FINANCING HEALTH CARE IN THE UK: A DISCUSSION OF NERA'S PROTOTYPE MODEL TO REPLACE THE NHS

Edited by

Adrian Towse

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FOREWORD

There is little doubt that throughout the world there is a growing concern about health services and the provision of health care. It is of interest that the worry seems to be independent of the precise structure of health services, the form of provision, and how it is paid for. This suggests two things. One is that the causes of the problem (or problems) are fundamental, and are not entirely, or mainly attributable, to the precise position in any individual country. The second is that each country *may* have something to learn from the others.

It was this kind of thinking that underlay, at least to some extent the original NERA international study of health care and finance (Hoffmeyer and McCarthy, 1994). It was certainly why OHE organised the conference of which this booklet is the outcome. It should be said immediately that the purpose of the present contribution is to offer a balanced introduction to the work done by NERA and to the field in general. It is not a substitute for the NERA volumes themselves. They contain a mass of important information that experts, in particular, must acquaint themselves with. That is not, of course, to say that everyone will agree with NERA's approach or their conclusions.

The central questions appear to be simple, perhaps deceptively so. What are the causes of the rise in demand? What determines the supply response? Does the former always outstrip the latter, and, if so, what is the significance of that? What are the optimum policy responses, and, in particular, what are the best future roles, respectively, for public and private finance? On the latter, it ought to be borne in mind that while the rhetoric often seems to suggest that the latter is that of individual household choice, in practice, especially if US experience is anything to go by, it really means business finance. (As a historical comment, before the NHS, health care in the UK also had a tendency to be based on the workplace, either from the firm itself or from trades unions.)

NERA itself emphasised technical progress, increased expectation of life, and rising expectations as causes of the underlying problem. To the layman this may seem a strange use of language since all of these seem *prima facie* to be good things rather than bad. Nonetheless, it must be agreed that the system, whatever it is, needs to respond to them.

One topic not covered at length in the report is the so-called relative price effect. In essence as gross domestic product rises chiefly as result of productivity improvements in some sectors, relative prices in labour intensive sectors rise. In terms of health care, which despite its own technical progress, is inevitably labour intensive, this means extra cost pressures. This subject has been dealt with in Professor Baumol's recent OHE paper (Baumol, 1995), and itself helps to place the present booklet in a useful context.

There can be no doubt that the issues discussed in this book are highly controversial. That does not mean they can be avoided, even though a debate on them may be painful. The fact that health care is so important does not mean that economic questions can be left out. Quite the reverse is true. Because we are all committed to decent health care, we are obliged to look at matters of costs and efficiency. But it must not be forgotten that it is outcomes that matter. Efficiency in economics means relating costs to benefits (including who benefits). It is not solely about cost saving. In the UK we must not be insular. There may be lessons to be learned from what other countries do, although some of them may be to warn us not to make their mistakes! It is hoped that the present booklet in contributing to the discussion will also assist in the eventual decisions to be taken on policy.

MAURICE PESTON
House of Lords

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OFFICE OF HEALTH ECONOMICS

The Office of Health Economics was founded in 1962 by the Association of the British Pharmaceutical Industry. Its terms of reference are:

To undertake research on the economic aspects of medical care.

To investigate other health and social problems.

To collect data from other countries.

To publish results, data and conclusions relevant to the above.

The Office of Health Economics welcomes financial support and discussions on research problems with any persons or bodies interested in its work.

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ABOUT THE AUTHORS

Tony Culyer

Tony Culyer is Head of the Department of Economics and Related Studies at the University of York and is the university's Deputy Vice-Chancellor. He was the chair of the Task Force whose report *Supporting R&D in the NHS* (HMSO 1994) (the 'Culyer Report') has been adopted as policy by the Department of Health. He is a member of the Central Research and Development Committee of the NHS as well as a member of his local District Health Authority and the Northern and Yorkshire Regional Research Advisory Group. He is on the editorial boards of four academic journals in the health care field and is co-editor of *The Journal of Health Economics*. He is on the Editorial Board and Editorial Policy Committee of the OHE. He is one of the founders of health economics in the UK and has spend most of his academic career developing the analytical frameworks now in wide currency for the study of medical care finance and organisation, and also applying them in wide range of specific contexts, from cost-effectiveness analyses of specific medical procedures, through the analysis of hospital costs, to the reform and design of health care systems. In addition to his purely theoretical work in the welfare economics of health care and health insurance, outcome measurement, hospital cost analysis, and the methodology of cost-effectiveness and cost-utility analysis, and applications of these methods, he has served as adviser to federal and state governments and international authorities, and has also served as a consultant to private firms, industries and professional organisations. In his 'spare' time he is the organist and choirmaster in an Anglican parish church.

William Laing

After graduating from the London School of Economics William Laing began his career in 1967 as an Economist with the Association of the British Pharmaceutical Industry.

Subsequently he joined the ABPI sponsored Office of Health Economics where he researched and wrote a number of their series of occasional papers on health care topics. He was appointed Deputy Director of OHE in 1971 and left in 1976 to set up his own consultancy and conference organisation.

In 1985 the consultancy extended its activities to include publications, concentrating on the rapidly growing sector of private health care. William Laing now edits two widely respected annual publications. *Laing's Review of Private Healthcare*, which is acknowledged as the authoritative annual reference source on the activities of the independent sector, and *Care of Elderly People*, a comprehensive review of structure and trends in the long-term care industry.

William Laing frequently speaks at health care conferences and writes widely on health care topics. Publications include *Keeping a lid on Medical Insurance Costs* (1988) for the Institute of Economic Affairs, *Empowering the Elderly: director consumer funding of care services*, published by the IEA Health and Welfare Unit in 1991 and *Financing Long Term Care*, published by Age Concern in 1994.

William Laing is 50, married with two daughters and lives in London.

Adrian Towse

Adrian Towse became Director of the Office of Health Economics in 1993, where he oversees its research programme into the economics of particular disease states and health problems, the economic evaluation of medicines, the economics of pharmaceutical industry innovation and the economics of financing and organising health care.

Prior to this he was an Associate with Touche Ross Management Consultancy, which he joined after completing his M Phil at Nuffield College, Oxford. At Touche Ross his health sector consulting experience included studies for the Department of Health looking at the market for generic medicines, and for the ABPI looking at the economics of patent life and at the NHS reforms. The ABPI studies were published as *Piecing Together a Healthy Future* and *Achieving a Healthy Balance* respectively. He completed a study for the European Commission estimating the workload and resources required by the proposed *European Medicines Evaluation Agency*. The report was published in 1992.

His work in the NHS has included a study for a Special Health Authority, the Central Blood Laboratories Authority, looking at its future strategy and status. The study began a process which led to the creation of a new Special Health Authority, the National Blood Authority.

His regulatory economics work included advising Oftel, Ofgas and Ofwat, and the Departments of Environment and Energy.

Since joining OHE he has spoken frequently at health care conferences. His publications include editing 'Industrial Policy and the Pharmaceutical Industry' and, with David Hale 'The Value of the Pharmaceutical Industry', both published by OHE in 1995.

1 AN OVERVIEW OF THE NERA STUDY AND ITS PROPOSALS FOR HEALTH CARE REFORM

by Adrian Towse

In 1994 a major study of health care financing and delivery in 12 countries by National Economic Research Associates (NERA) was published in two volumes by Kluwer Academic Publishers (Hoffmeyer and McCarthy, 1994). The study was commissioned by Pharmaceutical Partners for Better Health Care, a group of 40 of the world's largest research based pharmaceutical companies. The countries covered were the USA, Japan, eight European countries (France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland and the UK), Canada and New Zealand.

The report identifies elements of convergence between the health care systems of these countries and proposes a reform prototype (the NERA Prototype) designed to use competitive compulsory insurance to achieve guaranteed health care for all citizens, high expenditure on health care in countries like the UK, and more efficient delivery of health care services. Under the NERA proposals, the NHS would evolve into a competitive compulsory insurance market. The three papers in this publication examine the appropriateness of the NERA Prototype for the UK.

I have sought in this paper to draw on a number of sections of the Study to introduce the authors' case for health care reform and to set out how their proposals would change the NHS. Some key tables and summaries of their objectives and of the NERA Prototype have been reproduced with permission of Kluwer Academic Publishers. Inevitably however my brief overview of a 1453 page study cannot convey the full wealth of analysis that it contains, and I hope that this OHE publication will encourage readers to refer to the full study.

The two following chapters set out the case against the NERA approach, by Professor A J Culyer (Culyer) and the case for the NERA approach, by William Laing (Laing).

In this introductory chapter I outline the NERA analysis as to:

- why health care reform is required in the 12 countries the authors consider;
- the NERA Prototype reform model the authors propose;
- the short and long term reforms they advocate for the NHS;
- the main issues of principle and of practice this raises in the context of the future of the NHS which are taken up by our two contributors.

Why is Health Care Reform required?

The common problem NERA identify in countries where government dominates the financing of health care is that the demand for health care exceeds supply. The authors' assessment is that 'the limits to government financing and provision of health care are at hand... governments will spend less on health care than its citizens individually would spend if they had the choice.' (p3).

The authors overall analysis of the health care systems of the 12 countries leads them to conclude that:

- in most countries (and in particular the UK), demand exceeds supply;
- the upward pressures on demand will increase excess demand or unmet need;
- all 12 countries fail to meet reasonable performance goals of a health care system, in particular they are not as efficient as they could be;
- health care is much more like an ordinary good than is usually assumed;
- analysis of the systems of finance and methods of reimbursing providers of the 12 countries provides evidence as to how performance can be improved by reform.

In the rest of this section I set out the main points and findings that lead the authors to reach their conclusions about the necessity of reforming the NHS and other health care systems.

Factors increasing demand

We can identify three key factors pushing up demand. The authors identify them as 'cost drivers' (p23) and as 'factors driving need' (p 81-8)

- technical progress which has increased society's ability to prevent and treat disease;
- the ageing of the population, with older people requiring more health care;
- the rising expectation of the population at all ages that ill health merits a medical response and that the best solution will be made available irrespective of its cost.

Figure 1 **Summary of Projections, Percentage of GDP**

	1990			*2000*		
	Actual Expenditure	*'Need' or 'Demand'*	*Shortfall*	*Politically Acceptable Expenditure*	*'Need' or 'Demand'*	*Shortfall*
Canada	9.0	10.2	1.2	10.6	13.5	2.9
France	8.9	11.1	2.2	10.5	15.2	4.7
Germany	8.1	11.0	2.9	10.4	14.2	3.8
Italy	7.6	8.7	1.1	9.1	12.9	3.8
Japan	6.5	11.0	4.5	7.8	13.7	5.9
Netherlands	8.1	12.2	4.1	10.1	18.1	8.0
Spain	6.6	10.3	2.7	10.6	17.2	6.6
Sweden	8.7	12.7	4.0	10.9	16.7	5.8
Switzerland	7.8	7.8	–	8.4	8.5	0.1
UK	6.1	9.0	2.9	7.3	16.5	9.2
USA	12.4	12.5	0.1	15.1	17.1	2.0

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Excess demand

The authors[1] estimated the demand and supply of health care for all 12 countries for the period 1960-2000 in two stages:

- demand and supply equations were estimated for each country from actual data for the period 1960 to some point between 1983 and 1990, depending on the availability of data and excluding periods where downward pressure on expenditure growth has prevented supply responding to need;
- these equations were projected forward to the year 2000 to identify the extent of excess demand which would have to be tackled by some form of rationing, either using the approach of the Prototype or by some other means.

The 'demand' equation, as the authors note, looks at need (defined as capacity to benefit) rather than demand, which they define as 'wants [i.e. perceived need], modified by the effect of price' (p 66). This is because in most countries, price has little role to play in demand for health care and so it is not possible to estimate demand. The demand equation assumes that the need for past and future health care expenditure is a function of demographic factors (population by age band), technology changes and quality improvements. The last two factors are jointly proxied by a time trend. The supply equation plots health care expenditure as a function of GDP. The forecasts of funding (supply) and need (demand) projected for 11 countries are set out in Figure 1.

The projection for the UK shows a funding shortfall of around 9 per cent of GDP, with UK health care expenditure reaching 7.3 per cent of GDP in the year 2000 but with the 'need' for health care expenditure rising to 16.5 per cent of GDP in 2000. Expenditure by the year 2000 is projected to meet less than 50 per cent of need. This is the largest proportionate shortfall of any of the countries studies. The smallest is Switzerland.[2]

The UK equations were estimated for the period 1960-1986. The data for 1987-1990 was not used because of the 'larger than usual funding shortfall in 1987... the data suggest that the relationship between health care expenditure and GDP may have changed in the late 1980s, with health care expenditure rising at a somewhat lower rate than might have been expected, from previous historic trends.' (p 125).

1 This section of the NERA study was written by Penelope Rowlatt and Adam Lloyd.

2 This probably reflects assumptions about GDP growth, together with the income elasticity of supply. It is possible that the absence of a price index in the demand equation also has an impact as Switzerland, and the USA, the country with the second lowest shortfall both use prices in their health care markets.

However, even after discarding the data for 1987-1990 the demand projection was considered too low, with a time trend factor (proxying for technological and quality improvements) of only 3.4 per cent, as compared to 4 to 5.5 per cent for most other countries.[3] UK demand in the year 2000 using the 3.4 per cent time trend factor was projected to be 9 per cent of GDP, compared to a supply of 7.3 per cent. This would involve a much smaller excess of demand over supply. However the authors view this as an unrealistic result given that it would involve a UK demand for health care significantly below the per capita need of the other ten countries. They argue that a more realistic forecast would relate demand to the average estimated 'need' for health care expenditure per head in five other EC countries (France, Germany, Italy, the Netherlands, and Spain) in the year 2000. This is used to prepare the UK projection of excess demand shown in Figure 1.

This projection of substantial excess demand provides the background rationale for going back to first principles in the redesign of health care systems.

The performance goals of a health care system

Hoffmeyer and McCarthy identify two objectives for a health care system – efficiency and social solidarity. They define these as set out in Box 1.

The efficiency goals are designed to encourage productive, allocative and dynamic efficiency. An additional objective 'might' be to design a self regulating system that adjusts to changing consumer preferences, reducing the regulatory role of government to a minimum. They argue that the evidence from the 12 countries is that health care markets have economic characteristics that allow consumer preferences and competition to drive the provision of health care. It is consumed individually with few externalities, there are many consumers (patients) and suppliers with virtually

3 If data for 1987-1990 were included then the trend estimate of technology changes and quality improvement would be even lower and the estimate of the responsiveness of health care supply to GDP growth would also be lower. The former would tend to lower excess demand, the latter would tend to increase it.

Box 1 **Goals of health care reform**

On Efficiency

1. Health care systems should be designed to encourage efficient funding and provision of health care services. The amount and the mix of health care services should reflect the informed preferences of consumers. Providers and consumers should not be encouraged by inappropriate incentives to deliver or consume more or less health care than is economically efficient.
2. Health care systems should be responsive to new opportunities and needs, as expressed by patients and doctors. Services should be provided to high professional standards, using cost-effective medical technology and medicines. The health care system should encourage innovation of improved treatments.

On Social Solidarity

3. Health care systems should be financed in a way that allows all members of society access to essential services regardless of their ability to pay. This means that within health care systems a redistribution of funds must take place, from those who can afford to pay for these services to those who cannot afford to pay.
4. Access to services, regardless of ability to pay, need not extend to all aspects of health care, but should cover at least a guaranteed package of health care services. Society must, therefore, reach an agreement on how such a guaranteed health care package is to be defined.

Source: Hoffmeyer and McCarthy, 1994, Reproduced by permission of Kluwer Academic Publishers

no natural monopoly aspects in supply. The unpredictability of need for an individual and the significance of cost relative to income means that a free market in health care would be characterised by insurance. We can, however, have a competitive health insurance market driven by consumer preferences.

Citizens on low incomes will not be able to afford insurance, and those with chronic illnesses or at high risk of needing expensive health care will find insurance premiums too high to be affordable and may end up not getting the health care they need.

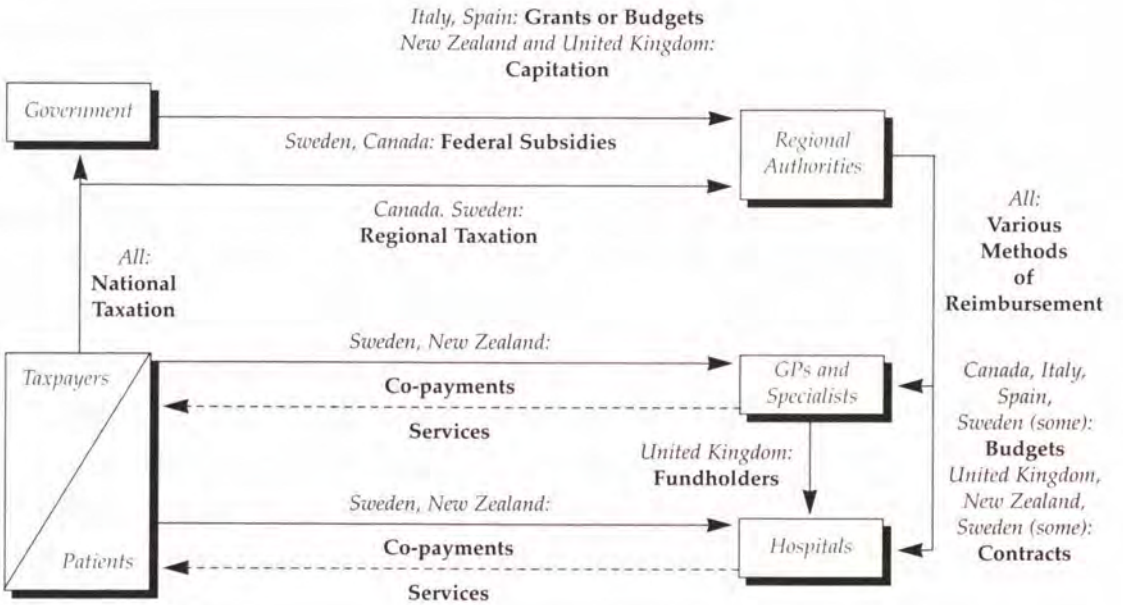
A solution that involves redistribution within the health care system (i.e. those on high incomes or with low health care needs subsidise the health care costs of those on low incomes and with high health care needs) requires government action to tackle two problems:

- risk selection by insurers, who seek to deny cover to high risk individuals or those with pre existing conditions. This can be tackled, in the view of the authors, by requiring insurance companies to take all-comers at the same (income related) premium;
- adverse selection. Individuals who have low expected health care costs, or high incomes, will find it cheaper to opt out of this type of insurance scheme and pay directly for health care (or find an insurer that has practised risk selection if this can be done). The authors argue that this can be tackled by requiring all citizens to take out insurance.

The Study considers whether the redistributive requirement could be met outside of the health care system, by giving citizens tax credits or vouchers, enabling low income families to purchase health care insurance at the market price, but concludes that it will be impossible to design such a tax credit or voucher system without the government second guessing the risk assessment of the insurance market in order to manage its own finances. The government would probably end up as a residual insurer to avoid disputes with insurers in the cases of high risk people.

Conversely, where premiums are lower than tax credits or vouchers the government will be under pressure to reduce the credit, giving companies little incentive to price below the credit. For these

Figure 2 **Generic Model 1: Tax-funded health care systems. Canada, Italy, New Zealand, Spain, Sweden, UK**



Source: Hoffmeyer and McCarthy, 1994
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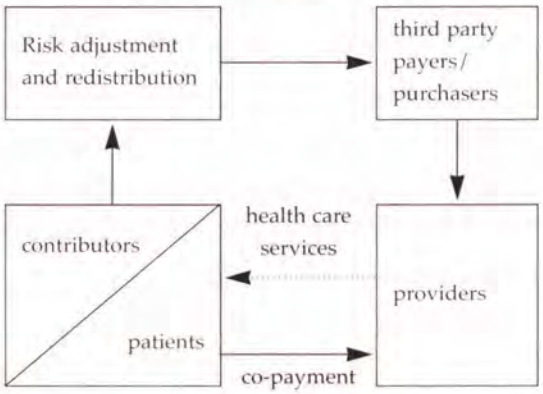
Figure 3 **The four basic building blocks**



and other reasons government might well get drawn into substantial regulation of an insurance market that did not tackle equity considerations within a self regulatory, self contained system.

Lessons from the 12 countries studied

The authors divide their findings into four:

- classification of the financing of health care systems;
- reimbursement of providers;
- performance and output;
- observations and conclusions.

(i) Classification of health care systems

They class health care systems into three generic types of financing:

- predominantly tax-funded health care systems (Canada, Italy, New Zealand, Spain, Sweden, UK);
- predominantly social insurance-based health care systems (France, Germany, Japan and Netherlands);
- predominantly voluntary insurance-based health care system (USA and Switzerland).

The generic model for the NHS, the tax funded health care system is set out in Figure 2.

Funds are raised from citizens as tax payers. The government distributes the monies allocated from taxation to give budgets to the regional purchasers who contract in one or more ways for health care services from providers. There are certain basic insurance and other characteristics of financing that are shared by all three models. I have simplified the NERA models to four basic building blocks which are set out in Figure 3.

These are individual contributions, some element of redistribution, purchasers, and providers. The systems differ primarily on the scope of the redistribution and risk adjustment that takes place.

In the case of the tax based systems there is comprehensive redistribution. Tax-based contributions are related to income but the budget allocations to purchasers from the central fund are related to the likely health care needs of the population served by the purchaser. Usually the formula for allocating funds is designed to adjust for the risk faced by the purchaser, i.e. the characteristics of the population, often based on a combination of past expenditure and trends in mortality and morbidity.

Social insurance based systems (where people make compulsory contributions to not-for-profit funds) vary as to the extent of risk pooling and central risk adjustment to balance contributions, (or contribution rates in relation to salary), across funds. For example, Netherlands has a complex central risk adjustment mechanism, but in Germany contribution rates differ substantially between funds.

In predominantly voluntary insurance based systems there is much less risk pooling. Where individuals purchase insurance directly then they will be assessed on their own risk characteristics. Where large employers purchase insurance on behalf of their workforce they will risk pool and, usually, charge employees a 'community rate' i.e. a common percentage of salary. In most cases the employer will absorb some or all of the health insurance costs. Even here, the benefit will usually be represented to employees as a percentage of salary.

The key issue for the authors is risk pooling, the ability to have a risk adjustment mechanism that could combine equity (premiums based on ability to pay) with choice of competing purchasers who draw from the central fund on the basis of patients risk characteristics.

Table 2 **Performance of Health Care Systems**

	Macro-performance			*Micro-performance*	*Social solidarity*	*Health status*		*Satisfaction*
	HCE as a percentage of GDP (1980)	*HCE as a percentage of GDP (1990)*	*HCE per capita, PPP[1] $US (1990)*	*Physician visits per head per year (various years)*	*Percentage covered by public schemes (various years)*	*PLYL[2] (various years)*	*Perinatal mortality[3] (various years)*	*Percentage of population generally satisfied[4]*
Canada	7.4	9.0	1795	6.6	100	3977	7.6	56
France	7.6	8.9	1379	7.2	99	4434	8.9	41
Germany	8.4	8.1	1287	11.5	92	4039	6.4	41
Italy	6.8	7.6	1113	11.0	100	4034	11.0	12
Japan	6.4	6.5	1113	12.9	100	2890	5.7	29
Netherlands	8.0	8.1	1182	5.5	69	3499	9.7	47
New Zealand	7.2	7.2	853	na	100	5198	8.5	na
Spain	5.6	6.6	730	4.0	99	4368	10.0	21
Sweden	9.4	8.7	1421	2.8	100	3375	6.8	32
Switzerland	7.3	7.8	1640	6.0	100	3718	7.1	na
United Kingdom	5.6	6.1	909	5.7	100	4060	9.0	27
United States	9.3	12.4	2566	5.3	44	5479	9.7	10
Average	7.4	8.1	1304	7.3	96	4123	8.5	32

1 PPP (Purchasing Power Parity): notional exchange rates derived from the price of a representative bundle of goods and services in different countries.
2 PLYL (Potential Life Years Lost): the number of deaths under the age of 65 which are 'avoidable' given current medical knowledge multiplied by (65 – the age of the deceased), as a rate per 100,000 person years of life, as estimated by the World Health Organisation. This is therefore a weighted measure of premature mortality. The figure quoted is the unweighted average of the male and female PLYL, for the latest year when data was available.
3 Number of stillbirths from the 28th week of pregnancy and of infants dead in the first week of life per 1,000 live and stillbirths.
4 See Blendon et al. (1990, 1991).
na Not available.

Source: OECD (1991).
Source: Hoffmeyer and McCarthy, 1994. Reproduced by permission of Kluwer Academic Publishers.

(ii) Reimbursement of providers

The Study notes the following findings:

- providers are general practitioners (usually self employed, but sometimes salaried), specialists, and hospitals;
- public, private-for-profit, and private voluntary not-for-profit hospitals exist in all countries;
- primary care reimbursement is by one of three methods: retrospective fee for service from a tariff, capitation or fixed fee per registered patient, fixed salary;
- hospital reimbursement is by one or more of: prospective cost-per-case (estimated services multiplied by fee-for-service for an average type of case), per diem rate or uniform sum per day of in patient stay, imposed or negotiated global fixed budget.

(iii) Performance and output

A number of proxy measures of performance are identified in relation to the objectives or goals of health care systems. These are as follows:

- health care expenditure as a percentage of GDP and per capita, as a measure of macro-economic efficiency;
- physician visits per head as a measure of micro-economic efficiency;
- the percentage of the population covered by public schemes, as a measure of social solidarity;
- potential life years lost and perinatal mortality as a measure of health status;
- citizen satisfaction with the health care system as expressed in opinion surveys as a measure of the outcome of the health care system.

The performance of the 12 countries against these proxy performance and output measures is set out in Table 2.

(iv) Observations and conclusions

The authors make a number of points:

- all countries use a mixture of public and private funding. Concern about the public/private mix has obscured the real economic issue, which is not public/private but compulsory/voluntary. Funding can move from public to private and meet equity requirements providing contributions remain compulsory;
- 'there is some evidence from our studies that countries with high satisfaction ratings are those that combine substantial public financing of health care with quite high private expenditures and/or private provision. Canada, the Netherlands, and Germany all have private health expenditure in excess of 2 percent of GDP – higher than any other country in the survey except the United States where there is not universal public provision. What is not clear is whether this satisfaction arises from the effect of private expenditure increasing total health care spending (which it seems to) or from the extra choice available to individuals through their private outlays' (p 16);
- public funding is often combined with private provision. In many countries (notably Canada, France and Japan) hospitals are often privately owed, providing services to publicly funded purchasers. In most countries publicly funded primary care is provided by doctors who are (private) independent contractors. Conversely, as in the UK and Spain, public hospitals can provide services to private purchasers;
- all 12 countries 'define a Guaranteed Health Care Package (GHCP) explicitly or implicitly, and often generously' (p 17). A GHCP is defined as 'a list of medicine conditions, treatment of which are made available to all citizens regardless of their ability to pay' (p 17). They conclude that 'a GHCP can be defined, even if rather loosely at present' (p 17).
- the evidence does not reveal 'whether competing (for profit) insurers can deliver a universally available health care package' (p 18). However there are multiple-payer schemes providing a GHCP in France, Germany, the Netherlands and Japan which pool incomes and risks. In the Netherlands and France, individual funds are compensated for the risk profile they face, so that members of all funds can be charged the same premiums. In Germany and Japan, there is redistribution within each fund, so that everyone in the same fund pays the same percentage of income, although different funds charge different percentages of income. The authors conclude that in principle 'competing for profit payers could provide GHCP on the same basis, if suitable rules were introduced. However, this approach has not yet been tried in any of the countries in our study' (p 19).
- in most cases primary doctors are independent contractors remunerated on a fee-for service basis. There is strong anecdotal evidence that this encourages over-provision. It is far less clear that capitation payments (used in Italy, Netherlands, and UK) lead to under-provision of necessary medical care, perhaps because of medical ethics. There is anecdotal evidence that it may interfere at the margin with best-practice medicine in:
  - referring patients to hospital for treatment that could have been given in the doctors surgery, (including minor surgery);
  - meeting patients' wishes for medication, rather than their medical need for it.

  The 'evidence favours some element of capitation payment... or, better perhaps, a fee-for-service structure with a patient co-payment element' (p 24);
- how hospitals are remunerated is less important than the incentives facing hospital clinicians who usually take the key resource decisions. Most are salaried. The introduction of prospective payment systems is changing this although these are the exception rather than the rule internationally. There is some evidence from private insurance purchases 'that the introduction of expert purchasers into the system may be one important way to improve efficiency' (p 21). Overall 'evidence favours a move towards prospective cost-per-case

payments so far as the information systems are in place to calculate average costs'. (p 24);

- their observations 'suggest that the use of co-payments to restrain demand faces practical limits. In some countries, social considerations require that they be kept too low to have much effect. When co-payment rates rise they lose their impact because people take out insurance against them. There is evidence that co-payments can help to moderate excessive demand if used within an appropriate range. The practical question is whether, in particular countries, a level can be found which is high enough to have a beneficial impact without being so high as to convert the system, unintentionally, onto an insurance basis.' (p 22)
- the evidence is that the private sector tends to introduce the latest technology faster. This does not imply that the private approach leads to optimal installation. The worst problems of under utilisation arise when 'gatekeeper' physicians have a financial interest in acquiring new technology;
- in general doctors are not using restrictive entry to raise the price of their services artificially, Governments have used monopsony power to offset this threat, but an alternative is a more competitive environment with individual contracts;
- 'Public, single-payer systems do not seem able to generate sufficient incentives for efficiency nor, in some countries, can they always control total spending. Private insurance funding systems have more incentives to be efficient but often fail to provide universal coverage. This suggests that some combination of these approaches is needed' (p 24);
- all 12 countries studied are in the midst of health care reform. Public funded systems are seeking more competition and efficiency, the US more public regulation of private insurers and providers and greater coverage. 'Somewhere in the middle there may be common ground towards which everyone my be heading in the long-run.' (p 25)

The NERA reform prototype

The proposals are for a competitive compulsory insurance market with three main characteristics:

(i) societies can choose the extent of social solidarity in terms of:

- the comprehensiveness of the Guaranteed Health Care Package (GHCP) available to all citizens irrespective of their income;
- how much of the GHCP premium comes from direct out of pocket contributions; rather than compulsory income related contributions
- the size of co-payments;

(ii) funding for health care is open ended, and is determined by consumer preference (allocative efficiency) and competitive pressure (productive efficiency) as in other markets;

(iii) costs are constrained by competition. However, as competition is driven by consumer choice of insurer, there is a trade-off with the extent of social solidarity. This is because the more the patient pays for directly (as top up insurance for non GHCP services, or out of pocket contributions for the GHCP, or in co-payment) the more incentive they have to look carefully at the price and quality of coverage offered by insurers.

The core of the reform proposals are set out in 15 recommendations. These are set out in Table 3.

Table 3 **The NERA prototype**

1. A Guaranteed Health Care Package (GHCP) should be defined, detailing the services that society intends that everyone should be entitled to, regardless of their ability to pay.

2. The function of financing health care rests mainly with insurance funds, even within the GHCP. The statutory role of insurance funds is to purchase or otherwise provide the services included in the GHCP on behalf of their members. Funds may be for-profit or not-for-profit organisations. Market entry is open for new insurers who meet certain requirements specified by the government, as a regulator of the system.

Table 3 – continued

3. Insurance for the GHCP with one of the insurance funds is mandatory for every citizen. Insurance funds have to accept every individual who applies for coverage for the GHCP.

4. Insurance funds will charge their members a premium to cover their health care expenses for services within the GHCP. That premium will come from two sources:

   A. One part of the premium will be a fee that is related only to income.

   B. The remainder of the premium will come from individual contributions based on individual risk.

   A political decision will be taken by society on the respective share of the two sources of funding. That is to say, society decides which share (x) of the projected total health care expenditure for any given year should be financed through income contributions. The remaining share of (1-x) then constitutes that part of the contribution which is based on individual risk.

5. A central fund, or re-insurance scheme, should be set up to provide the insurance funds with a risk-adjustment service. Its operations would fall into two parts:

   A. The central fund would receive all income-related premiums paid by individuals, and would pay out to each insurance fund a risk-adjusted capitation fee for each individual enrolled in the fund.

   B. For 'low' or 'moderate' levels of x, funds would be obliged to seek re-insurance to cover their expenses associated with patients who incur unexpectedly high costs.

6. A safety net should be set up to ensure health care is provided to those few remaining individuals who are unable to cope with the proposed system. The safety net would apply in the following cases:

   A. Special concessions should be available to those individuals, who, despite the safeguards in the system for those on low incomes and with poor health, are unable to afford coverage. These may apply for an affordable rate with an insurance fund. Either the discount would be subsidised by all other members of that particular fund; or, alternatively, the fund would receive compensation payments from other insurance funds via the central fund.

Table 3 – continued

   B. An agency would be set up to aid mentally disabled people, and other members of society who, for whatever reason, are unable to make the appropriate decisions within the health care system. The main function of this agency would be to purchase health care insurance on behalf of these individuals.

7. Insurance funds are free to offer to their members services that are either:

   A. not covered by the GHCP; or,

   B. that are covered by the GHCP, but which provide more choice or higher quality.

   Premiums for any additional services will be set by the insurer in whatever manner they see fit.

8. The delivery of health care services rests with providers, including primary care physicians, hospitals, nursing and community centres, and producers and distributors of medicines. Providers will sell their services primarily to insurers. The quantities of goods and the level of services, their quality and their prices will be either determined through open market sales made at list prices, or will be specified in legally binding contracts concluded between individual insurance funds and individual providers. Some providers, such as primary physicians, may be allowed to negotiate contracts collectively. Providers therefore have an incentive to compete on the basis of the quality and the price of their services.

9. The way in which providers are reimbursed by purchasers is subject to negotiations between the two parties. Purchasers of health care are free to discontinue a contractual relationship with a provider at the end of a contractual period. Similarly, they are not obliged to commence a contractual relationship with a new provider.

10. All potential providers are given unregulated entry to the health care market subject to meeting medical qualification requirements, which will be continuously checked. This includes private, for-profit hospitals, as well as new provider forms, such as medical centres. Capital expenditure programs are financed mainly by contractual income and from funds raised by providers on the capital markets, but not by the government.

Table 3 – continued

11. In order to provide universal access to the GHCP, the government will intervene in the market for health insurance in the following ways:

    A. Every individual must be obliged to take out health insurance from an accredited insurance fund, to cover the GHCP.

    B. Every accredited insurance fund must be obliged to accept all requests or enrolment on reasonable terms.

    C. Every individual must be obliged to pay over to the central fund a premium related to his or her income, and to nominate an insurance fund as recipient of a risk-adjusted payout; *or* every insurance fund must be required to collect an income-related premium from every individual enrolled, on behalf of the central fund an in return for a risk-adjusted premium.

    D. A Guaranteed Health Care Package will be defined which will include mandatory co-payments.

12. In the health care system recommended by NERA the main operational functions of the government will be as follows:

    A. The government should set up an agency to oversee, and if necessary regulate, competition amongst insurance funds and amongst providers. The task of the agency would be to adapt existing or new anti-trust legislation to the health care system. In particular, this includes a ban on cartels and arrangements that are designed to benefit some participants of the health care system at the expense of others. This includes merger approval. Furthermore, this agency would also be charged with supervising, and approving, the risk-adjustment formula for the central fund, and auditing the process to guard against abuse.

    B. The government should set up an audit agency. The audit agency will be charged with the task of ensuring that all insurance plans offered by the insurance funds meet certain credentialling requirements. Furthermore, the audit agency may be charged with the task of inspecting providers to ensure that acceptable quality services are provided.

    C. The government should set up a separate agency that will act as the agent of the mentally

Table 3 – continued

disabled, and others who are unable fully to participate in the health care system. This agency will purchase health care on behalf of its members and will represent their interests in those matters that require a decision by society.

    D. To the extent that teaching and research is not financed from private funds, the government will assume some responsibility of financing these. This includes funding medical and nursing schools, as well as some research activities carried out at hospitals or elsewhere.

    E. The government will have responsibility for public health issues, in particular the prevention of communicable diseases.

    F. The government will also maintain a licensing agency, that will grant licences to all participants in the health care system, e.g. insurance funds and providers. This agency will also act as the medicines approval agency.

    G. The government will assist in collecting the income-related fee which it then transfers to the central fund.

13. Co-payments for health care services included in the GHCP should be made mandatory for each insurance plan offered by each insurance fund. Furthermore co-payments should:

    A. In principle, apply to all patients and all treatments;

    B. Use a comparable basis for different health care services as the basis for their calculation;

    C. Be calculated as a percentage point of health care expenditures; and,

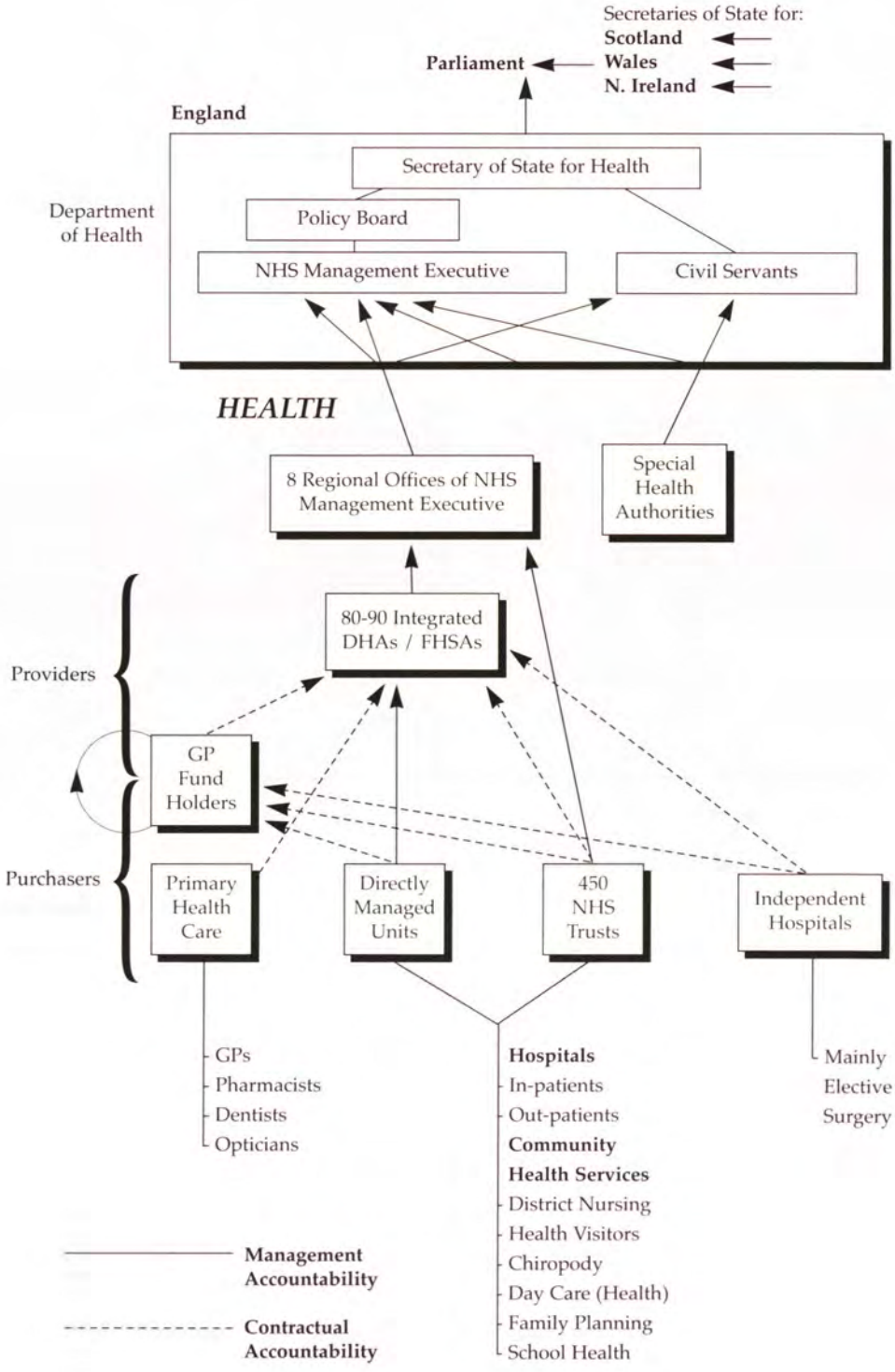
    D. Apply only up to an income-related upper limit (beyond which co-payments are equal to the upper limit).

14. For services not included in the GHCP, or for supplementary benefits of services included in the GHCP, insurance funds are allowed to offer insurance plans that include optional cost-sharing arrangements.

15. Consumers of health care should be encouraged to establish private consumer organisations to monitor the developments in the health care system.

Source: Hoffmeyer, and McCarthy, 1994.

Figure 4 **Structure of NHS – 1994.**
Following changes proposed in Managing the New NHS



Source: Laing, 1994.

Long and short term reform for the NHS

The existing (post 1991 internal market reform) NHS structure has been set out in schematic terms in Figure 1 (above). A more detailed structure is set out in Figure 4.

In the context of the NERA approach we can view the NHS as operating as one insurer. In this framework I would describe the NHS in the following way. All premiums are income related (i.e. paid via taxation), and the GHCP available to all citizens is intended to be comprehensive, indeed open ended, but is not defined, and in practice maybe limited by the resources available to the local health authority or hospital. Consumers can buy 'top up' private insurance but this operates parallel to, rather than as complementary to, NHS provision. There is no co-payment, except for flat rate contributions towards the cost of prescription medicines and some dental services. Even here, there are substantial exemptions. Patients can choose their GP, and, since the introduction of GP fundholding can exercise, indirectly, choice in secondary care. However, they lack information on which to exercise choice. The internal market has introduced competition between providers for contracts from purchasers. However, lack of information about costs and quality has to date limited the extent of competitive purchasing, with forms of block contract often maintaining long standing relationships between purchasers and providers. Significant efficiency gains have been achieved, although budget constraints, centrally imposed targets, and the separation of purchaser and provider may have contributed more than competitive pressure to these improvements. Many regard the establishment of the NHS Research and Development programme as the most important addition to the purchaser-provider split, as it will provide evidence on the effectiveness of treatment and stimulate the collection of information on the quality (outcomes) of treatment. For discussions of the impact on the internal market on the performance on the NHS, see OECD (1994) and Maynard (1994).

The author[4] envisages that moves towards the NERA prototype could involve a two stage process:

- interim reform steps which have merit within the existing system, i.e. they will make the NHS more efficient and more responsive to patients;
- more fundamental reforms which would involve the government withdrawing from the direct financing of health care and ownership of health care purchasers and providers, and regulating a private system which combined compulsory and voluntary elements of financing and provision.

The interim reform steps proposed by NERA are set out in Table 4.

Table 4 **Interim reform steps in the United Kingdom**

Major health care reforms were introduced in 1991. They were designed to increase efficiency by stimulating competition between providers; and, through the establishment of GP Fundholders, to a limited extent between purchasers. The UK model constitutes the basis for the health care reforms in New Zealand introduced in 1992. Other countries are likely to follow. The reforms can be described as steps in the direction of the NERA Prototype. However, the UK government maintains strong central control over the financing and delivery side of the health care system. Under the NERA Prototype, it would have to relinquish some of its powers.

Reform Proposals

1. Redifinition of the GHCP

There exists a GHCP, but it is not codified in any precise sense, and it is not identical in all parts of the country. Health care facilities are poorly distributed, which results in excessive waiting lists for some (even essential) services in some regions. The government attempts to improve the situation by targetting conditions and setting standards for health status improvements, but so far not comprehensive and universally available list of treatments has been forthcoming. We recommend that work on a GHCP commences; this is desirable as it would facilitate the working of the NHS internal market.

2. Reduction of Imbalances in the Financial Stability of Insurers

Under the reforms, it is planned that purchasers (e.g. District Health Authorities and GP Fundholders)

4 The NERA Study chapter on the Health Care system in the UK is written by Tim Boer.

Table 4 – continued

receive a capitated budget from central government. So far the introduction of such captitated budgets has been slow. The transition to captitation should be implemented as quickly as possible, as it is the prerequisite for purchasers to play a more active role in the market and to influence providers' behaviour. In the long run, captitated payments (financed through health insurance premiums) could lead to increased competition between Districts and GP Fundholders for insurance members.

3. Increase of Total Funding of the Health Care System

There is evidence that the health care system in the UK is underfunded. Health care expenditure per capita is lower than in any other European country in the study bar Spain; and health care expenditure as a percentage of GDP is the lowest of all the countries included in the study. It is conceivable that increased funding (perhaps complemented by the introduction of co-payments) would increase both efficiency and equity of the health care system.

4. Separation of Health Insurance Premiums from Taxation

A fully separate structure of health care insurance premiums sufficient to cover the costs of the NHS should be introduced. This change would be accompanied by a compensating reduction in taxation. This would increase the transparency of NHS funding and facilitate later reforms.

5. Remuneration of Hospitals to Move Towards Prospective Cost-per-Case Payments

The present predominant form of block contracts between purchasers and providers should give way to contracts based on prospective cost-per-case payments. This would improve the incentive structure and the financial situation of many hospitals but might require increased funding.

6. Introduction of a Consistent Co-payment Scheme

More extensive use should be made of co-payments to cover primary and hospital services, not just medicines, dental and eye treatments. However, the introduction of co-payments should be matched with an increase in central funding by the government.

Source: Hoffmeyer and McCarthy, 1994.
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My interpretation of the Prototype suggests that the longer term steps to move towards the full prototype could involve:

- the establishment of a separate health care fund into which income based premiums (collected by the government through the Inland Revenue) would be channelled;
- the ability of private insurers to obtain capitation based (risk adjusted) payments from the health care fund for patients who opted for them, rather that the public sector health authority purchasers, to provide them with the GHCP;
- the NHS becoming one of many insurers providing the GHCP, rather than the monopoly or dominant purchaser. Health Authorities could become private insurers or could compete within the public sector for patients to purchase GHCP services on behalf of. GP Fundholders could also become insurers, although it would be important to prevent anti competitive vertical integration between purchasers and providers.
- NHS Trusts being privatised or given freedom to operate commercially (making profits and, in some cases going bankrupt) whilst remaining within the public sector.
- the introduction of direct payment for part of the GHCP, and comprehensive co-payment.

NERA recognise that there are major obstacles to reform of this type. The authors identify:

- wide public and political support for a full range of free health care to be available to all;
- an unwillingness to acknowledge that the NHS is failing to achieve this;
- a strong lobby for equality of care, i.e. a belief that it is wrong for some people to be able to buy better quality care than others;
- a belief that health care skills are finite and private purchase of these skills means poorer quality of health care will be made available for the rest of the population;
- a belief that it is wrong to make profit out of health care;
- a belief by government that any relaxation of

Treasury control over the health care system will lead to both inefficiency and an increase in the share of GDP devoted to health care, with the latter reducing the competitiveness of the economy.

Issues raised by the NERA prototype in the UK context

In this section I briefly discuss some of the key issues raised by the Prototype and debated in the two following chapters of this book.[5]

The ones I now cover are:

- whether health care is a 'normal' consumer good;
- what the health care system should be trying to maximise;
- the extent and cost of any potential benefits from competition;

I also conclude with some of the other issues that arise from the NERA study which are also addressed by Culyer and Laing.

Health care as a consumer good

Perhaps the central issue is the extent to which we believe health care can be purchased in the same way as any other good. For most consumer purchases, we use information and our preferences to exercise choice, constrained by our income. This includes buying insurance policies. Culyer and Laing differ as to whether the NERA view – that consumers can drive the health care market – is realisable. Both suggest, however, that in one important area – co-payment – NERA are wrong. Agency relationships are such that when someone is ill, the doctor must be the decision maker, and forcing patients to pay something at the point of *use* of health care services is as likely to deter people from seeking medical attention when they need it, as it is to discourage them from seeking unnecessary attention (where the cost of health care services exceeds the cost of self help or the value of the benefits to be gained by the patient). Laing argues that co-payment is not necessary to drive the NERA system. By implication ex post moral hazard is not a major problem.[6]

5 I do not examine whether the evidence set out by NERA supports their author's conclusions.

6 See p 32 of this book for a discussion of moral hazard.

What Laing argues is necessary to make the NERA prototype work is an element of out-of-pocket contribution to the cost of the GHCP policy. This, together with the informed consumer choice is, for him, the key to price competition between the insurance providers. Hence the importance of the question of informed choice.

Culyer argues that there are important externalities, both in public health terms, relating to communicable diseases, but also a 'caring' externality. NERA would argue that both are addressed by providing access to the GHCP for all citizens.

What are we maximising?

The NERA prototype is designed to achieve a Pareto optimum, subject to GHCP provision for all citizens, whereby the amount of health care consumed by society reflects, at the margin, the preferences of consumers for health care as compared to other goods, with competition between providers and insurers ensuring that prices reflect cost.

Achieving this depends crucially on ones view as to whether health care can be purchased as a normal good by informed consumers. If it cannot, then a different political/administrative (extra-welfarist) process is required to decide how much is spent on providing health care and what treatments are provided. Even in the NERA prototype, a political/administrative process is required to determine the contents of the GHCP.

Culyer argues that more appropriate objectives than maximising consumer welfare subject to incomes and preferences might be either to maximise health gain for the population, or to try and achieve equality of health status. These objectives could produce quite different types of health care services. Maximising health gain subject to an expenditure limit might involve restricting services to those with debilitating conditions where some alleviation could be achieved but only at high cost. Putting the emphasis on achieving equality of health status would, conversely, imply that these sorts of intervention had a high priority.

The point is, however, that patients do not drive the system, exercising choice through voice or exit. What treatments are provided reflect society's view as to the objectives of collective provision.

Thus for Culyer there are two separate decisions to be made:

- how much should society spend on health care?
- how should that money be spent, i.e. what should be the objective of health care spending?

He accepts that the UK is probably underspending on the NHS, but argues that more transparency (or hypothecation) could tackle the problem.

It could be argued that although there is a fundamental difference of philosophy between the two approaches, in practice there may be less. This is because:

- the NERA GHCP will be determined by society collectively. It could be constructed to maximise health gain given target premiums, or to achieve some other objective;
- Culyer accepts the right of individuals to buy private insurance to achieve their optimum amount of health care. Indeed Laing sees the integration of public and private insurance into one market as a key efficiency benefit of the Prototype. However, as Laing points out it would represent a major change for the NHS to have inequality built into the system. Laing also points out that such an integration could mean that consultant pay for providing GHCP services rises, as the ability of the NHS to act as a monopsonist and gain from consultants ability to top up their salaries with private practice would go.

One issue remains – NERA argue that if health care remains financed out of taxation it will continue to be squeezed, given the political priority attached to keeping down taxation. Culyer would no doubt argue that a separate fund, perhaps with a separate 'health tax' could achieve this objective.

The benefits of competition

Perhaps the biggest divide between NERA (with Laing) and Culyer, is on the allocative and productive efficiency benefits of competition between purchasers (and insurers), and between providers. Culyer is a 'demand side socialist' believing in the benefits of informed expert purchasers. Patients as consumers are not able to exercise choice in such a way as to drive meaningful, NERA style, competition between purchasers. The NERA analysis, for him, confuses the type of decision in which the patient can and should participate. Expert purchasers can plan and anticipate the *collective* health care requirements of the population they cover (whether a health authority, GP fundholding practice or US or NERA style HMO is the purchasing agent). Patient or consumer voice is inevitably muted here. Patient choice at the *individual* level can and should be exercised, although the balance of knowledge in the principal-agent relationship between the patient and their GP, inevitably means that patient choice must be exercised in conjunction with the GP. Depending on the diagnosis, then patients can and should be involved in joint decision making on choice of treatment, and the location and timing of treatment. Culyer argues that the new NHS provides a far better model to enable this individual patient choice to be exercised than NERA style competition between plans offered by purchasers, which may restrict the individual choice available to a patient when seeking care under the scheme.

Culyer also argues that direct competition between hospitals is also of questionable value. Information on hospital and purchaser performance, and yardstick comparisons are valuable, however, to help the NHSE improve the efficiency of the system. Culyer argues also that with competition insurers (and by implication GP fundholders) cannot be stopped from cream skimming or colluding with 'healthy' patients to practice adverse selection by the rules NERA propose.

The fundamental challenge for the NHS identified by Culyer and accepted by Laing, is that resources are being consumed on inefficient treatments. Health technology assessment of the sort now being undertaken by the NHS R&D programme is the key to improving efficiency. Culyer argues that there is no reason to believe that a competitive system will produce more efficient use of existing and new technology – and indeed the evidence from the US is not encouraging. NERA would argue that the problem in the US has been inappropriate incentives – such competition as existed has been to improve 'quality', and fee for service encourages a proliferation of intervention. Laing argues more fundamentally that a market provides incentives for purchaser and provider innovation and dynamic efficiency benefits. A

purchaser that cuts out ineffective care and so cuts premiums, or expands services elsewhere, will attract consumers. This, of course, brings us back to the question as to whether consumers can exercise rational choice in this market.

Culyer also raises the possibility that a move from a monopsonist purchaser could lead to higher wages. Higher health care spending may simply lead to higher economic rents for suppliers. In short, are the administrative or transaction costs associated with competition offset by static and dynamic efficiency gains? Laing accepts that wages may rise, but argues that the efficiency gains will offset these extra costs.

Other issues

There are a number of other points of the NERA analysis and prototype which are addressed in the pieces by Culyer and Laing. These include:

- the NERA performance measures, and the difficulty of making international comparisons;
- the NERA forecasts of UK demand and supply;
- the difficulty of establishing a GHCP;
- the optimum contract structure between purchaser and provider. A background issue, explored elsewhere (Wynard et al, 1994), is whether competition between providers and purchasers, or between integrated purchasers is the optimum form of market:

The NERA Study and Prototype lay down a major challenge to those who believe that the NHS is working well and that the purchaser-provider separation, together with the NHS Research and Development Programme provide a sound structured basis for the NHS to continue to meet the health care needs of UK citizens. In the chapter that follows Culyer rises to that challenge and sets out a comprehensive critique of the NERA analysis and proposals. In chapter 3, Laing responds with an advocacy of the NERA approach.

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2 CHISELS OR SCREWDRIVERS? A CRITIQUE OF THE NERA PROPOSALS FOR THE REFORM OF THE NHS

by Professor A J Culyer

Introduction

The report, *Financing Health Care*, prepared by National Economic Research Associates, (NERA) runs to two volumes and 1453 pages, reviews the experience of 12 countries, develops a Prototype model and a phased strategy by which the UK might approach it, and has plainly involved a huge amount of work to which I can scarcely do justice in the space available. I thus have a problem akin to that of the authors of the report: given the vast complexity of the systems – indeed of our own – and the immense range of issues that any proposals for change must range over, how can one fasten on to the key issues without grossly over-simplifying and doing gross injustice to the authors? The problem faced by the authors – which I may as well say that I do not think they have altogether resolved – is that, in comparing international systems, while it is undoubtedly true that some aspirations and problems are shared in common, history and culture never are, and neither are *all* of the aspirations and problems. It is not so hard (though it is not easy) to compare the workings of one system with either some aspirations of one's own or those of another system and find it wanting – but that is not a lot of help if the shortcomings thus identified are being judged by a set of criteria which are not those of the clients of the system being evaluated.

I propose to divide my discussion into the following parts:

- first I shall review the Report's *diagnosis* of the problems faced by the NHS;
- second, I shall review their proposed *treatment*;
- thirdly, I shall then ask whether the diagnosis is *correct* and the treatment *appropriate* and *cost-effective*;
- finally, I shall briefly enquire into other possible diagnoses and alternative treatments for the patient.

I shall not review the descriptions and analyses of the health care systems of other countries but shall focus on the UK, making occasional reference to other countries where it may be helpful. I shall not comment on the study's discussion of the implications of its recommendations for the pharmaceutical industry, though I may as well say, less there by any doubt about it, that a profitable, thriving and innovative pharmaceutical industry is something to cherish and, although I do not think that the welfare of the industry is something that should drive the financial and organisational structure of health services, I am confident that the industry is well capable of responding effectively, appropriately – and profitably – to most systems likely to evolve in western society that are this side of rational.

The diagnosis

There is no single place in the study at which the reader can find a convenient summary of the problems faced and so there is some risk that I may have missed some crucial element in the diagnosis, However, a trawl reveals the following:

- government is predicted to relinquish the roles of health insurer and health care provider to the market, which forces the issue of change and reform dramatically (p3);
- the demand for health care will continue to outstrip the supply due to aging population and technical advance (p3);
- bureaucracies are inherently less responsive to demands for new treatments than market orientated systems (p22);
- governments will choose to spend less on health care than individuals prefer (p3);
- centralised systems, such as the NHS, create distortions which seriously compromise the delivery of appropriate levels of service (p5);
- patients and physicians do not have the correct incentives or information for making well-informed and efficient choices (p6).

The treatment

The recommended treatment is 'required to move the existing UK system towards that of the NERA Prototype over the long term' (p1127). The main components are:

- establish an agreed *Guaranteed Health Care Package* (GHCP) (the initial contents of this are said to be the current range of NHS services, whatever this is (p1132), but the 'target' contents of the GHCP in the Prototype are not given, so it is not clear whether the services included would curtail or extend the current range of NHS and community care benefits) (p1127);
- introduce a market for health care insurance for the GHCP (plus top-ups at customer discretion) with insurers being denied the right to turn away clients for the GHCP at prevailing premiums (p1127-8);
- make health insurance compulsory (p1128);
- set premiums in two parts: one, a function of (family?) income payable to a central agency, for redistribution to insurers after adjustment for risk: the other payable directly to insurers and risk-rated (p1129);
- establish a public National Health Insurance Fund (NHF) for those 'unable to manage their own health care insurance' (p1130);
- all services within the GHCP to be subject to mandatory co-payments (initially with exemptions but 'increasing the rigour over time') (p1133);
- by implication, abolish the NHSE, its regional offices, FHSAs, DHAs and GP fundholders (it is not clear what implications there are for services provided outside general practice or hospitals, such as community services, blood transfusion services or ambulance services);
- make contracts between insurers (purchasers) and providers (public or private, primary, secondary and tertiary care) legally binding and enforceable at law (p1131);
- deny insurers (purchasers) the right to own providing institutions (p1131);
- create unregulated entry for providers (subject to 'medical qualification requirements') and permit providers full access to the capital market (p1131);
- reduce the role of government to accrediting insurer, enforcing compulsion in insurance and the way the insurance market works, collecting premiums for the central fund and specifying the GHCP.

Is the diagnosis correct?

What are the objectives?

In asking whether the diagnosis is right, one comes directly up against an issue to which I alluded at the beginning: what are we trying to achieve? It is quite clearly one central objective of the current NHS to increase the scope and range of individual (patient) choice. I shall return to this later. Another, on which I shall for the present concentrate, is to maximise 'health gain'. What this means is not entirely clear and neither 'health' nor 'gain' (presumably some positive difference attributable to the use compared with the non-use of health services) are easy either to conceptualise or quantify. However, these difficulties are hardly grounds for ignoring or replacing this objective with some other. Indeed, if I were going to write a report on the current problems of the NHS I would actually begin with an analysis of the *efficiency* issue of what it ought to be maximising (and what limits its success in accomplishing that objective) and then complement that by a parallel analysis of the currently unpopular theme of *equity* in resource distribution (and what limits success in accomplishing that). I think I might be able to make a good case for maximising health gain (and justify this broad objective as superior to a consumer sovereignty model), and be able to put some practical content into both 'health' and 'gain' (with perhaps some epidemiological help) to guide both purchasers and providers, and I think also that I might be able to develop both some principles to guide distributional judgements and some practical suggestions for improvements on where we are now. I do not think the implications of this for organisational and financial structures would be terribly radical – but, then, I take the view that the structures currently being developed (which may be characterised as *'demand-side socialism'*) are broadly right with the main things needed being a loosening of the capital market, some mechanism for freeing management from political interference, and a need for equity to take a more central role as an allocation criterion – plus one other thing (where I come into closer tangency with the authors of our report) – the need to create a mechanism through which genuine desires by the purchasing/voting public for greater expenditure on health care can be reflected in the actual

resource flow to the NHS, thus escaping an implacable Treasury public expenditure constraint imposed on grounds of so-called macro efficiency but at the cost of probable micro inefficiency. But this is not *my* report. I make these comments simply to remind you of the old truth that where you stand (on health care reform) depends on where you sit (your ideological and financial interests) and where you sit is essentially a matter of the objectives you either accept from someone else or put up for your little old self.

So what are the underlying objectives for the health care system of the UK as seen by our authors? They are elusive. And who are the ultimate clients for the study and what are their objectives? Are their objectives likely to be shared by the British electorate? Even if we pick the diagnosis apart, these issues do not become any clearer. But let us look anyway at the diagnosis in more detail.

The diagnosis in detail

(i) A reduced role for Government

I do not intend to give any weight to the first of their diagnostic bullet points because, as a prediction, I see no basis for it other than as wish fulfilment. The issue as I see it is whether the government ought to relinquish or take on roles, not that this is something to be taken for granted with the implication that we then have to cast around to make the best out of whatever fate thrusts upon us.

(ii) Demand for health care will outstrip supply

The second bullet point is more substantive. But it is hardly news. What it is saying is that health care has to be rationed. I don't think anyone denies that (apart from the occasional minister who wants to avoid an awkward public debate). The issues are, of course, the *levels* to which demand (or need) is to be rationed, the *criteria* that are to be used in the rationing and the *means* used to do the rationing. But let me enter a dissenting note of caution on those alleged twin drivers of the overall medical bill, to which the authors draw our attention: an aging in population and changing technology. I find it distressing that our authors, along with a good deal of distinguished company, treat these two factors as *exogenous* when it seems to me plain that they are in very large part *endogenous* – that is, determined within the overall economic system. If health care expenditure per head of elderly is rising relative to health care spending per head of the rest, then that is the result of decisions taken within the system – and decisions, moreover, that are frequently alleged, by people in a position to know, to be inappropriate. Chucking high-tech medicines and inpatient care at the elderly regardless of true cost-effectiveness is not something that we *have* to do. Nor do we have to adopt every latest mark of imaging technology the moment it appears (indeed, the authors themselves make quite clear that different systems manage to control the introduction of new technologies at quite different rates). Incidentally, are such technologies to be in or out of the GHCP? You could argue either way – or for a sophisticated mix. But to determine which one needs a clearer statement of the objectives of the system.

Moreover, I conjecture that the character of the research that produces the sorts of technology that are held to drive costs ever upwards (relative to constant price GDP) *is itself endogenous* – it itself is driven by knowledge of what it is that the finance of medical care will pay for, so even the research (and especially the industrial research in companies and the research sponsored by them in universities and elsewhere) is ultimately endogenous and therefore influenced by system design. Of course, some technological change is cost-reducing rather than cost-increasing. The development of an effective vaccine for Polio is a classic example that eliminated the need for the iron lung; or that for rubella, which led to a greatly reduced incidence of babies with birth defects. But, in general, technological advance in medicine tends to be cost-increasing. A notable example is modern neo-natal intensive care which has increased the survival chances greatly of low and very low birthweight babies but which has major cost consequences not only of the neonatal care itself but also of the subsequent long term care of these children as they survive into adulthood. I conjecture that this 'bias' towards cost-increasing technological change is not accidental. None of these things is inexorable. They are themselves generated by the systems we have and the incentives they embody. No successful business is going to embark on the development of products if

it believes there is no market for them – and whether or not there is such a market depends on the willingness and ability to pay of those with power to decide what technologies they shall use, and the criteria to be used in selecting new – or come to that, old – technologies. These ultimate determinants of the pattern of technological research and development are all endogenous and therefore a function of system design.

(iii) Bureaucracy is less responsive to new technology

It is not very good analysis simply to say that 'bureaucracies are inherently less responsive to demands for new treatments than are market-orientated systems' (p22). Market orientated systems of competing funders have *immense* bureaucracies of their own which respond, as do all bureaucracies, to the organisational goals that are set for them and the rewards systems in operation to promote those goals. It *may* be that public bureaucracies are less efficient than private ones – but we have to ask (again): *efficient at what?* If a public 'bureaucracy' like a purchasing health authority has more rigorous standards of effectiveness than a private health insurance agency, then the difference between purchasing decisions will reflect something quite different from 'inherent' lack of responsiveness. After all, there is abundant evidence that competition between health care providers in the US operates less through price than through what is, somewhat misleading, often called 'quality', and this is why you will find under-utilised (and probably mis-used) CAT scanners in neighbouring 50-bed hospitals in the US. Is this the sort of 'responsiveness' which our authors want to see in the UK? Perhaps it is. But if it is not, I have to wonder at the (bureaucratic) mechanisms that competitive insurers might employ to counter the very real inherent tendencies that such competition is likely to evoke, especially since it seems inevitable that they will seek to fund 'managed care' on the provision side of health care.

Beneath all this there is, however, a fundamental and real difficulty. It can be put quite simply as a question: what is the optimum rate of diffusion of a new technology? It is not adequate to reply; 'let the market decide' because, first, the market is extremely imperfect and, second, the element of public accountability for expenditures is going to be high even under the prototype. In essence the problem involves a trade-off between two uncertain elements: the postponement of possible (but uncertain) benefits while effectiveness and cost-effectiveness trials and analyses are done, against the greater assurance that what is adopted will have real benefit and constitute value for money. These issues are currently being examined in the Health Technology Assessment programme of the NHS Executive and I do not pretend to know what the right general answer is – except that it is unlikely to be 'leave it to the market'! To whom will our authors leave it?

(iv) Macro and micro efficiency

I conjecture that the nub of our authors' diagnosis lies in the last three bullet points. They are telling us that too little is spent on the NHS (macro inefficiency) and that what is spent is not spent efficiently (micro inefficiency). Now, efficiency is, of itself, a pretty emotionless term. It means simply maximising outcome per unit of input. The big issue here is evidently *what should we be maximising?* I think what our authors have in mind is good old-fashioned welfarism – we should be maximising individual welfares, as perceived by individual clients. Put more crudely, health is like most other things, so let individuals choose subject to the prices they confront and their incomes. It must be said, less I be thought unfair, that it is not all that clear that this really is what is in their minds, particularly when one reads their discussion of performance (p13-15). They tell us (p13) that "*'Health care expenditure (HCE) as a percentage of GDP'*, and *'HCE per capita'* are measures for **macroeconomic efficiency** of health care systems' but they also tell us (p29) that 'the amount... of health care services should reflect the informed preference of consumers'. Now, as a matter of fact (or, rather, of definition) HCE as a percentage of anything or per head of population tells us nothing at all (even as a proxy) about efficiency of any kind, nor would a monetary estimate of benefit as a percentage of something or per head. 'Macroeconomic efficiency', if it means anything, must mean that the total spend is such as to optimise the social benefit relative to the social cost. The fact, as reported by our authors (p13), that HCE as a percentage of GDP has been *rising* in

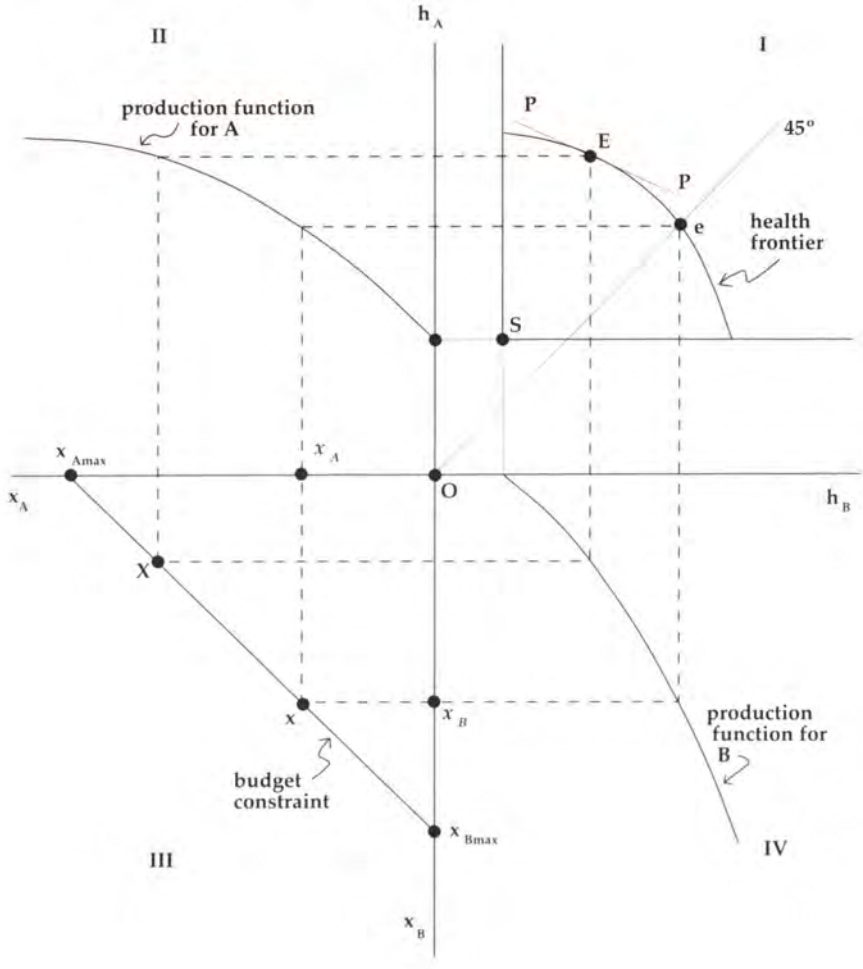
the United States cannot credibly be held to imply that the macroeconomic efficiency of US health care has been rising. Or should we take it that our authors want us to interpret the trend as evidence for a *falling* macroeconomic efficiency in the US? The ambiguity is plain. Likewise, the fact that the UK spends less on health care as a percentage of GDP or per head than many other developed countries, does not imply anything about efficiency unless one assumes that by some magic everyone else has their shares at the optimal level *and* the criteria for determining cost and benefit are appropriately the same across comparator countries.

Our authors' index of *microeconomic efficiency* is physician visits per head. This index is neither a cost nor a benefit indicator, but a measure of utilisation or, if turned upside down, a workload measure for physicians. So this, in international comparisons, is not going to reveal any relative efficiency or inefficiency in the NHS to other countries. Nor does it have any clear bearing on the issue of whether these quantities 'reflect the informed preference of consumers'.

Back to the objective of 'efficiency'

Economics has only one concept of efficiency, not a micro one and a macro one, and central to this concept is the idea of maximising some value function, such as utility, welfare or health gain, subject to constraints. Depending on the scope of the analysis, the constraint might be taken as the resources available to the NHS (where the system is judged efficient if it maximises the postulated value function given these resources) or, at a broader level, the resources of the whole

Figure 5 **Health care efficiency and equity diagram**



community (where the health care system is judged efficient if it allocates an optimal share to health care and maximises the value function given the share allocated to it).

The idea is at once so important and easy to lose sight of when one comes to try to apply it, that it is worth spending just a little time getting the theory straight. I hope you will forgive me for an economist's diagram that I use to illustrate efficiency in the context of a given 'budget' for health care. In Figure 5 I have assumed, for simplicity, that there are just two people (A and B) and that there is a fixed sum annually available for spending on health care. This budget is shown in quadrant III of the diagram as sum of money, which could all be spent on A (in which case A gets X_{Amax}) or on B (X_{Bmax}). Or, of course, it could be divided between them at any point on the straight line connecting these two points, which is called the *budget constraint*. The outcome of applying health care resources to A or B depends upon what economists call the *production function*. A production function shows the *maximum* rates of outcome that can be obtained at various levels of use of the inputs, assuming that at any level of opportunity cost, the mix of inputs (bed days, physician time, use of equipment, etc.) is optimised to maximise expected outcome. These functions identify what the authors quite correctly call (p150) 'productive efficiency'. I have supposed that the production functions exhibit diminishing returns so that, for constant increases in resource commitment under prevailing technology, additional health outcome becomes smaller and smaller. Production functions for A and B are shown in quadrants II and IV, where I have assumed that B is relatively sick and also has a greater capacity to benefit from health care over a wide range of expenditures.

I have also assumed that 'health' is the relevant outcome desired and that we have an acceptable measure of it. Each production function has its origin at the relevant individual's current health status or some appropriately weighted (and discounted) sum of future expected health without a health care intervention, and the outcome is the expected *change* in (the present value of) health that results from the application of health care resources. The co-ordinates of point S in quadrant I, the 'starting point', indicate the presenting states of health of the two individuals.

If we were to trace round the maximum health gain for A and B for different divisions of the budget in quadrant II between them, one would trace out the convex locus in quadrant I which is called the *health frontier*. This shows the maximum increases in health that are possible, given the budget in quadrant III, the presenting states, and the two production functions determined by prevailing technology in quadrants II and IV.

In the sense of production efficiency, *any point on the health frontier is an efficient point*. It follows that a system is inefficient if, for any reason, the allocation of resources between individuals (in quadrant III) results in a point in quadrant I that lies inside the health frontier. This is most likely to arise because the most efficient production technology is not being used so that, given any amount of resources devoted to, say, A, the health gain is less than that indicated by the production function in quadrant II. In common parlance, such treatments would be seen either as inappropriate, inefficacious, ineffective, or not cost-effective. A failure in any one of these respects for either individual will result in an outcome that lies below the health frontier in quadrant I. In my opinion, this source of inefficiency is the most prevalent in *all* systems of health care including the NHS (the epidemiology literature is replete with examples of wide and inexplicable variations in clinical practice, continued use of proven ineffective procedures, and the use – this is the largest category – of procedures that have never been subject to careful critical scrutiny, let alone tested for cost-effectiveness). A concern for this aspect of efficiency lies at the heart of the government's drive for a 'knowledge-based' health service and which is also driving its research and development programme, the meta-analytic function of the UK Cochrane Centre, and the no less important activities of disseminating best practice (the York Centre for Reviews and Dissemination) and trying to secure a contracting and incentive environment that maximises take-up of cost-effective methods of health care, which mainly means educating purchasers so that they can better identify true needs, and not just current mortality and morbidity, and then purchase truly effective services to meet these needs.

There is a big value judgement in the foregoing, which is that I have chosen a particular outcome concept – health. However, I am hopeful that the analysis so far can be tied in quite closely to our authors' analysis because they too place considerable emphasis on health status (proxied negatively by potential life years lost and perinatal mortality) as an objective for systems and as a measure of performance.

Some economists would push the idea of efficiency further – beyond that of *productive efficiency* – so as to embrace the idea of *exchange efficiency* – an efficient allocation of outcome *across individuals*. In the market system, individuals ('consumers' in the language of our authors) would form a judgement of the value of additional health to them and express this in terms of the purchase of appropriate inputs, given their income and wealth, insurance status, and so on. The relative marginal valuations of health implied in such a system can be indicated by the prices individuals would be willing to pay for additional health and these relative prices are shown by the slope of line such as the one I have labelled *PP* in quadrant I. If these were indeed the implied relative marginal valuations of health in our community of two people, then *E* on the health frontier is the allocative efficiency point and this, as you may readily see, would entail a distribution of the health budget between A and B shown by point *X* on the budget line on quadrant III. (I have used the 'implied' just now because markets will not, of course, directly reveal the marginal values put upon *health*, but those put upon *health care*. The 'shadow price' of health can, however, be inferred from these, given the production functions.)

However, I do not myself much like this way of extending the idea of efficiency, because I think the sort of principle that ought to guide interpersonal allocation ought to be much more guided by judgements of fairness or equity. I would prefer to see the idea of efficiency in health care as being to do with the supply side, and this seems to me to be the way the government also sees the matter. I personally tend to prefer points closer to *e* on the health frontier in quadrant I, which, since it lies on the 45° line through the origin in quadrant I, indicates (complete) equality of health between A and B. Less strongly, I prefer points on the frontier closer to the 45° line than the starting point *S* is. Note, incidentally, that aiming at greater equality of health will generally involve an unequal allocation of resources between individuals (tracing back from point *e* to the budget line does not bring you to the half-way point along it, X_A is not equal to X_B). Note also that going for equal health is not the same as going for equal health *gain* – which would involve preferring a point as close as possible to where a 45° line passing through *S* cuts the health frontier.

Now it is not my purpose to become bogged down in theoretical niceties, but the analysis we have just done does enable us to make some quite important distinctions (for example, about efficiency in production compared to efficiency in interpersonal allocation, or that going for a more equal distribution of *health* in the community may involve quite unequal allocation of health *care* resources within the community, or that the final distribution of health in the community depends upon presenting health states – and the non-health care determinants of these, the relevant production functions, and the distribution of health care expenditures) and it also enables us to frame a discussion of the efficiency or inefficiency of the NHS more carefully. In particular, it becomes clear that, *if health maximisation is the objective*, particular attention needs to be paid to the sorts of technologies that are used in health care and that, especially, the system needs to be designed so far as possible as to maximise the appropriate use of cost-effective technologies (in the broadest sense of 'technologies').

'Macroeconomic efficiency' revisited

What of our authors' concerns about 'macroeconomic efficiency'? This can now be seen to be a question of the location of the budget line in quadrant III – greater resources for health care will push it out further from the origin and fewer would move it towards to origin. As it moves away from or towards the origin, so the health frontier moves away from or towards the origin in quadrant I, *assuming that efficient technologies only are used*. And here is the rub. In a system like the British one, governments will be reluctant, quite apart from any narrow mindedness from the Treasury, to expand the health care budget if the increases went into income increases for existing resource owners (such as doctors and nurses) rather than additional inputs, or if any real increase

in resources increased the use of ineffective health care technologies. In such cases, the budget line might move out but the use of inefficient production functions would still result in an outcome point beneath the health frontier in quadrant I of the diagram – and it may even cause the frontier to shift towards the origin. In these cases, additional health care spending yields no ultimate additional benefit to the clients of the system.

Our authors note that does not seem to be much of a correlation between international health care expenditures and their measure of health status. There are at least three reasons why this may be the case:

(i) some systems (the US notoriously) afford (some) workers in the health sector substantial rents in the sense of higher incomes than a truly competitive market would permit (here one should never lose sight of the happy symmetry between income and expenditure – more expenditure on health care always and invariably means an exactly corresponding increase in incomes for those in that sector, so calls from those within sectors for more *expenditure* may equally be seen as calls for more *income*);

(ii) systems differ greatly in their expenditures on relatively ineffective (including grossly under-utilised) technologies (again the US is notorious);

(iii) *current* health status cannot anyway be expected to be much influenced by current health care expenditures, even if effective, partly because current health is determined mainly by factors other than health care, partly because the beneficial effects of health care emerge only after the passage of time, partly because current health status is mainly determined by factors occurring in the past rather than currently, and partly because the measures of health themselves are rather poor, being both crude and incomplete (I mean no criticism here – the availability of data limit what you can do at the macro level).

Is the treatment appropriate?

I do not propose to take each of the elements of their Prototype in turn. Space forbids that. Let us, however, note the general character of their proposals.

(i) A Guaranteed Health Care Package

The first striking feature is the proposal for a Guaranteed Health Care Package (GHCP). I do not have much quarrel with that but, then, there is not much to quarrel about since any quarrelling would be bound to focus on contentious issues to do with the contents of the package. It may be a good idea for the NHS to adopt a GHCP (through its definition would be no less contentious).

(ii) Compulsory competitive health insurance

The second striking feature is the proposal for competitive insurance coupled with a much more aggressive use of co-payments. The arguments for this seem to be advanced on efficiency grounds, though they are not systematically set out. Where in terms of the diagram are the efficiency gains likely to lie? One possibility would be that our authors expect their proposals to generate a more optimal overall expenditure on health care, which I take to mean an increase! They expect the budget line to move out and that this will, in turn, push out the health frontier. Well, since the compulsory two-part premium is effectively an ear-marked tax, it is certainly possible that this will happen. But it would depend, of course, on political judgements about acceptable premium levels and public subsidy, and we really need a theory of public choice to enable us to say how government would exercise its discretion. In any case, if there really are grounds for optimism in this respect, would it not be simpler to create a National Health Service Fund, hived off from central government, which would receive the earmarked income-related premiums of the public, and which would then allocate this to existing purchasers? That would create as much 'openness' as our authors' suggestions, enable the public to express their views on the adequacy of health care spending at election, and also enable a reduction in, say, income tax yield equal to the current expenditure on the NHS.

They also expect that such a mechanism would enhance the productive efficiency of the system by weeding out inefficient technologies. I cannot myself see the mechanism by which this would happen, unless the new insurers were somehow more effective purchasers for the needs of their clients than current purchasers. But why should

they be? In my analysis, the main reasons for inefficiency of this sort lie in the availability of information on best practice for maximum health gain and an environment in which purchasers have the ability to create incentives for providers to use best practice and providers the means of controlling (mainly) physicians so as to adopt it. Our authors have nothing to suggest that is additional to current policy or structure in this respect.

Or it may be that our authors think that a restructured insurance function would move society to a more desirable point on the health frontier than where they think we currently are. Well, here it needs to be said that premiums are not themselves the cost of using the service and so they themselves will not cause much moving, though they may have important (and I would guess regressive), consequences for the sharing of the burden of health care finances.

I think the Study is frankly naive about the workings of what the authors hope would be competitive insurance. Although they tell us nothing of the billing and monitoring mechanisms to be used, it is quite clear that the transactions costs of competitive insurance are bound to be high (I set aside the costs to government of monitoring and regulating the industry in order to maintain its competitiveness). At least, high in comparison to the single monopolist insurer in the form of the government itself or an agency to which the insurance function has been allocated (I presume through competitive tender!). They minimise the dangers of cream-skimming, which I conjecture would be substantial. It is very easy for a company to turn away potentially unattractive clients (for example by having user-unfriendly application forms, unhelpful responses to telephone enquiries, discourteous front office staff). If I were to run such an agency I have absolutely no doubt that I would easily be able to erect informal mechanisms to cream-skim in ways impervious to any regulatory correction and which, at the end of the day, when my bottom line results raised eyebrows, I would be able to claim, without fear of authoritative contradiction, simply reflected my superior efficiency coupled with the free exercise of consumer choice. But it would all be mostly sham of course! At any rate, detecting my sham would involve a costly, and presumably public, bureaucracy.

(iii) Use of co-payments

Would the more 'rigorous' use of co-payments for 'consumers' (including co-payments for components of the Guaranteed Health Care Package) shift the distribution of health in a way most of us would think desirable? Further, and more fundamentally, who is the consumer? One of the odd things about the economics of health systems is that nearly everyone agrees that the principal character who determines what resources shall be used, and for whom, is a doctor. This is only to be expected. Patients have very little understanding of medical technology and effectiveness (even less than doctors!). They are usually worried and anxious at the time of consultation, most are elderly, many are confused, and many are frightened. While they have the right to have their values and personal circumstances understood and respected by their doctors (this is, after all, one of the main reasons for having a system of GPs) in most cases *decisions* about resource commitment are actually taken by the doctor. Patients may *receive* care and, in that sense, be consumers, but they are unequal partners in the *decision* to consume. In this context it is odd to extrapolate from other walks of consumerist life, when personal judgements about what to buy are much less clouded by fear and anxiety, and are less likely to be delegated in whole or part to a professional agent (who may have his or her own personal agenda to pursue which may conflict with the patient's) and, via this extrapolation, suggest that financial *brakes* (note we are now trying to reduce expenditures, not increase them) be applied to the *patient*. Why not the *doctor*? What are the grounds for supposing that the greater use of *patient out-of-pocket payments* would enhance the efficiency of the system? None are presented and I cannot imagine what they might be. Isn't it all a bit like blaming the overcrowding in prisons on the absence of co-payments for their use? The analogy may not be perfect – after all, people are not sent to prison in the same way of for the same reason as they are sent to hospital. But it is apt in the sense that the decision is largely taken by another party.

Would it not, therefore, be more sensible to charge the doctor? After all, he or she is the real decision taker and he or she is in a much better position to form a judgement about the legitimate claims of one patient relative to another on the inevitably

limited resources available to maximise the community's health. But, then, is not that what we more or less have with fundholding (GPs with budgets to purchase health care at prices set by other providers) and increasingly in the internal budgeting systems in use in hospitals? If it ain't broke, why fix it? I am sure that our authors do not intend this but there is an unmistakable whiff of victim blaming in these proposals. The patient is a victim of ill-fortune or self-induced calamity, so let's saddle him or her with further burdens, even though there is no perceptible reason for supposing that these burdens will, even in subtle indirect ways, lead to substantive improvements in either welfare or health. I do not object to modest charges, mainly as fund raisers. But 'rigorous' charges? There is disturbing evidence, especially from the USA, that even minor user-charges subject to a modest annual maximum annual outlay per insured person, deter – and deter particularly utilisation by children and the poor. If we are to deter people from early consultation with GPs, which is the stage at which preliminary (and sometimes final) judgements about the need for medical care are made, then there is the grave risk of introducing what would actually be a feature that would substantially impede the system's ability to deliver health gain – for it would become increasingly difficult to *identify* the existence of the very needs the system is there to meet, let alone set about meeting them. But, then, our authors do seem to have it in mind to have extensive exemptions from copayments, even in a 'rigorous' system. But how would that differ from what we now have? Whose consumption are they trying to deter? How rigorous is 'rigorous'? And whose bureaucracy would manage a system with exemptions?

A part of the Study's case for co-payments is 'to make patients more aware of the cost of treatment' (p 1133). I find this argument at best incomplete. It is incomplete partly in that it is not clear what would follow in the way of behaviour from such awareness, apart from a normal responsiveness arising out of any elasticity in demand, which is likely, as I have argued, to impair the cost-effective maximisation of health gain. It is incomplete further in that paying only *part* of the cost at the point of use is in fact to receive a *false* signal about (marginal?) cost. We already know that much of the British electorate thinks that it has 'paid its share' of the public expenditure on health care via National Insurance. If anything, then, the message received by patients would be that the care they receive cost much less than it actually does. This proposal does *not*, then, produce the transparency claimed for it.

(iv) Enforceable contracts

The authors' advocacy of enforceability seems much too bold in our current state of knowledge. It is not clear what the relationship between purchasers and providers is in terms of contractual obligations, statutory obligations, and obligations arising out of tort and restitution. Additionally, effective contract enforcement is crucially dependent upon information being available that will stand the test in determining whether or not obligations have been carried out. Such information concerns, among other things, information about service mix, quality, and risk. A further complication is that the status of patients in the contracting process is problematic. The traditional contract doctrines of privity and consideration preclude third parties like patients from enforcing contracts even when such contracts are made to further their interests. Even when all these issues have been resolved there would remain the question of the behavioural and economic implications of them.

It therefore seems clear that much more experience and research is needed here and I frankly doubt whether the general conclusion to which we might eventually come would be to make all contracts legally binding. The current arrangement is that contracts between purchasers and providers are not legally enforceable as *contracts* but are subject to arbitration by the Secretary of State. This is itself a murky legal area and suggests, along with all the other considerations, that there is much to be yet thought about concerning the legal status of contracts.

(v) Insurance, moral hazard, externalities and agency

There is a good deal more that might have to be said once the proposals were got up in greater detail. For example, would premiums be set for individuals or families and whose income would

count in the income-related bit of the premium, whose health experience in the health-related part of the premium? Are these matters which could be left to the market to sort out? If the government chose to have a health policy, as seems reasonable to suppose it might, what would be the mechanisms by which such a policy might be implemented? How would the vexed interface between the health services, conventionally defined, and local authority services be managed under the proposed reforms? We have recently seen a major switch in the location of care away from institutions to the community – 'there's no place like home' (even if it's in a cardboard box under a railway arch). How would such policies be developed and managed under the new system?

All systems of health insurance have their own ways of resolving moral hazard problems of various kinds – those that arise *ex post* at the consumption end when insured parties have an incentive to demand more when the user-price falls as a result of insurance, those that arise (also *ex post*) when providers see opportunities for billing practices that inflate the true costs of effective care, and those that arise *ex ante* when insured parties face a reduced incentive to avoid the circumstance that may lead to their making a claim on the insurer.

There is an undoubted potential inefficiency inherent in moral hazard – 'potential' because although moral hazard tends to increase consumption, whether it does so beyond optimal rates depends on the extent of externalities that lead the social optimum rate to be one higher than the individually selected rate. Although the authors refer to this phenomenon (p 144), they claim that there are few such effects other than that of communicable disease. This sort of eternality has been largely internalised by the NHS and public health measures in the UK, as have the utility interdependencies to which they merely refer in a footnote on the next page. However, the fact (as I conjecture it to be) that these have been largely internalised does not, of course, mean that they cannot be 'uninternalised' if the system were to be changed. These effects are thus a potential (and potent) source of *inefficiency*. The standard market response to moral hazard (of the consumer's *ex post* kind) is co-payment but we have already seen that there are grounds for doubting the relevance of this mechanism in a system aiming to maximise health.

What would be the future role of GPs in the reformed system – still gatekeepers, still the coordinators of community and institutional care, still those professionals chiefly charged with the task of knowing a good deal about the 'whole patient' and able to make clinical (and other) judgements in the context of as a complete an 'agency relationship' as probably exists anywhere in the world? Would they still be those who purchase from the secondary sector for their patients? Or will the new system require the patient to make an initial diagnosis to decide whom to consult (pain in the shoulder therefore I shall go to a physiotherapist), give him or her direct access to outpatient clinics in hospital, and require him or her to make their own arrangements for after care, community services, and all the rest?

And what of the government's own insurance fund – the NHF? (p 1130), which is supposed to operate on a level playing field with the private insurers, and without public subsidy, but which seems likely to wind up with a highly unbalanced portfolio of risk, if only because the poorest will be the sickest?

I do not ask these as rhetorical questions but as ones that need addressing before a full evaluation of the proposals can be made. And they need addressing because they are important matters that have the potential for major disturbance both to the efficiency and the equity of health care in the UK. Nor do I ask them in the fond belief that the NHS as it is, and as it is now evolving, has found the perfect answers. I ask them because the onus is on those who propose change to be clear about what's wrong, how significantly wrong it may be, what's needed to put it right, and how much improvement it may be reasonable to expect as a result. Reformers do not have to promise the earth, but we do need to know the approximate shades of green of the grass on the other side. And the burden of reasonable proof lies with them.

(vi) Patient choice

Another principal objective of the NHS since the recent reforms has been to widen patient choice. Here we confront a large number of difficult issues, most of which have to do with the 'doctor-patient relationship' and the 'agency role' of doctors. In its idealised form, this relationship consists of two

individuals coming together to determine a course of action. The doctor is supposed to bring to this relationship an expertise in the probable consequences of alternative courses of medical action and a skilled judgement as to what procedures are likely to be effective. The patient brings personal circumstances, values and preferences, perhaps occasionally some medical knowledge, and is frequently confused, frightened and having difficulty articulating his or her perceptions, even to a GP with whom they may be very familiar. The art lies either in the patient transmitting the relevant personal circumstance and values for the doctor to fit them into his or her portfolio of medical knowledge so as to make a recommendation, or in the doctor transmitting the medical knowledge for the patient to fit into his or her portfolio of personal knowledge so as to make a decision.

Several things are required if this relationship is to work well:

- the first thing is that the doctor be thoroughly competent in his or her expertise;
- the second is that the relationship be such as to encourage trust on both sides;
- a third is that the resource and reward environment in which the doctor operates should not cause his/her advice to be compromised by factors that are not a legitimate part of the relationship while, on the other hand, enabling him/her to form a judgement about the priority that claims on resources by other patients of their own (they are not typically in a good position to judge the claims made by patients on other doctors relative to those made by their patients on themselves) and which can often involve the tactful denial of care of some types to some patients whose need is judged to be of very low priority);
- a fourth is that the willingness of the patient to come forward to have questions answered, anxieties allayed and needs assessed should not be prejudiced by irrelevancies such as co-payments;
- a fifth, on which I want momentarily to focus, is that the balance between the weights given to the doctor's and the patient's judgements must vary according to circumstances.

There are some cases where the doctor's judgements are extremely marginal, for example, shall the patient have a private room in hospital with bedside office facilities? In such a case, and assuming that having or not having these facilities really is irrelevant for the medical outcome, there is every reason to permit free choice, out of pocket payment, and private supplementary insurance, there being no obvious threat to either health or equity from the exercise of such choice. Such possibilities are clearly implementable within the current public and private arrangements. In other cases, the decision must be balanced between the two. For example, in many situations when the question arises as to whether a woman shall have a caesarean section, and especially in difficult decisions where there is a relatively low risk of a good outcome from a particular treatment and quite a high risk of a bad outcome – the doctor may be quite good at judging the *risk* but the patient is more expert in judging the *acceptability* of the risk. Another case requiring balance is where there are difficult trade-offs, for example in the case of cancer of the larynx, where surgery may prolong life briefly but at the cost of the loss of voice and medical management may involve a shorter life expectation but use of the voice for longer.

At the other extreme are choices where the patient is in no position at all to contribute to the decision, as when he/she is unconscious and an immediate decision is required (though relatives may be legitimately involved in lieu). Some limitations of choice may be more damaging to patient freedom and autonomy than others. It is a characteristic of some systems (for example, Preferred Provider Organisations in the US) that there is a limited choice of hospital doctors from whom to choose. This undoubtedly reduces the range of choice but, if there are good other grounds for limiting choice in this way, the loss may be judged acceptable provided that the controlling doctor (say, the GP) has confidence in those secondary doctors to whom referrals may be made and the patient too has a similar confidence in the GP's judgement. Systems which (or doctors who), however, deny patients the opportunity to have their values properly taken into account are unacceptable. Systems which arbitrarily deny choice (even when there is a willingness to pay) over the quite considerable range of 'hotel' type services which necessarily

accompany much medical care, are likewise unacceptable. The NHS plainly has a long way to go in developing the latter freedoms of choice. But creating these opportunities requires no great radical reform.

Which are the choices which our authors wish to see expanded and why are their proposals needed in order to bring this expansion about? Again, these are not rhetorical questions. They need answering before one can enter in to a useful dialogue on the meaning of patient choice, those elements to which greatest importance is attached, the principal deficiencies of the NHS that need putting right, and the various means at our disposal for putting them right. I miss such a discussion in the Report. Indeed it seems quite likely that the introduction of competitive insurance (and fee-for-service physician remuneration?) could all too easy militate against the ideal relationship, as I have described it, for example, by directly encouraging the use of treatments that are to the doctor's but not the patient's advantage, or indirectly by encouraging the hospital sector to invest in 'me-too' technologies that involve hospital doctors operating too low on their learning curves for effective (let alone cost-effective) care.

The short term proposals

The short term recommendations (p 1124-6) are (I omit any that are the same as long term ones):

- increase the rate of introduction of capitated GP and Health Authority purchasers;
- increase overall funding;
- introduce an earmarked tax called health premiums and reduce other tax equivalently;
- depend less on block contracts and use prospective cost per patient instead;
- increase the use of co-payments to include primary, secondary and tertiary care (with appropriate exemptions.

I tend to support the first three of these and reject, for reasons already rehearsed, the last one. I am not sure what to make of the authors' contracting proposals. On the one hand they want to stop block contracting; on the other they want greater flexibility. No discussion of optimal contracting can ignore the transactions and enforcement costs that are entailed. It is odd that block contracts, which *may* be optimal at least for some packages of care, are to be outlawed. In general I incline to an evolutionary approach: not knowing a *priori* what is right one must rely on experience.

I ought, however, to say in relation to the first recommendation that there is a major tension in the present system between purchasing Health Authorities and purchasing GPs. The former are charged with identifying the needs of their catchment communities (which I regard as the single most important feature of the recent reforms) and arranging for it to be met; the latter deal with the needs of their own patient group within the larger group. It is plain that coordination and consistency are required and that the ability of Authorities to discharge their duties was being increasingly prejudiced as their income was topsliced to fund GPs. It would have been interesting to have read an analysis of this issue in the Study and what role they see in the future for Family Health Service Authorities, whose merger with DHAs is the current policy response to this problem.

Although the Prototype seems to envisage the removal of purchasing District Health Authorities, the specific short term proposals for the UK allow for their retention, with 'consumer' choice of Authority. It seems, then, that we are to envisage three sorts of purchaser: GPs, Health Authorities and competitive insurers. This seems to be a recipe for chaos, especially if the HAs were also competing for clients' custom. How, for example, would differences be reconciled if, as seems likely, GPs and competitive insurers felt obliged by market pressures to purchase services judged ineffective by Authorities, or that did not address the major needs identified by Authorities? And what sort of information base is to be supplied (and by whom) to inform better the purchasing choices of GPs and competitive insurers, granted the already inadequate base that exists for purchasing Authorities, the very wide variability of GP competence in epidemiological understanding, and the general ignorance of the public for whose custom these various agents will be competing?

There is something of a *curiosum* in the proposals to which I have not referred so far: that there

should be price ceilings on some forms of treatment, such as geriatric care (p 1133). This seems odd, in part because geriatric services (or at least the health care services used by the elderly) are such a large part of total expenditures and the proposal seems almost an after-thought, and in part because it is so out of line with the market orientation of the rest of the Study. What shall these ceilings be, who shall set them, and who monitor and enforce them? What, anyway, is their justification in terms of the economic efficiency that underlies the whole Study?

Final comments and conclusions

I have focussed my comments mainly on the 'long term' treatment recommended for the patient by the authors rather than the intermediate treatment they recommend. The reason for this is plain – should the long term treatment be deemed not appropriate or cost-effective, then we need not enquire too diligently into the intermediate treatments. Moreover, the short and medium term proposals are in large part contained within the long term ones, so any discussion of the latter will have embraced a good deal of the former. I must say, however, that I have grave reservation both about the diagnosis and the recommended treatment. My analysis has not been made the easier for the absence of a clearly defined set of objectives. I have tried to be rather clearer and specific in my own reactions. My own view is that the patient's condition is not such as to warrant the draconian measures proposed and that even if it were in a parlous state, I am not convinced of the efficacy or cost-effectiveness of the treatments recommended. Nor am I convinced that the objectives sought, once they were made clear, are those to which most of us would want to subscribe.

There are also many gaps in the analysis. Changes as radical as those proposed for the UK generate a host of important questions – to some of which I have alluded – and which would require a good deal of careful thought and investigation if the dangers inherent in them were not to swamp potential benefits from such changes, if there are any to be had. Issues such as the definition of 'need', how best to promote effective medical care, the transaction costs of competitive insurance, the sorts of patient choice that need expanding, adverse selection, moral hazard, cream skimming, externalities, equitable distribution of benefits, enforceability of contracts, and so on, are complex and best discussed in the context of concrete proposals and an awareness of the nature of the problems that can arise.

Nor, I fear, ought anyone to take the limited forecasting exercise presented in the Study (p 73-80) too seriously. A good idea of the predictive power of estimating equations can be given if a subset of the data are used to estimate the equation, whose predictions for other years in the data set can be compared with the actuals for those years. It is not entirely clear what our authors did from the Report, for the estimation period of the 'supply equation' is stated (under the equation) to be 1960-1986, but the text refers to an estimation over the period 1960-1990. There is a comment that the equation for the shorter period does not explain the period 1986-1990 well, and this is not surprising since these equations have been shown to be unstable elsewhere. Their estimated income elasticities are higher than most of those found in the literature, which gives grounds for caution. There has been a considerable discussion of these procedures in issues of *Journal of Health Economics*, which is not referred to, where methodology and the literature are discussed in greater detail. Moreover, the projections of 'need' are based *not on UK data but on those for other countries*, on the basis of which it is said (p 78) that UK current need is for 9 per cent of GDP to be spent on health care rather than the current 6.1 per cent (1990). I have commented earlier on the weakness of this kind of comparison but to use other countries' estimates of need as a proxy for the UK's seems extraordinary. Taken together, these considerations suggest that the somewhat alarmist warning (p 80) about an increasing and unsustainable shortfall between need and supply ought not to be taken too seriously. If there is a shortfall it needs to be identified and detailed in other ways – ways which have a closer relationship to the economic concept of efficiency and the ethical concept of equity.

My own view, to put it rather generally, is that current policy towards the NHS is, in broad terms, right in terms of *structure* – what I have called 'demand-side socialism', which is, of course, quite consistent with private ownership (and for-profit

motivation) on the supply side, provided that providers act at the behest of purchasing Authorities and GPs. I think the objective of maximising health gain is appropriate and that the separation of provider and purchaser has had, and is having, a useful effect in forcing attention (especially purchasers' attention) on issues of effectiveness and need and is galvanising the research and development community into the provision of a demand-led set of methodologies and results that, over time, stands a good chance of revolutionising the overall efficiency of the system. I am less persuaded that competition between providers is likely to yield efficiency gains of significance apart from the sort of relocation of activity from high-rent sites to low-rent sites that is currently raising difficult questions of 'exit' for policy makers. I also take the view, however, that the many distributional issues in health and health care (both on the financing side and the delivery side) need much greater thought, discussion and research, particularly at the policy-making centre and at the level of the purchaser.

I do not think that the case for radical change in financing methods has been made, though I do feel sympathy for the idea of hiving off the compulsory public insurance function. An independent National Health Fund funded out of earmarked contributions proportionate to average income tax rates has attractions, particularly if it could be so designed as to cause it to fall outside public expenditure. I, however, would not see this as a residual sort of fund of the kind of envisaged by the authors. There must be some way of operating a compulsory insurance system, monitored and regulated by central government, that was not a part of the tax system (even if the Inland Revenue was the agency via which – for a fee – the contributions of taxpayers were collected and delivered to the Fund). This would not completely insulate health care expenditures from the probably arbitrary limits imposed by macro economic judgements, and it would evidently fall to government to determine or control the premiums charged, but it would – or it could – create that magic transformation through which ('unproductive') public spending was turned into ('productive') private spending, and 'non-wealth-creating' production was transformed into 'wealth-creating' production. This is, of course, merely to swap myths. Unfortunately, myths are hard to get rid of but they do have consequences, some of which are bad and some good. Replacing a myth with bad consequences with one that had good consequences would be no bad thing and the main good consequence would be to give the public an opportunity more directly to determine the total spend on health care.

I am therefore much more modest in my own proposals for reform. I prefer the UK Cochrane Centre to competitive insurance as a means of securing greater efficiency, public purchasing health authorities to private health insurers as a means of revealing need, and GP gatekeepers to co-payment-determined independent access to the entire system as a means of investigating *prima facie* need and coordinating the work of providers for individual patients. I think health care is probably under-financed in the UK and would welcome a new mechanism to correct this provided that increased financing was translated into increased cost-effective resource use and not rent-seeking and waste. In short, I think what we have in Britain is a nut of a problem and our authors are offering us a sledgehammer which not only smashes the nut to smithereens but may also break our toes, or backs, or both. It also seems altogether premature to jettison the current structures when they have hardly yet had time to deliver on their promise. The prospect of subjecting the NHS to yet another upheaval is too awful to contemplate, even thought the evidence is that managers would respond as energetically as they have to *Working for Patients* and all its *sequelae*. (In passing, one might note that the alleged resistance of the NHS 'bureaucracy' to change is quite unsustainable. One can only marvel at the way in which NHS management has responded to the recent challenges of managing change).

Let me end with some wise words from C E Lindblom: ***'A market is like a tool: designed to do certain jobs but unsuited for others. Not wholly familiar with what it can do, people often leave it lying in the drawer when they could use it. But then, they also use it when they should not, like an amateur craftsman who carelessly uses his chisel as a screwdriver.'***

3 THE CASE FOR THE NERA PROPOSALS FOR THE REFORM OF THE NHS

by William Laing

Introduction

In writing this commentary on the NERA study, I shall adopt an approach which I hope will not be viewed as unfair. I have had the advantage of reading Culyer's piece, which is broadly critical, before writing my own, which is broadly favourable to the Prototype competitive health care funding system. This means that I am in a position analagous to the defence lawyer who is able to listen to the prosecution case before having the last word for the defence. I shall specifically deal with some of the criticisms raised by Culyer, but not so much to seek debating advantage as in the genuine belief that it will promote constructive debate on the NERA proposals.

As Towse and Culyer outline, the NERA study *Financing Health Care* runs to some two volumes and 1453 pages and draws on the experience of 12 countries' health care systems. It would be a truly daunting task to write a commentary which did full justice to the entire work. I am, however, going to simplify the task by concentrating my attention on what I take to be the core of the report, which deals in a balanced way with the problems (or challenges, depending on your viewpoint) that have to be resolved in setting up a market in health care insurance which could deliver the twin objectives of efficiency with social solidarity. Whether or not you agree with NERA's agenda or conclusions, they, do invite an open and honest debate about the key ethical, political and economic issues of health care funding and delivery. I confine my comments to the NERA Prototype in the context of the United Kingdom's health care system.

There is some looseness in NERA's argument. For example, and this is a point picked up by Culyer, the discussion of performance and output of health care systems on pages 13 to 15 adds nothing at all to case for NERA's proposed reforms and indeed detracts from the argument by the rather odd use of 'physician visits per head' as a measure of the relative macro-performance of different health care systems and by using 'health care expenditure per capita' and 'health care expenditure as a percentage of GDP" as measures of micro-performance. As Culyer rightly point out, these measures tell us nothing whatsoever about 'microeconomic' or 'macroeconomic' efficiency. This particular part of the analysis report would have been better left out altogether. But these shortcomings should not divert attention from the core argument on the NERA prototype, which is developed clearly and logically.

My commentary on the NERA prototype considers in turn:

- the role of consumer sovereignty in health care systems;
- the content of the NERA Prototype;
- its place in political philosophy;
- the merits of the Guaranteed Health Care Package;
- the likelihood of the Prototype getting more resources devoted to health care, and the potential cost;
- the positive impact on consumer choice;
- the implications for productive efficiency and the dropping of ineffective treatments;
- the forces for dynamic efficiency that would be set in motion;
- the need for regulation.

Lastly I set out my overall conclusion.

Consumer sovereignty

A hypothetical 'best' health care system, according to the authors, is one that is:

> 'organised to satisfy consumers' preferences as completely as possible within the constraints of willingness to pay for health care' (p 139)

NERA, therefore, unequivocally identifies consumer sovereignty as its guiding principle, and the maximisation of consumers' preferences as the main object of health care reform. This is at odds with those commentators who stress information asymmetry between consumers (patients) and doctors and who consequently argue that the consumerist model for maximising social welfare (ie through the aggregation of millions of individual consumers' purchasing decisions in the light of individual preferences) is inappropriate for health care.

NERA asserts that no health care system, at least in the twelve countries studied, achieves the goal of maximising the satisfaction of consumers' preferences:

'...in some countries large and increasing amounts of resources have been flowing into the health care sector, while in others expenditure has been controlled in apparently arbitrary and perhaps unjustified ways.'... 'Policy makers in many nations feel that their health care systems are inefficient in some significant way, and our own research confirms that impression'. With reform, it is felt, 'more health care could be purchased for the same resource spending', or [presumably referring to the UK] 'more resources would be made available' (p 139).

It would be difficult to disagree with NERA's assertion that health care systems generally fall short of optimal performance. Optimal performance is a pretty tough standard to meet. The issue, however, is whether the UK health care system really does have fundamental structural problems, and whether these problems are so pressing that they can only be addressed satisfactorily by another radical reform of the NHS (another 're-disorganisation' of the NHS, to use a phrase coined by Alan Maynard). I shall return to this point later.

NERA then asks what are the objectives of health care systems. Two broad objectives are identified, efficiency and social solidarity. These objectives are not rigorously defined, but there is a discussion of how one may trade off against the other, both in the body of the text (pages 150-156) and in Annex 3.1. (pages 226-229). The word efficiency is used by the NERA authors in a utilitarian or 'welfarist' sense, where the level of 'social welfare' within a given community can conceptually be measured as the sum of all individual utilities among members of the community. Few commentators would raise any objection to this sense in which NERA uses the term efficiency, which is consistent with the concept of maximising 'health gain' as the efficiency dimension of health care objectives. But where the NERA analysis becomes more controversial is in its treatment of the 'equity' dimension. Essentially, the NERA authors adopt the Rawlsian social contract approach to 'equity' or 'justice' as a necessary counterweight to the rigours of a purely utilitarian distribution of health care resources. As the authors point out, unfettered utilitarianism can lead to a distribution of benefits which may be viewed as extremely unfair, because it shifts resources to recipients who have the most capacity to benefit, regardless of the health status that the recipients already enjoy. Indeed, some people in an idealised utilitarian state may be left with no health care at all. For example – and this is not an illustration used by NERA – the cost per QALY of hospital haemodialysis may be such that a rigorously utilitarian Secretary of State for Health (or Director of Healthcare for the State of Oregon) would rule it out entirely and leave those people who cannot get a well matched donor kidney, or who cannot cope with home dialysis, to die.

NERA then describes, in Section 3.4 of the Study some of the options for funding health care that have been suggested in the economic literature. The central problem, according to the authors, is that:

'a freely competitive market, while theoretically attractive, generally leads to risk selection by insurers. It therefore fails to meet society's desired level of social solidarity. Non-market solutions, on the other hand, generally lead to productive inefficiencies and a poor allocation of resources' (p 157).

The prototype

NERA's prototype health care funding system is then set out in detail in Section 3.5. There are 15 core recommendations, reproduced on pages 11-13 of this book, which are intended to be relevant to any country considering reform of its health care funding system. Their content may be summarised as follows:

- a Guaranteed Health Care Package (GHCP) should be defined, detailing services that everyone is entitled to, regardless of ability to pay;
- insurance funds, both for-profit and not-for-profit, should take over responsibility for financing most health care services;
- all citizens must obtain GHCP cover from an approved insurance fund;
- insurance funds must accept every individual who applies for GHCP cover on reasonable terms;
- part (typically the bulk) of enrollees' GHCP premiums will be based on income. In practice, the government may collect this through the tax

system. These income related premiums (or taxes) will be paid into a central fund. The central fund will then pay risk-adjusted capitation fees to the insurance funds, for each of the enrollees they have attracted, at rates equal to each enrollee's expected annual consumption of GHCP services. The central fund's risk adjustment will not, however, take into account 'lifestyle' factors which may have a bearing on expected medical care costs and which are under the control of enrollees;

- the balance of GHCP premiums will be paid directly by enrollees to their chosen insurance fund, and this risk-related component of the GHCP premium may be set at the discretion of the insurance fund to take account of any residual risk related to lifestyle factors;
- there will be mandatory co-payments for health care services included in the GHCP;
- people will be entitled to buy supplementary insurance from their insurance funds, to pay for services which are not covered by the GHCP, or to buy better amenity or quality in those services which are part of the GHCP. Insurance funds will have full discretion over the premiums they charge for these additional services;
- insurance funds should negotiate freely with providers of health care services and contracts should be enforceable at law. All potential providers should have unregulated access to the health care market, subject to meeting medical qualification requirements. Insurance funds should not own provider units and nor should they accept commissions from them.

In the NERA prototype, the residual responsibilities of government agencies are:

a) defining the GHCP
b) setting the proportion of GHCP premiums to be met by (i) income related payments into the central fund and (ii) direct, risk related payments to insurance funds
c) setting the risk adjustment formulae for non-lifestyle factors and redistributing income related premiums to insurance funds
d) regulating competition between insurance funds and providers
e) setting up a safety net health insurance fund for people unable to cope with the new system
f) paying directly for public health services and for teaching and research.

A social market philosophy

Clearly, the NERA report should be seen as a contribution to a long term debate. NERA's proposals will not come to fruition, if at all, for many years. The prototype is far too politically contentious for it to be viewed as a set of 'technical' proposals by a group of economists for the reform of health care funding. In the UK, the reality is that few people with Labour sympathies would give it serious consideration, first because of its market orientation and second because, by allowing people to top-up their basic health care entitlement at marginal cost, the NERA proposals would make two tier services an integral part of the mainstream system for health care funding – something which would be wholly at odds with the NHS principle of equal access regardless of ability to pay. Those on the right of the political divide are more likely to sympathise with the market orientation of the NERA prototype, though politically it is inconceivable that it could form part of a Conservative manifesto for the next general election.

Having said that, many ideas that appeared outlandish within living memory have now become political reality. Examples include privatisation of utilities and the sale of council houses. It is not inconceivable that a similar transformation could take place in the health care funding debate. In this spirit, the commentary which follows takes as its starting point not what is politically possible today, but what may be possible in 5 or 10 years time.

What are the intellectual and political traditions that the NERA proposals stem from? Certainly they can be seen as in the tradition of economic liberalism, with its emphasis on markets and pro-competition policies. But the idea of the Guaranteed Health Care Package is more in the political liberal tradition, with its concern for open government, defined rights and written constitutions. The prototype as a whole can perhaps best be seen as an example of social market thinking. In his *Restatement of Economic Liberalism*, Samuel Brittan (1990) refers to the

history of the term 'social market' and the fundamental idea expressed by Muller-Armack that market freedom should be combined with social balance (or solidarity). The social market philosophy, as summarised by Brittan in the following quotation, seems to mirror exactly the thinking behind the NERA proposals.

'The word 'social' was introduced partly to emphasise the possibility of combining income redistribution by means of welfare benefits with an economy governed by markets. The main importance of 'social' was, however, to remind readers that a competitive market needed an appropriate constitutional and political setting, together with a widespread acceptance of its legitimacy, if it was to flourish.'

(Brittan, 1990)

Guaranteed health care package

One of the most attractive features of the NERA prototype, in my view, is the Guaranteed Health Care Package. It is, of course, an essential part of the whole NERA edifice, since without a GHCP the objective of social solidarity could not be achieved in a competitive market. But I believe that a GHCP would be an important and valuable innovation in its own right in the UK, irrespective of implementation of the rest of the NERA package. Culyer, for his part, is lukewarm about the idea. He has no quarrel with it but points out that contentious issues will arise in any attempt at setting the contents of the package. I feel it is much more important than that, and central to the idea of democratic accountability. Despite the new service standards introduced by the Patients Charter, it is still one of the most unsatisfactory features of the British NHS that no-one knows what their entitlements are. According to the National Health Service Act, the Secretary of State has a duty to provide necessary services, and organisations like the British Kidney Patients Association have in the past tried to use this to force the Department of Health to provide services for patients who have been denied them under the informal rationing system which NHS doctors operate. But it has been established that the Secretary of State's duty is only to provide services *within available resources*, which means no right to treatment exists in practice. The response to this is that the government is accountable for its health care policies, and for all other policies, to the British electorate. But the validity of this democratic accountability argument is weakened to the extent that the Department of Health seeks to delegate as much discretion as possible over local purchasing (and rationing) of health care to health authorities which are unelected and which therefore lack legitimacy from any source other than central government. In few other countries are entitlements to health care services so weak as in the UK. In countries with social insurance based health care systems, like France and Germany, the existence of insurance contracts and schedules of fees create a much more transparent set of entitlements. It seems to me that, especially in a unitary state like Britain, it is an absolutely appropriate role of government to undertake to define national entitlements to publicly provided health services in a way which is comparable to, if not identical to, the national definition of social security entitlements. This is what NERA's GHCP would seek to do.

Extra resources

Another important feature of the NERA prototype is that it provides a mechanism for drawing more resources into health care. This is significant because most commentators, including the NERA authors themselves and, from a different viewpoint, Culyer, believe that more money should be spent on health care than British governments have hitherto been willing to spend. Moreover, no non-market orientated proposal has yet offered a convincing mechanism by which the supposed desire of individuals in aggregate to spend more money on health care might be realised. It is important to emphasise, however, that the NERA prototype will not necessarily cause more money to be spent on health care. It is conceivable that competition between insurance funds, combined with non-inflationary revisions of the GHCP and low take up of supplementary insurance, could lead to a reduction in Britain's overall spending on health care. Most commentators would agree that this is unlikely, however, and that implementation of NERA's proposals would cause health spending to grow faster than otherwise. But the point is that NERA offers a mechanism whereby there could be greater confidence than there is now that whatever is spent on health care fairly reflects the aggregated

preferences of the individuals who make up society.

There is, however, a big price to pay for access to of additional health care resources. First, and probably most important, the NHS – or whatever the publicly funded British health care system would become known as – would have to abandon its claim to offer equal access to medical care irrespective of means. This is not so much because of NERA's recommendation of mandatory co-payments (about which more later) but because, under the NERA plan, individuals will have the right to top-up their GHCP at marginal cost, rather than having to pay twice – as they do under the existing NHS regime – once for the NHS and once for private medical care. This element of the NERA proposals is anathema to Labour sympathisers and is also contrary in spirit to declarations by both the Conservative prime minister and his predecessor, that they would not contemplate abandoning the principles of the NHS. Since this is part of a long term debate, however, it has to be asked to what extent the claim of NHS to offer equal access to medical care irrespective of means is a myth. Equal access irrespective of means probably does exist for emergency medical care and accidents and trauma. But in the case of elective surgery the current reality faced by British health care consumers is that the NHS provides an elective surgery service with relatively high barriers in the form of sometimes restrictive diagnostic criteria and frequently long waits between GP referral, specialist consultation and surgery. In contrast, those who have private medical insurance, or who can afford to pay out of their own pockets, have access to elective surgery on demand. It can be argued, therefore, that allowing individuals to top-up their NHS (or GHCP) entitlement would do no more than shift inequalities out of the present two track (public/private) system into a single, mainstream health care funding system.

To summarise, therefore, NERA, offers a mechanism which might in theory draw the appropriate (economically 'efficient') amount of money into health care. But despite the existence of a guaranteed minimum health care package, designed to satisfy a Rawlsian test of social justice, serious equity objections may be raised because the new system would recognise unequal access to medical care as an integral part of the mainstream health care funding system. These equity objections may or may not be justified since unequal access to medical care is also an in-built feature of the present parallel systems of public and private funding.

Enhancing consumer choice

Allowing more money to flow into health care is one of the principal benefits claimed by the NERA prototype for the UK. At one and the same time the proposals aim to enhance consumer choice, which is claimed as a major benefit in itself.

It is worth stressing at this point that all of the standard objections to individuals excercising choice in buying health care services (lack of consumer knowledge, unequal doctor/patient relationships, vulnerability of patients) are red herrings. In the NERA proposals, people are not buying individual treatments, where such objections may often be valid. Nowhere does NERA suggest that people needing emergency medical care should be asked to choose which hospital to be taken to. Rather, NERA expects people to exercise choice when buying an annual subscription to a health insurance plan on the basis of overall cost and overall services. There is no reason why prospective enrollees should not be able to make informed decisions, as do purchasers of Health Maintenance Organisation services in the United States.

There can be little argument that the structure of the NHS has in the past been unfavourable to the expression of choice. Consumers of health care cannot choose between health authorities, unless they move house – like some people choose to move to local authority areas where state schools enjoy a high reputation. For the vast majority of people this is impractical, and they must seek to make the best of the local health service that exists. To use the terminology coined by Hirschman (1970), consumer pressure in the NHS has hitherto been expressed mainly through 'voice' (via DHA consultation with Community Health Councils, local authorities, FHSAs, voluntary organisations and other informal local interest groups) rather than 'exit' (i.e. seeking another service provider). Rather than engage in a long discussion of the relative merits of exit and voice, let me simply state my view that exit is usually superior. However,

that assertion does not necessarily lead one to support the NERA proposals. As Culyer argues, why not build on the exit opportunities built into the internal market reforms through GP fundholding, rather than go through all the disruption that would be entailed in implementing the NERA package?

One reason is that facilitating exit is only part of the objective. Under GP fundholding, individuals can take their resources (capitation fee, etc.) from one GP to another. In essence, this is the same as the government giving individuals 'vouchers' for the range of services covered by GP fundholding. Without in any way minimising the importance of the GP fundholding initiative, the NERA prototype offers a more sophisticated means of introducing consumer choice into health care funding. Individuals who are simply given a voucher with which to buy health cover will have an incentive to choose the highest quality alternative, but they will have no incentive to choose a low cost alternative because, under voucher schemes that have been proposed (or GP fundholding), none of the saving is retained by individuals. In the NERA prototype, however, individuals pay part of the GHCP premium themselves and this provides an incentive to select the optimal quality/price mix. Such savings as they make in their purchase of the entire GHCP package are reflected in a reduction in their direct payment to the insurance fund. Equally, individuals are incentivised to adopt healthy lifestyles, since the financial benefit from reducing lifestyle related health care risks will also accrue to the individual in reduced direct payments to the insurance fund. In terms of incentive structure, therefore, the NERA prototype can claim significant advantages over GP fundholding.

Productive efficiency

Turning now to what NERA refers to as 'productive efficiency', would the NERA prototype give us a health care system which delivered more consumer satisfaction per pound of spending? Or, to express the question in Culyer's terms, would the health outputs obtained from any given level of inputs bring the UK closer to the efficiency maximising 'health frontier'? The first and most obvious question relates to transaction costs. The NERA system would presumably mean higher transaction costs, and it would have to achieve greater efficiency in order to make these costs worth paying. Second, what about the price of inputs? As Culyer points out, there would be no additional benefit to the clients of the health care system if the extra money drawn into health care simply went on higher pay for doctors, nurses and other health care professionals. There is a prima facie concern here, since on the one hand it is widely believed that the NHS has used its monopsony purchasing power to keep health care professionals' pay down and on the other hand there are countries (in particular the USA) where health professionals have exploited market imperfections to extract economic rents from consumers – i.e. higher pay than a truly competitive market would permit. On the other hand, there is no merit in the NHS using its monopsony power to underpay health professionals, since in the long term this would tend to reduce the quality of recruitment to the health care professions.

There is also a specific reason why the NERA proposals may inflate medical staffing costs payable by the public sector in the UK. This arises out of an unspoken deal between the government and medical specialists which has been in existence since the inception of the NHS. In essence, specialists have tolerated relatively low rates of NHS pay in return for being able, when they obtain consultant status, to engage in lucrative private practice without compromising their NHS job and pension rights. This means the private sector is currently subsidising the public sector's expenditure on consultants' salaries (though it may of course be argued that the NHS is subsidising the private sector in other ways). Presumably, one effect of adoption of the NERA proposals would be to undermine the very large differential in the price paid by the public and private sectors for specialists' services. This in turn would have an inflationary effect on the cost of providing the GHCP.

In order to avoid simply dissipating any additional resources in an inflationary spiral, the competitive insurance funds brought into existence by the NERA proposals would need be effective purchasers. Essentially, the NERA argument is that provided a competitive market is set up with the appropriate cost minimising and quality

maximising incentives in place, and provided this is supported with a pro-competition regulatory framework, then the market should deliver effective purchasing. It is not then necessary to be prescriptive about the processes by which this is to be achieved, since different insurance funds will find different solutions. The NERA pro-market case is not, however, made naively. The authors flag the principal problems that arise from imperfections inherent in the health care market and from the artificial rules that need to be set to achieve the complementary objective of social solidarity. They recognise that certain payment methods may be preferred to others. For instance, fee-for-service is not usually a desirable reimbursement method for hospital care, but it may be for primary physician services. To encourage efficiency, NERA suggests, insurance funds might prefer to pay hospitals by prospective cost-per-case, primary physician services by fee-for-service and medical aids, medical technology and medicines according to list price per unit. But, says NERA, other payment methods are perfectly possible. Insurance funds will be able to use their own discretion. In addition, NERA believes that mandatory co-payments will dampen any inflationary tendencies by restraining consumption of medical care. In fact, like Culyer, I think that NERA is mistaken to insist on mandatory co-payments, and I do not believe (as NERA does) that such co-payments are a necessary part of the entire NERA package. Again, I shall return to this point later.

Tackling ineffective treatment

Transaction costs, input prices and co-payments are all important, but the fundamental efficiency issue, which lies at the heart of the challenge faced by health care policy makers in all developed countries, is how to create and maintain a health care funding and delivery system which matches health care needs with cost-effective interventions. As Culyer notes, the principal source of inefficiency in *all* health care systems is the expenditure of vast sums on treatments which are inappropriate, inefficacious, ineffective or not cost effective. Taken together with the failure of health care systems to deliver appropriate and cost-effective treatments to all those who could benefit from them, there is clearly massive scope for efficiency gains. The evidence, as Culyer points out, is inescapable in the epidemiology literature, full as it is of examples of wide and inexplicable variations in clinical practice and continued use of procedures proven to be ineffective. There is no disagreement here over the diagnosis, but Culyer's prescription is wholly different from NERA's. Whereas NERA says the market will lead to greater efficiency in ways that cannot be specified in advance, Culyer argues for a more direct approach, building on initiatives which have already been set in motion in the UK within the existing structure – disseminating knowledge and best practice, educating purchasers and securing an appropriate contracting and incentive environment under the internal market reforms.

Dynamic efficiency

My own view is that the NERA report does not do justice to the case for seeking efficiency gains though the creation of a competitive market in health care funding. The reason is that NERA fails to capture the reader's imagination with a vision of radically new and more efficient health care delivery systems that might emerge, more rapidly, as a consequence of extending competition to cover the entirety of health care systems – funding as well as provision. This is perhaps surprising because it has typically been economic liberals who have emphasised the role of the market as a discovery procedure in a world where preferences and technologies are changing and where information is scarce and expensive. According to economists in the tradition of Schumpeter and Hayek, the neo-classical view of perfectly competitive markets which bring about an optimal allocation of resources and maximise welfare in their equilibrium states is only part of the story. Perhaps more important are the signalling and discovery aspects of markets, which facilitate the evolution and emergence of new ways of satisfying economic needs.

The possibilities of market mediated reform of the health care system can become much more exciting if one attempts to visualise the alternative systems that appropriately incentivised health insurance funds might seek to put in place – alternatives that would otherwise be much slower to emerge. For example, one can conceive of a vigourously competitive NERA-type health insurance fund seeking to carve out a niche market by taking the

simple, but extraordinarily radical, step of informing its prospective enrollees that not all doctors are equally competent and that the fund will select only the most competent doctors, according to its own criteria, to provide services for its enrollees. It is much more difficult to envisage a UK health authority vigorously pursuing such a preferred provider purchasing strategy. The present reality is that there are strong political and professional pressures which protect not only relatively inefficient doctors but incompetent doctors as well. In view of this the Culyer approach of persuading, informing and educating health professionals to become more efficient will continue to be an uphill struggle – a struggle that could be made less difficult if the purchaser's sanction of exit were more readily available and if the purchasing organisation itself were subject to the incentives/sanctions of enrollee entry/exit. The NERA-type insurance fund might then pursue the logic of its strategy even further, using its promotional budget to press home its message to potential enrollees that not only are the doctors it uses more competent than their competitors' doctors, but also that the fund can deliver an exceptionally high quality of effective health care at low cost simply by excluding all the ineffective interventions that no one was seriously willing to challenge before. This is not an option which is currently available.

As a purchaser of a GHCP in NERA's brave new world, I personally would be happy to choose a no grommets, no tonsillectomy health insurance fund, which contracted with doctors who had agreed to work to research-based best practice protocols and which offered rapid access to effective health care when needed. I would be even happier if, according to my reading of the NERA prototype, there were the possibility of receiving a cash rebate in place of the risk-adjusted premium I would normally pay direct to the insurance fund.

This example may be to a certain extent fanciful. But it does illustrate how a competitive market for health insurance could prove to be a superior mechanism for securing efficiency gains in health care than the alternative of persuasion, education and seeking managerial initiatives to develop more sophisticated purchasing within existing NHS funding structures. There are many other less radical ways in which health insurance funds might seek to differentiate their services, thus increasing the range of choice. It would be quite possible, for example, for different insurance funds to offer their own unique approaches to rationing, setting more transparent criteria than exist under the present structure for priority setting within the GHCP budget constraint.

In the illustration above, self confessed 'demand side socialists' like Culyer and supporters of competitive markets for health care insurance at least share the more or less common aim of seeking efficiency in the sense of maximising health gain. But individual choice will not always be aligned with experts' scientific views on what constitutes cost-effective health care, and this is where demand side socialists are liable to part company entirely with proponents of market solutions. The logic of the NERA prototype leads to the conclusion that once a GHCP has been defined, nothing should stop individuals who wish to enrol in a health care fund which promises to spend a major part of its GHCP transfers from the central funds on treatments which the scientific community would reject as ineffective or at best unproven. If, therefore, there are people who wish to 'waste' their GHCP money on alternative therapies, and who can find an insurance fund willing to cater for their preferences whilst keeping to the GHCP rules, there should be no objection to them doing so according to the consumer sovereignty principle advocated by NERA.

Co-payments

My point of disagreement with NERA, and agreement with Culyer, concerns NERA's proposal to make co-payments mandatory. The problems with mandatory co-payments are well analysed by Culyer. No evidence is presented by NERA that co-payments by patients enhance the efficiency of health care systems. Certainly, they reduce usage and cost, but that is not the same thing as enhancing efficiency. Moreover, the theoretical case for co-payments is poor. Consumers may well be capable of making informed choices about which health care plan to buy for the year, but their level of knowledge is typically insufficient to equip them to make informed choices as to whether to seek medical advice for a particular set of symptons or have a prescription filled for a particular condition.

Co-payments, NERA argues, make people aware of cost, but unless the co-payment approaches 100 per cent the signal sent to consumers will be a wrong one which would, according to standard economic theory, give rise to an inappropriate allocation of resources and sub-optimal efficiency. There is also a question mark over the equity of co-payments. Culyer points to evidence from the United States that co-payments may particularly deter utilisation by children and the poor.

The reason why NERA insists on mandatory co-payments is that the authors believe that without them the whole theoretical edifice would come tumbling down (p211). But it seems to me that the logic is wrong, and they do not have to make co-payments a core element of the prototype. NERA's reasoning, which is partly based on a paper by Rothschild and Stiglitz (1976), is as follows: If co-payments were optional (instead of mandatory) then individuals who self-assessed themselves as being very low risk would opt for co-payments in return for a lower premium. This would have the effect of raising premiums for other individuals who expect to consume the service and hence do not wish to opt for co-payments. As a result, argues NERA, the service would be primarily funded by those who need it, and not (or only marginally) by those who expect not to consume it. This means, NERA continues, that the service would effectively have dropped out of the GHCP, and for this reason co-payments have to be made mandatory. It seems to me, however, that there is nothing to prevent NERA's central fund from monitoring the effect of co-payments on utilisation and taking the factor into account when determining the levels of risk adjusted GHCP premium that are to be transferred to enrollees' selected insurance fund. Then, if there NERA's fears of adverse selection by voluntary co-payers were to prove to be well founded, the central fund could revise downwards the transfers it would be willing to make for enrollees who opted for co-payments, which would in turn cause the insurance funds to charge higher residual premiums to enrollees wishing to opt for co-payments, to the point where the incentive to adverse selection would disappear. An alternative more direct route, though one that seems to me to be less attractive, would be to have mandatory nil co-payment for GHCP services. This would prevent low risk consumers opting for high co-payment insurers to provide their GHCP package.

Regulation

This, of course, raises the broader issue of whether the regulatory regime proposed by NERA could prevent the sort of selection and cream-skimming by insurance funds which might in practice prevent the NERA prototype from achieving its objectives of efficiency and social solidarity. Culyer makes some telling points about the informal mechanisms that could be used by insurance funds to hoodwink the regulators. I was reminded of the story, which may or may not be apocryphal, of the American HMO which responded to the community rating requirement it was faced with by situating its offices on the 6th floor of a building without a lift. Thus, the story goes, people with arthritis, heart problems and so on were informally excluded from enrolling. If the NERA prototype were to become a practical option, in some markedly different political world a number of years in the future, this would be the sort of question that would have to be addressed in detail. Suffice it to say here that proponents of reforms along NERA lines would see this as a challenge to be resolved rather than a fatal flaw.

Conclusion

In summary, the NERA prototype offers a carefully thought out and elegantly structured solution to the challenge of securing an efficient and equitable health care system though a competitive market for health care insurance. It offers the prospect of drawing more money into health care (if that is what people in aggregate want). It also provides a means by which choice might be enhanced for most health care consumers in a more sophisticated way than under the voucher systems that have been proposed in the past. Though the NERA prototype is a political non-starter in the short term, it is quite possible to imagine the ideas it contains being part of the mainstream health policy debate in the UK in 5 to 10 years time. In my view, the greatest attraction of the NERA proposals is the possibility that regulated competition among insurance funds might stimulate the emergence of radically new and more efficient health care delivery systems as part of the 'discovery' process associated with competitive markets. There are undoubtedly problems (challenges) in making such regulated competition work. How to prevent skim-