991 census population data were accurate, although questions have been raised about the completeness in certain age groups.⁵ We also compared census data from 1991 with family health services authority data from 1993 since these were the latest available. Migration of patients into and out of practices since 1991 would affect the difference between population figures from these two sources. The extent of this needs to be analysed.

ASSUMPTIONS ABOUT PRICES

We compared the money spent by health agencies with the resources allocated to fundholding practices. This comparison was thought to be valid because it is most likely to compare the funds available to buy fundholding activity. Similarly in our analysis of inpatient and day case prices, prices paid by health authorities were compared with those quoted to fundholders because quoted prices are those used to set the budgets for hospital care for fundholders (which therefore influence what is left for health agencies to spend).

We estimated the costs paid by health agencies in

1992-3 and simply multiplied these by inflation to estimate costs in 1993-4. This assumes that the amounts paid by health agencies between years across hospitals were similar. This is likely for the region as a whole but may be less true in some health agencies.

OVERALL FINDINGS

Though there are reservations about the method and the data, the results show a consistent pattern. The data suggest that fundholding practices had a higher per capita funding than non-fundholding practices for inpatient and outpatient hospital care in almost all health agencies in North West Thames region in 1993-4. Though the exact differences may be challenged, the consistency of the results suggests that differences in funding exist and may be considerable.

Justifiable reasons may exist for the apparent differences. Firstly, the need for care in fundholding practices may be greater than in non-fundholding practices. In North West Thames we have used three capitation formulas based on need to estimate budgets for hospital care for fundholders. In 1993-4 the Department of Health formula (based on age and sex only) predicted budgets for hospital care that were 6% lower than those actually given to fundholding practices by the historical method.¹ A formula developed by the Department of General Practice at St Mary's Hospital, London (based on age, sex, bed supply, and morbidity) predicted budgets 12% lower for the same year (department of general practice, St Mary's Hospital Medical School, London, unpublished data). For this financial year a third formula developed at the region (based on age, sex, morbidity, and socioeconomic class) predicted budgets that were 11% lower.^{6,7} This suggests that important factors influencing need for care—such as age and sex, mortality, and socioeconomic deprivation—are unlikely to differ greatly among fundholding and non-fundholding practices and would not account for the differences in funding we have found.

Secondly, buying fundholding activity may be a relatively low priority for health agencies, leading to lower expenditure on these services. This is difficult to assess because purchasing decisions on how much fundholding (elective) care health agencies can buy is strongly influenced by how much emergency care must be purchased first. This constraint does not operate for fundholders because they rely on health agencies to buy emergency care and their budgets for elective care are therefore protected.

Thirdly, prices for fundholding practices may be higher so that they need more funds per patient. Our limited analysis of price differences for inpatient care does not support this hypothesis, although a more precise analysis will be needed before a firm conclusion can be drawn.

We suggest that the most likely reason for differences in per capita funding between practices is because fundholding practices are funded on a historical basis and health agencies are funded using a capitation formula. This conclusion is supported by the results of other work in our region.¹⁵ The amount of the hospital care budget allocated to but not spent by fundholders (£7.7m by 31 March 1994⁷) also lends weight to this view. Fundholding practices in the region have been supportive of our work—as a result of this project and other work they have agreed to have their budgets for hospital care reduced by over £4m this year. It is also in the fundholders' interests to do so, because more funds will be available for health agencies to buy non-fundholding activity for all practices.

Overgenerous funding of fundholding practices may have been a greater problem in our region than elsewhere. The per capita funding given to fundholders in our region has been higher than the average in England and Wales.^{8,9} The reason for this is unclear.

Policy implications

- Concern has been raised over the equity of funding between fundholding and non-fundholding practices
- This study showed that fundholding practices received more per patient for hospital care than health agencies received for equivalent care of patients of non-fundholding practices in North West Thames
- The different methods of funding are more likely to account for this discrepancy than are differences in need for care
- Health authorities should contract for fundholding activities separately so that equity can be assessed more easily
- Regional health authorities should be developing ways to allocate budgets to fundholders that are based on present need rather than past demand

In other regions fundholders may be underfunded relative to non-fundholders. Until health agencies and fundholders are funded on a similar basis, inequities in funding will persist.

CONCLUSION

Our results suggest that fundholding practices were funded more generously than non-fundholding practices for hospital care in North West Thames region in 1993-4. The current methods of funding fundholders are likely to be the main cause of this apparent difference. As alternatives are developed, there should be more investigation into the equity of current allocations, prices charged by hospitals to fundholders and health agencies, and the outcome of care for patients in fundholding and non-fundholding practices. This could help to set fairer allocations for all patients in future.

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Commentary

Better data needed for analysis

C Bowie, R Spurgeon

Much has been written about fundholding, but little is based on good research or proper analysis. It is therefore important to look at substantial pieces of work which might be more than a string of anecdotes or selected statistics.^{1,2} The work from North West Thames region is a brave and imaginative attempt to make the most of insufficient and inadequate data, but because the conclusions are based on so many tenuous assumptions it is open to criticism.

Assumptions on costs and prices

Many health authorities do have separate costs for some fundholding procedures that are purchased on a cost per case contract rather than a block contract. So North West Thames starts at a disadvantage in having only rudimentary data available for analysis. Nevertheless, specialty bed costs are not an appropriate measure of fundholding procedure costs, which tend to have higher costs in the first few days, such as theatre use, than other types of admission. Patients admitted for fundholding procedures tend to have lower average lengths of stay and are often treated as day cases. The average cost per day of a fundholding activity will therefore be higher than the average cost per day for all episodes of care. The cost of fundholding activities to health agencies has therefore been undervalued. The costs of outpatient fundholding activity are also likely to differ from the average.

An essential test of the robustness of assumptions and methods in articles of this type is to see if the data on patient numbers and the sum of costs calculated agree with the total picture described for each hospital in the audited annual cost returns. Because of the sparseness of reliable non-fundholding data the authors have been unable to apply this acid test to their work.

The paper suffers from one general problem. Throughout the paper the authors have used one set of assumptions for non-fundholders and another for fundholders. This is because of the different way the budget for fundholdings and health agencies are set. Unfortunately, two wrongs do not make a right, and

sensitivity analysis becomes mandatory when so many assumptions are used.

The wide variation in results for each health agency raises serious questions about the validity of the data. They have made no attempt to compare the historical pattern of care of fundholders and non-fundholders. The difference could explain their results, if they are real. Despite these reservations it must be right that a fairer distribution of funds is more likely if both fundholder and non-fundholder budgets are set using the same formula and the same sources of data.

How did fundholding get into this mess?

One of the key decisions the politicians must have had to consider when choosing to introduce fundholding was whether to bring the scheme in before a reliable information system was available. Presumably the political advantage of launching fundholding at the same time as the other NHS reforms was felt to outweigh the possibility of the scheme foundering because of inadequate information. The paper highlights this inadequacy and shows that little has been done to improve the situation over four years.

If it is confirmed that the scheme produces an inequity of the size described in this paper there is a real possibility that the scheme will founder. If the overfunding is corrected fundholding general practitioners may leave the scheme. If it is not corrected inequity will become institutionalised, and inequity within the NHS seems to be something the public will not tolerate.³ As a recent article in the *Economist* pointed out, "Not only is the income gap between rich and poor widening, so is the health gap. A National Health Service was supposed to make this unlikely, if not impossible. What has gone wrong? And what can be done about it?"⁴

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Somerset Health
Authority, Taunton
TA2 7PQ
C Bowie, director of public
health
R Spurgeon, director of
finance