

THE ROCK CARLING FELLOWSHIP

1999

**In Pursuit of an Improving
National Health Service**

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AN IMPROVING
NATIONAL HEALTH
SERVICE

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Published by
The Nuffield Trust

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Telephone: 0171 631 8450

Facsimile: 0171 631 8451

Email: mail@nuffieldtrust.org.uk

Website: www.nuffieldtrust.org.uk

ISBN 1-902089-37-5

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Typeset, printed and bound in
Great Britain by QSR Ltd
Loughborough, Leicestershire

The Rock Carling Fellowship
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Sir Ernest Rock Carling
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It was stipulated that each holder
of the Fellowship will seek to review
in a monograph the state of
knowledge and activity in one
of the fields in which Sir Ernest
had been particularly interested,
and which is within the purposes of
the Trust.

The arrangements provide that
the monograph will be introduced
by a public lecture given at a
recognised Medical Teaching Centre
in the United Kingdom.

In Pursuit of an Improving National Health Service

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To the very capable
and dedicated people
who are the NHS.

Professor Alain Enthoven

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Preface

In 1984, I came to England as a guest of the Nuffield Provincial Hospitals Trust to “take a look at the NHS and report my impressions”. I believe the invitation was based on my writings on reform of the American health care system which emphasised getting the incentives right for patient satisfaction and economical use of resources. I returned in 1985 as a visiting fellow at St Catherine’s, Oxford, and, at the invitation of the Trust, wrote up the talk I had given to the Trustees in an occasional paper.⁴⁶ While I discussed other ideas in that paper, what attracted the most attention was my description of an “internal market” in the NHS as a way of creating incentives for improvement. What I wrote did not pretend to be a completely worked out scheme. It was a brief sketch of an idea to be developed. *The Economist* picked up on the idea and published a four-page summary in which I suggested it be tried “initially and experimentally in a few districts”.⁴⁷ A few years later I began hearing that my paper was being read with interest in high places. And the ideas reappeared in 1989 in *Working for Patients*.¹⁴²

The drafters of *Working for Patients* were the recipients of many intellectual influences, only one of which was mine. Increased reliance on market forces was one of the main themes of the Thatcher administration. There was widespread interest in “quasi markets” in other social services such as education. And what may prove to be the most important idea in the package, GP Fundholding, was described by Alan Maynard in 1986.⁹⁰

Why do this project? Why should anyone care? We can all learn from the experience of the internal market. I certainly have. I hope what will be seen as a balanced and fair assessment will be useful to others. Despite what the present government says about abolishing the internal market, in fact the basic building blocks (the purchaser-provider split, the NHS Trusts, Primary Care Groups (or PCGs) and Primary Care Trusts (or PCTs), that will make all GPs Fundholders, albeit in a different configuration) remain in place. Moreover, if the Primary Care Trusts (PCTs) proposed in *The new NHS* are really allowed to act as commissioners and use their purchasing power as leverage to improve services in their patients’ best interests, the market may be strengthened by more credible and

effective purchasers. I think it likely that over the long run, some UK governments will be interested in letting local commissioning do a significant part of the work of resource allocation, so I hope this essay will be helpful in indicating what needs to be done to make that idea work. Moreover, there is interest in “quasi markets” or market-like arrangements in other public services such as education and social services. I think some of the lessons from the NHS internal market will be useful there also.

My focus is entirely on the NHS and strategies to improve it. In this lecture, I do not explore the role(s) of the private sector such as the Private Financing Initiative (PFI) or increased contracting with private suppliers.

I hope that readers will appreciate that I am not involved in British politics. Contrary to some reports, I was not an advisor to the Thatcher government. I appreciate the Conservatives’ initiative and feel honoured that they would take up my idea, but I see the present Labour version of the Internal Market as being potentially as compatible with my writings as the Conservative version, provided they actually let decentralised purchasing decisions do a substantial amount of the work.

I would like to thank the Secretary, John Wyn Owen, and Trustees of the Nuffield Trust for their generous support of this project and the non-bureaucratic manner in which they did it. I would like to thank the Dean, Harrison Spencer, and faculty colleagues at the London School of Hygiene and Tropical Medicine for appointing me a visiting professor, for housing me, and for being such friendly and stimulating colleagues: Pauline Allen, Nick Black, Annette King, Anne-Marie Rafferty, Jenny Roberts, Martin McKee, and Colin Sanderson, I also would like to thank friends and colleagues who kindly read and commented on earlier drafts of this work: Ian Ayres, Linda Bergthold, Donald Berwick, Nick Black, Peter Brambleby, John P. Bunker, Sandra Dawson, Nigel Edwards, Donald Franklin, Victor Fuchs, Pam Garside, Chris Ham, Rudolf Klein, Martin McNicol, Patrick Nairne, John Wyn Owen, Michael Powell, Carol Propper, Maurice Shock, Clive Smee, Adrian Towse, Carol Vorhaus, and Sylvia Wyatt. The remaining errors of fact or interpretation are mine and not theirs. I would also like to thank the various professors and others who kindly set up seminars at which I could try out my ideas

including Nick Black at the London School of Hygiene and Tropical Medicine, Julian LeGrand and Ray Robinson at the London School of Economics, Rosemary Stewart and R.M. Nicholls at Templeton College, Maureen Dalziel of the North Thames Region, Simon Burgess and Carol Propper at The University of Bristol, Chris Ham at Birmingham, Alan Maynard at York, Martin Powell of Bath and Jenny Roberts of the London School of Hygiene and Tropical Medicine and my participation in the “Middleway” Conference, as well as Adrian Towse of the Office of Health Economics, Stephen Thornton of the NHS Confederation, and John Wyn Owen and David Welsh at the Nuffield Trust. The attendees at these seminars taught me many valuable insights. They are too numerous to enumerate, but I particularly appreciate the help of Claire Perry and Simon Robbins. I interviewed over 120 people throughout the NHS and I want to thank them very much. They gave generously of their time. They received me very kindly. I was most favourably impressed by the high quality and dedication of the people who are attracted to work in the NHS. Also, I would like to thank Nigel Edwards, Sylvia Wyatt, Kate Denhard and Nabila Choudhry for support through the London Health Economics Consortium.

Introduction

The National Health Service (NHS) has earned the respect and gratitude of the British people. It is based on the principles of universal access to all necessary care, free at the point of service, allocated by medical need alone, of high quality, and at a price that is affordable to taxpayers. The NHS cares for everyone in Britain at an expenditure less than 6 per cent of the GDP, a remarkable and admirable achievement. Managing the NHS to the satisfaction of most people is an especially tough challenge for many reasons. The NHS, like the health care systems of all the economically advanced countries, faces increasing resource demands from ageing patients, rapidly expanding technological possibilities, more and better informed patients and rising patient expectations, based in part on observation of how they are treated by private sector services and by what Continental Europeans receive. The NHS is obviously very short of resources needed to achieve its objectives. One sees it in the buildings, the pay, the staff and equipment shortages, the very short times doctors spend with patients, and the headlines about crises.^{158, 39, 146} People experience it in the long waiting lists and times and in the operations cancelled at the last minute for lack of resources.^{164, 165} And health care is rationed by waiting, by dilution, diversion and denial.¹⁵¹ Apparently limitless demand meets scarce resources. Providers become and come to be seen as the dispensers of the scarce resource. Their judgement determines who gets what. This sets up a particularly unequal relationship between provider and patient. It must be very difficult for providers to resist developing attitudes of superiority, “they are lucky to get this,” “our time is more valuable than theirs” . This also creates an ethical dilemma. Is the doctor at the bedside the individual patient’s advocate, as befits the usual professional norm, or an agent of the state?

Medical care is extremely complex, changing rapidly, filled with uncertainties, difficult to measure results and evaluate. Medical problems are very heterogeneous and we are a long way from having common denominators to compare the relative health gains produced by one treatment versus another. There are built-in contradictions between effectiveness, efficiency and equity. There is a clash between utilitarian ethics and the rule of rescue. There are paradoxes between the imperatives of national and local decision-making. The boundaries

between medical care that ought to be provided to everyone free or at a low cost versus what people ought to pay for themselves are not clear.

At the level of practical reality, keeping spending within prescribed limits (while avoiding political embarrassment) is the top priority, the one thing management control systems measure well. It must take great effort to be sure that quality and patient satisfaction are as important. The NHS lives under the microscopes of press and Parliament. Isolated mistakes can become the subject of headlines and questions in Parliament. Doctors can and do innovate in the medical realm. But others face strong incentives not to innovate in ways that risk failure. Powerful forces are arrayed against change in a Service that needs to be changing constantly: politics in the form of local resistance to change, unions and professional societies, and a lack of capital which makes it necessary to make do with outmoded and inappropriate facilities. Many opportunities for improvement lie in co-ordination across the boundaries of general medical services, acute hospital services, community health and social services, and social services, but co-ordinating across these boundaries is often difficult.

One of the most important reasons that it is difficult to manage is that the NHS is a government programme which means that it must operate under many constraints such as “the rule of do no direct harm” (see Chapter V below), inflexible procurement laws and personnel policies and pay scales. The latter make it hard to respond to acute needs for highly skilled personnel such as information technology specialists. Moreover, politicians use the NHS regularly as a tool to improve their chances in the next election. One minister wants to re-draw the boundaries while another wants to expand the hospital in his district while yet another seeks to block a proposed hospital closure. Such use may conflict with the search for maximum health gain within available resources.

The NHS, like the care systems of all the advanced countries, needs to create incentives for appropriate evaluated innovation that improves the effectiveness and efficiency of care processes. Because resources are inevitably limited, the guiding principle needs to be maximum health gain from available resources, balanced with other goals such as fairness, access and giving the patient a good experience of care.

Incentives are important and deserve careful thought. Before the 1989 reforms, the NHS contained many perverse incentives (not all

WHY INCENTIVES FOR CHANGE?

Some health services management teams:

- Centre care processes around the needs and wants of patients, not professionals;
- Reach out to find and use the best known care processes;
- Ask patients what they need and want—what works for them and what doesn't;
- Follow patient outcomes through registries to see what works and what doesn't;
- Study care processes and redesign them as appropriate to improve them;
- Empower staff to do the right thing without being overly constrained by professional boundaries;
- Cross-train or multi-skill staff to break down boundaries between professions;
- Organise for multi-disciplinary problem-solving leading to ever more efficient and effective resource use.

Other health care management teams:

- Do not ask patients, but look exclusively to professionals for what is needed;
- Stay with habitual care processes;
- Centre care processes around professional needs (because it uses their time more efficiently);
- Admonish staff to observe professional boundaries without deviation;
- Address problems one discipline at a time;
- Resist changes because they upset people and threaten professional turf.

Incentives are needed to get the latter to change to be like the former.

banished by the reforms): better service attracted more patients without more resources needed to care for them; the best way to strengthen your case for more resources was to do a poor job with what you had; please the people in the hierarchy who control your budget and your career; and play it safe, don't make waves. Poor performance wasn't even measured.

My 1985 suggestion to look to market forces was based on the observation that companies that had made such a transformation

usually were motivated and sustained in their commitment by market forces. Indeed, most if not all had gone through a “near death” experience in which they realised they could be destroyed by the superior performance of competitors.^{19 28} Managements were able to convey to workers that it was in everybody’s interest to become very serious and systematic about improvement.

This book is in three parts. The first is an assessment of the internal market experience: why markets? Were incentives reformed? And lessons. The second part is a discussion of the present crisis of confidence in the quality of care in the NHS: the need for high quality clinical data bases. The inadequacy of pre-existing quality assurance processes. Continuous Quality Improvement. Transparency and Risk-adjusted measures of outcomes. Why British physicians and surgeons should embrace Continuous Quality Improvement and Transparency. The third part is a brief reflection on whether there is competition in the future of the NHS. I doubt the NHS can achieve “modernisation” without consumer choice and competition and more resources. I suggest some British people ought to think seriously and in detail how that might be done.

THE PAST:
The Internal Market

Why a Market? And Why Not?

Why introduce a market model, that is resource allocation determined by the interaction of buyers seeking value for money and sellers seeking to win the customers by offering better value, free from external restraints that prevent them from doing so? The literature on this subject is absolutely vast, and I will not even attempt to summarise it. Rather, I will attempt to offer some insights that seem to me to be particularly relevant to this case.

First, consider the contrast between market economies and non-market economies. Basically, market economies are driven by informed purchasers, using their own money and therefore responsible for their choices, seeking maximum value for money, i.e. the difference between what they are willing to pay for the goods or service and what the seller charges. Sellers seek to win customers by offering them better value for money than they can obtain from other suppliers. Buyers keep on purchasing until the marginal value to them of the next unit of purchase reaches the price they must pay. And sellers keep on expanding output until the marginal cost of another unit reaches the market price. If markets work freely and well, this process produces a kind of “social optimum” in which net value is maximised. To be sure, there are many reasons why this principle does not work perfectly in practice. There is a large literature on “market failures” such as “externalities” (pollution, noise), lack of information, monopoly, etc. And from the point of view of health services, the most important limitation is that there is nothing in this that says the distribution of services will be fair.

The experience of the Twentieth Century has shown that market economies, accompanied by strong social protections, are most likely to raise the living standards of ordinary people. As a general model of organisation of whole economies, socialism failed everywhere it was tried.¹⁵⁴ Of course, all the advanced countries have large directly managed public programmes in health, education, transportation, criminal justice and national defence. Even there, governments are seeking to find workable ways of turning increasing amounts of these programmes over to private enterprise to overcome the inherent inefficiency and unresponsiveness of public programmes: the list includes prisons managed by private companies, maintenance and supply for

armed forces. In America, federal and state governments are turning to private managed care for health care programmes.

A key point about market systems is the incentives they can create to use resources economically and to innovate in improvement of the goods and services produced. For example, in health care in the UK and elsewhere, there tend to be wide variations in the quality and cost of services. A recent report by the Department of Health indicates even six-fold variations among hospitals in the costs of some procedures.*³⁶ In a market model, purchasers can seek out the best combination of high quality and low cost. Not only do they benefit directly, but also their decisions encourage producers to improve quality and reduce cost. Compared to centrally planned and controlled economies, market systems allow greater freedom, variety, and adaptation to local conditions. Decentralised market systems empower people and encourage them to develop as responsible decision-makers. Charles Schultze notes that market-like systems minimise the need for coercion, allow efficiency-enhancing changes to move forward, and are economical in needs for information. In his analysis, which was a modern-day rediscovery of Adam Smith's *invisible hand*, market-like arrangements can harness individual interests in the public interest.¹⁴¹ Moreover, in market systems, decision making is widely decentralised over many points, so those injured by efficiency-enhancing changes do not have a single target on which to focus their opposition.

What drives non-market decision-making? Very many things, including altruism, solidarity, a profound and sincere desire to serve society and the nation, and also many selfish motives such as protecting one's turf and perpetuation of political power. I do not doubt that altruism is a very powerful force within the National Health Service, though some of the outside forces bearing on the NHS are less than altruistic. As a practical matter, other considerations also enter into individual decisions. David Mayhew wrote a brilliant book called *Congress: The Electoral Connection* in which he described how the perpetual quest for re-election drives the behaviour of members of the US Congress.⁸⁹ They engage in advertising or the building of name recognition, posturing (as in stating public positions known to be popular with constituents such as opposition to evil), credit claiming, and the delivery of particularised

* These costs were not adjusted for such factors as teaching status, and a good deal of variation may be due to different methods of allocating overhead costs.

benefits to their con-stituencies. I heard enough examples of the latter during my travels around England to be persuaded that MPs are not exempt from the same motivations. MPs and ministers cheerfully use the NHS as a bundle of gifts to give voters: a new hospital here, stopping those dreadful bureaucrats from closing one there, winter money here and reduction in waiting lists there. All this is well and good and democratic, but it isn't the same as a relentless and systematic effort to maximise health gain for money or systematically improve customer service, and indeed may be the opposite. Local citizens appropriately have their influence on the health services they receive. But their interests may conflict with overall health gain as when they resist a proposed consolidation of services to improve quality and cut costs, because they want the services and the jobs in their neighbourhoods.

British doctors went to medical school because they want to take care of patients and they are willing to make large personal sacrifices for the satisfaction that comes from saving lives and improving their quality. But, just like professors, some doctors also seek the prestige or recognition that comes from scientific discovery and from impressive and novel medical achievements such as organ or limb transplants. In fact, the Distinction Award system pulls them in that direction. They may also prefer to work on patients who present interesting intellectual challenges. This is not to tarnish their altruism. But it is to say that their desires to serve mankind may be channelled to outlets other than maximum focus on improving health services for large numbers of patients.

National prestige enters in as in the case of a desire to have a Scottish or Welsh capability in cases in which more health gain for money might be achieved by sharing with English resources. And non-market systems have been known to indulge proclivities for personal empire building. Of course, these things are known to happen in private markets also. But there, market forces usually check and discipline them.

There are many alternatives to the market model: regulated (privatised) public utilities, government monopolies at local, regional, or national level, QUANGOs, etc. The problems that generally plague these models have to do with creating sufficient incentives to motivate improvement in efficiency and customer service. I have spent enough time paying electricity bills in California and riding trains in Britain to experience some of the problems of regulated public utilities.

On a large scale, perhaps the most prominent alternative to the market model is the centrally planned and controlled economy with varying degrees of decentralisation to local units. These systems have generally been failures, and countries that formerly had such systems are struggling to create market systems. The centrally planned and controlled economy is rife with perverse bureaucratic incentives. In these systems, the basis of resource allocation includes political activity rather than economic merit, thus rewarding the former over the latter. For many years, the NHS ran on a centrally planned model with little information at the centre and a great deal of local autonomy. As one observer put it, “give the doctors the money and let them get on with it”. That idea ran afoul of the lack of incentives for improved customer service (waiting lists), wide variations in efficiency and patterns of care, and the recently well-publicised failures of quality of care.

People diversify in consumption and specialise in production. Therefore, they are much less likely to vote their consumer interests than their provider interests. An increase in the price of milk will sway few if any consumer votes, but it will surely influence the vote of a dairy farmer. Moreover, through companies, trade associations and trade unions, people have ready made vehicles to convert their producer interests into political power. So governments systematically favour provider interests over consumers. Of course, from time to time, when patient frustration over waiting lists approaches the boiling point, or when the opposition party sees an opportunity to score points, governments will announce much publicised waiting list reduction initiatives. But these initiatives are likely to be in the form of more resources for providers, not structural changes that enhance productivity. Extra money for waiting list reduction may bolster the status quo and postpone facing up to the need for basic system change. And when the dust settles, attention to this issue fades. Moreover, it is very difficult to define and focus consumer interests in acute health care because these interests are so diverse and often short-lived. There are societies to promote the interests of sufferers from chronic diseases and they are effective in focusing political pressure.

Could a sophisticated centrally planned and controlled system armed with lots of good performance information and ample use of performance incentives motivate economy in the use of resources and improvement in productivity and quality? This was the dream of some economists and other social thinkers from the nineteenth century to

the 1970s. It might be possible theoretically, but nobody has managed to do it yet. I doubt it can be done in a dynamic context. The centre is most likely to be captured by the providers and be held responsible for the success of the providers. If a hospital were to fail, it would be the government that would be held responsible, not the managers and doctors who managed it poorly.

Information is an important issue. The Health Authority and providers in East Anglia are likely to know a great deal of important information about health care in their area that the centre does not know. This would include informal or “soft” information that doesn’t get encoded in computer data bases. The market model permits local use of local knowledge that would overload the centre.

All this is to argue that it is not unreasonable to seek alternatives to the centrally planned and controlled model.

Why might an attempt to create a market be a bad idea? Again, the literature on this subject is vast and I will not attempt to summarise it. Markets do not protect the weak, the disadvantaged, or the unlucky. Social protections are needed and generally present in modern democratic market economies. In any case, *Working for Patients* did not in any way change Britain’s commitment to universal access to care, free at the point of service, independent of ability to pay. So patients were protected. Markets are supposed to sort out providers of goods and services. Those who add the most value prosper. Those who add the least may not. Again there are social protections: unemployment insurance, some job security. From this point of view, it is not surprising that some providers would prefer not to find themselves in a competitive market situation. Market forces are impersonal. They can deprive poor performers of their livelihoods.

In addition, there are the often-noted features of medicine and its associated financing that make it particularly susceptible to market failure. While the patient’s preferences are an important foundation of the appropriate decisions, patients lack important information and generally do not have the time and the background needed to acquire it when they are sick. Patients must depend on doctors for information and advice. Thus, as Arrow noted in 1963, the element of trust is essential.² This is a fiduciary relationship more than a market relationship. This requires strong professional norms and standards. Second, the doctor may lack important information, either because of uncertainty of prognosis, lack of knowledge of the natural history of

disease, or because the patient does not confide in him. Also, relevant information can be very costly relative to the cost of the product itself. Indeed, the product is usually mainly information. There is great uncertainty in the incidence of illness, the progression of disease, and the efficacy of treatments. Thus, there is a great need for some form of pooling of resources to protect the sick from large expenses. But once their costs are shared widely, the sick lack incentive to use resources wisely (“moral hazard”). In some situations, there are serious problems of adverse selection. Moreover, the sick or injured may be in great pain or danger, and medical professionals will feel powerful ethical imperatives to care for them whether or not they can pay. So the transaction of caring for the sick is not voluntary, a key principle underlying market theory.

Many reasonable people have judged that these problems of market failure are insurmountable obstacles, and they may prove to be so. Although we have gone a long way in developing a competitive market economy for insured health care in the United States, and we have made notable (but possibly temporary) progress in using incentives to moderate the growth of health expenditure, all the returns are not in yet. The idea may ultimately prove to be unworkable or ineffective in the face of powerful cost-increasing forces. And no other society has come as close as the USA to applying market principles in an environment of insured people.

There are other reasons why not. The “market” idea proved to be counter to the culture of most people in the NHS, a culture of dedication to public service, not one of competitive buying and selling. Some have said it led to a loss of professionalism and morale. NHS values are non-entrepreneurial and risk averse. NHS managers have always been rewarded for conforming and “playing the game.” Their activities are oriented toward tradition and provider institutions. Moreover, few people in the NHS had experience in buying and selling of health services. In 1990, I was told that a contract for the purchase of hospital services had never been seen in the UK. The NHS was and is medically dominated with an agenda of professional service development rather than an orientation to customer service. Another problem is that markets in general, and as complex a one as health services, generate substantial transaction costs, a problem often noted in critiques of the internal market. (However, most of the transaction costs for systems of information for measuring and monitoring the

quality and costs of services and for specifying and monitoring performance would have been needed in a properly run centrally managed system. More on this later.) And finally, resource allocation in the NHS is intensely political, both in the sense of bureaucratic politics and party politics. If political leaders do not really intend to let the managed market allocate resources, including shutting down inefficient or ineffective departments and facilities, then there is no point in incurring the expense and political costs to set it up and attempt to run it.

No form of organisation is perfect. All forms have their disadvantages. And the balance of advantages and disadvantages will be different in different cultures and, since cultures evolve, at different times. The challenge is to find something in the middle that captures some of the best of both central planning and market forces. That is the general idea behind “quasi markets”.

Is an “internal market” even possible? PCTs may make it so

Is such a thing as an “internal market” even possible? Some will feel that I should have thought of that question 15 years ago!

The classical notion of an economic market presupposes buyers and sellers that are independent entities. The buyers are systematically pursuing value for money from their point of view. Their purchases are voluntary and they are well informed. The sellers are competing to win customers by offering better value for money. An arrangement wouldn't be a market in this sense if the sellers could coerce the buyers to buy from them.

The term “quasi markets” has gained popularity in recent years. A good example would be direct grant schools, or in the USA, vouchers or portable scholarships for children from deprived areas with poor schools. The providers would include the state and also private (“public”) schools of several varieties (e.g. religious or not). In this case, it is assumed that the parents exercise choice not under control of the schools and seek best value for their children. Buyers and sellers are independent entities. The arrangement offers some hope of maximising value as seen by parents. (Problems of information and the capabilities of purchasers to make judgements similar to the ones I am outlining here of course exist in this quasi market.)

But in the NHS internal market, both the buyers and the sellers are a part of the government and under the control of the NHS Executive and Parliament. They are not really independent actors. Conversations with NHS people about this evoked the image in my mind of puppets, some called “purchaser” and others called “provider” all on strings held by the same NHS Executive. When one of the purchaser puppets became bold and threatened to withdraw custom from a provider puppet, the provider puppet would cry “destabilisation” and the NHSE would hear and jerk the strings of the purchaser puppet until the purchaser puppet stopped upsetting the provider. Not all purchasers saw the situation that way. Some were able to accomplish a great deal without having their strings jerked. But the threat was always there. Moreover, as government is systematically on the side of

the providers, for reasons explained earlier, purchasers may not be able to expect much support if their actions threaten to destabilise hospitals. Indeed, if a purchaser proposed to move substantial business from one hospital to another, the losing hospital could and often did appeal to the regional office and possibly the local MP to get the decision modified or overturned. Rudolf Klein's view is that an internal market not only never was tried, but it never could have been because the tradition of central control is too strong in the NHS.⁷⁸ This tradition, in turn, stems from central tax funding and parliamentary accountability.

Of course, government as both purchaser and provider is a problem that exists independently of the internal market. It is a problem of lack of accountability, lack of checks and balances, and weak corrective forces when performance is poor. The government is held accountable through the democratic electoral process, but the policies and performance of the NHS are diluted among a host of other issues that influence people's votes. The provider interest will always be dominant.

Kenneth Clarke, Secretary of State for Health during the development of *Working for Patients* tried to give the NHS some distance from the government by forming the NHS Executive and moving it to Leeds. Needless to say, that did not solve the problem.

The government of New Zealand saw this problem clearly in 1993 when it introduced reforms to separate purchasers from providers. Four Regional Health Authorities (RHAs) were constituted "purchasers" under the control of the Minister of Health. Hospitals were converted to "Crown Health Enterprises" CHE on the model of New Zealand's State Owned Enterprises SOE, reporting to the Minister for Crown Health Enterprises, and monitored by the Crown Company Monitoring and Advisory Unit reporting to the Ministry of Finance. About 23 CHE were formed in all, some being made up of several hospitals. So the purchaser provider split was institutionalised at a high level of government. How well did it work?

According to Michael Powell of the University of Auckland, "CHEs ... were put onto a reduced funding stream as an incentive to encourage increased efficiency. Despite the intention of having them live under 'hard' budgets, the failure of the majority to get out of deficit mode ... forced the hand of the owner/shareholder (government) to make equity injections to retain the companies' financial viability. These equity injections were in addition to the revenue streams that

came through from the purchase agreements they had signed with the RHAs. ... Furthermore, the poor financial performance of the bulk of the CHEs, coupled with increased demand for acute services, resulted in increased waiting lists for elective procedures (rather than the reduced waiting lists promised by the government). This was and is a political hot potato and led the government from time to time to make additional payments for increased elective work. ... this has all changed in the last couple of years with the CHEs now reporting to the Minister of Health.”¹²⁸

Donald Light described this problem as follows:

“The problem is that the government also sees itself as the provider of services as well. A major obstacle to effective purchasing is that the Secretary of State for Health is legally responsible for everything that happens in the NHS, even a bedpan dropping in some distant ward. Such a mandate and mythic vision completely hog-ties him or her as a purchaser.”⁸⁴

Light goes on to suggest some public-sector options for creating a more arms length relationship.

“Hospitals and other trusts could have local boards like British schools, for example, which would put them at arm’s length from the central government as Commissioner and also make them more locally accountable ... Greater local accountability of providers and services is not only more real and accessible to patients, but it liberates the centre to commission more effectively.”⁸⁴

Yet another possibility for resolving this problem may be found in the Primary Care Trusts (PCTs) proposed in *The new NHS*. “New Primary Care Groups will be established in all parts of the country to commission services for local patients ... They will have control over resources but will have to account for how they have used them in improving efficiency and quality.” If they achieve their promise and achieve credibility (including good information on which to base decisions) and community support, the PCTs could become the powerful independent force on the demand side of the market systematically pursuing the satisfaction of patient needs and wants needed to give meaning to the idea of internal market. PCTs will be led by GPs, doctors, who may command more respect and support than “Health Authority bureaucrats,” i.e. managers, when it comes to facing down a non-responsive consultant or hospital department or

an inefficient hospital. The government may find it difficult to overrule doctors who have support in their communities. Doctors may be able to give persuasive explanations why some work should be sent to another hospital. PCTs appear to be about the closest approximation to independent purchasers on behalf of patients as anyone has thought of in the UK context. An even better approximation would be realised if there were real measurement and disclosure of information on GPs and PCTs and if patients had genuine choice of GP and PCT, with a rule like the one generally in force for American HMOs that they must accept and care for any patient who chooses to enrol with them in an annual open enrolment period (within stated capacity limits).

Working for patients

THE WHITE PAPER

After a review of a wide range of options to reform the NHS, in January 1989, the Thatcher government published *Working for Patients*.¹⁴² While the White Paper did not use the term “market” in any form including “internal” or “quasi”, it was clearly a proposal to seek to use the market forces of informed patient, GP, or Health Authority choice to create incentives for continuous improvement in value for money. The main ideas were as follows:

The “purchaser-provider split”: recast the Health Authorities as *purchasers* of services on behalf of people in their districts, rather than as higher-level service delivery managers, dispensers of funds to the providers and clearly a part of the provider hierarchy. “... DHAs can then concentrate on ensuring that the health needs of the population for which they are responsible are met; that there are effective services for the prevention and control of diseases and the promotion of health; that their population has access to a comprehensive range of high quality, value for money services; and on setting targets for and monitoring the performance of those management units for which they continue to have responsibility.” “The Government believes that the primary task of each DHA should be to secure the best and most cost-effective services it can for its patients, whether or not those services are provided by the District’s own hospitals. This in turn implies that health authorities should be funded for the population they serve, and not for the services they provide.” DHAs are to be funded on the basis of their resident populations, “weighted for the health and age distribution of the population, including the number of elderly people, and the relative costs of providing services”.

Next, hospitals would be empowered and encouraged to become new, separate, self-governing legal entities known as NHS Hospital Trusts. “An NHS Hospital Trust will earn its revenue from the services it provides. The main source of revenue will be from contracts with health authorities for the provision of services to their residents ... NHS Hospital Trusts should be free to employ whatever and however

many staff they consider necessary, except that junior doctors' posts will continue to need the approval of the relevant Royal College for training purposes. ... The ... objective ... is progressively to introduce greater flexibility, in order to allow managers to relate pay rates to local labour markets and to reward individual performance ... it is unacceptable for local management to have little authority or influence over those who are in practice responsible for committing most of the hospital service's resources ... NHS Hospital Trusts will employ their own consultants ... The Trust will be free to use the hospital's assets to provide health care in accordance with stated purposes laid down by the Secretary of State ... The Trust will be free to dispose of its assets. ... The Trust will be given an interest-bearing debt equal to the value of its initial assets The Government proposes to introduce a new system of charging for capital in the NHS It will ... encourage as many major acute hospitals as possible to seek self-governing status"

"... NHS hospitals should be free to offer their services to their own Districts and to other Districts in a way which enables them to attract the funds they need in line with the work they are asked to do ... making it possible for the money available to treat patients to move more freely to the hospitals which offer patients the best service and the best value for money."

Next, "Hospitals and their consultants need a stronger incentive to look on GPs as people whose confidence they must gain if patients are to be referred to them". "GP practices with lists of at least 11,000 patients ... will be free to apply for their own NHS budgets for a defined range of hospital services. They will be able to obtain these services from either NHS or private sector hospitals." Services will include out-patient services, a defined group of in-patient and day case treatments such as hip replacements and cataract removals, and diagnostic tests by hospitals ordered by GPs. The GP budgets will include staff costs, premises and prescribing in a single budget. "Patients should be quite free to choose and change their doctor without any hindrance at all, and the Government will bring forward the necessary amending regulations as soon as possible."

Though the legal and regulatory frameworks to underpin patient choice were put in place, the regulations were never effectively implemented. Comparative information on GP practices, even on simple things like opening times, let alone quality (e.g. patient

satisfaction), was very difficult to come by. New entry by GPs was severely restricted. GPs could, in effect, choose not to accept each other's patients. Hence, the positive incentive of competition for patients for GPs to provide and to purchase well was not really there. Still, GPs had far greater incentives to be responsive to their patients than did Health Authorities. As Peter West noted, "... there was little if anything in *Working for Patients* that touched on patient choice".¹⁶¹

While there were other significant changes proposed in *Working for Patients*, these are the main features from the point of view of my present inquiry.

The White Paper was put together in a hurry without much detailed analysis as to how these concepts would be made to work in actual practice. The government turned a broad description over to the Department of Health and told civil servants to work out the details.

BRIEF HISTORY

To implement *Working for Patients*, the Government went on to pass the National Health Service and Community Care Act of 1990 which went into effect April 1, 1991. The NHS Executive energetically encouraged hospitals and community health services agencies to seek Trust status, and GPs to accept Fundholder status. Hospitals became Trusts and GPs Fundholders in "waves". To become a Trust, a hospital had to apply and demonstrate that it had the capability to manage the new responsibility. While Health Authority officials remained on the Civil Service pay scales, Trusts were free to offer much more attractive pay to executives. (Doctors' pay continued to be established by national scales.) By 1994, most hospitals and community health service organisations had become Trusts, and eventually all of them did. GPs were offered substantial financial inducements to adopt Fundholder status, including money for information technology and management expenses. The patient list size threshold for Fundholder status was progressively reduced, to 9000 in 1991, 5000 by 1996, and another status called Community Fundholding was introduced (in which GPs held budgets for community services but not hospital services) with a required patient list size of 3000. By 1997, half of the population was enrolled with GP Fundholders. To lubricate the transition, the Government pumped in a great deal more money. NHS expenditure rose from £25,491 million in 1989, 4.94% of the GDP

to £40,195 million or 6.02% of GDP by 1994. Total NHS cost per head rose from £444 to £688. Adjusted for general inflation, NHS spending increased 25% in 5 years.¹²²

The most interesting development occurred in primary care. While many GPs signed on to Fundholding, many others chose not to for various reasons including that some saw it as potentially unfair, divisive, or just not in the best interests of their patients and themselves. Yet many non-Fundholder GPs recognised that they had a substantial contribution to make to commissioning, and they needed to do something to protect their patients' interests. A variety of partnerships grew up between GPs and Health Authorities. Moreover, Fundholders and non-Fundholders saw that there was much to be gained by co-operation among themselves on a larger scale. Health Authorities could supply the financial resources, the personnel, data and contracting capacity to do commissioning. GPs could bring to the partnership the medical credibility that Health Authorities lacked. So "a mosaic of primary care led commissioning and provision" grew up in the West Midlands and elsewhere.¹⁴⁹ The report on the West Midlands described "multifunds, locality commissioning groups, health authority/GP executive groups, total purchasing projects, joint commissioning initiatives, out-of-hours GP co-operatives, and whole district approaches to primary care led commissioning". In some cases, Fundholders and non-Fundholders teamed up, as in a project at Tamworth. A more recent report from the London School of Economics and the King's Fund offered a typology of eleven different current purchasing organizations in the NHS including the conventional centralised Health Authority purchasing, GP consultation schemes, locality purchasing/commissioning, practice-sensitive GP commissioning, GP total purchasing pilots potentially purchasing all Hospital and Community Health Services (HCHS), extended Fund-holding pilots (specific additions to the range of services offered in standard Fundholding, Fundholding multi-funds, Fundholding consortia, standard Fundholding, and community Fundholding.⁸¹

In view of subsequent developments, perhaps the most important descendants of the original standard fundholding were the total purchasing pilot projects (TPPs). Four pioneer projects started in 1994 at the local level. The NHS Executive took up the idea and, in October 1994, invited bids to establish a first wave of TPPs. Fifty three first wave and 35 second wave projects were started. They were to start

live purchasing in April 1996 and end in April 1998.⁹² The TPPs could agree with their parent health authorities to purchase an expanded set of services on behalf of their patients, with an increased per capita budget. Contrary to what is suggested by the name TPP, none purchased the full range of services. The main things they tried to accomplish included reducing length of hospital stays by early discharge planning, improving community and continuing care services (e.g. by developing the role of the local community hospital as an alternative to the main acute hospital), reducing emergency admissions, and developing primary healthcare teams.⁹³ A large scale evaluation study was commissioned by the Department of Health in England and the Scottish Office Health Department and published by the King's Fund.⁹³ From the point of view of research design, the study had some disappointing features. There were no formal standard performance criteria for the TPPs, so each set its own objectives, and the study evaluated each against its own objectives, largely on a self-assessed basis. And the pilots ran for only two years which meant that there was not enough time to do a great deal of learning and application of lessons learned. A high proportion of the time was spent on getting organised, especially in the larger projects. Pilots like this should run for at least five years.*

For those who admire such virtues, this whole national development of primary care organisation and commissioning was a great demonstration of local initiative, creative problem solving, and adaptation to local circumstances. It suggests that there is a great deal of talent and energy "out there" in the NHS which can do great things if encouraged and permitted, and not made to wait until orders come from headquarters.

* I visited the South West London Primary Care Organisation, made up of 8 practices on 13 sites with 42 GPs and 81,000 patients, the largest of the national TPPs. They had created integrated nursing teams (community and practice nurses) to whom budgets had been delegated. They were case managing high risk individuals to reduce the need for hospitalisation as well as to improve the quality of life for patients. Some teams on maternity services had developed protocols for antenatal care to separate the low risk cases from the high risk cases so that the latter could be cared for by obstetricians while the low risk cases could be referred to midwives. They started with hospital discharge planning and moved to preventing admissions, such as by monitoring CHF patients at home and adjusting their medications. Nurses were available by phone 24 hours. None of this was "rocket science" or totally original ideas. The important thing was that they had got organised to do it and were performing effectively. The bringing together of all HCHS funding streams permitted them to improve efficiency.

Kenneth Clarke was the Secretary of State for Health at the time of preparation of *Working for Patients*. He was replaced in November 1990 by William Waldegrave whose instructions from Mrs. Thatcher were “Ken Clarke stirred them up; you’ve got to quiet them down”.¹⁵⁹ He ordered a “steady state” for the first year of operation: Health Authorities would adhere to historical patterns in their purchasing in order to assure a “smooth takeoff” and avoid radical and controversial shifts in NHS service patterns. Virginia Bottomley succeeded Waldegrave in April 1992. The very contentious issue of excess hospital capacity in London and the need to reallocate resources to primary care became salient on her watch. Battles over hospital closings brought home the point that market forces or not, government would be held responsible for what happened to hospitals. And hospitals commanded intense loyalty from their communities, their staffs and, in the case of teaching hospitals, their alumni. Later on Bottomley wrote “The large hospital is like a cathedral for the prestigious professional group of doctors ... Like a place of worship, it marks the milestones of family life.”¹⁴ It was becoming very clear that the internal market could not distance hospitals from government responsibility.

Along about the third year, enthusiasm for using market forces to restructure services began to wane.²¹ As one of my interviewees put it “The government got cold feet; but then, I doubt they ever had very hot feet.” Bottomley turned her attention to health improvement in *Health of the Nation*, and patients’ rights in *The Patients’ Charter*. In varying ways, interviewees told me that market forces wound down in 1993 and 1994. The negative local political consequences from trying to close hospitals were too much.

The 1997 Labour White Paper *The new NHS* announced the abolition of the internal market.¹⁴³ However, it left in place the purchaser/provider split, the NHS trusts, and it proposed replacing GP Fundholding by individual practices with Fundholding Primary Care Trusts covering geographic communities of about 100,000 population on whose behalf they would purchase hospital, community health services and purchase or provide primary care. Despite the rhetoric, it appears that the basic building blocks remain in place. The real test as to whether it will be an internal market will come when some PCG or PCT makes a well informed and considered decision to move services from one hospital to another and the loser cries “destabilisation”.

DID IT WORK? THE HEALTH SERVICES RESEARCH
POINT OF VIEW

To seek an answer to the question “how well did it work?” I turned to the health services research literature. The health services research approach to the Internal Market was largely to take it as a “black box” with inputs and outputs that could be examined, as opposed to an examination of the machinery inside that I will offer in the next section. What I learned is that it is very difficult, if not impossible, to answer the question on the basis of anything approximating scientific data. First, there were virtually no baseline data on many of the relevant variables (though there were on some like GP prescribing). Numerous changes other than the internal market were going on at the same time such as the effects of the Griffiths reforms and a new GP contract. The few data the researchers did have are ambiguous in interpretation. There was more activity: was it appropriate? There was a decided increase in the rate of growth of productivity. GP Fundholders lowered prescribing costs. Was that at the expense of more suffering or hospitalisation? There was no research design. Comparing Fundholders with non-Fundholders: could the results be determined by selection bias, or strategic response to incentives such as improvement measured from an inflated base year?²⁶ As to the TPPs, there were no generally applicable specific objectives (such as reduced hospitalisations for asthma, CHF and diabetes) against which to measure. Pointing to the solid achievements of leading edge performers—and I believe there were such—can be written off as selection effect. Part of this problem grew from the apparent fact that the government wasn’t interested in research and evaluation of these organisational issues. (In contrast, they emphasised research focused on health technology assessment.)

External evaluations were attempted much too soon. Many were published in 1993 and 1994 that could not have been based on more than one or two years’ data. Things just don’t change that fast in healthcare. It would take the better part of a decade to see really significant change. Moreover, some of the high administrative costs were one-off investments in new systems and not necessarily all part of a chronic problem. Many of the evaluations looked at the averages: it is very difficult to move averages in a 1,000,000 person organisation, especially health care. It might have been more productive to ask whether the new framework empowered leading-edge innovators to

do valuable things that had not been done before, things that others could later be motivated to emulate.

Beauty is certainly in the eye of the beholder. Critics of the Internal Market can say, without fear of effective refutation, that all the good things that happened would have happened without it. Le Grand et al report that the HCHS Cost Weighted Activity Index, a measure of output, grew 2.4% per year in the 1980s and 4.1% per year post reforms.⁸¹ And efficiency measured by activity adjusted for inflation-adjusted expenditure grew 1.6% per year before and 1.95% after. Critics could and did argue that the Activity Index was based on finished consultant episodes (FCEs), a flawed measure, that the improvement came from advances in medical technology that permitted shorter hospital stays and more day surgery, and that besides, the increased activity might or might not have been appropriate or of good quality. Moreover, increased FCEs do not give the Service credit for avoiding more avoidable admissions. Some put down the activity gain to the Conservatives' preoccupation with output at the expense of quality. I would simply note that it is not consistent to be against increasing waiting lists and also against increased productivity in a resource-constrained environment. In any case, these arguments end up quite tangled and inconclusive.*

In 1998, the King's Fund published a review of the evidence done by some of the most capable and best informed researchers, *Learning from the NHS Internal Market*, edited by Julian LeGrand, Nicholas Mays and Jo-Ann Mulligan, with significant contributions by others.⁸² I doubt that I could do nearly as well, certainly not improve on their work. I encourage the interested reader to read their very informative book. For the convenience of the reader, and with the kind permission of King's Fund Publishing, I reproduce here some excerpts from their summary of summaries:

- "Post-reform, NHS activity rose faster than resources (and rose at a relatively faster rate than before the reforms). This suggests that overall, despite some well-publicised increases in transactions costs, there was an increase in efficiency in the NHS that is attributable to the reforms.

* A high-powered econometric study of hip fracture surgery found "that waiting times for surgery fell after the reforms, while outcomes such as the length of stay in hospital improved ... [and] are consistent with the new incentives provided to hospital managers by the NHS."⁽⁶⁵⁾

- Although analysts widely predicted that cream-skimming would create equity problems, no cream-skimming was observed in practice Fundholders also managed to hold down prescription costs relative to non-Fundholders and were better able to generate surpluses on their budgets than HAs.
- GP purchasers and GP commissioners in their various forms did appear to generate some improvements in the responsiveness of providers. However, there was no evidence of any increase in choice for patients; and, although there were changes over the period in indicators of quality such as waiting lists and patient satisfaction surveys, it was difficult to attribute these specifically to the reforms....
- Overall, despite some changes in culture, measurable changes were small and perhaps not as great as was predicted (or feared). This was partly because competition within the market was limited, and this in turn may have been because the essential conditions for a market to operate were not fulfilled. More specifically, the incentives for the relevant agents were too weak and the constraints imposed by central government were too strong
- Lessons to be learned include the importance of devolving purchasing to GP-led groups.”

This is about where I come out. While the productivity figures are not insignificant, I think the more important consequences of the internal market will be elsewhere, particularly in the improved balance between primary and secondary care and in cultural changes in the NHS.

Assessment: Were the Foundations in Place?

As I noted in Chapter II, health services have many characteristics that make them particularly susceptible to market failure. This makes creation of a workable market model particularly complex, if it can be done at all. An effective market for such a service cannot be expected to spring to life as a consequence of an executive order. Considerable investment in basic institutional foundations is needed. Not only that, but all the foundations must be present, at least to some degree, rather like all four tyres must be present for the car to run properly. These are all matters of more or less; everything does not need to be present in perfection for the market to work. Moreover, some of these are dependent on others and can be considered to be endogenous to the system. This is especially true of management information which arises in response to the demands of managers and willingness to use it. Finally, the effectiveness of the market model should be judged in comparison with the actual performance of realistic alternatives, not in comparison to some theoretical ideal that has never been achieved. Many of the following are requirements for a well run centrally planned and controlled system also.

Here are some of the main ones.

POLITICAL SPACE

In private markets, the actors (consumers, producers) have considerable freedom to pursue their own best interests (subject of course to a large body of generally applicable laws such as zoning, consumer protections, anti-monopoly, environmental protection, etc). As Charles Schultze points out, “those who may suffer losses are not usually able to stand in the way of change. As a consequence, efficiency-creating changes are not seriously impeded.”¹⁴¹ If Sainsburys decides to close a loss-making store, communities may protest and politicians may perform their time-honoured rituals, but at the end of the day, the store usually will close. In particular, the poorest performers in private markets are allowed to fail. Thus, for the most part, private markets have the “political space” to do their work.

On the other hand, when it comes to political decisions such as to close a hospital, a school, a military base or a nationalised coal mine, all hell breaks loose. Writing of the American political system, but even more applicable to the British, Schultze writes "... we tend to subject political decisions to the rule, 'Do no direct harm.' We can let harms occur as the second- and third-order consequences of political action or through sheer inaction, but we cannot be seen to cause harm to anyone as the direct consequence of collective actions".

The government must have looked to "the market" as a place where efficiency-creating changes take place. But the internal market did not have or create any "political space" within which market forces could work to reorganise services. Because the interest of the public in the configuration of hospital services remained high, the interest of the government remained high, as it has under the subsequent government. It always has been and remained important for the NHS to avoid doing anything that might upset voters especially in the runup to an election. Fulop and Rosen reported that during the 1994 European and local election campaigns, chief executives were told that they should exercise care before publishing decisions or other material which might be regarded as controversial during the election period, and in undertaking new publicity campaigns.⁵³ Several people described to me the same phenomenon in 1999 except that the message apparently was not put in writing. They couldn't even *say* anything controversial, much less *do* it.

INFORMATION, THE OXYGEN OF MARKETS

The pre-reform NHS ran on completely inadequate information on activities, costs and quality of care. That condition was not alleviated by the internal market. Some observers felt that the abolition of the Regional Health Authorities, the privatisation of NHS information, and also the emergence of the concept of proprietary information worsened data access.

Without information on quality and costs, markets cannot do the good things we ascribe to them. It seems hard to understand how purchasers can do other than wander around in the dark or proceed on the basis of guess and gossip if they do not have access to reliable information on the quality of the would-be providers of services and the costs of the services. Lack of such information makes it difficult

to defend decisions to move business from one provider to another. Providers also need similar data for needs assessment and for benchmarking. GPs and Health Authorities cannot be expected to refer to the best quality providers, or even those of acceptable quality without good information on specific providers. Poor performers cannot be motivated to improve if they have no idea where they stand. The situation remains today that quality-related information is virtually absent.

Subject to the requirements of protection of patient (not provider) confidentiality, information on activities, costs and quality should flow freely and be equally available to all participants in a market. Databases should be available to the general public so that researchers and others can develop innovative analyses. In Britain, government controls access to information and uses it to protect ministers. This is not open government. To illustrate what could be done, in California, the hospital discharge abstract data set, with all patient identification removed, is available as a public user tape. Anyone, including my students, can use it to obtain hospital volumes by procedure, mortality rates, and other information. The same is true of some other states. The Health Care Financing Administration that runs the federal Medicare program makes similar data available nationally for inpatient, outpatient and physician services. These data have been used extensively by health services researchers and by entrepreneurial medical informatics companies developing performance measurement tools. An open government ought to make such information available to the general public.

Why is it important to know what services cost if the goal of the NHS is to deliver to every person the services he or she needs regardless of cost? First, there are wide variations in costs of services among hospitals. *The new NHS—1998 Reference Costs* reporting on costs of surgical procedures in NHS acute hospitals reports that the lowest cost trust is 30% below average, the highest 70% above, or nearly a 2.5-fold variation, and 90% of Trusts are within 20% of the average, which still leaves a variation by a factor of 1.5.^{36*} In the face of variation, in a competitive market, purchasers would like to buy from the hospital offering the best combination of cost, quality and

*There is continuing controversy over the accuracy of the figures, and whether the comparisons are adjusted adequately for such relevant variables as presence of teaching programmes and local costs of living.

access. Hospitals that want the business therefore offer purchasers prices lower than those of competitors.. In the long run, their prices must cover cost. So the business moves to the lowest cost hospitals, and that is one of the main ways value for money is improved. In a non-competitive centrally managed system, top management may use benchmarking, asking the managers of the high cost hospitals to study the methods of the low cost hospitals with a view to adopting them. *The new NHS—1998 Reference Costs* says that this is the method that will be used. It is often said that markets cannot work without cost information. That is also true of a competently managed centrally planned and controlled system.

Before 1990, there were no systematic and reliable data on the costs of health services. There were limited pioneering research efforts such as the Resource Management Initiative to devolve financial management to clinical directors.¹²⁴ And there were efforts to test Diagnosis Related Groups (DRGs) in England to see if homogeneous “products” could be agreed for costing. The idea was that clinical directors would become accountable for the costs of DRG cases they produced. But implementation was temporarily side-tracked by the introduction of the Internal Market. In 1991, the main concern was with a “smooth take-off”. Apparently, there was a fear that cost per case information, with its likely wide variations, would motivate large swings in purchasing patterns and interfere with the desired “smooth take-off.” So the government did not move forward on this quickly.

In 1991, the government did recognise the need for valid comparative cost information and inaugurated a systematic effort to get it. The NHS created the National Casemix Office to develop a methodology for valid cost comparisons considering variations in casemix by the development of Healthcare Resource Groups (HRGs), homogeneous groupings of inpatient cases with respect to resource use, units that could be used as a currency for buying and selling inpatient hospital services. The NHS Executive Letter “Costing for Contracting” appeared in 1993.¹⁰⁶ It began “While great improvements are being made in contracting and management information, there is little doubt that the lack of valid, reliable and comparative data is the weak link in the contracting process. Thus steps are being taken to improve the situation, including the approach taken to costing in the NHS.” The Letter went on to describe principles of cost allocation that should be

used by all Trusts. Over time, acute hospitals were asked to provide HRG costs for an increasing range of surgical specialities.¹⁰⁹

But progress was slow. This work requires a great deal of data gathering and consensus-building to get the agreement of all concerned, particularly the medical profession. *The new NHS—1998 Reference Costs*, was not available until 1998. James Raftery of Birmingham University recently pointed out some of the limitations of this product.¹³⁴ First, only “trimmed” inpatient surgical cases are covered which accounts for around 40% of total costs. “Second, the costing methods are not standardised Third, ... the costs are based on the much criticised finished consultant episodes (FCEs)” prone to “FCE inflation whereby a patient’s hospital stay might generate several episodes Fourth, since data are reported at hospital, rather than at patient or FCE level, no confidence limits can be estimated. This makes it impossible to interpret the significance of cost differences.”

As of 1998, hospitals were using a “top down bottom up” method of allocation in which overhead costs are apportioned down to each clinical department. The accountants and clinicians allocate their direct operating costs to each Health Resource Group HRG, based on normal practice, not observed actual practice. This information is being reported to the Casemix Office. The engineered standards based on time and motion studies normal in manufacturing industry and also used to a limited extent in some American hospitals are not used. A frequent practice is to allocate costs based on national average cost weights. The 1998 method is generally not “activity based costing” with activities ascribed to each patient or type of patient. For example, drugs are mostly not dispensed to a named patient, but to ward stock. So direct patient detail is not captured. Cost finding costs money and how much to spend should depend on a judgement of costs vs. benefits of better information at the margin. The World’s leading competitive industrial companies find it in their interest to estimate costs with some precision. But if the information isn’t going to be used for any serious decision making, then there is no point paying more for it.

So the NHS “isn’t there yet”. How will we know when the cost estimates are good enough? It will be when purchasers and providers start taking them seriously and using them without being bogged down in arguments about their validity.

What does this tell us about the implementation of the internal market? First, the internal market made the need for good cost

information explicit. It put many people into a position where they needed it to do their work. Before the internal market, the need was not recognised. Second, real markets create powerful incentives for managers to know their costs accurately. (If you underestimate, you will lose money; if you overestimate, you may fail to make some profitable transactions.) If the politics had allowed the internal market to work, it could have created such incentives. As Carol Propper observed, “There is little incentive for anyone to work out their costs when they will not go bankrupt.” So cost estimation is more than an abstract technical exercise. What comes out depends on the political and economic context. Third, the government did get the necessary work going to produce the information and it is now working to correct some of the deficiencies. However, the process took too long for it to be available during the 1990-97 period and the absence of cost information had to impair the effectiveness of the internal market (assuming people would have been allowed to act on the information if they had it). So a crucial building block was not in place when it was needed. One can’t expect much from a “market” that is not informed by cost information. If the NHS were, or is, really serious about improving value for money, it would know its comparative costs quite well and act on the information.

MOTIVATED PURCHASERS FREE TO BUY SELECTIVELY

The whole idea of the Internal Market rests on the concept of effective purchasers or commissioners who have goals that relate clearly to the goals of patients and society, powerful incentives to pursue them in the face of obstacles, and the freedom to act to pursue them.⁸⁴

In ordinary markets for consumer products and services, economists assume that consumers have a reasonably clear ability to discern what purchases will be most satisfactory to themselves and that they systematically pursue their own satisfaction (“maximise utility”) within the limited resources available to them. In a market for health services in which information is uncertain or unavailable and not shared by both parties, the link between the patient’s purchases and satisfaction realised is weaker. This is also the case in a market in which the judgement of sick people is impaired. In a market for health services in which consumers do not pay for the services they receive with their own money, the matter is even more complex. Given that there are

inevitable limits on resources, someone must do the purchasing for them and the purchaser needs criteria or clear goals.

When I first thought about this, I was attracted to the goal of maximum health gain within the limited resources. However, on further reflection, it became clear that the problem with this formulation for health authorities is that there are many and competing goals including health gain (which itself comes in many dimensions): access, equity, reassurance, comfort, dignity and convenience for patients, and that fundamental to this situation is the fact that there isn't and can't be very clear goals because many goals need to be balanced. Even within the concept of health gain, there are important uncertainties in the efficacy of treatments, and also distributional issues. Getting more health gain for some with personal medical services inevitably means less for others, with all the difficulties of interpersonal comparison of utilities. This important fact is illustrated by the new NHS Performance Assessment Framework which identifies six areas for assessment (health improvement, fair access, effective delivery of appropriate healthcare, efficiency, patient/carer experience and health outcomes of NHS care) and then a high level indicator set for 1999-2000 with 41 measures and a promise of more to come.¹¹⁶

Purchasers must be motivated and supported in pursuit of commissioning goals in the face of entrenched provider and local interests. There must be political will behind them to protect them when they act in accordance with their charter.

The "purchaser-provider split" was supposed to free Health Authorities from the day to day responsibility for managing providers and to re-cast them as purchasers of health care services for the people in their districts. They were supposed to take an overview of the needs and wants of the people in their districts and to use their purchasing power to maximise the health gain of their people within the limits of the resources available to them. Thus, freed from provider interests, Health Authority purchasers were supposed to be the driving force in seeking the best value for money for the people in their districts. A Health Authority should have been in a position to say to a Trust something like "We regret that our decision to buy our orthopaedic services elsewhere causes you a financial problem, but that is *your* problem, not ours. Our responsibility is to buy high quality services at a low price, which you are not offering us." Or "We regret that you are unable to supply us with information that would help us judge the

quality of your services, but that cannot prevent us from taking our custom to providers who can supply the information.” Unfortunately, it didn’t work that way.

To be effective, purchasers must have some freedom of action to pursue their goals. This means, for example, that Health Authorities should have significant freedom to contract with others than the established providers in their own districts. Of course, in pursuit of their goal, they will need to have the services of most of their local providers accessible to the people for whom they are purchasing. And they can have little alternative to purchasing emergency services from local providers. But they should not be obligated to purchase from any particular provider because if they are, they will be unable to demand accountability. I believe that for a market to work effectively, some ineffective providers must be allowed to fail, though there must be a safety net for patients. The possibility of failure provides a powerful incentive to all hands. There will not be an efficient market if most people on the provider side believe that their jobs are secure no matter how poorly they perform.

Effective purchasers need “Programme budgeting and marginal analysis.” as illustrated by the work of Peter Brambleby.¹⁶ Programme budgeting was first developed at the RAND Corporation in the 1950s and then put into practical application as the resource management system in the US Department of Defense in the 1960s.⁴⁵ Programme budgeting had its beginnings in a cost accounting tool that could display, over time, the total costs of weapon systems and forces in a way that could be related to the achievement of the missions of the Department of Defense (DoD). Program Budgeting recognised that one cannot be confident of the cost estimates of any part of the system unless the method can account for all the costs. This system can give decision makers information on the resource consequences of strategic decisions.

Peter Brambleby applied these ideas in the East Sussex Health Authority. His stated objectives were to simplify, to inform, to plan, to co-ordinate and to communicate. Instead of defence missions, his dimensions for the programme budget matrix were age groups, specialities and other spending, and the acute/community divide. Brambleby’s display makes it easy to see, for example, what the Health Authority is spending in inpatient episodes for asthma. “This sets the financial framework for planning such innovations as asthma liaison

nurses ... working in general medicine or paediatrics or both, part of whose function will be to keep people out of hospital.”

A few Health Authorities have performed very effectively in the absence of much of the relevant information. But a well informed, empowered Health Authority purchaser would have an information system and set along the following lines.

First, each purchaser would have a history and projection of its covered population, sub-divided by age and sex, and information on the prevalence of costly medical conditions. It would have data on experience of hospital use, primary and secondary care doctor visits by group. And it would have access to comparable information for other Health Authorities so that it could compare its population's utilisation of services with that of others. Hospital use would be subdivided by HRG, or Major Disease Category, or as Brambleby did in the absence of HRG information, by speciality. This could be used to prepare a “programme budget” showing in meaningful form where the resources will go in the future if present policies are continued, as a point of departure for consideration of better ways of using them.

Next, as a guide to choices of provider, purchasers need risk-adjusted outcome measures for all providers from whom they might purchase services as well as information on their processes of care. (I discuss this below in chapter eight.) Purchasers ought to have access to results of surveys of patient experience and satisfaction based on uniform, tested and validated instruments, in enough density to be able to evaluate individual providers.

Purchasers need systematic information on the prices and case-mix adjusted costs of services, as in price per case by HRG for all the relevant providers in their market. Purchasers need to know about the *costs* of would-be providers, and not just the *prices* on offer if they intend to form an ongoing buyer-seller relationship in which they must make investments in the relationship (e.g. training personnel to develop processes of collaboration). They need to know that the low price offered truly reflects the low costs of a high quality efficient provider, and not just a one off price that will not be sustained.

Purchasers need access to a data base of studies evaluating marginal benefits versus marginal costs for a wide range of treatments, the kind of studies that have been pioneered by David Eddy and that are produced by the NHS Centre for Reviews and Dissemination at the University of York.⁴³ There is a need for marginal cost-benefit

analysis within units of care (e.g. compare marginal benefits and costs of fewer or greater resources applied within an HRG) and at the level of more or less units of care.

Finally, purchasers ought to have substantial analytical resources in the form of adequate numbers of well-trained analysts such as public health doctors, statisticians and health economists. These are the people who can pursue systematically the questions asked by health authorities as well as generate and test their own hypotheses as to how resources might be reallocated to increase health gain.

These requirements are not unique to a market system. It is hard to see how any system for running the NHS can be effective in their absence.

Unfortunately, these requirements were not met.

First, few, if any, defined and understood the role of Health Authorities as purchasers. There wasn't a clear definition and direction as to what purchasers were supposed to do, other than improve their "efficiency index" performance, reduce waiting lists and not overspend their budgets. They were also under pressure to avoid major disputes with providers.^{84 85} They lacked incentives to innovate and take risks to improve value for money (which is not to say that some did not do so in the absence of incentives). Preservation of the status quo came to take precedence over changes which could have improved health care. For "purchasing" to be meaningful, purchasers had to be change agents in a culture profoundly resistant to change.

The Audit Commission did a very interesting review of the purchasing of highly specialised services by Health Authorities.⁴ They observed that "Despite their high cost, Health Authorities often do not have good information on the number of patients receiving specialised services, particularly when they are buying a range of services from a teaching hospital that provides both general and specialised services Our study shows that the real costs of specialised services are often not known More commonly, providers set prices based on historic levels with adjustments, even if this does not reflect the real costs of services Health Authorities do not always ask about prices and do not appear to be sensitive to price variation ... in general, benchmarking exercises were rare. Outcomes are easier to measure for some services than others But even where such measures are readily available, they are often not used by commissioners Feedback from GPs and referring consultants

at local hospitals on the quality of specialised services was patchy at sites visited for this study.” If they were not buying on the basis of price or quality, what were they doing? Per the Audit Commission, “General audits of the NHS in 1996/7 indicated that many health authorities were simply rolling over the previous year’s contracts across a range of services, while demanding efficiency savings”.

Second, the Health Authorities were not supplied with adequate resources: comparative data on quality and costs, analysts and computer resources. The Health Authorities did not have or develop the information systems that purchasers needed to do their jobs. Lack of standard information on quality and cost left the Health Authorities “flying blind” and also weak against the pressures of Trusts and ministers. An excess of confidentiality blocked the access of Health Authorities to whatever quality-related data existed. It really struck me, for example, that the purchasers in Bristol apparently did not feel that they had the power to prevent an inappropriate development of paediatric heart surgery or even that they had a right to volume and mortality information. A few Health Authorities had creative aggressive leadership that found ways to get information and use it, but they were the exception and they did not get much support from the NHS hierarchy.

In the early 1990s, the NHS did begin several important initiatives to improve information for purchasers: the NHS Centre for Reviews and Dissemination, University of York, the Cochrane Centre at Oxford, and the National Co-ordinating Centre for Health Technology Assessment at Wessex.⁴ These are very worthwhile efforts at improving the dissemination of existing knowledge. But they do not supply purchasers with specific information about the quality and cost of the services of the particular providers they are considering or using.

Third, Health Authority officials were often seen as bureaucrats without credentials or credibility needed to be able to stand up to pressures from Trusts, local politicians and ministers. They were the “bad guys” who interfere with doctors, try to close hospitals, and are always saying “no”. Health Authorities did not win the public relations battles. Regular and formal consultation with the public was not built in. The Health Authorities’ master was the NHS Executive, from which money and directions flowed, not the patients in the district.

Fourth, purchasers operated under very strong political constraints from local citizens who wanted their local facility or department to

remain open, regardless of the cost to the system, or regardless of quality of care, to protect their access to services and jobs. Also, there were strong national and regional rivalries creating support for doctors developing local services that would not have the volume to support them from the point of view of quality or economy. It was hard to oppose doctors driving for recognition and Distinction Awards. There was a great deal of involvement by Members of Parliament. It was not established that the search for health gain for limited resources should be able to override at least some political pressures. If a purchaser were to withdraw a contract for a speciality service from a hospital, it could and probably would “destabilise” the hospital by preventing it from meeting its financial targets, forcing it to raise prices, or affecting the viability of other related clinical services or Royal College approval of the Trust as a teaching site for junior doctors. Moreover, a Health Authority’s hands could be tied because they couldn’t justify changes in purchasing patterns by full disclosure of the facts regarding a provider’s shortcomings, thereby admitting complicity in acceptance of poor quality in the past.

I think there was too much focus on closing whole hospitals or whole departments whose closure could “destabilise” a hospital. Diane Dawson has suggested that it would have been better for purchasers to focus on individual consultant firms. Taking business away from one of them would likely have caused less problems with service disruption.

Health Authority purchasers that aggressively pursued value for money risked being seen as trouble makers for “destabilising” hospitals. Trusts losing contracts could and did appeal to the Region who would often overrule the Health Authority or order a compromise that split the difference. In other words, purchasers were not allowed to be purchasers. Some purchasers did not use HRGs because they feared the political consequences of finding local providers to be inefficient. This and other issues such as availability of information and local wage determination might have been solved if purchasers had acted on strong incentives and had top level political support.

In 1985, I wrote about the internal market idea:

“From an economic point of view, the main defect in this model is that it still lacks powerful incentives for District Managers to make their decisions in the best interests of patients in the face of political pressures to do otherwise. I am referring to pressures to favour inside suppliers in the interest of keeping peace in the family, pressures for the District to

use its own personnel rather than declare them redundant and spend the money elsewhere, pressures from consultants to develop a full range of services in the District for the sake of autonomy, control and prestige, etc. This is perhaps the central problem of the NHS today, the problem with any monopoly provider of services.⁷⁴⁶

Unfortunately, that problem was not even addressed, much less solved. Health Authorities could persist in ineffective but “comfortable” purchasing and, if anything, be rewarded for not “destabilising” hospitals. Purchaser decisions were mostly about balancing the books and preserving institutions, not about health gain or quality improvement. This was the weakest point in the whole model.

One of the perennial problems of health policy is how to overcome provider domination. The Internal Market was supposed to help this. It didn’t get very far. The government couldn’t shake its identity as a provider and make the transition to becoming primarily the purchaser of health services.

GP FUNDHOLDERS

The GP Fundholder initiative did what mathematicians call proving an existence theorem. It empowered GPs with resources and authority and they showed that there was a great deal they could do to improve the quality, co-ordination and appropriateness of care and services. Also, the larger scale operations such as the South West London Primary Care Organisation, the various “multi-funds,” and the Total Purchasing Pilot Projects showed that GPs could work together effectively in large groups and improve the co-ordination of services.*

GP Fundholders used their enhanced purchasing power to improve communications with hospitals and consultants.⁵⁶ Some demanded and got prompt computer generated notifications of hospital discharges so that they could know when their patients were coming home and be sure appropriate resources were deployed to support them.⁶⁷ They got involved in discharge planning. Some Fundholders used their knowledge of patients’ needs to influence which non-urgent patients were called in for surgery first. Most Fundholders adopted quality standards. One practice used the threat of taking its business elsewhere to get a 12-week turnaround time for cervical smear tests reduced to

* A very good summary of this is available in the Audit Commission’s report *What the Doctor Ordered*.

one week.³ Another forced a Trust to reorganise care processes to reduce the waiting times for cataract removals. Some Fundholders invited consultants to their surgeries to hold outpatient attendances, thereby improving convenience and accessibility for their patients (if at some cost in time and convenience of consultants). They brought more services into their surgeries such as prompt access to physiotherapy, dietetics, community psychiatric nursing, chiropody, phlebotomy, speech therapy, occupational therapy, etc.

Some Fundholders became involved in the development of care pathways. The Audit Commission reported that 43% of Fundholders have agreed guidelines about discharge arrangements. Some demanded access to clinical audit information. Some reduced inappropriate or unnecessary follow up visits. Some set limits on the number of repeat outpatient attendances they would pay for.

In the larger projects such as the South West London Primary Care Organisation and the Total Purchasing Pilots, integrated teams of practice nurses and community nurses participated actively in hospital discharge and in the prevention of avoidable hospitalisations by improved home care. They developed shared care pathways with hospitals, 24-hour call and rapid response capabilities to reduce emergency admissions, and case management of high risk individuals.

The Fundholding scheme created structures that permitted GPs to manage financial flows in one pool and improve the overall integration of care.

If Fundholding in its early days was seen as the final model for primary care, it was vulnerable to a number of criticisms including that the practices were too small for the spreading of administrative overhead costs, too small for risk bearing, and that they created a danger of two tiers of services. But if the early “standard” Fundholding was seen as a kind of pilot, a probe, an opening shot in a campaign to strengthen primary care, to take advantage of the under-utilised commissioning capabilities of GPs, and to right the balance between primary and secondary care, then it was clearly a big success, crowned by the adoption of Primary Care Groups (PCGs) in *The new NHS*. With hindsight, I think the initiation of Fundholding should have been seen a first step in a process of innovation and not the introduction of a finished product.

Fundholding created a disequilibrium between Health Authorities and Fundholders and non-Fundholders which had the knock on effect

of stimulating a great deal of innovation in the role of primary care in the commissioning of services. Most GPs became involved in some sort of commissioning activity. Local doctors were taking the initiative to solve problems rather than waiting to be told what to do. There was much innovation. It obviously stimulated adaptation to different conditions and beliefs. Along the way, the government enacted the Primary Care Act Pilots (PCAPs), allowing Health Authorities and GPs to agree innovative contracts. And the government picked up and encouraged Total Purchasing Pilots which served as the prototype for the Primary Care Groups. If PCGs achieve their promise, we will have their Fundholder predecessors to thank for it.

GP Fundholding also created serious concerns about equity. In a desire to encourage Fundholding, the government supplied them generously with funds. Their discretionary purchasing power gave Fundholders more leverage over consultants than that of non-Fundholders. There were concerns that the patients of Fundholders could thereby get higher places in the queue and could get better services than the patients of non-Fundholders. This fuelled the new government's desire to find a formula for Fundholding that would eliminate such equity concerns and also allow them to say they were abolishing Fundholding while keeping and extending its gains. That formula is Primary Care Groups.

Also, Fundholding generated high transactions costs as small business units had to incur the costs of searching the market and making transactions for a few patients, while hospitals had to keep track of and execute contracts from many purchasers.¹²⁷ In 1990, I felt that 11,000 patients was too small a base for spreading overhead and risks and that units more like 100,000 would be more effective and economical. However, while the larger units might have lower costs for transactions outside the group, per patient, they would surely have higher internal costs of co-ordination and management.

* "The new role envisaged for GPs and community nurses will build on some of the most successful recent developments in primary care. These professionals have seized opportunities to extend their role in recent years. Practice nurses are taking on new disease management roles GPs have been developing new services within their surgeries Extended roles in providing primary care and community healthcare have been matched by greater influence in shaping hospital services Multifunds, locality commissioning groups, individual fundholders, and total purchasing projects all have helped lead the way. Each has undoubtedly brought benefits to patients."

A clear appreciation of the achievements in Primary Care in these years is contained in *The new NHS. Modern. Dependable*, in the chapter on Primary Care Groups.^{*143}

PROVIDERS CAPABLE OF RESPONDING TO MARKET FORCES: NHS TRUSTS

The creation of NHS Trusts empowered executives to manage hospitals and other provider organisations. It freed them from detailed line-item budgeting which blocked responsibility and initiative, and it gave them the freedom to manage in the overall best interests of the organisation. In some hospitals, Trust status helped create a culture of “ownership”, responsibility and self-determination and motivation toward efficiency. Trust status was a good idea, and I was not surprised to see it remain a part of *The new NHS*.

All hospitals became Trusts. This became a policy goal, an end in itself, rather than a means to a new culture and style of management. As Peter West observed, “Trusts for all meant, paradoxically, no change The rapid move to Trust status for all fixed most of the health service not in a new model but in an old model with a new label There simply was not the time to change the culture everywhere”¹⁶¹

In the actual political context in which hospitals exist, and with the inadequate purchasing side discussed above, Trusts in effect were given extraordinary powers and immunities because “destabilisation” was considered unacceptable. Thus, as things turned out, Trusts could make unneeded investments in new services and make the Health Authorities pay for them. Trusts in financial trouble could get “transitional help” without clear and enforceable plans to make the needed adjustments. The NHS Executive put pressure on Health Authorities to buy services from Trusts in deficit status. Thus, the internal market did not break the basic perverse bureaucratic incentive: the best way to get more money is to do a poor job with what you have. Instead, doing a better job gets you less money because you don’t need it. If Trusts aren’t made better off for doing better work, it is hard to correct this incentive. In a system with full market discipline, the unwise investor can lose his capital and the company or factory that makes poor products can be shut down. But because of the “coercive deficiency power” of Trusts, this internal market was lacking in adequate punishment for poor investment

decisions or performance. As one observer put it, “People rarely lost jobs over bad decisions. A hospital could decide to compete in a speciality by hiring a couple of specialists only to find months later that demand was insufficient and that the investment was losing money. By then, the chief executive had moved on.” Only one Trust went out of business, and that wasn’t a hospital.

On the other hand, the rules that Trusts must break even year on year meant that the Trusts had no clear mechanism for generating capital to finance expansion. Combine that with the lack of excess capacity and the general scarcity of capital in the NHS and tight restrictions on access to private capital, and Trusts were handcuffed in capital spending and not able to compete much where capital spending was required. The unneeded investments they did make were generally “expense type” investments such as hiring new specialists for the development of new programmes they wanted to offer, and not capital investments.

Perhaps the most serious disability of hospital Trusts was their very high perceived percentage of fixed costs. I say “perceived” because most of what is considered “fixed” or “variable” is a matter of policy and choice, not some immutable law of accounting. I understand that British Trust hospitals believe that 70-80% of their costs are fixed. That results in part because their doctors are salaried, and there is a policy against compulsory redundancies, which relates to low pay in the public sector. If there were the will and also agreements to adjust the staff to the workload, a much higher percentage of costs might be considered variable. Trusts are also constrained in other ways. They need a critical mass in each speciality. They must maintain orthopaedic and other departments to support the A&E department. And they must maintain sufficient patient volumes as defined by the Royal Colleges, in departments in which they have teaching programmes. All this is perfectly reasonable. But it does mean that hospitals see themselves as very limited in the ability to adapt to market forces. If a purchaser were to withdraw a contract for a speciality service from a hospital, it could (and likely would) destabilise the hospital by preventing it from meeting its financial targets, forcing it to raise prices on other services, especially those the local health authority must pay for, affecting the viability of other related clinical services or Royal College approval of the Trust as a teaching site for junior doctors.

The net is that the NHS internal market did not have providers

that could adapt very much to market forces, especially in the short run, either on the upside or the down.

A REGULATORY FRAMEWORK

An effective market system for health services must have a fairly sophisticated regulatory framework. And it is important that these details be got right. For example, there need to be rules regarding transparency of information on quality and costs. Companies whose shares are traded on public exchanges are required to publish audited financial statements. Sellers of food and drugs are required to make available a great deal of information about contents, possible hazards, etc. I heard numerous complaints that in the internal market, Trusts were able to treat financial and cost information as “commercial confidential.” However, in fact, they were required to file audited financial reports of their incomes and balance sheets, plus the Trust Financial Return 2 (TFR2) which apportions expenditure by programme and speciality and TFR3 which reports expenditures according to pay and non-pay categories, a substantial amount of financial transparency. These reports appear comparable to reports California hospitals must file and publish, if somewhat less detailed. So I have difficulty understanding this complaint. Perhaps it refers to lack of data on costs of specific cases, casemix adjusted, i.e. HRGs.

Next, in the UK internal market there might need to be rules regarding pricing, especially to prevent the exploitation of inelastic demand as in the case of local monopolies. The NHS Executive established the rules that prices should be based on actual costs, costs should be established on a full cost basis, there should be no planned cross subsidisation between specialities, procedures or contracts, and revenues should just cover costs plus a 6% return on investment each year.¹⁰⁶ I doubt this rule was enforceable.¹²⁹ The Audit Commission found that it was not followed.⁴ The Advisory Group on the Review of the Trust Financial Regime found great variation in prices actually charged depending on purchaser and type of contract.¹¹¹

Moreover, I doubt that this is a good protection against the exercise of monopoly power. If the producer facing inelastic demand is not allowed by this rule to raise prices, it can still obtain the revenues market conditions allow by letting costs rise (putting the money into prestige-enhancing technology, pay rises, improved working conditions,

etc.) At the same time, the “price equals cost” rule destroys any incentive to cut cost. The rule required that if the Trust makes a cost reduction not planned in its budget, it must reduce its prices the following year. “As a result the Trust is only assured of retaining unplanned savings during the year in which they are generated.”¹¹¹ I think more likely routes to consumer protection would be active anti-monopoly policies and aggressive purchasers willing to reach out to or bring in alternative suppliers. A great deal of managed competition strategy in the United States is about purchasers designing arrangements so that providers see themselves as facing elastic demand.⁴⁹

One transaction that clearly requires regulation concerns the prices of services in emergency hospitalisations. These are involuntary transactions. Neither the purchaser nor the patient has the opportunity to shop around, compare prices and consider alternative suppliers. So hospitals can take advantage of the situation by over-charging and sometimes over-utilisation. What is needed is a standard case classification system, like HRGs, and a set of regulated prices for treating patients in them, perhaps set at the averages so that hospitals cannot exploit the situation unfairly and so that the more efficient than average hospitals can benefit. The Extra Contractual Referral process might have worked better had it been so regulated.

Next, there need to be rules for dispute resolution processes. If a Health Authority and a Trust cannot agree on a price, on what principles is the issue decided? A habit of splitting the difference would create perverse incentives. So would (or does) a policy of protecting institutions.

There need to be standards of performance applicable to all providers that can be applied generally and incorporated by reference in contracts so that everything does not have to be reinvented with each contract negotiation. For example, to be accredited for eligibility for such public programmes as Medicare and Medicaid, American hospitals must be accredited by a private body known as the Joint Commission for Accreditation of Health Care Organisations (JCAHO). Private purchasers incorporate accreditation and compliance with standards into their contracts by reference. Purchasers may choose to impose additional or stricter standards in some cases.

Just like private businesses that seek to protect themselves from competition by combining with their competitors, so NHS Trusts have

a strong motive to combine. The matter is complex because some hospital combinations may be cost-reducing and quality-enhancing. American anti-trust authorities have had a very difficult time sorting out beneficial from anti-consumer combinations. Again, pro-competition rules and policies are needed. This is especially important in the market for hospital services in the UK because so many district general hospitals have territorial monopoly power. In fact, for reasons of economy, they were designed to be so.

It is a part of the conventional wisdom that British hospitals are territorial monopolies that cannot be competitive. Nevertheless, Carol Propper showed that competition was possible among acute hospitals. She “estimated that only 8 per cent of a large sample of all acute service providers have no competitors within a 30 minute travel distance in the four important specialities of general surgery, orthopaedics, ENT and gynaecology”.¹³⁰ And she found that some price competition did occur.^{129 130} Thus the possibility of price competition among hospitals was worth preserving from the threat of competition-reducing mergers.

However, incentives for NHS Trusts to compete were not as strong as they would have been in the case of competition among for-profit enterprises. Also, as noted earlier, there were constraints on would be competitors including access to capital, and the fact that losers couldn’t be allowed to lose. This makes it all the more important to protect competition. Anti-monopoly guidelines were not issued until December 1994 which was a fairly long time after the start of the Internal Market.¹¹⁰ The guidance said that mergers would be disapproved if they were seen to reduce patient welfare through loss of competition. Mergers would have to be reviewed and approved by the NHS Executive under various conditions, the main one being “For any speciality which accounts for more than 5 per cent of any of the merging providers activity: all mergers in which the joint activities of the providers will account for more than a 50 per cent share of total market activity” where market area is defined as a 30 minute travel time around each provider. This kind of anti-monopoly regulation is a difficult area. For example, defining market areas is inevitably somewhat arbitrary and is a matter of judgement. A 50 per cent market share seems quite high to me. That leaves room for creating a dominant provider by merger.

Other policies were anti-competitive.^{58 51} As noted above, the pricing rule meant that Trusts couldn’t generate a net income to save

up and use to finance a competitive challenge to another Trust. Capital spending policies were geared to avoiding excess capacity and unnecessary duplication of facilities. It must have been very difficult if not impossible to get approval for the financing of new capacity for the purpose of challenging a hospital already offering a service. The NHS rations total capital spending. So once more, something that superficially looks like a market isn't really a market.

Apparently a considerable amount of merger activity was approved. From 1991 to February 1997, 13 mergers were approved by ministers and consultation was underway for another three. This does not count mergers which do not require ministerial approval because they do not involve dissolution of a Trust, nor mergers that took place in the early stages of the reforms in which a first or second wave Trust took over an existing Directly Managed Unit.⁵⁷ Mergers do not necessarily reduce cost. Some mergers in the private sector have failed because of the costs or difficulties of reconciling different cultures and management systems. Some of the overhead savings ascribed to mergers may be achieved by co-operative arrangements. Merger may be a poor solution to the problems of a failing hospital. Changing management or authorising new management to make needed changes may solve the problems without the anti-competition effects of merger. Regional concentration of costly volume sensitive services can be done without concentrating hospital ownership. The gains in quality and economy achieved by regional concentration, with associated economies of scale and experience, must be balanced against the costs of reduced competition and greater travel time for patients.

Maintaining competition in the acute hospital sector is important. An acute hospital that does not offer a particular service remains nevertheless a potential platform for that service. So the presence of competing hospitals enhances contestability. Of course, some consolidation of services can be justified on the grounds of economies of scale and experience, and a merger may be an effective step in shutting down excess capacity and reducing overhead costs. But I think that the burden of proof should be on almost any merger in the NHS. Part of the problem of maintaining a pro-competition policy is that there was and is no effective constituency in the NHS alive to the dangers of monopoly. Indeed, Health Authorities proposed mergers in the hope of reducing Trust management costs. And the present government seem to be encouraging mergers. The end result is likely to be an undesirable loss of competition.

A CAPITAL MARKET

To be competitive, a market for goods or services must have a link to the capital market in such a way that a producer that provides services valued by purchasers at more than they cost to produce can retain some of the savings and, one way or another, use the net income to generate capital to finance expansion. In the case of a non-profit, the capital might be generated by matching a pound earned with a pound borrowed. In the case of a for-profit, generating capital might mean selling shares or borrowing or both. In any case, a market system includes a mechanism whereby successful performers can generate capital to finance expansion to take business away from less effective performers. The NHS lacked such a capital market; capital spending continued to be centrally controlled. In private markets, the prudence of the borrowing is overseen by the lenders who examine performance, proposed business plans for the use of the borrowed money, and who limit the amount they lend in relation to the capacity of the borrower to repay. The lenders are at risk of loss of their capital. The borrowers are also risking their own capital and the executives their jobs and reputations. These safeguards are not naturally present when an NHS Trust borrows with the full faith and credit of the government behind it. People on both sides of the transaction are playing with someone else's money. There is a danger of people borrowing unwisely, knowing that losses won't harm them personally and that they won't lead to the closing of the hospital. Economists refer to this as a "moral hazard problem". There needs to be an institutional equivalent to this disciplinary aspect of private capital markets.

The government introduced the Private Finance Initiative (PFI) under which a private company would finance and build a hospital or other facility and lease it to an NHS Trust with a facilities maintenance agreement. This was seen as a way of building infrastructure without increasing the Public Sector Borrowing Requirement, and as a way of transferring risk to the private sector. The PFI was not without its problems including the difficulty of writing a contract that would be good for 25 years, what to do a few years later if the NHS developed an unforeseen need for substantial modification of the hospital, and the use of private sector rather than public sector borrowing costs. Uptake has been described as disappointingly slow and much of the activity a substitute for and not an addition to public capital.⁶¹ I don't think the PFI changed the

problem of a lack of a link between good Trust performance and capital generation.

The government also introduced a charge for use of capital, a requirement that a return on assets employed be achieved, so that capital was no longer “free” to the user.⁴⁸ And the government gave Trusts some freedom to buy and sell assets in order to improve the overall effectiveness of their use. One of the most satisfying moments in my visit occurred at the Central Middlesex Hospital where they explained how they had used their freedom to sell off some of their land that was unused and to apply the proceeds to the construction of a new Ambulatory Surgical and Diagnostic facility. The land was bought by a company that created 600 jobs on the site, which must have been very helpful to the well being of people living in a deprived area. Apparently as a general proposition (though all generalisations are false including this one), the proceeds of asset sales were deducted from the amount of borrowing approved for a hospital, so asset sales did not lead automatically to a net increase in funds available for investment. Nevertheless, the proceeds did reduce a Trust’s capital charges.

COMMON LANGUAGE AND CURRENCY

For buying and selling to take place efficiently, (i.e. with buyers and sellers being able to compare prices and services on offer elsewhere, and without a great deal of reinvention of the wheel at each transaction) there needs to exist a common language and currency. In what units will hospital services be bought and sold? Markets won’t work well if buyers and sellers can’t communicate in common terms and, in the case of sellers, if they can’t relate their costs to the units being sold. This seems obvious and commonplace, but it is actually quite an important problem. Data categories need to be developed that are meaningful in terms of the “outputs” of hospitals and that are reasonably resistant to manipulation for financial gain.⁹⁵ For inpatient cases, American private purchasers generally use such concepts as “all inclusive medical surgical days” but they also regulate the number of days of stay by type of case according to practice guidelines, and must give permission before stays longer than their guidelines will be paid for. The US Government’s Medicare program pays for most hospital inpatient episodes on the basis of fixed payments for each diagnostic related group (DRG, predecessor to the HRG), adjusted for such

variables as regional price levels, ratio of junior doctors per bed for teaching costs, etc. But as is the case with HRGs, these all took time and a good deal of research to develop.

In its 1997 review of purchasing of specialised services, the Audit Commission found “Our study sites were using a number of different measures of activity in contracts (‘contract currencies’) for each service.⁴ In fact, one Health Authority alone was using eight different measures for renal services, ranging from hospital episodes to number of patients receiving treatment. The lack of consistency in contract currencies clearly makes it very difficult for commissioners and Trusts to compare prices at different places or to identify total activity and spend on each service”. One frequently used currency was the finished consultant episode (FCE) but this measured discrete episodes of care, not use of resources by patients, and it was vulnerable to manipulation. One hospital stay might lead to two or more FCEs if one consultant handed over a patient to another during the same stay (discussed below). However, the NHS did recognise this problem early and created the National Casemix Office to work on it in 1992. The National Casemix Office has been developing Health Resource Groups (HRGs) to measure the “product” of inpatient care. HRGs group FCEs but I understand that a shift to spells of hospitalisation (from admission to discharge) is envisioned.

Thus, the internal market did not have the benefit of a common language and currency for buying and selling services, and this doubtless reduced efficiency and raised transactions costs.

LOCAL WAGE DETERMINATION

Theoretically, one could have a market model in which wages were determined centrally, but it would be one that left behind the possibility of substantial gains in value for money. Local determination of wages and working conditions (perhaps subject to some national minimum) allows the freedom to adapt to local market conditions. It signals to workers that their pay and rises come from their local employer and depend on its success, and not from national political action. And it gives the local employer an opportunity to link pay to performance and achievement of objectives. A recent White Paper refers to “greater flexibility for local managers to set pay and conditions according to local needs” as a way of *Modernising Government*.²⁷

In 1984, I met a DHA Chief Executive who said that one of his most serious problems was keeping his surgeons supplied with capable medical secretaries who could transcribe surgical notes accurately without taking a lot of surgeons' time. His problem was that he couldn't keep them because local industries paid more. The result was surgeons losing a lot of time doing secretarial work at surgeon's pay. He said that he would need the Minister's personal approval to pay these secretaries more (not to mention encountering arguments about fairness). This illustrates the loss in value for taxpayers' money that can result from inflexible national pay scales.

Local determination of pay and working conditions represented a significant opportunity for economic improvement. It was a key idea in my paper and in *Working for Patients*. However, wage determination remained largely on a national basis. Apparently, Trust executives did not feel that they had the human resources management capabilities or the willingness to confront employees on what was likely to be an explosive issue. It is not clear how many exceptions were made. Chalk this up to inadequate incentives to drive for efficiency versus a quiet life. Moreover, it is argued that the NHS saves a great deal of money through its monopsony power over health professionals that can be exploited only through national bargaining. It isn't clear to me why this would be incompatible with substantial performance-related bonuses determined at the local level as well as additional pay to relieve local shortages. I think the NHS pays a significant price for this inflexibility.

SORTING OUT WHAT CAN BE ASSIGNED TO THE MARKET, WHAT NOT

A policy decision to create a market system needs to be preceded by a careful sorting out of what functions should be managed by regulation or central planning versus what can or should be left to the market. All governments in developed countries intervene in markets to compensate for the fact that a free market-determined distribution of health services would not satisfy our principles of justice and equity. For example, information reporting and technology standards should be kept under some kind of central control so that information can be shared efficiently to be sure that all participants can operate with adequate and valid information. In the USA, our capital markets seem

to be quite free, but for a security to be sold to the public, the issuer must publish audited financial statements, certified by a public accounting firm as in accordance with Generally Accepted Accounting Principles as determined by the Financial Accounting Standards Board. The accuracy of the information is reinforced by legal liability for misleading investors. The needed transparency cannot be achieved entirely by market forces.

Probably the most significant overestimate of what the market can do was in the field of information, which is, for the most part, a public good that markets under-produce because of the problem of “free riders” and because many providers consider it against their interest to report data in a uniform format that can be compared with that of others. In any case, hospitals would not produce discharge abstracts for public use if not required by government. The same is true of financial information. I was told that the government acted on the idea that the market would take care of information. If that is accurate, it was a large mistake.

Another area where the market works poorly is in the dissemination of information on the efficacy of medical technology. In the early 1990s, the government did see this and created entities such as the York Centre for Reviews and Dissemination. The new National Institute for Clinical Excellence will also address this issue.

Contrary to my hopes and expectations, market forces do not seem to do much to motivate quality improvement, at least so far. In part, this is because referring doctors and patients have had little or no access to credible quality-related data. Publication of a New York study of risk-adjusted mortality of coronary artery bypass surgery, discussed in the next section, did not appear to affect patient flows even though there were significant differences among hospitals and surgeons. Unfamiliarity of the data on the part of doctors and patients doubtless contributed to the lack of impact. Great educational efforts will be needed to get them to understand and take seriously these data. Moreover, patients tend to take quality for granted until someone is seriously injured.

Were Incentives Reformed?

As I explained at the outset, the whole point of the exercise was to reform incentives. Were they?

In a free commercial market, if certain conditions are satisfied such as absence of monopolies and what economists call “externalities” (e.g. pollution), incentives at the company level are aligned with the material well being of society. The baker is led, *as if by an invisible hand*, to produce just the amount of bread his customers want as well as to improve quality and cut cost. Customers paying for the bread they buy have an incentive not to buy too much. It is usually a challenge for management to bring these incentives to the departmental and individual level. Thus companies offer stock options and profit sharing to executives and bonuses, overtime pay, profit sharing, etc. to the workers. The whole point of the internal market was to correct the perverse incentives in the previous bureaucratic structure. The actual implementation was a mixed picture in this respect.

The internal market did improve incentives, relieving some of the perverse incentives in the previous model. Fundholders and Health Authorities in some cases did motivate improvements in services by demanding improvements backed by the threat of moving their business to other suppliers, in other cases by actually moving it. Where services were poor, some purchasers put them out to tender. Incentive alignment remained imperfect, but it was substantially improved. Because fundholders were small, they were much freer to move their business without fear that hospitals would cry “destabilisation.” That had the appropriate incentive effect of making money follow patients. Health Authorities bought services with several types of contract. In the case of cost/volume contracts, to use Mrs. Thatcher’s phrase, “money followed patients”. However, block contracts predominated in which a Health Authority subcontracted a whole service to a hospital for a fixed annual amount. Some fundholders bought into block contracts. The hospital’s incentives in a block contract are complex. I am not sure which would predominate. If the hospital considered a block contract to be contestable, it had an incentive to give good service including appropriate utilisation management, to

satisfy the purchaser. On the other hand, if the hospital administrators were quite sure they could not lose the contract, they would not see more money for serving more patients. The incentive might be to let the waiting list build while pleading for more resources.

But the incentives were not fully got right. Health Authorities found that, in effect, they were paying the fixed costs of their local hospitals no matter what they did because they had to support core hospital services in their districts and hospitals could load their overhead costs on the prices they charged them. This meant that Health Authorities could acquire additional services at marginal cost by “repatriating” services presently bought at average total cost from hospitals in the districts of other Health Authorities. So inter-district trade tended to break down as Health Authorities moved their purchases to home suppliers. Competition was attenuated or wiped out altogether. So in the end, ironically, while Mrs. Thatcher had proposed “money follows patients”, in many cases, patients followed money, i.e. they went to where their health authority had contracted. Incentives were not leading Health Authorities to buy where quality was high and/or cost low. Moreover, I heard complaints that the efficient were being forced to subsidise the inefficient. Health Authorities told the efficient providers that they didn’t need so much money, and then gave the money to providers in trouble. “Transitional aid” without firm adjustment plans led to the efficient providing the money to subsidise the inefficient, leading to some disillusionment and another perverse incentive. One consultant told me that her hospital management was very appreciative of the revenue that her service attracted through Extra Contractual Referrals (ECRs), but was unwilling to share the revenue with her department because “other departments needed it more”.

Two basic principles of incentives ought to be observed in the NHS. First, that money should follow patients, lest those hospitals that make themselves more attractive to patients be punished by more work without more resources. And second, that hospitals, GPs, PCGs or whatever, that realise savings by more effective management get to keep the savings and apply them to improving their services. Unless patients can freely change provider, there is a conflict with equity here. People who are burdened by living in areas served by inefficient hospitals thereby get less services than people living in areas served by efficient hospitals. The principle of fairness would suggest that the inefficient hospitals should be paid more money so that their patients

are not disadvantaged by the hospital's inefficiency. This would reward hospitals for their inefficiency. If patients could switch hospitals, they could move to the efficient ones and leave the inefficient to suffer the consequences. If patients cannot switch providers, it is hard to reform incentives.

The incentives of consultant physicians are of great importance. They are the Trusts' most important decision-makers from the point of view of quality and efficiency. The creation of NHS Trusts was supposed to create the opportunity to gear the doctors' pay to productivity in their hospitals. Unfortunately, things did not work out that way. Doctors' pay remained nationally determined. This meant that a great opportunity to align incentives with patient care at the Trust level was missed. Other than the personal rewards that come from the satisfaction of relieving suffering and saving lives—whose importance I do not want to diminish—two powerful incentives for doctors are Distinction Awards and private practice. Distinction Awards enhance prestige, can double a doctor's salary and also be taken into retirement. Now that the names of award holders are published, they must exercise a very powerful attraction. What do they reward? "Distinction awards are granted in recognition of outstanding professional work—often of national and international significance—which involves consultants devoting a substantial part of their time to activities of wider benefit to patient care in the NHS as a whole, including work carried out in the local setting where this has application nationally."¹ Admirable and important as these achievements doubtless are, the description does not fit very well the person who focuses on doing a greater amount of appropriate surgery and improving patient care processes in his or her local institution.

If governments really want to reduce waiting lists (as opposed merely to being seen as trying), they ought to pay doctors to do the things that reduce waiting lists all the time, not just in periodic drives.

DIGRESSION ON WAITING LISTS

I have inadvertently trapped myself in a digression on waiting lists. "Wait list-ology" is a complex and treacherous subject and I try to avoid it. One of the many paradoxes about waiting lists is that a hospital or consultant firm that has achieved a wide reputation for excellence is likely to attract more referrals and therefore have a longer waiting list,

even if it is more productive than other hospitals or firms. Hospitals whose doctors have poor reputations are likely to be rewarded with short waiting lists. Waiting lists are yet another ambiguous indicator and also a perverse incentive. Waiting list reduction is likely to be achieved by an across the board programme of improvement in productivity which is likely to be achieved by constant process improvement, redesign of tasks, breaking down of professional barriers, and retraining, as well as improved screening for appropriateness of candidates for surgery. Periodic throwing of money at waiting lists is not likely to help this because there isn't time in the short run to develop and implement the kind of process improvements that are needed. More money for management (to study and improve care processes), training, facilities and personnel is likely to help more in the long run.

Moreover, it is well known from the theory of queues that the less excess capacity, the longer the queues. If there were no excess capacity, queues would become infinite. The costs of excess capacity need to be balanced against the pain, discomfort and anxiety caused by waiting and the losses in productivity in waiting patients' work lives.

Doctors do not like to talk about this, but in the case of those specialities in which hospital doctors have a substantial private practice, reduction in waiting lists is not in the interest of the doctors because it is the length of the waiting list that gives patients an incentive to go private. At the end of a book on surgical consultants, the NHS and private medicine, John Yates found some remarkably low surgical workloads for the NHS.¹⁶⁵ He observed "We find surgeons are allowed to work for two competing employers in a way not permitted in commercial practice, nor in public life. There is neither an adequate consultant contract nor a monitoring mechanism in place to identify any abuse. The NHS does not know where its key employees are during the working day, nor has it any idea of the actual work undertaken by any individual surgeon." As a part of a corrective process, Yates recommends three steps: "1. The gathering of detailed evidence about the actual work done by surgeons in the NHS and private sector. 2. The production of clear guidance about the contractual obligations of consultants working in the NHS. 3. An explanation of why ministers, Department of Health officials, NHS managers and auditors have been so reluctant to address this issue." These steps would not be at all detrimental to the many surgeons who work extremely hard and productively to serve NHS patients. It might

enhance their sense of equity. These steps in themselves would not solve the waiting list problem; there are also problems of shortages of staff and facilities. But they would be an important step toward a solution. I find it astonishing that governments so visibly concerned about waiting lists find themselves unable or unwilling to take these steps.

For proper alignment of incentives, the Trust management should know and be able to negotiate over measures of doctors' productivity in treating NHS patients and other measures such as the number of appointments cancelled by the doctor. Moreover, Trust management should be able to negotiate over the volume of their doctors' private practices, or at least require reporting of it so that they can be sure NHS patients are not being short changed. Good alignment of incentives for doctors is important because their active leadership is needed for the redesign of care processes, for reassignment of professional roles and tasks among doctors and between doctors and nurses. If the government were really serious about reducing waiting lists, it should consider paying hospitals partly on the basis of fixed payments per case, adjusted for the HRG, for elective surgery, with the payments shared with the consultant firms doing the work. (I appreciate that this would conflict with the government's goal of making the entire NHS firmly cash-limited. So a choice between objectives would be required.)

Overall Assessment

The Conservative government did not come close to creating and unleashing market forces to the extent that might have been possible in the NHS. If one were to rank the degree of achievement of free market forces on a scale of zero to 10, with zero representing complete central planning and top-down control and 10 representing the regulated but relatively free American commercial economy, I would say that the Internal Market in the NHS got to somewhere in the range of 2 to 3 for a year or two, that is very limited market forces, and then fell back to more central control. All the forces of politics and culture were arrayed against it. The desired long run benefit to patients was too remote and diffused to be an effective force for change.

Nevertheless, my overall assessment is that the reforms starting with *Working for Patients* made a useful and lasting contribution to the evolution of the NHS.

First, the Internal Market and associated effort to sell and implement it had some impact on the culture of the NHS. It introduced and legitimised the importance of searching for value for money, something that had been recognised by a few pioneers before, but had not achieved a major presence in the Service's consciousness. It created a demand for management tools needed to evaluate cost-effectiveness. It introduced to consultants and other hospital personnel the possibility that some people could suffer negative consequences if their organisations gave poor service or poor value for money. The system of charges for capital and the requirement that a return on investment be achieved created an appreciation of the value of capital and the need to use it productively or else sell capital assets to someone else who will. It gave many previously unchallenged monopoly providers something to worry about if performance was poor. It taught consultants that they had customers, that is, patients and GPs who should be treated well.

It introduced accountability for output. Health Authorities and Trusts had to sit down together and figure out with reasonable definition just what the Trusts were doing for the taxpayers with their money. It started to shift the focus of management from inputs to outputs. It gave GPs in each locality an effective way of dealing with

consultant firms that gave poor service, something that was not present before.

Third, it unfroze the system, broke the previous mould, and opened the system to change.

Fourth, it freed the Trusts from the constraints of detailed line item budgeting. To some extent, and in some Trusts, it fostered a culture of ownership, responsibility and entrepreneurship. I believe it did lead to increased hospital productivity.^{65 133}

Fifth, the Internal Market freed Health Authorities—indeed charged them—to focus on the health needs of their populations. Previously District Health Authorities were preoccupied with managing the provider system. One could say this was a move toward a *health* service. The Internal Market empowered Health Authorities to demand service improvements. Unfortunately, as noted above, it did not supply them with the resources and the political backing needed to do their jobs well.

Sixth, it changed, and in my view improved, the power balance between primary and secondary/tertiary care. It empowered GPs and encouraged them to demonstrate their capabilities to manage and improve care. While not all patients received them, many patients experienced the benefits of an expanded range of services brought into the GP surgeries, better co-ordination of care between the primary and secondary care sectors, and better customer service (faster turnarounds and shorter waits) for patients and GPs.

One widespread response to these improvements was that it was seen as unfair for some people to benefit while others didn't, so the whole structure should be opposed and torn down. It seems to me it would make more sense to ask what incentives and arrangements could be created to bring up the performance of the poor performers to rival the best.

Seventh, the Internal Market made information needs explicit by creating a class of people who needed it to do their jobs.

I think the internal market represented good directions of change that lack of time, opposition, the inevitability of political control, and NHS culture did not allow to get far enough. Its most important shortcoming was that it was not based on consumer choice and that the Health Authorities had inadequate incentives and freedom to pursue aggressively the best interests of patients. In the future, this might be ameliorated by measuring consumer satisfaction at the PCT level and creating strong incentives for PCTs to raise consumer

satisfaction. In general, the effectiveness of the internal market could be enhanced by correcting the deficiencies I have discussed.

The new government has changed the rhetoric and vowed to correct the errors of the previous government—something all governments do—but it has retained the basic building blocks of purchaser-provider split, NHS Trusts, and GP Fundholders writ large in the form of PCTs. As to the frequent assertion that they are abolishing the internal market, methinks the gentlemen do protest too loudly. If PCTs are allowed to carry out the commissioning function proposed in *The new NHS*, they will re-introduce market forces by commissioning in the best interests of their patients. (However, if the present trend towards mergers of Trusts continues, there will be much less competition at the local level.) In the absence of such market forces, the government may be left without a coherent strategy for motivating and sustaining constructive change. I think it likely that some future governments will be interested in trying market forces again.

On the other hand, the Internal Market was inaugurated without an extensive period of detailed planning, analysis and public debate of the kind that might have surfaced many of the design problems and suggested solutions. As Chris Ham observed, they were making it up as they went along. Some of that is inevitable in public policy making.⁶² But the whole exercise could have benefited by substantially more planning in advance. The government made a broad general policy decision, in the absence of much understanding of important details, and then turned it over to the NHS for implementation. The NHS people, capable as they might have been in their previous jobs, had no experience in competitive markets. More careful analysis of important details, such as the incentives and accountability of Health Authorities and the extent to which closing of hospitals could be politically acceptable, might have modified the plan.

Overall, the introduction of the internal market was “government by blitzkrieg”. It was driven through in a big hurry. Key issues went unevaluated, including issues I had raised in my 1985 paper. It was reckless to do this without pilots. I do have some sympathy for why the government decided against pilots. People who were fiercely opposed to this idea or any change took up the cry of pilots as an argument against any change, and the government feared that opponents would be able to strangle a pilot. A more detailed blueprint of how it actually would be done should have been published and debated.

Lessons of the internal market experience

For anyone who is interested in trying again to bring market forces to bear in health services or other social services, I draw the following lessons.

First, creating a quasi-market that improves economic performance in a social service that is prone to market failure is a very complex matter, more complex than the government of the time thought, more complex than I had realised.

Second, broad ideological code words like “marketisation, privatisation, and deregulation,” are not nearly enough to assure good results or even an improvement in economic performance. Some privatisations are done badly and make things worse. I doubt many would deny that the privatisation of British railroads falls in that category.¹⁵⁶ The devil is in the details which must be got right.

Third, for markets to work to improve results, many institutions and capabilities must be in place to overcome market failures. For example, if buyers and sellers do not have reliable information on costs and quality, they are fumbling in the dark, not driving quality and economy. The realisation of the internal market idea launched in 1989 lacked essential components such as effective purchasers driving hard in pursuit of clear goals, political space, information, and a link to a capital market. The market won’t work well without essential components.

Fourth, it may be possible to find a way to make market forces work to motivate better health services in the UK, but to do so would require a great deal of careful planning and design, much more than what preceded *Working for Patients*.

Fifth, the “Big Bang” approach to health services reform, be it internal market or PCTs, is a mistake.⁷⁷ Too much is being wagered on too little knowledge of how it would work, even whether it could be made to work. An evolutionary approach would leave time for learning from experience and for essential capabilities to develop. Sweeping changes should be preceded by pilot projects and sound evaluations of them.

Sixth, significant change in the NHS (i.e. that has noticeable effects at the bedside) cannot be implemented in “political time,” i.e. before the run-up to the next election.

THE PRESENT:
Quality Management and
Improvement

Quality Management and Improvement

CRISIS OF CONFIDENCE IN NHS QUALITY

There is a crisis of confidence in the quality of care in the NHS. Led by the tragedy in paediatric heart surgery at Bristol ¹⁵⁷, the cancer screening failures at the Kent and Canterbury Hospitals NHS Trust and a few others ¹¹², the exploits of “the fastest gynaecologist in the south east,” ^{41 139}, the media have reported numerous cases of injuries alleged to be the consequence of errors or poor quality of care in the NHS.

In April of this year, in an article headlined “Hospitals face ban on liver surgery that kills babies,” *The Express* reported a unanimous recommendation by experts to concentrate the dangerous ‘Kasai’ operation for biliary atresia in infants in three hospitals instead of the 15 hospitals where it has been done.⁴⁴ Between 1977 and 1994, Queen’s Hospital in Nottingham reportedly did this operation on 28 infants and 18 died. Because of the lack of an adequate database and also lack of public access to such information, it was not possible for me to confirm the details of this story. But a credible source has confirmed that it is substantially true and that the NHS is acting to concentrate the operation in three hospitals.

Several years ago, “A bone tumour service in Birmingham, England, was shown to have misdiagnosed benign conditions as malignant leading to some patients having unnecessary radical and mutilating surgery”.⁴⁰ In May of this year, the Times reported “Blair plan aims to cut cancer deaths by fifth. Shamed by statistics that show Britain has one of the worst cancer survival rates in the developed world, the Government yesterday introduced a ten-year action plan to cut deaths from the disease ...”^{* 99 123} Of course, the press sells newspapers by sensational reporting of tragic cases so one cannot consider this to be a balanced source of information. But it would be a mistake to write

* I wish to imply no endorsement of the report because I have not had an opportunity to study it and read its critics. Such comparisons can be very difficult to make. For example, a country might increase the reported deaths from cancer by improving diagnosis and reporting.

this off as excesses of the media. There is a problem of variable and uncontrolled quality in the NHS.

Before I proceed, let me say emphatically that *nothing I say about problems of quality in the NHS or about things we are trying to do to measure and improve quality in the USA should be taken in any way to suggest that we do not have comparable problems of variable and unmeasured quality of care in the USA*. I could quite easily write a paragraph similar to the preceding one about quality problems in American medicine, and in fact have done so.⁵⁰ Michael Millenson has written a good book on the subject.⁹⁷ We have a growing literature about medical injuries in our hospitals. Tens of thousands of Americans suffer death or shortened lives each year from accidents in hospitals.⁶⁸ In California, we have many hospitals with open heart surgery programmes with dangerously low volumes. We are all in this together. I will be describing a few examples of what I consider “best practices” in the USA, but these remain the exception rather than the rule. And I believe some are matched by comparable British efforts.

I use “quality” here in the sense defined by the Institute of Medicine: “The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.” Or “doing the right things right”.

I suspect a significant quality problem is the prevalence of complex and dangerous procedures being done in such low volumes that the surgeons lack proficiency to do them safely. There is an extensive literature on the volume–outcome relationship in surgery. The problem is complex.^{86 105 153} Some early findings of association between volume and mortality have diminished with better controlled studies. And some studies find no volume–outcome relationship for some operations.⁸⁶ The effect is specific to certain operations and does not apply to all of them. In some situations, the volumes are just too small to support statistically significant results. There appears to be good evidence of a strong volume–outcome relationship in the case of paediatric heart surgery.¹⁵³ There does not appear to be much published information in England about low volume programmes for dangerous procedures. It comes out when scandals break, which suggests that the official quality monitoring programmes (if any) may not have been doing their job.

The most celebrated example is the Bristol paediatric heart surgery

case that focused on the arterial switch operation for transposition of the great arteries. A recent study reported that about 162 of these operations are performed annually in the UK in 16 institutions by 21 cardiac surgeons, therefore an average of about 7.7 per surgeon per year with an average mortality rate of about 6.5%.³³ HES data suggest a lower volume, but the accuracy of HES data has been questioned and seems doubtful in this case. In any case, paediatric cardiac surgeons do other operations as well and total volume is probably a more appropriate indicator of experience. Dr. Marc de Leval makes a case that I find persuasive that all paediatric cardiac surgery ought to be concentrated in 5 or 6 institutions, each staffed by three surgeons and with a total volume of 600 per year.³²

Reporting another example of low volumes, a team from the Inter-Authority Comparisons and Consultancy of the Health Services Management Centre at the University of Birmingham found that in 1994/5, surgical teams in the West Midlands averaged 26 planned total hip replacements per year.²⁹ Low volumes waste resources as well as lives because there are economies of scale and experience. Surgical teams that get better results tend to have lower costs as well because mistakes cause complications and complications cost resources. There is a need for greater public understanding and support for regional concentration of high-risk specialised services.

As I travelled around England interviewing officials and doctors in the NHS, I often asked “Do you know, or how do you know, there aren’t a lot of Bristol babies around here?” The almost universal answer was along the lines of “I have no way of knowing”. I asked hospital Chief Executives “do you have access to sufficient quality-related data to be confident of the quality of care in this hospital?” The answers were not reassuring. Good quality-related data are virtually non-existent in the NHS. *The new NHS. Modern. Dependable* introduces the concept of clinical governance. It is defined as: “A framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.” The guidance document adds “What clinical governance does is to bring together the diversity of existing approaches into a systematic programme to establish continuous quality improvement in every health organisation.”¹¹⁴ If Clinical Governance means that a hospital CE will have to sign an annual statement that s/he personally

knows by direct observation and participation that quality monitoring systems are in place (including accurate data reporting) and that corrective action is being taken when quality starts to turn bad, then this is a very important step forward, timely, indeed overdue. However, the CE cannot know how good is the quality in his or her hospital without reference to national data that can support comparisons. So clinical governance can hardly be a meaningful thing without a national high quality clinical database, the need for which I discuss below.

QUALITY ASSURANCE PROCESSES WERE INADEQUATE

Before the National Institute for Clinical Excellence (NICE) and the Commission for Health Improvement (CHImp), announced in the recent white paper *A First Class Service*, (and discussed below), what were the main quality assurance mechanisms in the NHS? First, there were processes in hospitals such as morbidity and mortality committees at which cases that went bad were discussed. Apparently, coverage by such committees was far from universal. Chief Executives of Hospital Trusts and Health Authorities considered that clinical quality was not their business and they usually did not have access to the data. Next, there was/is clinical audit, a confidential peer review process owned and led by the medical profession. The concept of clinical audit is reasonable as far as it goes: select a topic and establish measures of quality; gather and analyse data on performance; evaluate (“does our practice equal good practice”); and identify and implement improvements.¹⁰⁰ But it is often based on local experiences. Confidentiality prevents its spread. It doesn’t generate broadly-based uniform data, and it doesn’t get beyond good practice, as currently viewed, to comparative outcomes analysis and process improvement.⁷⁶ In an editorial called “Time to audit audit,” Sellu writes “The goals have been unclear and more emphasis was placed on the process than its result.”¹⁴⁵ It is based on an “inspection” rather than an “improvement” perspective. Moreover, apparently there was no requirement for doctors to take part. (The White Paper says there will be.) Different hospitals invented their own methodologies, so results were not comparable.¹³⁸ Clinical audit failed to detect or prevent the much-publicised disasters.

Second, there were and are the National Confidential Enquiries, at least seven in number, the most prominent of which is the National

Enquiry into Perioperative Deaths (NCEPOD).¹⁰¹ NCEPOD seeks to gather broadly-based data on perioperative (actually in-hospital) deaths, have expert consultants analyse it, and make recommendations to their colleagues as to changes that ought to be made to make such deaths less likely in the future. The process works as follows. First, a local “reporter”, often a pathologist, in each hospital notifies NCEPOD of each perioperative death. Roughly 20,000 deaths a year are reported. Next, a steering group of clinical co-ordinators identifies particular areas for focus each year. In 1996/97, 2541 cases or 13% of the total were selected for detailed review. Questionnaires are sent, *on a purely voluntary basis*, to each consultant surgeon and anaesthetist responsible for the case. The questionnaires are generic, not specific to the particular procedure or condition being investigated. (For example, a measure of heart function called ejection fraction has been found to be a predictor of death for coronary artery bypass graft patients. That measurement is not included in the questionnaire. On the other hand, many questions are asked whose relevance to the particular type of case has not been statistically validated.) *Compliance is voluntary, with respect to the doctors and the cases.* In 1996/97, 71% of surgeons and 76% of anaesthetists returned questionnaires. A team of speciality advisors reviews the cases and makes recommendations and comments. For example, the 1996/97 recommendations included: “General Comment-It is a surgical skill to recognise when surgery will be too adventurous, ill advised or futile, given the condition of the patient. It is difficult to resist pressure to operate, whether this comes from the patient, relatives or medical colleagues but it must be recognised that surgery cannot solve every problem.” And “Morbidity/mortality meetings should take place in all *anaesthetic* departments. Regular review of mortality following operations is an essential part of anaesthetic practice.” There is no specific follow-up to see whether the recommendations have been implemented, so it is hard to tell to what extent the recommendations lead to improvements in practice. Nick Black observed “Claims that dramatic falls in mortality rates followed their [the confidential enquiries] introduction are largely based on belief rather than scientifically based evidence”.⁸

NCEPOD was intended to contribute to quality improvement. The surgeons and anaesthetists who did so much work on it were likely among the more progressive in the profession. It generated recommendations that apparently led to improvements. Moreover,

some of its limitations were the result of inadequate data systems beyond the control of NCEPOD. But times change, and NCEPOD is no longer nearly good enough. If anything, it is counterproductive in that, like clinical audit, it gives politicians and the public the false impression that there is a serious quality management system in place. The science of performance evaluation has advanced and the National Confidential Enquiries ought to be replaced or substantially modified to become something having substantial scientific validity.

One problem with NCEPOD is that it looks at deaths only. How do they know that many patients who lived and did well were not subjected to similar conditions as those who died? This looks like a case control study without the controls and/or a selective case series. The Enquiry needs to consider *all* cases of a particular condition or procedure under examination. Moreover, the Enquiry does not examine all deaths. In 1994/5, the number of perioperative deaths indicated by Hospital Episode Statistics (HES) was 23% higher than the number reported by NCEPOD.²² *The NCEPOD reports no denominators and hence no mortality rates. Surely it makes a difference whether a death was one in 1000 or one in 10.* The questionnaires change over time and in fact they are destroyed after each report, so it is not possible to draw inferences regarding trends. Participation is voluntary which leaves the whole project open to suspicions of bias or worse. Did respondents systematically exclude the cases about which they felt most uncomfortable? (“I knew I messed up that case, I learned my lesson and won’t make the same mistake again, so there is no point in submitting it for review.”) Mortality subsequent to hospitalisation is unknown and not included. Thus, if mortality rates were compared, they might favour hospitals that send their patients home to die. What if the number of deaths at home in the first 30 days is quite large relative to the number of in-hospital deaths? It would be much better if a uniform standard such as death anywhere within 30 days were used. (This is a significant deficiency in some of the American studies discussed below.) And finally, the whole process is securely under the control of the Association of Surgeons and Anaesthetists. To enhance credibility, the process must include reputable independent academic health services researchers, independent academic statisticians, and others strongly grounded in up-to-date research methods who submit the findings to peer-reviewed medical journals and other representatives of the general public.

In March 1999, the government announced that “The four established Confidential Enquiries—on maternal deaths, stillbirths and death in infancy, suicide and perioperative deaths will be brought together under the umbrella of NICE, giving greater clarity and coherence to the status of their findings”. This is a step in the right direction. Moreover, under clinical governance, NHS Trusts “have a responsibility for ... ensuring that all hospital doctors take part in national clinical audits and Confidential Inquiries”.¹⁴

The third quality assurance process in British medicine is the General Medical Council (GMC), the national licensing body, over half of whose members are elected by doctors, a quarter of whose members are appointed by the Secretary of State to represent the public. The GMC creates and promulgates standards of professional behaviour, considers complaints against doctors, makes findings as to whether they have broken professional norms, and if they have, disciplines them, including “striking their names from the register”, i.e. removing their licence to practice either temporarily or permanently. There is no doubt that professional standards of behaviour are needed and appropriate, and that some doctors behave in such manners that the public should be protected from them. Removing their licences in such cases is an appropriate remedy. The GMC process is necessary and appropriate as long as it has enough independent-minded public participants to be sure it is protecting patients, not doctors. But as a quality assurance or quality improvement process, this institution is still inadequate. It is based on what Donald Berwick calls “the bad apples theory” of poor quality, i.e. that bad quality comes mainly from bad people who must be detected and rooted out.⁵ Until this year, the GMC addressed professional behaviour, not performance. If the mortality rate for paediatric heart surgery in Bristol had been, say 10 per cent, would the GMC process have been able to motivate improvement or take corrective action?

Unfortunately, bad results can be produced by good, sincere, well qualified people abiding by the rules and trying hard to do a good job. And the threat of GMC action is not likely to be seen as relevant by them. A different or additional approach is needed. Moreover, the GMC is the creature of the medical profession and its constitution raises questions as to the balance struck between protecting patients and protecting the rights of doctors to practice. Its present head, Donald

Irvine, was elected on a reform platform that included openness, accountability, and patient protection. That is clearly the right direction.

In 1998, in a document called *Good Medical Practice*, under a heading called “Maintaining your performance,” the GMC told doctors “You must work with colleagues to monitor and maintain your awareness of the quality of the care you provide. In particular, you must take part in regular and systematic medical and clinical audit, recording data honestly. Where necessary you must respond to the results of audit to improve your practice, for example by undertaking further training; respond constructively to assessments and appraisals of your professional competence and performance.”⁵⁴ To put actual teeth into these words, in February 1999, “the GMC decided that all registered doctors must be able to demonstrate regularly, through a link with continued registration, that they remain fit to practise in their chosen fields”.⁷² For all doctors, the proposed new process of revalidation will involve continuous local profiling of a doctor’s performance, external peer review of the profiling process, and submission of evidence of doctors’ fitness to practise to the GMC. I do wonder whether this will prove to be unduly costly and whether statistical approaches would be a more effective use of resources. “Where there are concerns about a doctor’s performance the following would be activated: Local remediation, Referral for assessment in the GMC’s performance procedures, and where necessary, action by the GMC on the doctor’s registration.”⁷² This points clearly in the direction of continuous quality improvement (CQI) which I will discuss below. It is a very desirable, and potentially large step forward in the protection of patients provided that the process adheres to the spirit of the proposal and does not become a mere pro forma exercise. The challenge it faces is a culture of secrecy, cover-ups and mutual professional self-protection.

There are also the Royal Colleges’ work accrediting training programmes, and the HQS hospital accreditation programme (which I have not had the time to review). The Royal Colleges control the accreditation of hospitals as teaching sites which means access to junior doctors, and they issue reports on such issues as the size of population required for different levels of services. And they withhold accreditation for teaching status from programmes whose volumes are too small to give junior doctors an adequate experience.

I like to believe that most doctors in the NHS are excellent. I have met some very impressive consultants and heard of many examples

to support that view, though regrettably, I have been able to find very little data to support it. And I have seen little evidence of the processes that would assure it. The present loss of confidence cannot be in their best interests, nor in those of their patients. The institutions of the past look too much like a systematic cover up of poor performers and a negative approach to quality. The NHS Executive is trying to lead the Service to become a Deming-style (see below) learning and continuously improving organisation, but the NHS isn't there yet.¹¹⁴

NICE, CHIMP AND CLINICAL GOVERNANCE

In recognition of the inadequacy of pre-existing institutions to safeguard quality, the White Paper *A First Class Service, Quality in the new NHS*, creates three new institutions for quality management.

- The National Institute for Clinical Excellence or NICE “will produce clear guidance for clinicians about which treatments work best for which patients”.¹⁴⁴ Conflicting clinical advice will be replaced by a single, clear, authoritative recommendation. “... NICE will develop a range of audit methodologies that can be adapted for local use to support the guidance it produces.”¹³⁵
- Clinical Governance, “a framework through which NHS organisations are accountable for continuously improving the quality of their services and safeguarding high standards of care ...” “The Chief Executive of each NHS Trust, as accountable officer, will sign an assurance statement on behalf of the Board ... and will provide Boards with regular reports on quality in the same way they do for finance.”¹⁴⁴
- The Commission for Health Improvement (CHImp) “will offer an independent guarantee that local systems to monitor, assure and improve clinical quality are in place. It will support local development and ‘spot-check’ the new arrangements. It will also have the capacity to offer targeted support on request to local organisations facing specific clinical problems.” The Commission’s rolling programme of reviews will cover all NHS Trusts and all Primary Care Trusts.”¹⁴⁴

One could easily get the impression from the White Paper that NICE will determine and prescribe the officially correct way to practise medicine in each circumstance while CHImp will act as a police force

exposing and correcting those who do not follow the official medical policy. I doubt this is workable and I hope this impression is inaccurate.

Professionally worked out evidence based guidelines are an advance over the ad hoc “rules of thumb” by which medicine has been practised in the past. They are a good way of helping doctors to keep their practices up to date. They take us part way to a truly science-based practice. But medicine is a very complex, uncertain, rapidly changing mix of art and science. There are often differences of opinion among very capable and well informed doctors. Also, local factors such as availability of facilities and experienced personnel, social conditions, epidemiology, etc. can play an important role in determining what is good practice. Some doctors may not yet feel confidence in their ability to perform the official procedure recommended by guidelines. Emergency angioplasty or CABG may be the preferred treatment for a heart attack if the patient was detected early and has the good fortune of having the attack near a facility that houses a proficient team for these procedures. Otherwise, thrombolytics may be the better choice.

An official position may be obtained by majority vote, but that risks freezing into place a position that may soon need to be overturned. People who took a strong position in a controversial matter may feel under pressure to defend it. The more institutionalised guidelines become, the harder they are to change quickly. Guidelines are not so onerous if there are no enforcers. But once such guidelines are backed by a specific enforcement mechanism, there is much less flexibility because the inspectors must be instructed to look for deviations and report or punish them. The model needs to be one that reflects change and uncertainty and that can accommodate multiple points of view.

I believe there is good reason for serious concern that practice guidelines could become politicised, and the pressure for this would be all the greater if guidelines were centralised in one politically accountable agency. There may be political pressures to adopt one or another technology for any of a variety of reasons such as drug company advertising or political contributions or symbolic politics. Despite a lack of evidence to support it—indeed the balance of the evidence was against it—one very prominent American technology advisory body (which must remain nameless) voted to endorse high dose chemotherapy and autologous stem cell transplant treatment for

metastatic breast cancer because access to this technology had become a high profile women's issue that evoked intense feelings. The Congress passed a law requiring all insurers covering federal employees to pay for this procedure for them. (This and similar actions by the Congress threatened to make it impossible to do a randomised controlled trial that would give us information as to whether the treatment was really beneficial.)

A similar event took place when a National Institutes of Health (NIH) Consensus Development Conference voted 10-2 that "The data currently available do not warrant a universal recommendation for mammography for all women in their forties. Each woman should decide for herself whether to undergo mammography..." The reaction was furious. "The panel was accused of condemning American women to death, and its report was described as fraudulent."⁵² The United States Senate, after grilling the panel's chairman "... voted 98-0 in favour of a non-binding resolution supporting mammography for women in their 40s."⁵² And the White House also made pronouncements. A member of the Consensus Panel observed in the *New England Journal of Medicine* "Questions about health care are increasingly being distorted by emotional, political, financial, and legal interests".⁵²

In yet another notorious case, the Agency for Health Care Policy and Research (AHCPR) supported studies that called into question the scientific basis for spinal-fusion surgery. A multi-disciplinary AHCPR research team reviewed the literature and recommended non-surgical approaches in most circumstances. The North American Spine Society attacked the research team for bias, organised a letter writing campaign against it, created an alleged patient advocacy organisation, lobbied to destroy AHCPR and succeeded in getting its budget cut back substantially.³⁸ British people can write off some of these excesses as attributable to American fee-for-service medicine, contingency fees for lawyers and money politics. But they should be aware of the problems a centralised approach to guidelines can create. Perhaps an approach that admitted of several authoritative producers of guidelines that might possibly conflict because of ambiguity and uncertainty in the evidence or differences in values or priorities might diffuse the pressures.

Standardisation of practice, i.e. elimination of unjustified variation has great potential for improving quality, economy and equity. But successful guidelines must have a strong "bottom up" component. The

top can help by providing information and encouragement. (Every group of doctors shouldn't have to do their own literature review.) But doctors have to believe in what they are doing. We wouldn't want it otherwise. They cannot be ordered to practise medicine one way if they really believe in another. Our experience in the United States has been that official pronouncements from bodies of distinguished leaders, "Consensus Conferences," do not change behaviour. So change in behaviour has to follow change in belief, which means that the main function of NICE must be *educational*, and not prescriptive. NICE could and should assemble in convenient format literature summaries and the recommendations of various authoritative bodies. The (Kaiser) Permanente Medical Group of Southern California has set up an "evidence hotline" for doctors who need and want information in an accessible form. A British version could be a clearing house where doctors can call in, and the staff can promptly transmit an information packet for the doctor who wants to know the latest and best evidence. The U.S AHCPR operates a Guidelines Clearinghouse.

Beyond practice guidelines, I suggest that NICE take a leading role in the roll out of Continuous Quality Improvement (CQI) discussed below. NICE people could teach, give workshops, and facilitate and resource "collaboratives" among Trusts seeking to work together to share experience with quality improvement projects. This part of NICE could function like Donald Berwick's Boston-based Institute for Healthcare Improvement. NICE should also lead in the development and endorsement of quality measures, like the Portland, OR-based Foundation for Accountability.

Rather than rolling visits to Trusts to inspect the implementation of their local audit methodologies, I suggest CHImp should take the lead in being sure that risk-adjusted monitoring of outcomes (RAMO) programmes, discussed below, are being developed in all specialities, working with the Royal Colleges, providing or finding resources. CHImp's approach should be broad and statistical to be sure that national comparative quality data systems are in place. And, in the case of poor performance, it should follow up to be sure appropriate remedial action is being taken. It should not be focused on anecdotes, individual mistakes, spot checks. Nor should it accept local audit methodologies. What are needed are national valid comparative evaluation and data systems.

THE NEED FOR HIGH QUALITY CLINICAL DATA BASES

There could be a good way of knowing about surgical volumes and death rates and that would be by regularly analysing Hospital Episode Statistics (HES). Per Michael Davidge, et al concerning HES, “Data collected includes patient identification number, name, age, post code, dates of admission, operation and discharge, type and source of admission, destination on discharge, consultant, GP, operative procedures and diagnoses”.²⁹ It ought to include medical conditions also. HES have been controversial and criticised as inaccurate and incomplete. McKee and Chenet of the London School of Hygiene and Tropical Medicine (LSHTM) review a daunting list of deficiencies in British hospital statistics including the vulnerability of the “finished consultant episode” to manipulation and inflation and “... conclude that the existing British system fails to provide robust measures of how many patients are treated, for what conditions, and with what treatments”.⁹⁵ The recently published *Quality and Performance in the NHS: Clinical Indicators* says “There can be several episodes during the entire stay of a patient in hospital (a spell), although in over 90% of cases there is only one.”¹¹⁷ McKee and James found that in a representative national sample of hospitals, 35% of cases of care of the elderly were multi-episode stays, 26% for general medicine, 21% for cardiology and 11% for general surgery.⁹⁶ It is very hard to know which of these conflicting sources to believe.

Another research team at the LSHTM examining the availability and use of coronary revascularisation found major under and over-reporting of cases in HES compared to actual hospital records.¹⁰ Reports ranged from 27% to 122% of what hospital records showed in 1994/5. In my own limited attempts to use HES, I found it to be hard to believe. In *Quality and Performance in the NHS: Clinical Indicators*, the NHSE found that of 389 NHS Trusts, only 262 or 67% have indicator values based on adequate quality data, where “adequate” means that less than 25% of a Trust’s records have a missing or invalid value in any one of an indicator’s key fields.¹¹⁷

As Nick Black of LSHTM has argued, “Irrespective of the uses to which they wish to put the data, clinicians, managers, consumers, and researchers all need data from consecutive cases, that are complete and accurate, that are based on standard definitions of clinical disorders, interventions, and outcomes, and that include information

on those characteristics of patients that affect outcome”.⁹ Making HES into a usable database for gross quality monitoring ought to have a high priority. Without it, the NHS lacks the data systems needed to tell it what is going on with respect to some of its most important activities. The required data set should cover all cases and be parsimonious, with additional data elements introduced selectively from time to time specific to particular conditions being investigated.

The national database ought to include the private (voluntary and for-profit) hospital sectors for quality surveillance purposes. The government ought to be just as concerned to protect the lives and health of subjects who use the private sector as those who use the NHS. As the *Lancet* recently editorialised, “Private facilities should have to meet the same standard of care that is demanded of the NHS ...”⁷⁹

Clinical Governance includes “Effective monitoring of clinical care with high quality systems for clinical record keeping and the collection of relevant information”.¹¹⁴ A determined government should find ways to make data reporting accurate and timely. Financial rewards to the relevant personnel might be appropriate. In America, submission of valid data that is audited is tied to the payment system and government is quite active in assuring accurate reporting.* In Medicare (federal government) cases, the attending physician must sign an attestation that the reported data are accurate. In the UK, accurate data reporting is now being tied to clinical governance. For that to be meaningful, medical records coders need to be recruited and trained in sufficient numbers. This is not without administrative cost. But it is an example of management costs that are worthwhile. The alternative is continuing to not know what is happening in the NHS, which has its costs also.

The Birmingham team did a case study of this method applied to cardiac surgery.²⁹ Some excerpts from their findings make the point. “... during the course of the research project the unit was given the opportunity to undertake an analysis of cardiac surgery dataThe background to this work was the high death rate in the work of two cardiac surgeons which had been highlighted by an anaesthetist colleague. It had taken some time for the Trust and the Department of Health to

* Of course, our payment system has its well known problems including providing incentives to overuse of services and to over-report diagnoses. We have problems in accuracy of diagnoses and “DRG Creep.” But the data are good enough for gross quality monitoring.

react and institute an enquiry, and as neither had made use of HES data to examine the alleged problems it seemed reasonable to divert some time to examining a perceived performance failure in cardiac surgery However, the HES data available at the DoH was aggregated to unit level and they had no access to individual surgeon or firm data In the event, the Trust was easily identified because of the high mortality rates for certain groups of patients and the fact that the overall mortality rate was so extreme The one [unit] with the highest rate was the unit which has undergone major enquiries into its performance and in which two of its surgeons were advised to cease operating. It should be noted that at least one of the surgeons also undertook adult surgery and that in 1991/2 the adult unit in which he worked had the highest death rate in England. *These data should have been available to the DoH and regional authority at the time concern was being expressed about the results of the unit. It is understood that no analysis of HES data was requested for comparative purposes.* [italics added] This analysis suggests that HES data can be used as a scanning mechanism to warn clinicians and managers of potential problems. Such a mechanism is not a precise diagnostic tool, but it does not need to pass very strict tests of sensitivity and specificity providing it does not raise frequent false alarms.”

There is an interaction between management information and its use. The key thing about this is *using* it, not just having it, and using it for quality and operations improvement, and not as a political weapon or for “naming, blaming and shaming.” One must use it to understand its limitations and to motivate its improvement. The use of the information generates provisional answers, the investigation of which generates insights into how to improve the data in a continuing cycle of improvement. The mistake in this situation was not having an imperfect information system, it was not using what was there while seeking to improve it. The main uses of such databases include risk-adjusted measures of outcomes (RAMO) and continuous quality improvement (CQI)

CONTINUOUS QUALITY IMPROVEMENT (CQI)

How can the crisis of confidence in the quality of care in the NHS be ameliorated? There is no simple, quick, easy or guaranteed answer to such a complex problem. I believe the answers must be found in basic organisational and cultural changes that lead to much greater

transparency and to a total commitment to continuous quality improvement. These changes will not happen unless the medical profession really wants them to happen.⁷ By far the best way forward would be for the medical profession to take the lead, aggressively, and embrace transparency and continuous quality improvement in partnership with managers, the public, the media and the government. Among the worst ways to attempt to resolve the problem would be to do nothing and hope that people will forget about it—something that *A First Class Service: Quality in the new NHS* makes clear will not be allowed. Or for the government to impose a measurement system and use it in a campaign to terrorise the doctors with “naming, blaming and shaming”. That approach would be sure to lead to arcane disputes over the validity of the data, denunciation of the data, strategic behaviour to make the data look better (including self-serving reporting on data elements that are judgement calls, possible avoidance of high-risk patients and poor compliance) as well as cynicism and disaffection.

What is continuous quality improvement (CQI) and why should the medical profession embrace it and lead it? CQI is a comprehensive and integrated management philosophy that has been adopted with impressive success in some industrial companies and that emphasises the ideas summarised in the box **Principles of CQI**. (The box presents a distillation of the ideas of some of the main thinkers and writers on the subject of quality including Deming^{34 160}, Juran⁷⁴, Crosby²⁵, Berwick et.al.^{5 6}, and Imai⁷¹ intended for those who are not familiar with them.)

CQI began with the work of Shewhart^{147 148}, Deming and Juran. The latter two were sent by the U.S. government to Japan after World War II to aid in the reconstruction of Japanese industry. Deming became a legend in his time and by the 1960s, Japanese electronics and automobile industries were beginning to make serious inroads into world markets. American companies began to adopt CQI as a survival strategy. This philosophy has now been adopted by some of the world's leading industrial companies: Hewlett Packard, Honda and Toyota, Ford Motor, General Electric, Motorola, Xerox and others. And it has led to evident and substantial improvements in quality of their products and services. The airlines have adopted similar principles in the area of safety. If one is looking for models of success and inspiration, one must look to these companies.

Principles of CQI

- Focus on and define quality from the patient's (or other relevant customer's) viewpoint. This may be different from the professional's viewpoint. Quality from the patient's point of view usually relates to outcomes but it also includes respect, dignity, kindness and access.
- Quality has many facets. What is important is to improve it rather than to define it. One does not have to be able to define optimum quality in order to identify and correct bad quality.
- Defective quality arises mostly from deficient *systems* and *processes*, and not from bad people. Most people in the NHS are competent and want to do the best job they can. If they make mistakes, poorly designed process rather than bad will or incompetence is the likely explanation and the first place to look. Management's job is to improve processes, to produce quality results with the people they have. Changing the system is more effective than changing the people.
- Processes can be studied and understood using quantitative tools: control charts, Pareto diagrams, analysis of variance, cause and effect diagrams, process flow diagrams and the like. Diagnosis of a problem in process can be approached the way a medical diagnosis is approached, i.e. scientifically. CQI is evidence-based process improvement.
- Hence rely heavily on statistical information and methods rather than hunch or unsupported intuition. One CQI company had the motto "In God we trust; all others bring data." Distinguish common cause variation (the variation inherent in the normal workings of the process) from special cause variation (caused by something else). Analyse variation in outcomes to discover the correlates of good and bad outcomes as a guide to corrective action.
- "Systems thinking" is central to quality improvement, i.e. a mind set of thinking of the system as a whole, including its interdependencies and non-linearities.
- Involve and empower front line workers with information and tools and a charter to study problems. Appeal to and enhance their pride in their work. Emphasise training and constant upgrading of skills. Cross-training can enhance efficiency and effectiveness.
- Break down barriers among professions, departments and organisations. Minimise focus on professional turf in the interests

Principles of CQI (cont)

- of getting the job done in the best way. Create study teams that cut across departments to look at complete processes.
- Top management must have commitment to quality improvement and constancy of purpose. It is necessary to convince staff that this is not merely the management fad of the year. To be successful, CQI must achieve basic cultural change within an organisation. In the NHS, consultants have empowered themselves. CQI requires that everyone participating in the care process be empowered, that consultants share power with management, nurses and others.
 - CQI seeks continuous incremental improvement in a never-ending cycle: identify problems or deficiencies; identify causes using systematic analytical methods; formulate and implement corrective actions; set standards and measure results; document the new methods to assure permanence of the improvement.
 - Poor quality has costs that ought to be measured and be recognised, including the costs of prolonged hospital stays from complications, re-operations, re-admissions, and other events that impose a resource cost on the NHS as well as suffering and disability on patients. In some cases, cost savings are achieved by improving quality. Crosby, one of the pioneer writers on the subject, believes that quality is free. Deming believes management should commit to quality improvement without counting the cost. Juran advises balancing marginal costs and benefits of quality improvement. All agree that the costs of poor quality are higher than most people realise. (In medical care, departures from optimal quality can be categorised as overuse, misuse and underuse. Fixing overuse and misuse problems usually saves money and improves quality at the same time. Fixing underuse usually increases health care expenditure, though increases in expenditures on prevention of disease or complications of treatment may reduce health expenditures in the long run. And it may be offset by reduced costs of suffering and disability.)
 - Develop long term relationships of loyalty and trust with suppliers and a shared commitment to higher quality. Award business on the basis of minimum total costs combined with the highest quality, not on price alone.
 - Seek to build in quality at the beginning rather than attempting to achieve it by inspection (or “clinical audit”) at the end.

Principles of CQI (cont)

- Quality is **everyone's** business all the time, not just the quality manager's. People must all be conscious of the search for continuous improvement and motivated to participate in it.
- "Drive out fear."³⁴ "Workers should not be afraid to report broken equipment, to ask for additional instructions, or to call attention to conditions that interfere with quality."¹⁶⁰ People must be assured that they will not be punished for mistakes revealed in a self-critical analytical process. People must be assured that ideas will be listened to and acted upon. "Whistle blowers" must not be forced to leave the country to find work.
- CQI is a synthesis of all of these ideas. Individual components implemented alone may not be effective. Its power as a management philosophy and tool is the synergistic process it creates for accomplishing change.

CQI began to be introduced in American hospitals and health care systems about 10 years ago. One of the main factors propelling it was the writing of Donald Berwick and the National Demonstration Project he headed in which "twenty-one experts in quality management from major American companies, universities, and consulting firms, [were] matched ... with leadership teams representing twenty-one American health care organisations" in projects to test the industrial ideas of CQI in health care settings.⁶ The CQI movement in American health care has produced committed leaders and many examples of significant improvements in care processes and administrative processes. So far it has not produced any examples of institutions that stand out as shining examples that everyone feels compelled to follow.¹³ Thus, if a health professional were to ask "what evidence do we have to go on in evaluating CQI?" I would have to answer first, the success of the industrial companies that have tried it and persevered; second, the successes that have been achieved in health care institutions that have adopted it; and third, the evident common sense and intuitive appeal of the ideas. We do not have anything like a controlled experiment. But CQI is a systematic search for quantitative evidence to support process improvements. In other words, arguing for CQI is like arguing for use of science and evidence

in the search for improvement. I appreciate that does not make nearly as clear a case as would a controlled experiment, but such a broad philosophical approach is not susceptible to randomised controlled trials. Rather, it is like evidence-based medicine.

CQI is not the solution to all quality problems, but the broader aspects of its culture, including inquiry and analysis of data are helpful. CQI on the industrial model is very good at fixing misuse problems such as preventing avoidable complications and correcting poor processes. These are the issues most analogous to quality issues in industry. As applied in the USA, CQI tends to address problems like waiting times, schedule delays, lost test results, drug dosing errors, etc. But it rarely addresses important problems of underuse and overuse. It is very good for addressing the errors that contribute to surgical mortality; it is not so adaptable to issues of appropriateness of the surgery itself.

CQI should appeal to health professionals because it relies on a scientific approach including measurement, analysis and evaluation of hypotheses, and because it appeals to the best in people who want to improve and want to give the best possible service, and because it is a distinct alternative to the culture of blame and finger pointing that has unfortunately become the norm in questions of departures from good quality in medical care. A most persuasive statement of this idea is Donald Berwick's "Continuous improvement as an ideal in health care".⁵ Another is Richard Smith's "Medicine's need for Kaizen".¹⁵⁰ CQI seems particularly appropriate to hospitals and other health care institutions because of the vast number of actual and possible actions, interactions, range of activities so incredibly vast and so dependent on the good judgement of thousands of health professionals in complex, uncertain and changing circumstances that it cannot possibly be controlled centrally by the numbers. We must rely on motivation, training and learning, not command and control. And a key part of learning comes from comparative data on quality.

Thoroughgoing adoption of CQI would entail a large cultural change for many people in the NHS. It would require greater willingness of consultants to work collaboratively with nurses, technicians and other health professionals in teams and an end to the authoritarianism often ascribed to them. It would require much greater openness, less "confidentiality" intended to protect providers. It would require an end to turf battles and protection of professional

prerogatives in the interest of more collaboration. Professional “silos” would come down. A protected space would have to be created to encourage the reporting of errors by oneself and others, not in the spirit of finding targets for punishment, but in the spirit of identifying opportunities for improvement. There would be no need for whistle blowers. There would be good channels through which all could report their concerns with confidence that they would be listened to and acted upon. More people with skills in statistics and data analysis would participate.

I met a most impressive example of this philosophy in the NHS. Doctor Marc de Leval, a paediatric cardiac surgeon at Great Ormond Street Hospital for Children has been pioneering ideas like CQI by applying modern theories of the causes of accidents in complex socio-technical systems. He writes: “How can we apply accident theories to surgical outcomes? First, there is a need to develop a culture of error. By and large, the medical world has had great difficulties in dealing with errors. The traditional teaching is that medical doctors are expected to function without error. This need to perform faultlessly has created a strong pressure to intellectual dishonesty, to cover up mistakes rather than admit them, and to overlook opportunities for improvement. The reality of the malpractice threat provides strong incentives against disclosure of mistakes. The paradox is that, to reduce the occurrence of errors, surgeons must become more open with their fallibility and patients must accept their own vulnerability.”³¹

In a most admirable and courageous demonstration of the sincerity of his commitment to this idea, Dr de Leval published the fact that after a series of 52 neonatal arterial switch operations with only one death, seven of the next 16 patients died. Dr de Leval worked with statisticians to develop a logistic regression analysis of risk factors to determine whether the deaths could be explained by a more difficult casemix or other variables. After finding that about half of the risk associated with this cluster of failures was not explained by casemix, Dr de Leval concluded that sub-optimal performance on his part appeared to have been a contributor. He identified another low-risk institution and went there for retraining. Only one of the next 36 patients died so apparently whatever problem there was, it was corrected.³⁰ Dr. de Leval has adapted a statistical monitoring procedure to his own practice.

How to start? The Royal Colleges, in partnership with the NHS

Executive, NHS Managers and other professional bodies, should take the lead. They should follow the examples of Dr de Leval and the companies that have embarked on this journey. Visit and study the best companies; see what they have done and how. Make use of indigenous resources such as the British Quality Foundation and the Public Sector Benchmarking Project. The British Quality Foundation (and *Modernising Government*) promotes the Business Excellence Model and the UK Quality Award for Business Excellence. I hesitate to mention more specific examples in the NHS because I know that in doing so I would unfairly omit other equally distinguished examples. But I was very impressed by the Bridgend and District NHS Trust which won the Wales Quality Award Health Sector Prize in 1997 and also the 1998 Wales Quality Award. Their submission for the 1998 Wales Quality Award is a very good text of what needs to be done.¹⁷ I was also impressed by the South Bedfordshire Community Health Care Trust that won the Golden Helix Award for Europe (an award for health care instituted by Hewlett Packard) for its stroke rehabilitation project initiative.

Medical leaders should study CQI and satisfy themselves that this is a promising course to take. Each hospital or Primary Care Group should start with a few pilot projects. The NHSE should provide extensive resources for training. The new NHS beacon services initiative, “intended to identify, celebrate and encourage learning from *existing* practice,” and the new Aneurin Bevan awards will encourage the spread of desirable innovations.¹¹⁵ (It is most important that the process of selection for these prizes be uncontaminated by politics.) These and other prizes can stimulate and recognise innovation. The application process can be a valuable exercise in self-assessment. It is a good idea for NHS Trusts to compete on quality improvement with businesses in the private sector and with other government programmes because that can expose them to valuable ideas from outside healthcare as well as acquaint them with the standards of quality and personal service people are becoming used to in the private sector.

An important part of this process will be to incorporate CQI principles and experiences into the training of junior doctors.

What can the government do to help? The most important thing is for the government to state its expectations that a profound change in NHS culture and method of operation must take place as it has done in *A First Class Service: Quality in the new NHS* and *Modernising Government*.

Then *government must prioritise*. NHS managers justly complain of the daunting volume of Executive Letters and other instructions that come from the Executive every week if not more often. Alan Maynard complains “In the first three months of 1999, the Department of Health issued 86 Health Service Circulars and 188 Press Releases. This is an average of three press releases and getting on for one-and-a-half circulars per working day”.⁹¹ The NHSE seems to have an Executive Letter for every problem that arises; what is needed is a coherent strategy for improvement. NHS managers are instructed about waiting lists, the PFI, complaints, health action zones, the Calman-Hine cancer initiative, etc. They are encouraged to compete for special one-off project funding. Bidding against ear-marked sums of money raises expectations, dashes hopes, and involves a lot of red tape. Hospitals and PCGs won’t be able to do CQI and all the rest of these things. On the other hand, if CQI really takes hold and begins to produce good results, many of the other problems like waiting lists will start to take care of themselves.

Government must provide resources to support the extensive training that will be needed. It does little good to exhort people to improve quality without training in how to do it. The general goal needs to be translated into specific processes that staff can implement, and staff need to be trained to do their parts. Many people will need retraining. Extra human resources will be needed to maintain services while people are being retrained. Government must provide resources to support data collection and analysis. In this connection, the document *Information for Health* which spells out the government’s NHS information strategy, is especially welcome, but as well as information, there must be people who know how to use it creatively to analyse problems and potential solutions.¹¹³ Government must be willing to take the long view, alas probably an oxymoron especially as the next election draws near! For example, instead of periodic short-term drives to reduce waiting lists, the emphasis should be on long term strategies to improve overall effectiveness and efficiency. These take time to develop and implement. Next, some of the examples of poor quality that are identified—I suspect many—will be the result of inadequate facilities and equipment. Government must be prepared to finance the improvements that are supported by quality improvement analyses. Government must support research in quality measures and improvement and dissemination of the results. Ministers

and civil servants need to learn the basic elements of CQI and support it. As the Beacon Services Initiative and the Aneurin Bevan awards are intended to do, they should recognise and praise the good performers and achievements. (Let the GMC—with quiet but firm encouragement—deal with the “bad apples.”)

As noted earlier, one of Deming’s principles was “Drive out fear”. There is nothing like politically-motivated high level political attention to create fear in a bureaucracy. When it comes to creating a culture of blame and recrimination, obviously politicians are the worst offenders, in a class by themselves! A disarmament treaty that took the NHS out of the political crossfire would be constructive. The saying is ascribed to Aneurin Bevan that if a bedpan falls in a hospital ward, it must be heard in Westminster. This is a wrong idea. The people in Westminster are not likely to have a clue as to what to do about the bedpan or how to evaluate its fall in proper context. But they are likely to be able to instil fear in the hearts of hospital personnel. Westminster shouldn’t be listening for bedpans. Bedpans will fall in even the best possible system of care. I suppose it is utopian to ask politicians to consider data instead of anecdotes. But Westminster should be focusing on national priorities and the appropriateness of top-level management processes to promote improvement. By sustained good example, politicians can help to end the culture of blame. Experience in the airlines and in QI studies in hospitals shows that there is a need for a protected space where people can honestly expose and analyse errors and correct them without fear of retaliation.⁸⁰

TRANSPARENCY AND RISK-ADJUSTED MEASURES OF OUTCOMES (RAMO)

A part of the CQI process is transparency and open sharing of relevant information. Public sector programmes are supposed to be open and transparent. The NHS is definitely not open and transparent. What inadequate data the government has, it releases selectively to suit its own public relations purposes. If a professor asks for data, s/he is asked “Why do you want it? What do you intend to do with it?” And if the answer is not considered satisfactory to the bureaucrat in question, the data will not be forthcoming. The Health Care Financing Administration of the U.S. Government makes publicly available large amounts of data which have proved to be a gold mine for health

services researchers. Many valuable published studies are based on these data. For example, I refer to a valuable comparison of CABG mortality by state below.¹²⁶ So if the government asks the medical profession to adopt a culture of transparency, it seems only reasonable for the government to lead the way and set a good example.

Here is an outline of what a programme of transparency might look like. First, with support of government, the Royal Colleges need to lead the process and partner with CHImp. Physician leadership is crucial. To win support of government, they would need to be able to assure the public that appropriate numbers and types of non-physicians play a serious role (e.g. independent health services researchers, medical ethicists, etc).

Quality may be measured either by risk-adjusted measures of outcomes or by measures of outcomes-validated processes. A risk-adjusted measure of outcome might be surgical mortality or ability to function in a satisfactory manner after an operation. A process measure might be the per cent of diabetics who had their retinopathy examination in the past year. Sometimes outcomes are a poor measure of a provider's performance because they happen too far in the future and people may have had several different providers along the way who contributed to the outcome. Or there may be too little that even the best quality care can do to affect the outcome. Process measures have the virtue of being intuitively attractive to physicians. In this section, I will focus on risk-adjusted measures of outcomes. In the next, on primary care, I will discuss some process measures.

As noted above, the National Health Service needs, but does not have, a national high quality clinical database. Nick Black has argued that such databases can support many activities including clinical practice (decision analysis), health services management, evaluation research and clinical audit.⁹ The guidance on clinical governance lists baseline assessment, monitoring progress, benchmarking, openness and public accountability, and early warning of serious service failures.¹¹⁴ I hope a combination of the government's new information strategy and clinical governance can produce this. But the key point is that the medical profession must decide that its members will do their part to collect and report the needed data, and that such data are needed to support informed clinical practice. From this database, i.e. greatly improved Hospital Episode Statistics (HES), the evaluation organisation should compile volumes and mortality by hospital and

by procedure and types of cases. It should build a linkage to population mortality statistics so that data can be collected on post-hospital mortality. It should prepare crude (unadjusted) mortality rates by hospital and use these data to prioritise the next steps.*

The next step would be to select about a dozen or a score of procedures or events, such as those associated with the most avoidable deaths, and begin a process of risk adjusted measures of outcomes (RAMO) for the purpose of underpinning a large scale quality monitoring and improvement effort. Eventually, this programme would cover all of hospital practice. As described by Mark Blumberg, the process proceeds in the following steps:

- Select a universe for study (e.g. persons , cases)
- Select a clinical care subject (e.g. a procedure)
- Select an appropriate outcome measure (e.g. death)
- Identify independent variables thought to predict the outcome
- Estimate the statistical relationship between the outcome and the predictor variables
- Estimate the probability of an adverse outcome for each case (if treated by an average provider)
- Compare observed with predicted outcomes for subsets of patients (e.g. hospital X, doctor Y or technology Z)

Thus, RAMO is a technique for comparing the outcomes produced by different providers taking account of the characteristics of the patients they treat (case mix).¹² Risk adjusted outcome measures serve several worthwhile purposes. First, they are a tool for monitoring performance. Second, they can guide the less successful doctors to the most successful so that they can study the latter's methods and adopt them to improve. Third, risk-adjusted outcome models can be a valuable tool for informing patients in the clinical decision process. A patient's characteristics can be entered into the model and a prediction of his or her outcome produced. And fourth, they can be used to evaluate the effect on risk adjusted outcome of different technologies or equipment being used.

One of the earliest RAMO studies was of perinatal mortality in California.¹⁶² Williams linked hospital birth records and mortality

* Unadjusted data are dangerous because they could be seen to penalise the doctors who care for the sickest patients, who ought to be the best doctors. Inappropriate use of unadjusted data could discredit the process.

records and developed a model predicting mortality based on sex and birth weight. The results told some hospitals they were poor performers and led them to make efforts to improve.

Two of the best known RAMO studies now ongoing compare mortality by surgeon and by hospital for Coronary Artery Bypass Graft (CABG) surgery in New York and Pennsylvania.^{66 23 125}

The New York experience is instructive. The Department of Health and its Cardiac Advisory Committee (made up of cardiac surgeons, cardiologists, generalist physicians and consumers) began an effort in 1989 to reduce mortality after CABG and to respond to the public's demand for more information about health care. They created a register of all patients undergoing cardiac surgery in New York, including demographic variables, risk factors and complications collected prospectively. For CABG performed separately from any other procedure, they developed a multivariate logistic regression model that permits comparison of mortality rates among hospitals and surgeons taking into account each patient's presenting illness and coexisting conditions. The 1996 model includes demographic data, haemodynamic state, comorbidities (e.g. COPD, diabetes, renal failure), severity of atherosclerotic process, ventricular function and previous open heart operations. Data were audited to assure accuracy.⁶⁶

In 1990, the Department published its first findings of volumes and risk adjusted mortality rates by hospital. A newspaper brought suit under the Freedom of Information Act and forced release of the data by named surgeon. Physicians reacted angrily. However, a plan was worked out whereby data would be compiled and published for the most recent three years for surgeons with volumes sufficient for statistical validity. In 1992, the Department made a major effort to educate the media. The leaders of the project report "No movement of patients away from hospitals with high mortality rates has occurred. Nor did patients move to hospitals with low rates."²³ From 1989 to 1991, five of the 14 risk factors used in the model were reported to become significantly more prevalent. "Since 1991, the prevalence of each risk factor except congestive heart failure has remained stable; for that risk factor, the definition has continued to be refined."²³

From the patients' point of view, some very good things happened. Between 1989 and 1992, actual unadjusted mortality decreased from 3.52 per cent to 2.78 per cent; risk adjusted mortality decreased from 4.17 per cent to 2.45 per cent.⁶⁶ The data showed that the highest

mortality was associated with surgeons with the lowest volumes (fewer than 50 operations a year). Some hospitals restricted their privileges. “Between 1989 and 1992, 27 low volume surgeons stopped performing CABG in New York State. Some surgeons who had unsatisfactory performance retired from cardiac surgery.” One hospital was suspended from performing bypass surgery in part because of high risk-adjusted mortality.¹²⁶ One encouraging story in the *New York Times* told of the experience of the “worst surgeon”. From 1990 to 1992, this doctor had a risk-adjusted mortality rate of 7.4% on 285 patients versus an average of 2.99%. Investigation showed that mortality at his hospital was concentrated in emergency patients. Comparisons with other better performing hospitals showed that doctors at this hospital were moving their patients into the operating room too quickly and not stabilising them beforehand as much as at other hospitals; also they were not using the intra-aortic balloon pump to increase blood flow through the coronary arteries before surgery as much as other hospitals. Appropriate corrections were made and all surgeons’ mortality rates at that hospital improved. In fact, the “worst surgeon’s” risk-adjusted mortality rate improved to nearly 2.0%, making him comfortably better than average. This particular doctor happened to have more emergency cases because he was one of the younger surgeons and had more emergency cases assigned to him.⁴² Dr. Mark Chassin, then Commissioner of Health for New York said “It’s misleading to look at this as a surgeon’s problem. It really is a system problem”.²⁰ The doctor’s latest reported risk adjusted mortality rate for 1994-6 is 1.25%.¹²⁰

Still there is some reason for caution in ascribing the overall mortality reduction in New York to its state-wide RAMO analysis for CABG or publication of its findings. A group of hospitals in Northern New England did a similar RAMO project and quality improvement effort and achieved a similar reduction in mortality without public disclosure of the outcomes, suggesting that the doctors found their motivation from something other than fear of publication of their mortality rates. The findings were published in a peer reviewed journal.¹²¹ William Ghali, et al compared New York and Northern New England mortality reductions with mortality reductions in Massachusetts for the same years and found that Massachusetts, with no state-wide outcome studies, achieved a similar reduction in observed mortality. And similar reductions occurred for Medicare

patients nationally.⁵⁵ However, the Ghali study used different data sets and inclusion criteria for the different states and for the USA. Commenting on the study's limitations, Ghali pointed to the use of administrative data which are less detailed than the data in the prospective studies, and therefore capable of supporting only less precise risk adjustments, and "... that 3 different risk-adjustment models were applied separately to the 3 states. Ideally we would have liked to have a uniform database covering multiple states to which a single model could be applied."

A more recent study by Peterson et al addressed these shortcomings (except for use of administrative rather than prospective clinical data) and used the Medicare national database and the same risk-adjustment model for all states and for the USA and found "... a NY patient's likelihood of dying within 30 days of bypass surgery declined an average of 10.3% per year between 1987 and 1992 compared with 5.8 % for patients in the rest of the nation" and 5.8% in Massachusetts.¹²⁶ Four "states" led the nation in rate of improvement including New York and Northern New England (that were about equal in mortality rates and rate of improvement) and two other small states that had somewhat greater rates of improvement but much higher mortality rates, therefore much more room for improvement. (I could imagine that retirement of one low volume surgeon could have produced such results.) New York ended with the lowest mortality rate.²⁴ (One advantage of this study is that the Medicare database permitted using 30-day mortality in any setting, rather than in-hospital mortality.) I find the methods in the Peterson study much more persuasive than Ghali's. But regardless of whether or not New York can prove that their programme produced the lowest mortality rate, I remain convinced that the right thing to do is gather data, analyse it, and use it to guide improvements, as was done in New York. Is there a rational alternative?

Eric Schneider and Arnold Epstein surveyed a random sample of 50% of Pennsylvania cardiologists and cardiac surgeons to find out whether they were aware of the *Consumer Guide to Coronary Artery Bypass Graft Surgery* compiled by the Pennsylvania Health Care Cost Containment Council, and if so, whether they thought it useful and influential in their practices.^{140 125} Among their findings were that 87% of the cardiologists "reported that the guide had a minimal influence or none on their referral recommendations," and that 68% of cardiac

surgeons considered the guide's ratings not important or minimally important. I share the authors' suspicion that "cardiovascular specialists may be questioning the validity of the data in order to vent their displeasure at being monitored". Of course, only 4 out of 43 hospitals had significantly greater than expected mortality rates, so it should not be too surprising that few cardiologists said the guide influenced their referrals. I think the Pennsylvania experience underlines the fact that, in the interests of saving patients' lives and improving quality, it is very important that the state and the medical profession work in close collaboration to make sure the risk adjustments are credible, that the profession knows about and understands the information, and that something is done about poor performers.

I cannot help but observe that in the Peterson study, Pennsylvania's annual rate of improvement in mortality rate was about 8.4%, compared to the national average of 5.8%. New Jersey, which also had a profiling programme, improved faster than the national average and faster than Massachusetts and California that did not have such risk profiling programmes.¹²⁶

The value of publicly identifying hospitals and surgeons remains debatable. The efficacy of the various mechanisms by which surgeons are informed and motivated to initiate quality improvement activities remains unclear. It is not at all clear that publication of quality-related data move patient flows, although that should be a challenge to referring cardiologists. I think patients take quality for granted. Mere publication is not enough to cause improvement. Someone with the power to cause change must intervene actively, as was done by the Department of Health in New York. For Britain, this appears to me to be a logical role for CHImp. But what should be clear is that physicians and surgeons ought to be measuring the results of what they do, comparing them on a risk-adjusted basis, examining variations in outcomes and identifying and implementing ways to improve. A society that pays for the care and whose members suffer the consequences of sub-optimal care has a right to expect that such a process is in place and that effective corrective action is being taken in cases of persistent and significant poor performance. Publication is one way of assuring the public on this point.

There was concern that publication of this information would cause surgeons to avoid operating on high risk patients who were appropriate candidates for CABG. (I personally never believed this

argument, that surgeons would so violate their ethical commitments as to leave untreated patients who needed care merely for the sake of their standing in the league tables. Of course, a high predicted mortality rate could rationally reduce the appropriateness of surgery.) However, the New York model was found to adjust fully, and then some, for the patients with highest risk so that, ironically, the best way for a surgeon to improve his/her numbers in that case would be to operate on the highest risk patients. Moreover, "... hospitals with the patients at highest risk have some of the lowest risk-adjusted mortality rates in the state. Conversely, the hospitals with high risk-adjusted death rates most often have patients at lower-than-average risk."²³ Peterson et al found "... that NY elderly high-risk MI patients were actually more likely to receive bypass surgery since the programme's initiation, mirroring national trends".¹²⁶ So the predictions of bad outcomes did not come true. The Department of Health now publishes a report on CABG each year on the Internet.¹²⁰ It also publishes risk-adjusted mortality and volumes for Angioplasty on the same web site. The Pennsylvania Health Care Cost Containment Council does the same for CABG.¹²⁵ And the State of New Jersey has also joined the parade.¹¹⁹ In all three cases, the data are presented with 95% confidence intervals so that the reader is clearly informed as to the amount of statistical variation.

There is an apparent conflict between Deming's principle "drive out fear" and the idea of publishing the names of "the worst surgeons in England". The problem must be managed with care and sensitivity. First, the process of identifying, defining and collecting the data and developing the models is likely to take several years, giving people plenty of warning and time to make adjustments. Preliminary data analyses need to be reviewed and discussed with the participants to be sure important explanatory variables are not left out. Beyond that, I think it would be a good idea if the published data were limited to the hospital or unit level, and not the named surgeon, in recognition of the fact that many factors other than the proficiency of the surgeon, including the anaesthetist, the nurses, the quality of the equipment, enter into producing the outcome and also that the purpose of the exercise is quality improvement and not "naming and shaming". (But the hospital's board ought to know about its individual surgeons and anaesthetists. In New York, they did find that the name of the surgeon had significant statistical explanatory power.) Whether the names of

individual doctors should ever be published should be left for the future. While Deming's principle "drive out fear" is very important, I believe that it is also the case that some fear needs to be in the picture. That is, there needs to be something to motivate the improvement effort, something stronger than what has been present in the NHS so far. The CQI companies feared being driven out of business by their competitors. The fear that needs to be driven out is the fear of individual blame and shame for self-critical identification and analysis of opportunities for improvement (i.e. mistakes).

There are people working on RAMO in the UK. Dr de Leval and his colleagues have developed a risk adjustment model for the neonatal arterial switch operation, having found that features of the coronary architecture can have a large impact on the risk of mortality. He led a study of the switch operation in all 16 UK institutions doing the procedure for an 18-month period, combining patient specific variables, procedural variables, including human factors, and post-operative variables. A human factors expert witnessed every operation. This research seeks to follow risk reduction strategies applied in other industries with complex socio-technical systems such as airlines and nuclear power reactors.³³

The most developed RAMO system I encountered in the UK was created by the Intensive Care Society, the Intensive Care National Audit and Research Centre (ICNARC), under the direction of Kathy Rowan. ICNARC was first funded by the Department of Health in 1993.⁶⁹ It is an independent charity that, as of 1998, had reporting to it 135 Intensive Care Units, just over 50% of the total for England and Wales. They have a carefully defined data set of 71 elements. Their definitions are available to interested parties so I was able to review them. Operating in 6-month cycles, they gather and analyse these data and report back to each unit its risk-adjusted mortality as well as various dimensions of its activity. (e.g. lengths of stay, bed occupancy, throughput). The data are confidential, though some units choose to share data with others in the search for improvements. The annual cost per ICU averages £16,000, mostly local data collection costs, about 1% of the budget of the average ICU. They report case mix adjusted mortality using four different models which do not always agree. That is, a unit may be better than expected by one model, worse than expected by another. This illustrates both the need for caution in interpreting the data and also the need for the continuing research they are undertaking.⁶⁹

The Cardiothoracic Surgeons of Great Britain and Ireland have also started down this path.⁷⁵ The Society of Cardiothoracic Surgeons established a national database in 1994 collecting some 150 data points on all adults undergoing cardiac surgery in selected units across Britain in conjunction with the MRC Biostatistics Unit in Cambridge.⁷⁵ In 1998 this database “accepted data from just over half of all British units.” The Society “has asked all NHS units to return annual, raw, surgeon specific mortality data on marker operations for adult cardiac surgery, thoracic surgery, and paediatric surgery from 1 April 1997 as an extension to the cardiac surgical register.” Several projects are underway evaluating alternative risk adjustment models and seeking to develop new better ones.¹⁸ The North West Regional Cardiac Surgery Audit Steering Group has analysed a year’s data on the 4 centres in the region and reported “The mortality following surgery in the region was 3.5% which was similar to that reported for the UK 1996/7. There was no significant difference in mortality between the 4 centres.”¹⁶³ This region comprises about one eighth of all UK cardiac surgery patients. The Society of Cardiothoracic Surgeons has a web site at which it publishes mortality from CABG subdivided by risk categories such as first vs. subsequent operation, number of grafts, etc.⁷⁵ This work is clearly on the right track. It needs to be brought to completion, covering all NHS hospitals with publication of the data by unit, definitions and auditing processes. Why shouldn’t people contemplating a life-threatening operation at a given hospital know about its performance? To accomplish this it will be necessary to be sure that they are supported for adequate data collection capabilities. All British (and American) surgeons should be following their lead.

The experience with RAMO illustrates some important points about it. First, it takes years to get the data and the modelling right. There must be painstaking attention to data accuracy, including frequent audits, careful design of the specific measures so they are useful for improvement, constant education of doctors, hospital administrators, and the media, and using the data for published research to enhance its credibility. Different groups working with different populations seem to find different predictor variables and models to work best. RAMO is not a panacea. A great deal of judgement is involved. Quality improvement is a science, and like any science, it should be continuously developed. It is art as well as science.

There are legitimate concerns about incentives, “gaming” or strategic behaviour and data manipulation that need to be worked through.⁷⁰

Once variations in risk-adjusted outcomes have been identified, there needs to be study and follow up action. For example, a doctor in a poorly performing unit might practice in one of the best units and/or a doctor from one of the best units might go and practice in the poor performer in order that ideas of best practice can be exchanged. Or a surgeon might follow the example of Dr de Leval and go for retraining. The purpose of all this is to support people who want to do well, not to punish them for mistakes.

The foregoing examples all use mortality as the outcome variable, appropriately as the processes in question are intended to save lives and there is significant mortality. Other outcome measures need to be developed in other cases where in-hospital mortality is not the main issue. For organ transplants, there is reporting of rejection rates, procedural volumes and survival curves. For joint replacements, there are measures of ability to function and the need for revision (a long term issue). For prostate surgery, there is the persistence and severity of unwanted side effects. For chronic conditions such as asthma, CHF and diabetes, American HMOs are measuring progress and care improvements by reduction in the need for emergency hospitalisations as well as patient satisfaction and self reported well being. Outcomes can be measured by asking patients questions about the outcome as perceived by them: ability to function, ability to return to work, etc. The Short Form 36 was developed at the Rand Corporation as a generic measurement instrument for this purpose, and some studies combine subsets of SF-36 with condition-specific measurements.¹⁵⁵

Publication of league tables must be very attractive to government and I believe that, when done properly, with all the care and attention to data quality mentioned above, it is the right thing to do. But people who are not well informed in this field should be made aware of their limitations. For one, there is random variation, for example in patient condition not measured by risk adjustment variables. This year’s “worst” may turn out to be next year’s better than average, so it is important to look for patterns over time. Moreover, statistical variation must be recognised and confidence intervals reported in the tables. Perhaps broad bands could be used for reporting: one, two or three standard deviations from the mean, or statistically significantly above or below. The confrontational use of league tables can create

perverse incentives such as gaming of the data, at least where predictor variables involve subjective judgements. So those who, like myself, believe that systematic use of RAMO is a good idea need to find ways to use it that pay due respect to the limitations.

MONITORING PRIMARY CARE

What about primary care? Most primary care is not a matter of life and death, at least in the short run. Much is caring, reassurance about self-limiting illness, treatment of minor injuries or detection of the signs and symptoms of potentially serious conditions for which there should be a referral to a specialist. Most of this is difficult or impossible to measure. However, a great deal of primary care is delivery of preventive services, care processes whose value has been established by scientific evidence or professional consensus. A great deal is also management of chronic conditions. Quality can be measured by comparison of actual practice with outcomes-validated process measures. The National Committee for Quality Assurance (NCQA) is an American non-profit organisation, sponsored by employer-purchasers and managed care organisations whose purpose is to develop and provide measurements of the quality of care being delivered by managed care.¹¹⁸ They have been developing a data set of measures of the quality of care that employer-purchasers require managed care organisations to report. The set is viewed as a step in the development of a much more comprehensive set of indicators. The 1999 Reporting Set includes the following indicators or domains: childhood immunisation status, adolescent immunisation status, advising smokers to quit, influenza shots for older adults, breast cancer screening, cervical cancer screening, prenatal care in the first trimester, low birth weight babies, check ups after delivery, beta blocker treatment after a heart attack for appropriate patients, cholesterol management after acute cardiovascular events, diabetic retinopathy examinations, comprehensive diabetes care, follow-up after hospitalisation for mental illness, antidepressant medication management, and the health of seniors. Each comes with a specification of the relevant population and the required measurements. Originally, many of these measurements had to be made by examining paper charts or claims records. Increasingly, they will be made by scanning electronic medical records or encounter data.

Possible candidates for future reporting include e.g. periodic cholesterol screening for adults above a certain age, faecal occult blood testing, sigmoidoscopy, measurement of blood pressure, etc. All this is of particular interest in America because the traditional fee-for-service indemnity system performed poorly in these dimensions and because the arrival of managed care and information technology has created entities that can be held responsible and the technical means for monitoring. Similar measurements will become possible in Britain when all patients have electronic health records as proposed in *Information for Health*.

In addition, some American Health Maintenance Organisations (HMOs) compile and report back to physicians their test-ordering behaviour relative to their peers, prescribing behaviour relative to their peers (well developed in Britain) and indicators of productivity such as doctor office visits, the number of different patients seen, as an indicator of access. In addition, NCQA has developed, in collaboration with the National Centre for Health Policy Research, a specific survey of patient experience and satisfaction which managed care organisations are expected to contract with qualified survey research organisations to administer to their populations.

HMOs are surveying their members after doctor visits to measure their perceptions of the encounter and their satisfaction. For example, one leading group practice HMO asks 50 patients of each doctor per year the following questions. "Thinking specifically about your visit with Doctor Jones on June 21 in the internal medicine department, please rate Doctor Jones in the following areas: (Can't answer, poor, fair, good, very good, excellent)

1. Doctor Jones' skills and ability
2. Your confidence that Doctor Jones provided to you the care and services your medical condition required
3. How well Doctor Jones listened to you and explained what was being done and why
4. Extent to which Doctor Jones involved you in decisions about your care
5. How familiar Doctor Jones was with your medical history
6. If you were asked to recommend Doctor Jones to a family member or friend, do you think you definitely would recommend, probably would recommend, ... , definitely would not.

7. For this appointment, was Doctor Jones the person you wanted to see? Yes; no, and this made me dissatisfied; no, but I was satisfied, etc.

Then “Still thinking about your visit on June 21 to the internal medicine department, please rate the following aspects of care and service on that visit:

8. The overall phone service you experienced in connection with this visit
9. How well your needs and schedule were taken into consideration when this appointment was scheduled
10. Courtesy and helpfulness of the staff during this visit
11. The co-ordination among all the people who cared for you during this visit.

Then similar questions about Pharmacy, Laboratory and Radiology if applicable.

The replies are analysed, fed back to the relevant professionals, corrective action recommended if indicated, and also the doctor’s financial bonus is affected by the answers.

The NHS has contracted with the Picker Institute of Boston to design similar surveys of NHS patients. The first results, published April 12, were reassuring. Nine out of ten patients are satisfied with the service they get from their GP, though more than one in three of the people referred to hospital by their GP thought their condition got worse while they were waiting to be seen. This information needs to be related to specific providers and medical conditions to be useful for quality improvement purposes.

A challenge for the NHS will be to figure out who, besides the GP, should be reviewing such reports. With clinical governance, at a minimum the Chairman of the Quality Committee in each PCG should be reviewing such information. The performance of each GP may be reviewed against the performance of similarly situated GPs who show high performance, and insights and recommendations might be developed to help the low performers to improve. Some form of “risk adjustment” may emerge.

In any case, a great deal can be done to measure and monitor primary care.

WHY SHOULD BRITISH PHYSICIANS AND SURGEONS EMBRACE AND LEAD CQI AND TRANSPARENCY?

Why should British physicians embrace CQI and transparency? It sounds like a lot of work and possibly dangerous.

It has been widely observed in industry that management adopts CQI when they are having a “near death experience”, i.e. they see themselves in real danger of being destroyed by their competition.^{28 13 19} Managers come to CQI when they have exhausted the list of easy quick fixes that did not work and come to the realisation that they must do something quite fundamental. The NHS is not having a “near death experience”, despite the occasional prophecies of doom. It commands a huge reservoir of good will on the part of the British people. It is a publicly supported monopoly that will survive. And given the political status of British hospitals and even hospital departments, competitive threats are unlikely to produce “near death experiences”. So that motivator is not likely to be present. I offer the following reasons.

First, the government is calling for it in *A First Class Service: Quality in the new NHS and Modernising Government* and it is laying out the first steps by publishing clinical indicators such as in hospital death rates following surgery and heart attack in England.¹¹⁴ To a physician, the publication of *Quality and performance in the NHS: Clinical Indicators* must be very disappointing.¹¹⁷ The mortality rates are not risk adjusted (except for age of the patient), they are not specific to the type of operation, and they are in-hospital mortality rather than 30-day mortality. They really don't tell one much. This needs to be seen as a first step, an indicator of needed improvements in data collection, and a statement by government that it intends to move ahead one way or another. British doctors still have an opportunity to take control of the process themselves before the government does it for them in a manner likely to be much less sensitive to their concerns. The government appears determined to move this agenda forward, so it would be better for all concerned for the medical profession to take a leading role, to be sure that the risk adjustments and the presentation are right, that the focus stays clearly on quality improvement and not on “naming and shaming”. The profession should avoid a debilitating debate on risk adjustments and focus on getting them done right. After the first round of headlines (if any, which I doubt) published RAMO will “inoculate” the public by

showing people that there is a mortality rate, it is usually low, and there is a system in place for monitoring, improving, and correcting poor results.

Second, how can doctors claim that they provide high quality if they cannot or will not measure quality? How can other people know they are measuring it if they will not share the measurements?

Third it fits with modern standards of accountability in practice in other walks of life such as business and education. It fits with the spirit of *Modernising Government*.²⁷ NCEPOD harks back to an earlier age when professions were not held accountable. There is something out of date and embarrassing about it. The trend in society is toward greater transparency. If the medical profession rejects transparency, it will appear as though it has something to hide, which will generate continuing nagging suspicion and cynicism. The great majority of NHS doctors have nothing to hide, so why do they act as though they do? Moreover, by what right do doctors and the NHS withhold this information from the public who pay for the NHS? If you were contemplating becoming a surgery patient, wouldn't you want to know your odds of success? Would it be right and fair for doctors to have inside knowledge not available to others? Was it fair that the mothers of the Bristol babies should not have been informed that mortality rates in Bristol were so much higher than elsewhere? The British people in general and the NHS in particular place a very high value on fairness. They would not want anyone to get less good medical care because of an inability to pay. Information is an important resource and without openness and transparency, it is being unfairly appropriated for personal benefit of some and denied to others. In the words of Dr. Tom Treasure, "It appears to be self evident that parents have a right to know the truth from both referring cardiologist and the surgeon. Why are doctors ever economical with it? Is truth thought to contaminate trust in a relationship? A frank presentation of the risks and benefits to the family should include sympathy and compassion, but this should not supplant frankness."¹⁵⁷ It would seem that an estimate based on a good risk adjusted outcome model would be a good place to begin the frank presentation.

Fourth, a CQI work environment is a satisfying work environment. The NHS is suffering from some chronic problems including a general shortage of resources that is sure to get worse when measured against what will be required to provide universal access to medical technologies

that benefit people, poor customer service (waiting), a culture of blame and recrimination, personnel shortages, etc. CQI is a strategy for getting more value for money for patients, for reducing waste and rework, and potentially a strategy for improving the motivation and working conditions for doctors, nurses and others.

Fifth, RAMO studies may be used to make the case for more resources where the analysis supports it. For example, ICNARC has been able to show that patients discharged from the ICU between midnight and morning, presumably because of bed shortages, do worse than other patients.

Sixth, the cat is coming out of the bag. Anyone with Internet access can look up the RAMO studies of CABG in Pennsylvania, New York and New Jersey and see what can be done. There is a medical literature on risk adjustment and also at least two prototypes in operation in the UK. It would be easy for people to compare the New York and Pennsylvania web sites with that of the Cardiothoracic Surgeons of Britain and Ireland and to see that the latter gives much less information. And the American experience implies that it can be done (though we have a very long way to go to apply this across the board).

Seventh, a regular flow of such information could stop the erosion of public confidence in the NHS.

Eighth, it is the right thing to do. It is the route to doing the most possible to improve the lives of people within limited resources.

I believe there are many British physicians who are ready and willing to do this.

THE FUTURE

Is There Competition in the NHS' Future?

On its present course, the NHS faces a challenging future. The average age of the population, and especially the number of elders who demand so much more medical care, is increasing. Technology is rapidly expanding the range of things medicine can do for people to relieve their pain, enhance their productivity and extend their lives. And some of these technologies are very expensive. People who can benefit from them want access to them. British people are travelling more, and more of them can see that people get better service in nicer facilities on the Continent. Complex issues will arise as people discover they can get services on the Continent for which they would have to wait a long time here. Information about medical technology is being spread more widely. Internet use is increasing rapidly in the USA and health-related information is one of its most popular subjects. Britain is likely to follow. Consumerism is rising as more Britons see themselves as members of the middle class. People will come to expect their desire for convenience to be respected. The old NHS culture that “they are lucky for what they get” will no longer do. People will come to want and expect customer service from their health care institutions comparable to what they get at good private sector service companies.

I doubt the NHS will be able to deliver on all these demands and expectations. At least on the present lines of fiscal policy, there won't be enough money. There seems to be little support for higher taxes and no easy source of funds elsewhere in the budget to raise health services spending to the level of other northern European countries. And NHS culture, which is dominated by unions and professional societies, will have a hard time delivering the customer service. Willing, kind, caring customer service cannot be ordered and compelled from the top down.

The present government is committed to *Modernising Government*, including the NHS.²⁷ The themes that it stresses include responsive public services focused on the needs of users, efficient high quality services, joined-up government, information age government, and valuing public service. The White Paper notes “The British public has

grown accustomed to consumer choice and competition in the private sector. If our public service is to survive and thrive, it must match the best in its ability to innovate, to share good ideas and to control costs.” The government intends to modernise “wherever practical by giving the public the right to choose.” “Governments have not always looked closely enough at the link between spending and what the public is really getting in the way of results *The incentives to modernise have been weak.*” [italics added].

I understand this to mean that there is a growing demand, likely to be expressed through the political process, for a more modern NHS. A recent Department of Health Survey reported that 9 out of 10 patients “consider that the GP made, in their opinion, the right diagnosis most, if not all of the time” though 19% thought it took too long to get an appointment.³⁷ “More than 1 in 3 people referred to hospital by their GP considered their condition got worse while they were waiting to be seen.” But independent surveys give a somewhat less favourable picture. A 1990 survey of ten nations by Robert Blendon et al found that 69% of respondents in the UK agreed with the statements either that “fundamental changes are needed to make the health system work better,” or “we need to completely rebuild it”.^{*11} A similar survey in 1996 (Eurobarometer) reported that 56% of people in the UK agreed with one or the other of those statements.⁹⁸ In that survey, about 41% of the UK population expressed dissatisfaction, a per cent exceeded only by Greece, Italy and Portugal. (By way of comparison, dissatisfaction among Danes, Finns and Austrians was at 6% or less.) The fact that only 11 or 12% of the population have chosen to subscribe to private health insurance might be taken to suggest that the number willing to pay more for better service is not great. But many other people pay out-of-pocket for services. The *Lancet* recently reported that “Today 850 000 people in Britain receive treatment each year in private facilities, where about 20% of elective surgery is now performed, including a third of all hip replacements”.⁷⁹ I think it is appropriate for government to be concerned with modernising the NHS.

The White Paper acknowledges that competition and the public’s right to choose are important aspects of modernisation: “... we will develop an approach [to the question of who should supply services]

* This compares with 89% of Americans.

based on the straightforward idea of best supplier, retaining an open mind about which supplier, public, private or partnership, can offer the best deal ... To make sure we get the best supplier, competition will be considered seriously as an option in every case.”

Why not apply these ideas to the NHS? If waiting lists are long and intractable, why not try contracting out some open heart surgery, hip replacement, cataract removal and hernia repair to some private hospitals and surgical teams *if* (and only if) they can offer high quality at a lower cost? *Why not* open up clinical laboratory services to competition from the private sector? Such a policy could help to free the government from its conflict of interest as both purchaser and provider and allow the government to pursue the best interests of patients. Today the government does not contract out much care.

I think there are two reasons why not. First, if the government were to choose the best supplier outside the public sector, it would come into conflict with the public employee unions who would denounce this move in strong ideologically-freighted language. The government would be described as “destroying” or “threatening to undermine” the NHS. Yet there is really nothing in the basic principles of the NHS—universal access, based on need alone, and free at the point of service—that implies the services must be delivered by entities that are *government owned and operated by public employees*. And second, the government does not really know how to buy services like these from the private sector.* The NHS is only just getting to know what its own services cost. Buying services from the private sector can be comparatively simple if it is a matter of one-off spot purchases to use temporary excess capacity. But when it comes to writing a long term contract at a price that is good for taxpayers and also profitable and safe enough to induce private investors to invest substantial fixed capital, the matter is very complex. The difficulties in getting the Private Financing Initiative (PFI) off the ground illustrate this. All of this leads me to doubt that the government really has or will achieve an open mind on choice of supplier. A good direction for improvement would be for the NHS to experiment and to see if it can develop good methods for contracting with the private sector.

* I am using the term “private sector” here in the sense of “non-governmental”, therefore to include private for-profit and also voluntary non-profit entities.

I think many of the ideas in *Modernising Government* are right on target: Continuous Quality Improvement, a focus on outputs rather than inputs, financial reward for staff who identify financial savings or service improvements, competition over who should supply services (public or private), encouragement of the best quality management schemes, learning organisations, staff involvement, local pay flexibility, and rewards for good organisational performance such as team bonuses. These are all ideas developed by competitive companies in the private sector. Some of them were supposed to be part of the internal market. And they are themes I have written about in connection with the internal market and quality management.⁷

I hope this programme is very successful in the NHS. And it might be. The British parliamentary model of government with its strong executive, is more likely to succeed in such an undertaking than most governments. Somebody is in charge there (unlike Washington). But experience with the public sector in general suggests that it probably will not succeed. It is hard to think of many public service monopolies that have achieved and sustained “modern” customer service. Will the government’s attention span be long enough to drive through this agenda? As the White Paper notes, this is a long term programme. So many other issues demand attention: peace in Northern Ireland, the Balkans, the relationship with Europe, the Euro, the economy, the schools, the environment, etc. Will such a basic long term effort be politically salient? Will the government believe that this programme will reward it with votes at the next election and the one after?

In the United States in 1993, Vice President Gore produced a report called *Creating a Government That Works Better and Costs Less: The Report of the National Performance Review*.⁵⁹ Its central theme was “reinventing government.” It proposed to streamline the budget process, decentralise personnel policy, streamline procurement, reorient the inspectors general, eliminate thousands of regulations, etc. The report included many penetrating insights about the failings of management of our government. Within less than a year, it was forgotten (except by a few professors of public management), and nothing ever came of it. Will *Modernising Government* meet a similar fate?

One barrier to modernisation of the NHS is that its focus, for better or for worse, is more on public health than on patient-focused personal service. It is as if its job is more to maintain a healthy workforce than to provide services responsive to individual needs and

wants. From the point of view of health gain for money, that serves the British people very well. But it is the kind of service that seems more appropriate to Britain in its deprived condition in the years after World War II, than to a modern advanced market economy whose population is largely middle class. Achieving the customer service aspect of modernisation will take some change in orientation.

I doubt that it is possible to create and sustain a culture of innovation, efficiency and good customer service in a public sector monopoly whose services are in excess demand and whose units do not get more resources for caring for more patients. That is just asking too much. Individual heroes or saints can carry it off for a time. But I doubt it can be generalised across the NHS and sustained over time in the face of such powerful disincentives. It is hard enough to do it in a private sector company facing real competition.

By “modern”, the government means high quality and efficient, up to date, and focused on the needs of the users or customers. *I doubt that the NHS can achieve modernity without consumer choice and competition and substantially more resources.* To get more money into health services, there is a need to allow people who are willing and able to do so to spend more of their own money for better service. Of course, the present availability of private health insurance does this to a limited extent. Because it is a supplement to the NHS and not an alternative, it doesn't really provide competition to the NHS. It is hard to come up with a practical scheme that does that. What I have seen of the alternatives leads me back to believing that the most practical way to move forward now is to build on the strengths of the internal market and to try to correct the factors that held it back—all within the constraints imposed by parliamentary control and central tax financing. The government could do this by “reinventing” the internal market, with a new politically correct name to be sure (could that be “*Modernising Government*”?). Base it on the Primary Care Groups and Trusts as purchasers. While recognising its limitations, the government should attempt to get the most out of the possibilities of the internal market to motivate improvement:

- Give itself some distance from the hospitals, if possible, to create political space for the market to work. The NHS Trusts were a step in that direction. There have been proposals to make the hospitals even more like free-standing locally controlled non-profit entities.^{64 84 60}

- Pursue fearlessly systems that measure costs and quality. (Fear of the consequences of such information inhibited its development in the past.)
- Encourage PCGs and PCTs to purchase aggressively on behalf of patients. Support them when they insist on more responsive patient-friendly services. Measure patient satisfaction by PCT and reward those who make the greatest improvements.
- Encourage hospital trusts to adopt policies that increase their flexibility to respond to market forces, with fewer bailouts for poor performers.
- Stop allowing or encouraging hospital mergers. Encourage a competitive hospital industry.
- Allow successful hospitals that can win more business the capital they need to finance expansion.
- As *Modernising Government* suggests, increase local pay flexibility, especially tied to performance of hospital trusts.
- Put some substantive reality into the words "... retaining an open mind about which supplier, public, private or partnership, can offer the best deal". Look for some good opportunities for long term contracts with private hospitals to provide services to NHS patients. See if they can offer a better deal. Consider it an experiment. Use their performance as a benchmark.

Modernising Government says, quite sensibly, "... wherever practical by giving the public the right to choose". Why not put some substance into that by implementing appropriate regulations and processes to make it easier for people to change GP and therefore to change PCG or PCT. There might be a periodic enrolment, similar to what is done for employees of large firms and government in the USA. Consumers could be provided with information on performance and customer satisfaction. A capitation payment adjusted for the expected medical demands of each patient could be made to the PCG of the consumer's choice. Geographical boundaries would have to be allowed to become blurred. PCTs might evolve into Health Maintenance Organisations (HMOs). To make this meaningful, it would be necessary to create incentives for PCGs and PCTs to make themselves attractive to more patients, and to be sure more patients do not mean more work without more resources.

This model, at least as I have described it, would not bring more resources into the NHS.

A more radical possibility that would bring more resources into health care, as well as consumer choice and competition, might be a version of managed care (in the private sector) and managed competition as put forward by David Green in a paper called "From National Health Monopoly to National Health Guarantee".^{60 49} Green describes a scheme in which everyone is covered through non-governmental health insurance organisations, either voluntary not-for-profit or for-profit. They would develop the capability to purchase services and to offer financial coverage for a comprehensive set of health care services. Rather than a supplement to the NHS as present private coverage is, this would be a complete substitute for the NHS. These organisations would develop "managed care" capabilities, that is, they would contract selectively with providers to deliver the covered services at prices and on terms defined in contracts with insured subscribers. They might develop their own facilities such as health centres. In short, they would develop capabilities to manage quality and cost. These managed care organisations (MCOs) would offer their services competitively in a market managed by independent regulatory agencies/clearing houses or "purchasing co-operatives." "They should be mutual organisations run by boards representing members."⁶⁰ They would function the way a large employer offering employees multiple choice of MCOs does in the USA. They would plan and manage an annual co-ordinated open enrolment in which each subscriber would be able to choose from among several MCOs. Purchasing co-operatives would perform several functions to make the market user friendly for consumers and to promote price elasticity of demand. Each MCO would set its own prices in this marketplace. The co-operatives would adopt standards for the coverage contracts. They would need to manage the problem of risk selection because without adjustment of premiums for medical risk, the most profitable strategy for an insurer is to select risks, especially to avoid poor risks. This is a degree of complexity that some might find daunting. However, such a scheme could bring the dynamism of competition and innovation in the private sector into health care.

The government would set broad rules such as a guarantee that all eligible persons would be able to join the plan of their choice with no exclusions of coverage for pre-existing medical conditions. With support from government (including resources and required reporting by providers and insurers), the purchasing co-operatives would gather

and publish information on consumer experience, waiting times, perceived quality of care, and also on indicators of quality of care processes and make it conveniently available to subscribers.

“To encourage competition, existing NHS hospitals should be removed from political control by privatising them as non-profit, voluntary hospitals.” Given the internal market’s experience with hospitals, could the government ever escape responsibility for their financial health and continuity of services? As I explained in Chapter III, and as Donald Light has written, the government would be much freer to buy the best services for patients if it could deal with hospitals at arm’s length, that is really consider competition seriously as an option in every case.⁸⁴

Government would pay everyone’s way into the lowest priced plan. People who wanted private coverage would top up this amount. Or in the transition, government might allow each person to take a fraction of his (actuarially adjusted) per capita cost out of the NHS budget and designate it be paid to the private MCO of his choice.

This would be a very far reaching change that would raise many questions and problems that ought to be studied and debated openly. One of the most fundamental is that what is needed is competing *delivery systems*, not just competing carriers. If all the carriers contracted with all the same hospitals, there wouldn’t be much competition at the provider level. This is one of the main ways that the implementation of this concept went wrong in the United States: several carriers all offering more or less the same set of providers. Perhaps carriers’ performance standards and consumer choice of provider within carrier networks would provide effective incentives for improvement.

The concept would have to be accompanied by a plan to phase it in gradually. It might be started in one limited geographical area and then rolled out gradually as it is seen to work. It could be a smooth process of incremental change. *Perhaps one of the most important advantages of this concept is that its implementation could start small and grow gradually as it proves itself.* If it doesn’t work, little would be lost.

The main point of controversy in such a scheme would be that the government would be frankly adopting a policy of “multi-tierism.” This would violate some people’s sense of fairness. There are at least two ideas of fairness concerning the NHS. One widely held view is that “no one should ever get more than anyone else.” In this view, people

should not be able to use their own money to buy better services. This view sees it as somehow wrong to “go private”. The Prime Minister has to apologise or be embarrassed for sending his children to a private school. I do not believe that such uniformity really happens in the NHS. Wide variations in service delivery are well documented and I doubt they will ever be abolished. It is well known that in bureaucratic systems, the educated articulate people who know how to manipulate the system get more and better care.

I do not agree with this strict egalitarian ethic. Some differences in care reflect legitimate personal preferences for a variety of styles and treatments. Some people are very busy and society values their time highly and they are willing to pay for prompt convenient service. Enforced equality denies people choices they ought to be able to make and it works against progress. In that view, if anybody gets out in front, he must be pulled down, as happened in the case of the GP Fundholders. Enforced equality works against competition and choice. It is hard to be sure there is equality if there is variety. Suppression of competition in the name of uniform standards has meant lower standards. The best thing for the poor would be for government, through premium support payments, to make them attractive customers so that providers would compete to serve them.

Another view of fairness is that society should see to it that everyone should have access to a “decent basic standard of care.” But above that, people should be able to use their own money to buy more and better services, including health care: private rooms, their own “private” doctor, first in line for the latest technology, little or no waiting. Those getting better care show the way to innovation and improvement for all. Their advantages put moral pressure on society to raise the basic standard. The philosopher John Rawls would say this can be morally defensible as long as it benefits the poorest.¹³⁶ A managed competition scheme might be designed to do this. For example, if each person opting out of the NHS for private insurance were allowed to take with him to the purchasing co-operative three-quarters of his actuarially adjusted per capita cost to the NHS, he would leave behind one-quarter that would benefit those who remain in the NHS.

Another disadvantage of managed care competition is that there would be considerable administrative costs, but these would not be overwhelming if modern information technology were well used.

Yet another problem would be whether anybody would know how to do managed care. At first, few, if any, would. But at least under this scheme, private managed care could start small and only grow if it proved itself.

Does the anti-managed care backlash in the USA have negative implications for an attempt to offer managed care options in the UK? Probably not. The situations are completely different. In the USA, ten years ago, most employed middle class people had health insurance that paid fees for items of service (the way most doctors wanted to be paid), with free choice of provider, the ability to go anywhere and do practically anything called “medical care,” and payment with no questions asked. That produced intolerable fiscal consequences. Managed care is a part of the efforts of government and employers to impose limits. The American people have a hard time accepting limits. The situation in the UK would be the opposite: private sector managed care would be a part of opening up new options.

I am not recommending managed care competition for the UK at this time. There are too many unanswered questions about exactly how it would work. I am not yet convinced it could be made workable. What I do recommend is that those people who believe in increased competition and consumer choice to serve all the British people think about schemes like this, analyse them, study their shortcomings and possible remedies for them, in short try to work out *in credible detail* the specifics of how such a scheme might be designed to make it politically attractive and practically workable.

I believe that one of the main failings of the internal market as public policy was that it leapt from fragmentary descriptions of the concept—including but not limited to a five page sketch of an idea from myself—to adoption and implementation without an adequate phase of detailed planning and analysis and responsible public debate. Any such reform should be debated in public and preferably enacted with bipartisan support to avoid the negative effects that hang over reforms under threat of reversal after the next election. And reforms should be evolutionary so that people have time to evaluate and adapt to them. Schemes such as choice of PCT or managed competition could and should start small in some typical geographic areas, watched carefully, expanded if they work, allowed to die if they don’t, without inflicting a sudden wrenching change on the whole NHS before gaining enough experience to know if they really are good ideas in practice.

REFERENCES

1. Advisory Committee on Distinction Awards, Overview of the NHS Consultants' Distinction Awards Scheme (England & Wales), 1999 Awards Round, October 1998 [www.open.gov.uk/doh/pubs/docs/doh/overview.pdf]
2. Arrow KJ. Uncertainty and the welfare economics of medical care. *American Economic Review* 1963; **53**:941.
3. Audit Commission, *What the Doctor Ordered*, London: HMSO, 1996.
4. Audit Commission, *Higher Purchase: commissioning specialised services in the NHS*, London: Audit Commission, 1997.
5. Berwick DM. Continuous Improvement as an Ideal in Health Care. *New England Journal of Medicine* 1989; **320**:53.
6. Berwick DM, Godfrey AB, Roessner J. *Curing Health Care*. San Francisco: Jossey-Bass, 1990.
7. Berwick DM, Bunker JP, Enthoven AC. Quality management in the NHS: the doctor's role—I and II, *The British Medical Journal*. 1992; **304**:235 and 304.
8. Black N. Quality Assurance of Medical Care. *Journal of Public Health Medicine* 1990; **12**(2): 97.
9. Black N. High quality clinical databases: breaking down barriers. *The Lancet* 1999; **353**(9160):1205.
10. Black N, Langham S, Coshall C, and Parker J. Impact of the 1991 NHS reforms on the availability and use of coronary revascularisation in the UK (1987-1995). *Heart* (Supplement) 1996; **76**:1.
11. Blendon RJ, Leitman R, Morrison I, Donelan K. Satisfaction with Health Systems in Ten Nations. *Health Affairs* 1990; **9**(2):185.
12. Blumberg MS. Risk Adjusting Health Care Outcomes: A Methodologic Review. *Medical Care Review* 1986; **43**:351.
13. Blumenthal D, Kilo CM. A Report Card on Continuous Quality Improvement. *The Milbank Quarterly* 1998; **76**:625.
14. Bottomley V. Modernisation of Health Care Systems: Its Impact on Hospitals. 26 June 1998. Unpublished address to the International Economist/Arthur Anderson International Seminar. "It is scarcely surprising that the political difficulties of hospital closure are so great. The role of the hospital in the community has been a landmark over the generations. The large hospital is like a cathedral for the prestigious professional group of doctors: TV soap operas about a hospital have similarities with a Trollope novel. Like a place of worship, it marks the milestones of family life. It is occupied and active through the night and day. It becomes a sanctuary in otherwise run-down, deserted inner city communities. It is the focus of philanthropic and fund-raising activity. The Hospital Leagues of Friends are the largest group of volunteers in Britain today."
15. Brambleby P, Letter to the Editor. *British Medical Journal* 1993; **306**:142.
16. Brambleby P, A Survivor's guide to programme budgeting. *Health Policy* 1995; **33**: 127.

17. Bridgend & District NHS Trust. *Submission for 1998 Wales Quality Award*, Bridgend, Wales, 1998.
18. Bridgewater B, Neve H, Moat N, *et al.* Predicting operative risk for coronary artery surgery in the United Kingdom: a comparison of various risk prediction algorithms. *HEART* 1998; **79**:350.
19. Buck C. Health Care through a Six Sigma Lens. *Milbank Quarterly* 1998; **76**(4):749.
20. Bumiller E. Death-Rate Rankings Shake New York Cardiac Surgeons. *New York Times*, September 6, 1995.
21. Caines, E. The Impact of Trusts on the Management of the NHS. *Health Services Management Research* 1994; **7**(3):181.
22. CASPE Research. The National Confidential Enquiry into Perioperative Deaths (NCEPOD): An External Evaluation by CASPE Research. London: CASPE Research, August 1998.
23. Chassin MR, Hannan EL, DeBuono BA. Benefits and hazards of reporting medical outcomes publicly. *New England Journal of Medicine* 1996; **334**:394.
24. Chassin MR. Is Health Care Ready for Six Sigma Quality? *The Milbank Quarterly*. 1998; **76**:565.
25. Crosby PB. *Quality is Free*. New York:New American Library, 1979.
26. Croxon B, Propper C, and Perkins A. Do doctors respond to financial incentives? UK family doctors and the GP fundholder scheme. Unpublished manuscript, School of Health University of East Anglia and Department of Economics University of Bristol, 15 February 1999.
27. Cunningham J, Minister for the Cabinet Office. *Modernising Government*. March 1999. <http://www.cabinet-office.gov.uk/moderngov/1999/whitepaper/related/executive.htm>
28. Darling H. Continuous Quality Improvement: Does It Make a Difference? *Milbank Quarterly* 1998; **76**(4): 755.
29. Davidge M, Harley M, Jayes R, Yates J. *Examining the Workload of Surgical Teams*: A report to the Nuffield Trust on the design, development, testing and trial use of an information system based on Hospital Episode Statistics data, Birmingham: Inter-Authority Comparisons and Consultancy, Health Services Management Centre, University of Birmingham, November 1997.
30. de Leval M, Francois K, Bull C, Brawn W, Spiegelhalter D, Analysis of a cluster of surgical failures. Application to a series of neonatal arterial switch operations. *Journal of Thoracic and Cardiovascular Surgery*, 1994; **107**(3):914.
31. de Leval M, Human factors and surgical outcomes: a Cartesian dream. *The Lancet* 1997; **349**(9053):723.
32. de Leval M, Report on Paediatric Cardiac Surgery in Cardiff, 21 January 1999. Great Ormond Street Hospital for Children NHS Trust.
33. de Leval M, Carthey J, Wright DJ, Farewell VT, and Reason JT, Human Factors and Cardiac Surgery: A Multi-centre Study. Presented at the April

- 1999 meeting of the American Association of Thoracic Surgery, forthcoming in the *Journal of Thoracic and Cardiovascular Surgery*.
34. Deming WE. *Out of the Crisis*. Cambridge MA: MIT-CAES, 1986.
 35. Department of Health *Self Governing Hospitals*, Working Paper 1, London HMSO, 1989.
 36. Department of Health, *The new NHS—1998 National Schedule of Reference Costs*, at <http://www.doh.gov.uk/pub/docs/doh/refcosts.pdf>
 37. Department of Health Press Release, 12 April 1999. The National Survey of NHS Patients—BT Internet Explorer, 03 August 1999.
 38. Deyo R A, Psaty B M, Simon G, Wagner E H, Omenn G S. The Messenger under Attack—Intimidation of Researchers by Special-Interest Groups. *The New England Journal of Medicine* 1997; **336**: 1176.
 39. Dobson F, Secretary of State for Health, Speech to launch New Health Network, 28 April 1999. “At present most people in most parts of the country get good treatment and care from the NHS most of the time. But the coverage is patchy and standards are variable. Many of the NHS buildings are substandard and shabby, many staff are run off their feet and frequently let down by unreliable equipment. They face a more demanding public and an ever quickening pace of technological changes—in treatments and pharmaceuticals.”
 40. Donaldson L. Quality in Health Care: The UK Policy Perspective, Paper given at the Commonwealth Fund/ Nuffield Trust 1999 Margaret E. Mahoney Symposium, Ditchley Park May 21-23, 1999.
 41. Dyer C. Obstetrician accused of committing a series of surgical blunders. *British Medical Journal* 1998; **317**:767.
 42. Dziuban SW et.al. How a New York Cardiac Surgery Program Uses Outcomes Data. *Annals of Thoracic Surgery* 1994; **58**:1871.
 43. Eddy DM. *Screening for Cancer: Theory, Analysis, and Design*. Englewood Cliffs NJ: Prentice Hall 1980.
 44. Ellis R. Hospitals face ban on liver surgery that kills babies. *The Express* April 3, 1999.
 45. Enthoven AC, Smith KW. *How Much Is Enough? Shaping the Defense Program 1961-1969*. New York: Harper and Row, 1971.
 46. Enthoven AC. *Reflections on the Management of the National Health Service: An American looks at incentives to efficiency in health services management in the UK*. Nuffield Provincial Hospitals Trust, Occasional Papers 5, London 1985.
 47. Enthoven AC. National Health Service: Some reforms that might be politically feasible. *The Economist*, 22-28 June 1985.
 48. Enthoven AC. Internal Market Reform of the British National Health Service. *Health Affairs* 1991; **10**(3): 60.
 49. Enthoven AC. The History and Principles of Managed Competition. *Health Affairs* Supplement 1993 **12**:24.
 50. Enthoven AC. Letter to the Governor, President pro Tempore, Speaker,

- and Members of the California Legislature. Improving Managed Health Care in California, Findings and Recommendations, Volume Two, Managed Health Care Improvement Task Force, January 1998. [www.chip.cahwnet.gov/mctf/front.htm]
51. Ferguson B, Goddard M. The case for and against mergers, in Ferguson B, Sheldon T, and Posnett J, *Concentration and Choice in Healthcare*, The Royal Society of Medicine Press Ltd., FT Healthcare, London 1997.
 52. Fletcher S W, Whither Scientific Deliberation in Health Policy Recommendations? *The New England Journal of Medicine* 1997; **336**: 1180.
 53. Fulop N. and Rosen R. Centre-periphery relations in the NHS: the role of communications. *British Journal of Health Care Management* 1996; **2**:268.
 54. General Medical Council, *Good Medical Practice*, London, 1998.
 55. Ghali WA, Ash AS, Hall RE, Moskowitz MA. Statewide Quality Improvement Initiatives and Mortality After Cardiac Surgery. *Journal of the American Medical Association*. 1997; **277**:379.
 56. Glennerster, H, Matsaganis M, Owens P, Hancock S, GP Fundholding: Wild Card or Winning Hand? in Robinson R and Le Grand J, *Evaluating the NHS Reforms*. London: King's Fund Institute, 1993.
 57. Goddard M, and Ferguson B, *Megars in the NHS: Made in Heaven or Marriages of Convenience?*, Nuffield Occasional Papers, Health Economics Series Paper No. 1, London: The Nuffield Trust, 1997.
 58. Goddard M, Ferguson B, Posnett J. Impact on the Purchaser-Provider Relationship and implications for the regulatory framework. *Concentration and Choice in Healthcare*. London: The Royal Society of Medicine Press, FT Healthcare 1997.
 59. Gore A. *Creating a Government that Works Better and Costs Less: The Report of the National Performance Review*. New York: Plume, the Penguin Group, 1993.
 60. Green DG. From National Health Monopoly to National Health Guarantee, in *How to Pay for Health Care*. Gladstone D. ed. London: IEA Health and Welfare Unit, 1997.
 61. Grout PA. The Economics of the Private Finance Initiative. *Oxford Review of Economic Policy* 1997; **13**(4): 53.
 62. Ham, C, Where Now for the NHS Reforms? Making them up as they go along. *British Medical Journal* 1994; **309**: 351.
 63. Ham, C. *Management and Competition in the NHS. Second Edition*. Oxon: Radcliffe Medical Press, 1997.
 64. Ham C. *Public, Private or Community: What Next for the NHS?* London: Demos 1996.
 65. Hamilton BH, Bramley-Harker RE. The Impact of the NHS Reforms on Queues and Surgical Outcomes in England: Evidence from Hip Fracture Patients. *The Economic Journal* 1999; **109**(457):437.
 66. Hannan EL, Kilburn H, Racz M, Shields E, Chassin MR. Improving the outcomes of coronary artery bypass surgery in New York State. *Journal of the American Medical Association* 1995; **273**:209.

67. Harrison S, Choudhry N. General Practice Fundholding in the UK National Health Service: Evidence to Date. *Journal of Public Health Policy* 1996; **17** (3):331.
68. Harvard Medical Practice Study. *Patients, Doctors, and Lawyers: Medical Injury, Malpractice Litigation, and Patient Compensation in New York*. Boston: Report of the Harvard Medical Practice Study to the State of New York, 1990.
69. ICNARC. Intensive Care National Audit & Research Centre, Case Mix Programme Data Analysis Report. London: Tavistock House, 1998.
70. Iezzoni, LI, Risk Adjustment for Performance Measurement, in LI Iezzoni, ed. *Risk Adjustment for Measuring Healthcare Outcomes*, Second Edition Chicago:Health Administration Press, 1997.
71. Imai M. *Kaizen*. New York: Random House, 1986.
72. Irvine, Donald, The performance of doctors: the new professionalism. *The Lancet*, 1999; **353** (9159): 1174.
73. Jencks SF. Can Large-Scale Interventions Improve Care? *Journal of the American Medical Association* 1997; **277**: 419.
74. Juran JM. *Managerial Breakthrough*. New York: McGraw Hill, 1964.
75. Keogh BE, Dussek J, Watson D, et.al. Public Confidence and Cardiac Surgical Outcome. *British Medical Journal* 1998;**316**:1759. The web site is www.scts.org/doc/2102
76. Kerrison S, Packwood T, Buxton M. Monitoring Medical Audit, in Robinson R and LeGrand J.eds. *Evaluating the NHS Reforms*. London: King's Fund Institute 1993.
77. Klein R. Big Bang Health Care Reform—Does it work? The case of Britain's 1991 National Health Service Reforms. *The Milbank Quarterly* 1995; **73**(3):299.
78. Klein, Rudolf Why Britain is Reorganizing its National Health Service—Yet Again. *Health Affairs* 1998; **17**(4):111.
79. Lancet. Echoes across the Atlantic. *The Lancet* 1999; **354**(9176): 351.
80. Leape LL, Bates DW, Cullen DJ, et.al. Systems Analysis of Adverse Drug Events. *Journal of the American Medical Association* 1995; **274**:35.
81. Le Grand J, Mays N, Mulligan JA, et al. *Models of Purchasing and Commissioning: Review of Research Evidence* A Report to the Department of Health.. London: London School of Economics and King's Fund, 1997.
82. Le Grand J, Mays N, Mulligan J. *Learning from the NHS Internal Market*. London: King's Fund, 1998.
83. Li P.-L. and Logan S. The current state of screening in general practice, *Journal of Public Health Medicine* 1998; **18** (3):350.
84. Light, DW. *Effective Commissioning*, London: Office of Health Economics, 1998.
85. Light, DW. Is NHS purchasing serious? An American Perspective. *British Medical Journal* 1998; **316**:217.
86. Luft H, Bunker JP, and Enthoven AC. Should operations be regionalized?

- The empirical relation between surgical volume and mortality. *New England Journal of Medicine* 1979; **301**:1364.
87. Malcolm AJ. *Enquiry into the bone tumour service based at the Royal Orthopaedic Hospital*. Birmingham: Birmingham Health Authority, 1995.
 88. Managed Health Care Improvement Task Force. *Improving Managed Health Care in California*, Volumes One, Two and Three, Sacramento CA: State of California, January 1998.
 89. Mayhew, DR. *Congress The Electoral Connection*, New Haven: Yale University Press, 1974.
 90. Maynard A. Performance Incentives, in Teeling Smith G, ed. *Health Education and General Practice*. London: Office of Health Economics 1986.
 91. Maynard A. Dissent into apathy. *Health Service Journal* 1999; April 22: 20.
 92. Mays N, Goodwin N, Bevan G, Wyke S, on behalf of the Total Purchasing National Evaluation Team. What is total Purchasing? *British Medical Journal* 1997; **315**:652.
 93. Mays N, Goodwin N, McLeod H, *et al.* Evaluation of total purchasing pilots in England and Scotland and implications for primary care groups in England: personal interviews and analysis of routine data. *British Medical Journal* 1998; **317**:256.
 94. Mays N, Goodwin N, Killoran A, and Malbon G. *Total Purchasing: A Step Towards Primary Care Groups*. National Evaluation of Total Purchasing Pilot Projects. London: King's Fund, 1998.
 95. McKee, M. and Chenet L. Informing the Market: The Strengths and Weaknesses of Information in the British National Health Service. *Health Care Analysis* 1997; **5**:149.
 96. McKee M, James P. Using Routine Data to Evaluate Quality of Care in British Hospitals. *Medical Care* 1997; **35**: OS102.
 97. Millenson, M. *Demanding Medical Excellence*, University of Chicago Press, 1997.
 98. Mossialos E. Citizens' Views on Health Care Systems in the 15 Member States of the European Union. *Health Economics* 1997; **6**:109.
 99. Murray I. Blair plan aims to cut cancer deaths by fifth. *The Times* May 21, 1999.
 100. National Centre for Clinical Audit. *Key Points from Audit Literature Related to Criteria for Clinical Audit*, 1997.
 101. National CEPOD. *The Report of the National Confidential Enquiry into Perioperative Deaths 1996/1997*. Compiled by Gray AJG, Hoile RW, Ingram GS, and Sherry KM. London: The National Confidential Enquiry into Perioperative Deaths, 1998.
 102. NHS. The National Institute for Clinical Excellence (NICE), DOH press release 31 March 1999.
 103. NHS Executive. *Use of HRGs in the contracting process*. EL(90)221, 1990.

104. NHS Centre for Reviews and Dissemination . *Relationship between volume and quality of health care: a review of the literature*. CRD Report No.2. York: University of York, 1995.
105. NHS Centre for Reviews and Dissemination *Concentration and Choice in the Provision of Hospital Services: the relationship between hospital volume and quality of health outcomes*. CRD Report No.8 , Part I, York, University of York, 1997.
106. NHS Executive. *Costing for Contracting*, EL(93)26, Leeds 1993.
107. NHS Executive. *European and local elections*. EL(94)36, Leeds, 1994.
108. NHS Executive. *Developing NHS purchasing and GP fundholding*. EL(94)79, Leeds 1994. (Also accompanying booklet *Developing NHS Purchasing and GP Fundholding, Towards a Primary Care-led NHS*), 1994.
109. NHS Executive. *The use of costed HRGs in the 1997/98 contracting cycle*. EL(96)64 London: NHS Executive 1996.
110. NHS Executive. *The Operation of the NHS Internal Market: Local Freedoms, National Responsibilities, and associated guide*. HSG(94)55, 1994.
111. NHS Executive. *Review of the Trust Financial Regime*. Leeds: September 1996.
112. NHS Executive. *The Performance of the NHS Cervical Screening Programme in England*. Report by the Comptroller and Auditor General, HC 678 session 1997-98, 22 April 1998.
113. NHS Executive. *Information for Health*. Wetherby: Department of Health Publications, 1998.
114. NHSE *Clinical Governance: Quality in the new NHS*, 1999.
115. NHSE NHS Beacon Services. Health Services Circular, Series Number HSC 1999/034, 1999.
116. NHSE, *The NHS Performance Assessment Framework*, HSC 1999/078, 1999.
117. NHS Executive. *Quality and Performance in the NHS: Clinical Indicators*, 1999. <http://www.doh.gov.uk/indicat.htm>
118. National Committee for Quality Assurance at <http://www.ncqa.org>
119. New Jersey State Department of Health. <http://www.state.nj.us/health/hcsa/cabg.htm>
120. New York State Department of Health. *Coronary Artery Bypass Surgery in New York State 1994-96*. October 1998. <http://www.health.state.ny.us>
121. O'Connor GT, Plume SK, Olmstead EM, Morton JR, Maloney CT. A regional intervention to improve the hospital mortality associated with coronary artery bypass graft surgery. *Journal of the American Medical Association* 1996; 275:841.
122. Office of Health Economics. *Compendium of Health Statistics*, 10th Edition. London: Office of Health Economics, 1997.
123. Office of National Statistics. *Cancer Survival Trends in England and Wales, 1971-1991: Deprivation and NHS Region*. The Stationery Office Publications Centre, London 1999.

124. Packwood T, *et.al.* *Hospitals in Transition: the resource management experiment*. Open University Press, 1991.
125. Pennsylvania Health Care Cost Containment Council. *Pennsylvania's Guide to Coronary Artery Bypass Graft Surgery 1994-1995*, May 1998. <http://www.phc4.org/adobe/pdf.htm>
126. Peterson ED, DeLong ER, Jollis JG, *et.al.* The Effects of New York's Bypass Surgery Provider Profiling on Access to Care and Patient Outcomes in the Elderly. *Journal of the American College of Cardiology* 1998; **32**:993.
127. Posnett J, Goodwin N, Griffiths J, *et.al.*, *The Transactions Costs of Total Purchasing*, London: King's Fund, 1998.
128. Powell, M. From Competition to Collaboration: Towards Managed Care in New Zealand? Sept 1998 presentation at Birmingham University Health Services Management Centre, in *The New NHS: What Can We Learn From Managed Care in New Zealand and the US?* Seminar Briefing No. 1. The University of Birmingham Health Services Management Centre, Nick Goodwin, ed. July 1999, supplemented by personal communications.
129. Propper C, Soderlund N. Competition in the NHS Internal Market: An Overview of its Effects on Hospital Prices and Costs. *Health Economics* 1998; **7**: 187.
130. Propper C, Regulatory Reform of the NHS Internal Market. *Health Economics* 1995; **4**:77.
131. Propper C. Market structure and prices: The responses of hospitals in the UK National Health Service to competition. *Journal of Public Economics* 1996; **61**: 307.
132. Raftery J, Robinson R, Mulligan J-A, and Forrest S. Contracting in the NHS Quasi-Market. *Health Economics* 1996; **5**:353.
133. Raftery J, Soderlund N, Csaba I, *et al.* Impact of the NHS reforms on English hospital productivity: an analysis of the first three years. *British Medical Journal* 1997; **315**:1126.
134. Raftery J. Benchmarking costs in health services. *Journal of Health Services Research and Policy* 1999; **4**: 63.
135. Rawlins M. In pursuit of quality: the National Institute for Clinical Excellence. *The Lancet* 1999; **353**:1079.
136. Rawls J. *A Theory of Justice*. Cambridge MA: Harvard University Press, 1971.
137. Roberts J, Schyve P. From QA to QI: The Views and Role of the Joint Commission. *The Quality Letter*, May 1990.
138. Robinson MB. Evaluation of Medical Audit *Journal of Epidemiology and Community Health* 1994; **48**: 435.
139. Rumbelow H. Women call for action over failed surgeon. *The Times* 17 November 1998.
140. Schneider EC, Epstein AM. Influence of Cardiac-Surgery Performance

- Reports on Referral Practices and Access to Care. *The New England Journal of Medicine* 1996; **335**: 251.
141. Schultze CL. *The Public Use of Private Interest*. Washington DC: Brookings 1977.
 142. Secretaries of State for Health, Wales, Northern Ireland and Scotland. *Working for Patients*. London:HMSO, January 1989.
 143. Secretary of State for Health. *The new NHS: Modern. Dependable*. London:The Stationery Office, December 1997.
 144. Secretary of State for Health. *A First Class Service: Quality in the new NHS*. London: Department of Health, June 1998.
 145. Sellu D. Time to audit audit. *British Medical Journal* 1996;**312**:128.
 146. Sellu D. Have we achieved crisis management in outpatient clinics? *British Medical Journal* 1998; **316**: 635.
 147. Shewhart WA. The application of statistics as an aid in maintaining quality of a manufactured product. *Journal of the American Statistical Association* 1925; **20**: 546.
 148. Shewhart WA. *Economic Control of Quality of a Manufactured Product*. New York: D. Van Nostrand 1931.
 149. Smith J, Bamford M, Ham C, Scrivens E, Shapiro J. *Beyond Fundholding: A Mosaic of Primary Care Led Commissioning and Provision in the West Midlands*. Health Services Management Centre, University of Birmingham and Centre for Health Planning and Management, Keele University, January 1977.
 150. Smith R. Medicine's need for kaizen. *British Medical Journal* 1990; **301**: 679.
 151. Smith R. New Government, same narrow vision. *British Medical Journal* 1998; **316**: 643.
 152. South West London Primary Care Organisation. Integrated Care Project (formerly SWLTPP Hospital Discharge Project). Annual Report 1997/98.
 153. Sowden AJ, Watt I, Sheldon TA. Volume of activity and healthcare quality: is there a link? in Ferguson B, Sheldon T, and Posnett J, *Concentration and Choice in Healthcare*. London:The Royal Society of Medicine Press, FT Healthcare 1997.
 154. Starr P. Liberalism after Socialism. *The American Prospect* 1991 No. 7, 70.
 155. Stewart AL, Ware JE,eds. *Measuring Functioning and Well-being: The Medical Outcomes Study Approach*. Durham NC: Duke University Press, 1992.
 156. *The Economist*, Britain's Railways:The Rail Billionaires. July 3, 1999:57.
 157. Treasure, Tom. Lessons from the Bristol Case. *British Medical Journal* 1998; **316**:1685.
 158. Waghorn A, McKee M, Surgical Outpatient Clinics: are we allowing enough time? *International Journal for Quality in Health Care* 1999; **11**: 215.
 159. Waldegrave W. Personal communication.

160. Walton M. *The Deming Management Method*. New York: Putnam, 1986.
161. West PA. *Understanding the National Health Service Reforms: The Creation of Incentives?* Buckingham: Open University Press, 1997.
162. Williams RL. Monitoring Perinatal Mortality Rates: California 1970 to 1976. *American Journal of Obstetrics and Gynecology* 1980; **136**:559.
163. Wynne-Jones K, Bridgewater B. Limitations of the Parsonnet score for measuring risk stratified mortality in the North West of England. Departments of Cardiothoracic Surgery and Clinical Audit, Wythenshawe Hospital, Manchester, unpublished manuscript.
164. Yates J, *Why are we waiting?* Oxford: Oxford University Press 1987.
165. Yates J. *Private Eye, Heart and Hip, Surgical Consultants, the National Health Service and Private Medicine*, London: Churchill Livingstone 1995.