



UNIVERSITY
OF YORK

**CENTRE FOR HEALTH ECONOMICS
HEALTH ECONOMICS CONSORTIUM**

Internal Markets in the National Health Service A Review of the Economic Issues

by

RON AKEHURST, JOHN BRAZIER and CHARLES NORMAND

DISCUSSION PAPER 40

UNIVERSITY OF YORK
YORK HEALTH ECONOMICS CONSORTIUM

INTERNAL MARKETS IN THE NATIONAL HEALTH SERVICE
A REVIEW OF THE ECONOMIC ISSUES

by

Ron Akehurst

John Brazier

Charles Normand

The Authors

Ron Akehurst is Director, John Brazier is a Research Fellow and Charles Normand is Deputy Director in the Health Economics Consortium, University of York.

Acknowledgements

The authors would like to thank Professor A Maynard for his comments on an earlier draft of this paper and the support of Trent Regional Health Authority. The sole responsibility for the views expressed and any remaining errors lie with the authors.

Further Copies

Further copies of this document are available (at price £3.00 to cover the cost of publication, postage and packing) from:

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

Please make cheques payable to the University of York. Details of other Discussion Papers can be obtained from the same address, or telephone York (0904) 430000, ext 5751/2.

The Centre for Health Economics is a Designated Research Centre for the Economic and Social Research Council and the Department of Health and Social Security.

CONTENTS

	Page
Abstract	1
Introduction	2
<u>Internal Markets</u>	4
The Case for Internal Markets	6
Making Internal Markets Work - Key Issues	7
Defining the Health Care Product	8
Competition	11
'Spiral Decline in Hospitals'	13
Scope of Market	14
<u>Efficiency, Equity and Consumer Choice in Internal Markets</u>	15
<u>The Case for for Experiment and Evaluation</u>	18
References	21

Abstract

The introduction of competition between health care providers in the NHS has been advocated as a means of promoting efficiency. In this paper we review one model of competition, internal markets, in which health authorities would be able formally to contract to buy and sell clinical services between themselves, as well as with the private sector.

This paper examines the implications of internal markets for the health service and draws attention to the position of clinicians. In particular it notes that their widespread adoption would require much closer management of the content of the workload of hospital doctors than is presently the case. The costs of adjustment to and maintenance of a market are considered, including the important role of capital markets. It is noted that the process of negotiation and monitoring of contracts would be improved by better costing information and a clear definition of the health care product.

The potential contribution to be made by internal markets is assessed against the policy goals of equity and consumer choice as well as efficiency. It is concluded that at present there is insufficient evidence to justify imposing a variant of the internal market model on the whole NHS. However, in searching for a means to improve the performance of the NHS the authors support the case for experimentation coupled with appropriate evaluation of performance.

1. INTRODUCTION

Recently there has been vigorous debate on the appropriate level of funding of the NHS and this has broadened to include a more fundamental review of methods of health service finance and provision. It is important to remember that although they tend to become intertwined in argument these two issues are separable. This paper is concerned with issues of provision of health care. In particular it considers the arguments for the creation of an internal market in the NHS, the inherent problems of such a system and the practical difficulties that would have to be addressed to make it work.

Three broad policy goals are usually taken as guiding principles for health care delivery. These are equity, efficiency, and consumer choice. These concepts are considered briefly in turn below.

The driving principle of the NHS has been equity, interpreted as meaning equal access to health care by different people dependent only on need and not on ability to pay (RAWP 1976). Since the mid 1970's more emphasis has been placed on efficiency. The introduction of general management, (Griffiths 1983) performance indicators, regional review and cost improvement programmes were all designed to reduce inefficiency and slack in the system.

The term efficiency has different meanings. An efficient mode of organisation of the delivery of health care will be taken here as one that produces the greatest positive impact on life expectancy and health status of the population within any given budget. This is broader than the interpretation often given to the term, and encompasses within it narrower ones, such as, concern with cost effectiveness of ancillary services.

The definition of consumer choice used here relates to taking account of the preferences of patients, notably about where, how, when and by whom they are treated.

The contribution that might be made by internal markets is assessed in this paper against these policy goals. In preparing this document, and in reviewing the published literature, it has become clear that there are important issues that have to date hardly been addressed in the discussion about the future patterns of providing health care in the UK.

INTERNAL MARKETS

A market exists when buyers and sellers come together to trade. An internal market in the NHS may be defined as a system in which health authorities are given budgets to meet the health care needs of their residents. They may purchase services from hospitals in other authorities, other health

service agencies, public (non health service) agencies, or may provide these services themselves. Although not strictly an internal market, they could similarly buy and sell in a provider market including the private and voluntary sectors. In essence, an internal market would extend the current practice of contracting out ancillary services to those concerned with laboratory tests, patient care including surgical operations, medical procedures and long term care.

Districts currently 'buy and sell' large quantities of patient care via cross boundary flows. The current system of reimbursing for flows across boundaries is at average specialty cost per case which make no allowance for variation in case complexity and severity. Delays in data collection and analysis mean the adjustments happen after two years, and then only to a district's long term revenue target, and not necessarily its actual allocation (Brazier, 1987). Further, patient flows across health authority boundaries are outside the control of districts, since most referrals are made by GP's, who are independent contractors. These are not the result of contractual agreements between districts, as they would be if an internal market were created.

In an internal market an authority would put out to tender particular areas of patient care for their residents. Hospitals and community units would generate income for themselves on the basis of the tenders they won. To win tenders

they would have to be able to supply the requested services at competitive cost and quality.

Enthoven (1985a) suggests that the budget for both primary and secondary care could be held by district health authorities, but could alternatively be held by regions, the pre 1982 areas, local authorities, FPCs or even by groups of general practitioners for the care needs of patients on their lists. (Maynard 1986).

The case for Internal Markets

Internal markets have been advocated because they are expected to promote greater efficiency in the NHS (Enthoven, 1985a and b; Ford, 1988; and Robinson, 1988). There are three main ways in which this may occur:

- a) By reducing x-inefficiency Internal markets reduce the amount of slack in the system, where a given set of resources is not worked hard enough through laziness or poor organisation. Removing this 'x-inefficiency' may reduce costs, increase outcome, or both. (Leibenstein 1966).

- b) By exploiting spare capacity in some districts. Some authorities, particular teaching districts, have more facilities than can be justified to serve the needs of their resident population. Rather

than close this capacity down, services could be sold to neighbouring districts. (This is an argument being used by some London Teaching Districts eg see Times, 1986). There may also be spare capacity in private sector hospitals. This could enable districts to buy services at a lower cost.

- c) By exploiting economies of scale. Districts may be willing to add to their capacity to serve their neighbours, knowing they can supply additional services at less than average cost from economies of scale. The latter may result from being able to improve the mix of staff, (eg. by introducing specialist grades for nursing to substitute medical staff) or by using expensive facilities more intensively. Greater efficiency may also come from an improvement in clinical outcome as the scale of activity increases (Luft et al, 1979).

It is the belief in the widespread presence of x-inefficiency that has primarily motivated the advocates of internal markets. Their expectation is that the mere threat of contracting out will be enough to affect the behaviour of both managers and clinicians. In consequence they would expect most contracts to be won in-house, but at higher levels of output than at present. Only where an authority was inherently inefficient is it assumed that it would fail to win any business.

Making Internal Markets Work - key issues

Clinicians' Behaviour

If internal markets are to work, managers must be able to control the quantity, quality and the mix of work undertaken by doctors and other professionals. A contract to carry out, say, 200 hip replacements for a neighbouring district implies that consultants will do that rather than, say, exercise a preference for operating on the knees of local residents. The market commitment means that the budget for the work carried out within a particular specialty would have to be agreed and the content of that specialty's work specified much more closely than is presently the case. A further probable implication would be the requirement for medical audit to ensure that the quality of work contracted out were up to the agreed standard. Thus internal markets bring with them a reduction in clinical freedom.

It is not only the freedom of hospital doctors that would be affected. In their turn, GP's would have to be controlled, or at least influenced, much more than now. They would only be able to refer patients to hospitals contracting to provide services to their District, and the total number of cases treated would be set out on the contract. Enthoven (1985a) recognised this in his original proposals, and suggested that GP's should become the employees of DHA's as in some rural settings. An additional consequence could be that GPs and

their staff would be required to take over some treatment and care currently provided in hospitals.

Defining the health care product

Contracts for providing services would require a classification of the health care product for two reasons. The first would be the necessity to monitor the quality of the services. For example a 5% perioperative mortality rate among elderly hip replacement patients could be good or bad depending on age and general health of the patients. Secondly, importing authorities would need a basis to assess the resource implications of providing the care. Both of these requirements would mean that the classification adopted should specify the characteristics of the patient (age, sex, comorbidity etc) and the procedure needed.

Current information on costs, activity and outcomes is deficient. The Korner minimum data set concentrates on costs and activities, and excludes consideration of outcomes. Even the descriptions of activity, by specialty are not sufficient because they are based on ill-defined and heterogeneous groupings (Hillman and Mix, 1982). To overcome the difficulties one possibility would be to use Diagnosis Related Groups (DRG's), developed by a team of researchers at Yale University for use in peer review, but subsequently used in the United States as a basis for reimbursing hospitals for work done (Fetter et al 1980). There are 467

DRGs which classify inpatients into what Fetter et al (1980) claim have the attributes of being 'clinically meaningful' groups and with similar patterns of resource use.

DRGs are being developed for use in the DHSS Resource Management initiative (DHSS, 1986) and in a separate exercise, research has been carried out to convert DRG's to the NHS hospital activity analysis data (Sanderson et al 1986). The Korner minimum data set should enable districts to assign their workload to these 'anglicized' DRGs. Medical records information is prone to error particularly in diagnosis coding. (King and Prowle, 1978; Martin et al, 1976 and McNeilly and Moore, 1975). A spin-off benefit of an internal market is likely to be an improvement in the quality of medical records data as they become the basis of reimbursement.

Certain consequences have arisen in the USA from the use of DRGs for reimbursing hospitals, which might be expected to occur here if DRGs become the basis of monitoring and charging between districts. Firstly, length of stay and costs per case by DRG have fallen in the USA since the introduction of reimbursement by DRG (Guterman and Dobson 1986). This cost reduction could reflect greater efficiency or be the result of cutting corners. This could have been achieved by providing a lower quality of care, but American studies of DRG reimbursement have not looked at outcome consequences. A second problem is that acute hospitals may

reduce costs by shifting them onto other agencies, such as long stay institutions as happened in America (Carroll and Erwin, 1987). Thirdly, despite their relative sophistication, individual DRGs contain a distribution of both severity of case and resource use (Horn et al, 1983). While this was less important in their original use for peer review, when used for funding there is an incentive to select patients. Those providing treatment wish to select the less complex cases while exporting authorities would have an incentive to send the more difficult.

Despite these problems, DRGs offer the best available case classification for acute inpatients derived from routinely collected data. At present they only include acute inpatient care, and depending on how extensive the internal market were to be, they might need to be extended to encompass outpatients, day cases and the priority care groups. DRGs would also have to be regularly updated to take account of technical change and supplemented by appropriate outcome measures.

In practice internal markets could operate without good data on patient classification, but there would be a serious risk of wrangles between districts about costs and quality of the services.

A corollary of using DRGs to classify cases would be the need for local management to assess their own marginal and average costs of treating patients by DRG. As already suggested, this would be beyond the capability of most, if not all, authorities at present.

Competition

There are two main issues which relate to whether competitive pressures would in practice occur, if internal markets were encouraged. Both relate to the view that the idea of internal markets makes more sense in large urban centres (usually containing teaching districts) than in smaller urban or rural areas. First, authorities whose main centres of population are a long way from neighbouring facilities are unlikely to feel much competitive pressure if this meant sending patients perhaps sixty miles from home and family for care. Secondly, there is the much more complex issue of the role of spare capacity in making internal markets work. In the short run a bid from a neighbouring authority is not credible if that authority would have to build, equip and staff new facilities to fulfil the contract. Although there may be spare capacity in inner city areas with RAWP losing teaching districts, particularly in London, it is not a general feature of the NHS.

The logic of internal markets is such that two authorities, both using all their capacity, should nevertheless be able to

gain from trade. By moving resources from relatively inefficient (ie. high cost for given outcome) to relatively efficient specialties, gains from trade could, in theory, be made. Authorities would undertake work in their more efficient specialties for neighbouring districts, and would export cases where they were less efficient. In practice doctors would have to be moved or sacked, wards (or worse, part wards) switched to other uses and specialist equipment sold off and acquired. The adjustment costs could be substantial and, to obtain this flexibility medical staff would have to be put on short term contracts. Furthermore, the adjustment may only be feasible if capital is available.

In an internal market capital is likely to have an important role in the the longer term. If the present system of allocating capital funds to successful bidders continues, then the ability of an authority to tender may depend on being lucky in the capital lottery. Furthermore, 'free' capital, as now, would make it very difficult for the private sector to compete with those authorities who were successful with bids. However, where authorities were unsuccessful in obtaining capital, they might see private providers building facilities and winning contracts which they could have won had they had the same access to capital markets.

To overcome these problems and promote competition it would be necessary to allow authorities to borrow capital, either

on the open market or from the Treasury, at an agreed rate of interest, to be paid back out of future revenue. To be equitable, it would also be necessary to charge notional rents for existing capital, along the lines of those developed in the Davies Report (1983).

'Spiral of Decline' in Hospitals

If some specialties fail to win contracts, efficient specialties in hospitals will be penalised because of their less efficient colleagues. The logic is that if one or two specialties are contracted out, the hospital overheads would have to be spread over fewer activities. This in turn could push up the price of internal tenders for the remaining specialties, causing their bids to fail. The process could lead to the shut down of efficient provision of care in a slightly inefficient hospital.

Scope of Market

An internal market could operate for all services or be restricted to some parts. For example, in one region it is being proposed for certain specialist services (SETRHA, 1986). However, separation of specialties or, for example, separation of in patient from out patient services could lead to the creation of incentives to 'redefine' patients to achieve maximum advantage to an authority's budget, with little positive relevance to efficiency. A particular concern to Enthoven (1985) was Accident and Emergency patients. He felt that authorities should continue to treat whoever turned up. Presumably this was because of the American experience in which someone turns up at an emergency centre and the hospital concerned calls the patient's Health Maintenance Organisation to check that the latter will pay for treatment (Richards, 1986). There then may follow a wrangle and a telephone diagnosis of whether the case really is an emergency. Clearly there would be an extra problem of triage for those patients who were not obvious accident or emergency cases.

On the other hand some method of recompense would have to be found to compensate city centre districts which took large numbers of emergency cases who were residents of neighbouring districts but who worked in the city. Neither the problems of recompense or of triage should prove insuperable in practice.

EFFICIENCY EQUITY AND CONSUMER CHOICE IN INTERNAL MARKETS

Efficiency

Preceding sections of this paper have concentrated primarily on efficiency issues. In summary, internal markets may generate efficiency gains because of reduction in X-efficiency, increased exploitation of economies of scale and use of spare capacity at marginal cost.

However, summarising the last section, these gains may not be forthcoming for the following reasons.

a) There would be resistance from hospital consultants, GPs and other staff. Authorities would be reluctant to risk harming local morale by making staff redundant to take advantage of cheaper supplies elsewhere.

b) The adjustment costs involved in shifting resources from one specialty to another - capital equipment and staff - may wipe out any efficiency gains. This may only be a problem in the short run. Given long enough major changes could take place relatively cheaply.

c) Cost reductions may be achieved by cutting corners and reducing quality of care, this would be avoided only with good measures of outcome to monitor quality.

d) Cost reductions in hospital may be achieved by shifting costs to the informal sector and to GPs by reducing

stay or by forcing patients and relatives to travel further for care.

e) once local competing suppliers were driven out of business, there may be little competition, and a drift towards monopoly and inefficiency. It is possible that potential competition could still provide incentives to efficient production with good outcomes.

The evidence on the effects of competition is limited to the non-acute sectors (for example see Knapp, 1986). In the acute sector the only evidence in the UK is of comparisons between the existing private sector with NHS hospitals (eg. Williams et al, 1985), but this static picture tells us little about the long term consequences of competition (for a review see Culyer et al, 1988).

Equity

Equity could be promoted by internal markets, since it would be possible to speed up the move to equalise provision using the RAWP formula, since only money, and not physical provision would be moved. An internal market would lead to more immediate direct payments for treating patients from a neighbouring district (assuming it had been agreed previously).

There are, however, possible adverse consequences for equity. First, there is the possibility that people who live in districts that contract out services will have to travel long distances for care. While it is possible to imagine the direct costs of travel being met by the health authority, the losses of time are unlikely to be compensated. Time losses fall with differential consequences on different social groups. In addition, distance is a deterrent to use health service facilities for diagnosis and treatment, for example in accident and emergency services (Russell and Holohan 1974). Take up of services could be expected to fall for those who have to travel.

The second equity argument voiced by critics is that internal markets might promote high profile, high technology medicine even more than now, and by producing public pressures for particular procedures, distort priorities between groups of patients. This is a particular problem if there is a move to more explicit rationing of services without good measurement of outcomes.

The third argument is that cost savings would come primarily as a result of driving down the payments to already poorly paid health service staff. Both of these arguments depend for their substance on untested assumptions about how management would behave if the internal market were created.

Consumer Choice

Enthoven (1985) recognised that the near total absence of consumer choice is a major flaw of internal markets. District management would make block decisions on where patients were to be treated, taking away the present freedom of GPs to refer patients where they wish. On the other hand the quality of the process and surroundings could be included in tender specifications as well as the quality of the outcome. Some other organisations, such as Health Maintenance Organisations, may offer more consumer choice, whilst having some of the advantages of internal markets, but this question is beyond the scope of this paper (see Maynard 1986 for further details).

THE CASE FOR EXPERIMENT AND EVALUATION

Internal markets would represent a significant change from present arrangements. At present, there is little evidence that substantial efficiency gains would be delivered or that the equity consequences would be acceptable. To try to collect that evidence, others have argued a case for experimentation and careful evaluation of the results (Enthoven, 1985a; Maynard, 1986; Robinson, 1988).

To be convincing, markets would have to extend to at least several districts and because of the differences between the Thames regions and the remainder, at least two regions - one Thames and one provincial - would have to be involved.

To improve the chances of success a demonstration project would benefit from the following broad features:

a) include a significant number of districts (but could be limited to certain specialties). Without this it would not be clear that the internal market would have a fair chance of providing services at greatest efficiency.

b) ensure that all districts in the experimental regions have introduced 'resource management'; this is an important step in recognising the key role of clinicians in an internal market;

c) invest resources to assist districts in improving their information systems. Markets operate most effectively when the product in terms of both process and outcome is clearly defined and the costs of different supply arrangements are known;

d) take considerable pains to involve hospital doctors, FPCs and GPs. There are serious senses in which doctors would have less choice and control, and their positions would be less secure and these changes would generate opposition;

e) involve an evaluation team in the project from the outset to detect changes in efficiency. The NHS has often

introduced major changes in structure and management arrangements without putting in place mechanisms to evaluate their effectiveness.

Conclusions

It has been argued that internal markets may offer some scope for efficiency gains in the NHS. These would come from improving incentives to be efficient, using spare capacity and exploiting economies of scale. However, there are serious difficulties in achieving the potential gains. Good markets, like good planning, need good quality information in appropriate forms, especially about the product that is being sold. It is notoriously difficult to measure the health care product, and there are incentives to cheat. DRGs offer a basis for defining the product, but are incomplete and unreliable. More serious problems with introducing internal markets are the inevitable constraints on clinical freedom in both hospital and GP settings and the fact that internal markets offer little scope for consumer choice.

On the present evidence there is no clear case to proceed with the introduction of internal markets, but there is a case for experimentation with appropriate monitoring of results.

REFERENCES

Brazier J E, (1987), Reviewing RAWP: accounting for cross boundary flows, Br Med J, 295: 898-900.

Carroll N V and Erwin W G (1987), Patient shifting as a Response to Medicare Prospective Payment, Medical Care, 25: 1161-1167.

Culyer A J, Brazier J E and O'Donnell O, (1988), Organising Health Services Provision: Drawing on Experience, IHSM, London.

Davies Report (1983) Underused and Surplus Property in the National Health Service, Report of the Enquiry (Ch., Mr Ceri Davies) HMSO, 1983.

Department of Health and Social Security (1986), Resource Management in Health Authorities, DHSS, London, unpublished.

Enthoven A C (1985a) Reflection on the Management of the National Health Service: An American Looks at incentives to efficiency in Health Services Management in the UK, Nuffield Provincial Hospital Trust, London.

Enthoven A C (1985b) National Health Services - some reforms that might be politically feasible, The Economist, June 22: 61-64.

Fetter R B, Shin Y, Freeman J L, Averill R F and Thompson J D (1980) Case Mix Definition by Diagnoses Related Group, Medical Care Suppl.

Ford K (1988) Towards a workload funded system in the NHS via internal markets, Kings Fund College, London.

Griffiths (1983), Report of the NHS Management Enquiry, (Leader: Roy Griffiths), DHSS, London, Mimeo.

Guterman S and Dobson A (1986) Impact of the Medicare prospective payment system for hospitals, Health Care Financing Review, Spring 1986: 97-114.

Hillman R and Nix (1982), DHSS Funded Research into specialty costing, Southmead Health Authority, Bristol, Mimeo.

Horn S, Starkey P D and Bertram D A (1983) Measuring severity of illness: homogenous case mix groups, Medical Care, 21,1: 14-30.

Kind P and Prowle M J (1978) Information and Health Service Management: A technical paper prepared for the Royal Commission on the National Health Service, Centre for Industrial Economic and Business Research, University of Warwick.

Knapp M (1986) The Relative Cost-Efficiency of Public Voluntary and Private Providers of Residential Child Care, In Culyer A J and Jonsson B, Public and Private Health Services, London, Basil Blackwell.

Leibenstein H, (1966) Allocative efficiency in X-efficiency, American Economic Review, 56: 397-409.

Luft H S, Bunker J P and Enthoven A C, (1979), Should operations be regionalised? The empirical relation between surgical volume and mortality, New England Journal of Medicine, 301, No 25: 1364-69.

Martini C, Hughes A and Patton V (1976) A study of the validity of the hospital activity analysis information, Br J of Preventive and Social Med, 30: 180-186.

Maynard A, (1986), Performance incentives, In Teeling Smith G (ed), Health Education and General Practice, Office of Health Economics, London.

McNeilly R and Moore F, (1975), The accuracy of some hospital activity data, Hospital and Health service review.

RAWP (1976), Sharing Resources for Health in England: Report of the Resource Allocation Working Party, HMSO, London.

Richards T, (1986), HMOs: America today, Britain Tomorrow? nuts, bolts and the customers, Br Med J, 292: 392-394.

Russell I T and Holohan, Ann M (1974), Newcastle Accident survey: Report of phase 1 and 3 of "The choice of care for minor trauma", University of Newcastle upon Tyne.

Robinson R (1988) Efficiency and the NHS: A Case for Internal markets, IEA Health Unit Paper No 2, London.

South East Thames Regional Health Authority, (1986), A new policy for the management and funding of multi-district specialties, A consultation document from South East Thames Regional Health Authority, Bexhill on Sea.

The Times (1986) Suitable case for treatment?, 14 May 1986:10.

Williams B, T, Nicholls J P, Thomas K J, Knowelden J, (1985) Differences in durations of stay for surgery in the NHS and Private Sector in England and Wales, Br Med J, 29: 978-980.