Reflections on the management of the National Health Service

An American looks at incentives to efficiency in health services management in the UK

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THE NUFFIELD PROVINCIAL HOSPITALS TRUST

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EDITORIAL NOTE

These reflections are notable in that unlike most publications, they have already been remarked upon in *The Economist* of 22 June 1985 as a 'full, sympathetic and remarkable report'. Again, *The Economist* believes that Professor Enthoven's main proposal for 'an experimental internal market in the NHS could be very important'. It has to be stressed that this is not just the result of a quick glance at the National Health Service during a flying visit. Professor Enthoven has known Britain over a long period, having been a Rhodes Scholar. His reading too has been extensive as befits, to quote *The Economist* again, 'one of America's leading experts on the economics of health care'. Not only that: since his visit at the invitation of the Trust, he has held a Fellowship at St Catherine's College, Oxford this year and has talked more to a number of people who could reasonably be included currently among experts on health affairs and policies in the United Kingdom.

The Trustees are delighted to present this essay by Professor Enthoven in the belief that some of his insights will be a contribution to the debate on health services in the United Kingdom, and take it further.

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SUMMARY

This essay is meant to be a sympathetic review of some problems of organization and management in the National Health Service (NHS), with particular focus on incentives for efficiency and innovation.

The NHS enjoys widespread support in Britain, and it produces a great deal of care for the money spent. But given the tight limits under which it must operate, the NHS will find it increasingly difficult to meet the demands placed upon it. The NHS will need to find ways to produce even more value for money if it is to make effective new medical technology available to all who can benefit from it at the standards enjoyed in other industrialized democracies.

The NHS is caught in a 'gridlock' of forces that make change exceedingly difficult to bring about. Public policy should seek to create an environment for the NHS that is hospitable to quality-improving and efficiency-improving change. Opportunities for constructive change should be nurtured, not politicized or otherwise abused.

The NHS runs on the ability and dedication of the many people who work in it. But its structure contains no serious incentives to guide the NHS in the direction of better quality care and service at reduced cost. In fact, the structure of the NHS contains perverse incentives.

The Griffiths NHS Management Inquiry recommended establishment of a Health Services Supervisory Board to set policy and a full-time Management Board to supervise implementation and control performance. It also recommended that General Managers (GMs) be identified at Authority and Unit levels. Both seem to me to be very sensible ideas. But if the structure and incentives in the NHS are not changed more fundamentally, these changes are likely to be little more than cosmetic.

A decree requiring all Authorities to implement GMs is an unlikely way to bring about real change. The idea of GMs would have had a greater likelihood of success if it had first been developed and tested in a few interested pilot Districts. National uniformity should not be a requirement in such organizational matters.

Competitive tendering from commercial contractors for catering, cleaning, and laundry services could yield significant financial savings. Competitive tendering can be the entering wedge for a great deal of management improvement.

Again, a circular directing all Districts to submit programmes is not the best way to go about implementing this good idea. Better to begin with a dozen pilot Districts whose managements are enthusiastic about the idea, develop and test it with the benefit of expert advice, then push it to the maximum in the pilot districts, and display the benefits for all to see.

NHS purchasing of acute care services from the private sector now appears to be a matter of 'targets of opportunity'. The NHS doesn't know its own costs so it isn't able to recognize a good deal when it sees one. Cost finding systems ought to be developed. The NHS ought to be willing to buy acute care services from the private sector when it can get them at a lower price than the internal cost of providing the services. The NHS could become more of a discerning purchaser of services from competing private suppliers and thereby realize some of the benefits of efficiency and innovation that competition in the private sector offers.

The NHS could benefit from making much greater use of demonstration projects. As described to me, the 'clinical budgeting' experiments are too narrow in scope and not likely to change things significantly. We do many demonstration projects in the United States, and we learn a great deal from them.

Regional and District Medical Officers are drawn from community medicine. They are not trained for management and their background is not the best for persons expected to give

leadership to the consultants. Medical leadership might be strengthened by giving postgraduate management training to selected consultants and by finding ways to make careers in top-level management attractive to them.

Despite the efforts to implement the recommendations of the Resource Allocation Working Party (RAWP), many inequalities of access and spending persist. Moves toward equalization are inhibited by the difficulty of closing facilities in the better-served areas. RAWP has been interpreted in a way that implicitly equates spending in a District, with spending for services for the people in a District. As a consequence, the only way to equalize the latter is to attempt to equalize the former. But that is hard to do because of all the difficulties in shutting down hospitals. I suggest dropping the implicit assumption that people must get all their services in their own District, equalizing the need-adjusted per capita spending on the people in each District by appropriating the funds to the District Health Authority (DHA), and letting Districts buy services from other Districts as needed. Among other things, this might let the London Teaching Hospitals compete for referrals from other Districts rather than face being ground down by the relentless application of the RAWP formula.

This line of thinking could lead to an 'Internal Market Model' for the NHS. Each District would receive a RAWP-based per capita revenue and capital allowance. It would continue to be responsible to provide and pay for comprehensive care for its own resident population, but not for care for other people without current compensation at negotiated prices. Each District would resemble a nationalized company. It would buy and sell services from and to other Districts and trade with the private sector. In such a scheme, District managers would be freed to use all their resources most efficiently. Some perverse incentives would be eliminated. But the main defect in this model is a lack of powerful incentives for NHS personnel to serve patients as efficiently as possible.

In the Appendix, I discuss Health Maintenance Organizations (HMOs) and the evolving consumer choice model in the USA.

The dominant system of health care organization and finance in the USA is still solo practice, fee-for-service payment to doctors, fee-for-service or cost-reimbursement for hospitals, and insured patients with a cost-unconscious free choice of doctor. This system is the most important contributor to the rapid rate of increase in spending on health services that has now reached crisis proportions.

The main alternative to this system of organization and finance are HMOs whose enrolled membership reached nearly 17 million Americans by the end of 1984, up 22 per cent from a year earlier. A HMO accepts responsibility for providing comprehensive health care services to a voluntarily enrolled population for a fixed periodic 'capitation' payment set in advance. Comparative studies show that HMOs cut cost roughly 25 per cent compared to fee-for-service. Even if Britain were never to adopt the HMO idea, I believe the HMO experience offers useful insights and examples for the NHS.

For example, when it is in the doctors' interest, they can do effective audit and control of quality and economy of care. Economic interest can even motivate doctors to expel poor performers from their group. In competition, doctors impose on themselves controls they would never dream of accepting if the government tried to impose them. Thus, 'clinical freedom' is giving way to effective control of quality and cost-effectiveness.

I do not sense any serious demand for radical change in the structure of the NHS. However, if British policy-makers were to seriously wish to examine a radically different scheme for health care, I would recommend the competing HMO model as the most promising candidate.

1

Introduction and disclaimers

This is my response to an invitation from Gordon McLachlan, Secretary of the Nuffield Provincial Hospitals Trust, to reviewing health services management and organization in the UK and, 'as if a man from Mars' to write a paper on what I have seen and heard. The thought was that my background in management in the public and private sectors in the United States and my interest in health services management might help me to suggest a few insights of possible value to British managers.* I do not pretend to be a well informed observer of the NHS. One could not possibly become well informed on such a complex topic in a year, much less a brief visit. At times I felt I could barely grasp the language. And I had no opportunity to verify independently much of the information I read or heard.

I make no overall judgements about the National Health Service. I am not writing to say that it is good or bad. It is obviously the democratic choice of the overwhelming majority of the British people. And I have no interest in trying to change that. Rather, this essay is meant to be a sympathetic review with suggestions of ideas for possible lines of improvement in its management and organization.

*In the 1960s, I served as Assistant Secretary of Defense, with responsibilities that included leading in the development and use of the Planning, Programming, and Budgeting System, strategic planning and cost-effectiveness evaluation. Subsequently I was president of a multi-national medical products company. For the past 11 years, I have been a Professor in the Graduate School of Business at Stanford, with a primary interest in organization, management, and public policy in health care. I also serve as a consultant to the Kaiser-Permanente Medical Care Program, America's largest Health Maintenance Organization. In 1977–8, I served as a consultant to the Secretary of Health and Human Services, during which time I designed a proposal for universal health insurance based on regulated competition in the private sector.

I wish to acknowledge gratefully criticisms and suggestions on an earlier draft by John R. Evans, Rudolf Klein, R. C. O. Matthews, Alan Maynard, Gordon McLachlan, and Christopher R. West. Any remaining errors or persistence in absurd ideas are my fault and not theirs.

I make no overall comparisons between the NHS and the US health care financing and delivery system. While medical science is the same on both sides of the Atlantic (we use penicillin, computed tomography, hip replacement, and other British inventions), our systems of organization and finance and our cultures are very different. Our respective health care systems reflect different histories, priorities, and circumstances. Neither country's system would be acceptable in the other. Neither system is as bad as its transatlantic critics charge, nor as good as the more enthusiastic of its admirers claim. However, I do propose to offer some suggestions based on American developments and experiences that appear promising and possibly relevant to the UK.

I will offer a few criticisms of the impact of politics on management of the NHS. A British reader is likely to think 'I'll bet they have the same problems in America', and of course he would be correct. My remarks are not intended to suggest that we usually do things better or that we do not have equally serious problems in the US.

2

A system under pressure

The NHS enjoys widespread support. And it produces a great deal of care for the money spent. (In the US, we are spending about 11 per cent of our Gross National Product on health care, compared to about 5·5 per cent in the UK). But the NHS is under increasing economic pressure. The prospects for real growth in the resources devoted to the NHS appear to be very limited. For the three years beginning 1984/5, the Government is planning around a one per cent annual growth in the volume of inputs, and (allowing for growth in real wages) about a 1·4 per cent annual growth in the real cost, and less in subsequent years (1). In recent years, GNP has been growing about 1·4 per cent per year in real terms. So a continuation of these trends would amount to maintaining the NHS' share of GNP.

Against that limit, there must be strong pressure for increases. The average age of the population is increasing. The Department of Health and Social Security (DHSS) estimates 'aggregate demographic pressure' (i.e., the increase needed to maintain age-specific use rates of services) at 0·75 per cent per year. New technology is increasing the power of medicine to enhance the quality of our lives. But it is often very costly. DHSS estimates 'extra demand generated by technological change' at 0·5 per cent per year. This must be an arbitrary figure. There is no calculation to produce such a number analogous to the calculation of the effect of increasing average age. Real per capita spending in other countries in Europe and North America, presumably reflecting in part the deployment of new technologies, has been substantially higher and growing much faster. What is available elsewhere in Europe, and to foreigners and privately insured British in the UK will inevitably, if gradually, affect the expectations of doctors and patients. They will want to provide and receive care based on more advanced technology.

So the NHS will need to find ways to produce even more value for

money if it is to make effective new medical technology available to all who can benefit from it at the standards enjoyed in other industrialized democracies. It will take more than the energy, intelligence, and desire of NHS managers to accomplish this. A supportive environment and some institutional innovation will also be needed.

3
Gridlock

A. Description

New York City had the ultimate traffic jam. Traffic on some North-South streets backed up into intersections and blocked East-West traffic, which caused some of the cars on these streets to block other North-South streets, until all traffic in a large area came to a stop. They called it 'gridlock'. The NHS is caught in the grip of forces that make change exceedingly difficult to bring about, a 'gridlock' of its own.

1. The Government projects and enforces cash spending limits that grow no faster than the GNP. Rhetoric notwithstanding, it is unlikely that any political party can change this significantly.

2. The consultants have accepted long-term contracts with the NHS and limits on total expenditure in exchange for job security and 'clinical freedom'. Thus NHS management has very little leverage to make their services responsive to patients' needs. To change the specialty mix of its medical staff, a Region must wait for deaths and retirements.

3. The General Practitioners (GPs) want and defend their separate independent status. They are politically powerful and have no desire to yield their autonomy.

4. Unionized nurses and other staff have negotiated national agreements on wages, working conditions, and job security. Thus their supervisors do not have much leverage or latitude to make efficiency-improving changes in work practices or personnel assignments.

5. Managers have no powerful incentive to make efficiency-improving changes. In fact, there are many disincentives to 'rocking the boat'. A person who actually pushes hard enough to improve efficiency risks antagonizing doctors and workers and gaining a reputation for being hard to get along with or 'a bit too pushy'.

6. The distinguished American economist Charles Schultze wrote of our own situation in the USA:

> Incomes and property values are constantly being created and destroyed in the normal course of the changes that characterize a dynamic economy. But . . . social attitudes toward losses are much more rigid when it comes to losses directly imposed by government action. The rule of "do no direct harm" is a powerful force shaping the nature of social intervention.
>
> We put few obstacles in the way of a market-generated shift of industry to the South or the substitution of synthetic fibers for New England woollens, events that thrust large losses on individuals, firms, and communities. But we find it extraordinarily difficult to close a military base or a post office. (2)

The NHS is surely constrained by the rule of 'do no direct harm'. Local citizens fight to hold onto local jobs and services, blocking efficiency-improving consolidations that, in the long run, would produce a better NHS for everyone.

7. Politicians face powerful disincentives to attempting significant change. The benefit from any serious attempt to improve things would be gradual, not clearly visible before the next election. Cosmetic changes that do not really change anything are sometimes rewarded. It is hard for non-specialist voters to distinguish image from reality in the short run. But any serious efficiency-improving change risks being attacked as 'downgrading the quality of care' by threatened provider groups, or being blasted by the left as 'tampering with the NHS'.

8. Many of the best educated and most articulate patients escape the delays, depersonalization, and other deficiencies of the NHS by getting their cold surgery in the private sector. Hence, their 'voice' within the NHS is attenuated. The private sector serves as an 'escape valve' for pressures to change.

9. The NHS is politicized. A group that doesn't like a change in a District can go to its MP or to the Minister with a good chance of getting it stopped. Fear of political criticism generates risk aversion and a reluctance to try anything new. The fact that the Minister must answer any member's question in Parliament must make the Minister want to

keep everything under control, which means resistance to diversity and experimentation, a desire for uniformity and rigidity. Moreover, political control means that the chief executive of this large and complex enterprise is a politician, doubtlessly motivated by the desire for success at the next election, and not a person experienced or trained in management.

Politicization can take a heavy toll. Management decisions are taken in public view. The public has the right to attend Health Authority meetings, and proceedings are reported in the press. The situation invites posturing for political effect. In such an environment, it can be extremely difficult for a manager to conduct an open and honest search for deficiencies and ways of correcting them. There is a serious risk that each discovery will end up in Parliament to be used as a weapon against the Minister. Such political involvement can create a defensive mentality and culture, a ritual assertion that everything is just fine, a sort of perpetual cover-up.

During a 17-day period in August and September 1984, 27 NHS patients at Stanley Royd Hospital died, at least 10 of whom showed positive tests for salmonella infection. In addition, 353 patients and staff were poisoned by salmonella. According to the District Medical Officer (DMO), 'cooked beef taken from a refrigerator and left out for 10 hours in a kitchen and a ward on a warm day was responsible for the spread of the salmonella outbreak...' (3) The day the story first appeared, and several days before the DMO was able to complete an investigation, the Labour Social Services spokesman in Parliament called on the Secretary of State to respond to charges 'that spending cuts imposed by the Government have been a major factor in the problems of the hospital'. (4) Of course, Labour spokesmen are not the only politicians who use such events as parliamentary weapons.

Tragedies of this sort are avoided by the disciplined observance of carefully designed procedures. It must be very difficult for managers to create and maintain such discipline if a leading MP, possibly the next minister, is saying that it is the Government's fault and not the fault of the worker who broke the rules. In the private sector, such a worker probably would be fired. In the political environment of the NHS, any serious disciplinary action would risk making him a martyr. Somehow, the interests of the patients get lost.

B. Implications

Rigidity appears to be a serious problem for the NHS. What were the best patterns of organization and care in 1948 are not likely to be so in 1985. Medical technology has changed enormously. Population distribution has changed. A better system would adapt gradually and continuously. Talk of schemes for large-scale change such as 're-privatization of the NHS' or change to a national insurance scheme are surely unrealistic. The nature of politics, medicine, and the British culture make it overwhelmingly likely that whatever change does take place will be incremental and gradual.

Public policy and responsible politicians should seek to create an environment for the NHS that is hospitable to quality-improving and efficiency-improving change. There is a need to work at loosening up the system so that new things can be tried, and so that successful innovations can spread. Opportunities for constructive change should be nurtured, not politicized or otherwise abused.

4

Incentives and economic efficiency

The NHS runs on the ability and dedication of the many people who work in it. I was very favourably impressed by the intelligence and spirit of the managers I met. But other than the satisfaction of a job well done—which I do not want to minimize—the system contains no serious incentives to guide the NHS in the direction of better quality care and service at reduced cost. There are not many rewards for the manager who takes risks and makes the extra effort, and not many rewards for him or her to hand out to staff. In a competitive industry, the manager who develops and implements efficiency-improving changes is offering solutions to the organization's basic problem, how to meet the competition's price and quality. In the non-competitive NHS, the manager who attempts to implement efficiency-improving changes is more likely to be seen as a cause of problems.

In fact, the structure of the NHS contains perverse incentives. For example, a District that develops an excellent service in some specialty that attracts more referrals is likely to get more work without getting more resources to do it. A District that does a poor job will 'export' patients and have less work, but not correspondingly less resources, for its reward. The RAWP formula, though generally sensible, is inadequate in this regard. (See below for a discussion of the RAWP). There is compensation for those who cross borders for inpatient care, but the payment is at an estimated average cost per case for each specialty, which may fall below costs for the difficult cases that are referred. And it comes in the form of a change in a Region's or District's RAWP target that may not be followed by a change in actual flow of resources for many years, if ever. If a District gets a lump sum budget for providing a high cost Regional speciality service, it remains in the position that attracting more patients does not bring more resources. In a rational economic model, those whose quality of service attracts more patients would get paid (for doing the

extra work) a negotiated amount that they agree makes the effort worthwhile.

There are other perverse incentives. A consultant's NHS waiting list creates a demand for his services by private pay patients. Thus clearing a waiting list is directly opposed to the economic interest of the consultant. This is open to abuse, and serious abuses have generated complaints.

There is status in waiting lists. Some patients show up on two or more lists. At the same time I am told some patients' names are on lists of consultants who never seriously intend performing an operation. The College of Health has published a *Guide to Hospital Waiting Lists* to help people find where they can get their operations done (5). A more effective approach might be to reconsider the basic incentives. A carefully designed and negotiated fee-for-item-of-service arrangement or incentive payment per case treated could speed up the volume of surgery and reduce the waiting lists. The usual objection to fee-for-service is that it gives doctors an incentive to do too much surgery, to recommend operations in cases in which they are not, on net balance, beneficial for the patient. But this might be controlled by the physicians who make the referrals.

The waiting list phenomenon is aggravated by the fact that GPs referring patients to other Districts with low waiting lists risk antagonizing consultants in their own Districts. GPs who want a good reception for their patients when they need it must play the referral game to the satisfaction of consultants in their own Districts.

A standard problem in bureaucratic budgeting systems is that one strengthens one's case for more resources by doing a poor job with what one has, and weakens one's case by doing the job with less. I used to carricature the problem in the Department of Defense this way:

> *General:* "Mr. Secretary, I am very sorry to have to tell you this, but that million dollars you gave us for shoes were spent on left shoes. Now we need another million for right shoes. We will both be embarassed if you don't give it to us."

Thus, management and consultants in a District risk weakening the case for a new hospital wing they have been campaigning for by solving their waiting list problem by referring patients to other Districts with

excess capacity. The cure for this incentive is to structure the budgeting system so that resources are determined by some impersonal mechanism that does not provide more resources for less efficiency. The RAWP formula, if suitably applied, could serve this purpose. One might argue that it would be unfair to the people in an inefficient District to give them the same resources per capita as are allocated to an efficient District. But the cure for inefficiency should be specific to its causes. One should not reward it with more resources.

GPs have weak or no incentives to reduce referrals. They have neither the incentives nor the resources to make extra efforts to keep people out of hospital. For example, extra attention to ante-natal care might save some costly weeks in the neo-natal intensive care unit. In fact, the Hospital and Family Practice sectors each have incentives to dump their problems on the other.

The NHS suffers from a lack of real incentives for good performance. (For an example of what I would call real incentives, see discussion of the competing HMOs in the Appendix to this paper.) Aside from individual cases of leadership, there is no systematic force that rewards and encourages excellent performance in solving the medical problems of the District's population, and punishes uncaring, insensitive or inefficient performance. Accountability to Parliament certainly doesn't serve these purposes. I have not been able to design a very satisfying answer to this problem for the NHS short of the competing HMO model discussed in the Appendix. That would represent quite a radical change in NHS structure. It doesn't appear to me that the pressures for change are strong enough to bring that into the realm of the politically feasible. But conditions might change.

To bring about efficiency-improving changes, it is generally necessary to get people to do things differently from the way they have in the past. This can create dislocations, winners and losers, and opposition. One example of an efficiency-improving change would be consolidation of clinical laboratories, or consolidation of a certain kind of surgery at one location. Another might be using certain facilities on weekends. Another might be substituting improved medical therapy for open-heart surgery. To overcome the resistance to change, there is a need for incentives and rewards for the organization that makes the changes. It doesn't need to be as simple as a few pounds extra in the pay envelope. Incentives might be much more general, such as expansion and success for the organization as a whole.

Many people have too narrow a concept of 'economic efficiency'. It seems to conjure up visions of people running around faster to do routine tasks more cheaply. There is a broader and more important concept of efficiency: what are the needs and wants of patients and how can they be served most effectively with the resources available? It seems to be taken for granted in the NHS that patients needs are without limit, so the NHS doesn't need to spend any effort finding out what they are. The NHS does no market research. Such research might turn up valuable insights into patients' priorities and might help the NHS to allocate resources more effectively. The concept of economic efficiency applies to medical practice. Efficiency-improving changes include scheduling clinic hours at times convenient for patients, adoption of cost-reducing technologies, day surgery, shortened stays, efficient sequencing of diagnostic tests, balancing diagnostic capacity with bed capacity so that inpatient stays are not prolonged by delays in diagnostic testing, more rigorous evaluation of the benefits of surgery and new technologies, and many other examples. There is a growing body of literature on efficient medical decision-making.

I recently heard an excellent example of an efficiency-improving change, a presentation by an American orthopaedic surgeon explaining how he and his team reduced the average length of hospital stay for total hip replacement cases from 18 days to 9 while improving the outcomes. An industrial engineering analysis of the procedure enabled them to reduce the time of the operation by adopting the techniques of the most efficient surgeons. This reduced blood loss and the need for transfusions. They decided to initiate the use of a continuous passive motion machine (for flexion and extension) sooner. This reduced post-operative pain and enabled patients to regain the full range of motion sooner. They started exercise on the first post-operative day. They introduced autotransfusion: patients deposited a unit of their own blood 4 and 2 weeks in advance of surgery. This substantially reduced complications from transfusions. And they did patient education pre-operatively. The combined result was less pain and complications, faster recovery, and earlier return to work or usual activities. As far as I can tell, there was nothing in this scenario that could not have been done several years earlier. But the innovation came under the impetus of the Medicare Prospective Payment System which pays hospitals a fixed payment per case regardless of their actual costs. Under the Prospective Payment System, shortened stays are obviously advantageous for hospitals.

The idea that medical needs are limitless must be a major disincentive to efficiency-improving changes. It makes attempting to clear a surgical backlog look like trying to bail the ocean. For example, any attempt to shorten hospital stays will simply mean that other patients fill the beds. Limitless demand creates a sense of futility. Based on the experience of American HMOs, I don't believe medical needs are limitless. What medicine can do to cure illness and relieve suffering and disability that is worth the cost is finite. Stanford faculty families in the Kaiser-Permanente HMO, get all the care they need and want for $180 per month (or $62 for an individual adult). That might seem like a great deal in British terms, but it is finite, less than 8 per cent of the average employee's salary, and a substantial part is paid by the employer. If NHS Districts were assigned responsibility to care for their own populations, but not for other people in the absence of a contractual agreement with the District of their origin, perhaps this sense of limitless demand and hopelessness could be abated.

What is most efficient from the patient's point of view is not at all necessarily the same as what fits in with the prestige and reward structure of the medical profession. Patients see many fairly routine operations as important contributors to the quality of their lives. Consultants are likely to see them as lacking in technical interest or prestige. Clinical freedom gives the consultants a lot of freedom to choose the cases they consider professionally interesting. The NHS needs to develop incentives that will make it more rewarding for consultants to meet the needs of patients. For example, Regional Health Authorities or General Managers might take hold of the distribution of consultant merit awards and pay them to those responsible for visible improvements in productivity and quality of service to patients. Better still, Regional Health Authorities might insist on employment contracts with consultants with a maximum length of five years. So that they will have the option of replacing consultants who seem to be poor performers.

Health care services are largely services by individual providers to individual patients. Outcomes are hard to measure unambiguously. Efficiency is hard to define and measure in terms that can be used by Regional management. Are more inpatient days better or worse? In the United States, we tend to think of reduced inpatient days per capita as better. But it could mean a denial of needed services. To interpret the data, one must use judgment based on knowledge of what is actually

happening. The British interest in throughput per bed doubtless makes sense in the circumstances. We would be likely to consider an increase in throughput per bed in the USA to be an increase in unnecessary admissions. Performance indicators are subtle. They often can be misleading and manipulated. For example, more inpatient cases may be produced by admitting people who don't really need to be in the hospital. Cost per case can be reduced in the same way. Cost per day can be reduced by keeping people in the hospital longer. Politicians can use performance indicators for 'numbers games' that destroy credibility.

Thus the ability of Central or Regional management to make decisions that improve efficiency is quite limited. It can allocate aggregate resources according to a formula such as that proposed by RAWP. It can plan for the efficient deployment of a few high cost services on a Regional basis: open-heart surgery, radio-therapy, computed tomography, magnetic resonnance imaging, neonatology, neurosurgery, etc. And this is not unimportant. But health planning in the style of the Planning Programming Budgeting System is quite limited in what it can contribute to efficiency. At least an equally important part of the role of management, in my view, is to create a culture and reward system that guides thousands of decisions in the direction of better quality care and service at reduced costs.

This is where the NHS structure is weakest. It relies on dedication and idealism. It is propelled by the clash of the interests of the different provider groups. But it offers few positive incentives to do a better job for the patients, and it has some perverse ones.

5
Griffiths

While the Griffiths NHS Management Inquiry contained many recommendations, the two that seemed most significant were:

1. The Secretary of State should set up a Health Services Supervisory Board and a full-time NHS Management Board. The Supervisory Board, chaired by the Secretary of State would set policy. The Management Board would plan policy implementation, give leadership, control performance, and achieve consistency and drive over the long term.

2. A General Manager (regardless of discipline) should be identified at Authority and Unit levels (6).

Both seem to me to be very sensible. I take it that part of the idea of the first recommendation is an attempt to get the NHS out of politics, to visibly involve the Secretary of State in policy-making, for which he should be responsible to Parliament, and to disconnect him from day-to-day operational detail. I am not optimistic that this worthwhile purpose will be achieved. The Secretary of State was obliged very quickly to give assurances that no shift away from ministerial accountability to Parliament for the NHS is proposed (7). Another part of the idea of both recommendations is to create more of a managerial, less of a political style for management of the NHS.

While I am sympathetic to the thrust of the report, and think that in different circumstances its recommendations might make a difference, if the structure and incentives in the NHS are not changed more fundamentally, these recommendations are not likely to change much. There is a real danger they will be little more than cosmetic. If General Managers were a good idea, why hadn't some Districts adopted them long ago? The answer is that the NHS rigidly prescribes national uniformity in organization. The composition of District Management Teams was defined by a DHSS circular, including specific job descriptions for each member. And, of course, a concensus of all the professions

favoured the District Management Team approach. It gives them a veto on any change they perceive to be adverse to their interests.

Why must there be national uniformity in such a matter? And why must it be achieved by the end of 1985, if other than for political effect? This seems to fly in the face of Griffiths' admonition that 'Regional and District Chairmen should . . . be given greater freedom to organize the management structure of the Authority in the way best suited to local requirements and management potential'. It would be far easier to innovate in the NHS if the innovator had only to persuade his or her own DHA.

A decree seems an unlikely way to bring about real change. There is no assurance the people who are supposed to carry it out will understand it, much less support it. A more effective way to implement the idea would have been to work with a few interested pilot Districts or perhaps one Region, and work out in detail exactly how it should be done including job descriptions, delegations of authority, and reporting relationships. Then try it for a couple of years, refine the process and then, if the idea still looks good, recommend it for wider adoption. As it is, the 3 to 5 year contracts and an extra £3000 per year do seem unlikely to inspire many dynamic leaders to drop what they are doing and energize the NHS. The implementing circular reads more like an invitation for entrenched bureaucracy to out-wait the General Manager (8).

Perhaps the Authorities had to be ordered to take this step, instead of being merely freed to do so, because of a perception that they have little incentive to pay the price to make management effective. But if the incentives aren't right to appoint General Managers, they probably aren't right to give the General Manager the context in which he or she can manage effectively. The distinction between General Manager and team approaches is a matter of shades of grey. There is less there than meets the eye. Some Districts probably had *de facto* GMs in the DMT days, that is, people who led by force of character. The GM will have to consult and compromise a lot. There are too many ways the doctors and staff can defeat the GM if they don't perceive the GM's ideas as in their interest. 'Market forces' that make good performance in everyone's interest are a lot more fundamental than the details of organization charts.

By what indicators will the General Managers navigate? What tools will they have to make it in the interest of the staff to provide better

service? How will they measure patient preferences and inject them into decision-making? Without something more fundamental done about incentives, the change will be largely cosmetic. There is a need for 'market forces' or some motivating factor that serves the same purpose.

6

Contracting with the private sector for services

DHSS requested hospital management to obtain competitive tenders from commercial contractors for catering, cleaning, and laundry services (9). This is an innovation of great potential value. The economic gains from competitive tendering for support and clinical services should not be reckoned merely in terms of a few percentage points reduction in the cost of some services, though even these gains are too great to be ignored. As the Thornton Baker Associates report to the Nuffield Provincial Hospitals Trust makes clear, competitive tendering can be the entering wedge for a great deal of management improvement (10). It requires management to develop a precise work statement for each department, including quality standards. Avoidable costs in other departments must be estimated. This forces analysis and understanding of how departmental workloads vary with those of other departments. Information and control systems must be established. Tendering requires a whole new style of management. It also tells in-house suppliers of services, previously in a monopoly position, that they have competition. Contrary to a widespread perception, use of competing outside suppliers can increase the control management has over over the quality of services. The threat of non-renewal of a contract is a lot more powerful than complaints to an in-house monopoly provider of the same services.

Potential savings from support services might appear to be modest. A 20 per cent cut in catering costs would save the NHS £70m per year. At about £700 per acute inpatient case, that would be enough to pay for 100,000 more cases per year. A rough calculation suggests that it might be enough to pay for over 30,000 more hip replacements per year, more than enough to clear that waiting list. But the value goes beyond the immediate financial savings. Tendering can create a climate more open to innovation. Savings may grow as competing suppliers realize substantial economies of scale and experience. However, savings from tendering

might be squandered because of a lack of incentives to use them efficiently.

It does not appear to me that issuing a circular asking all DHAs to submit programmes, and then monitoring progress in a coercive manner, is the best way to go about it. Most District managements apparently do not know how to do it and some obviously do not want to. In September, 1984, The *Guardian* reported that at least nine DHAs had refused to follow the order (11). The story reported that the Government threatened to take the refusing DHAs to court. If one wants to assure that some DHAs do a really bad job of it and give the whole idea a bad name, I cannot think of a more effective method for achieving that result.

Tendering for such services is not an entirely simple or straightforward matter. There are important issues of technique. The NHS apparently does not have a great deal of experience with tendering for catering. In 1982/83 only 0·23 per cent of catering was contracted out. Generally speaking, public sector purchasers are not allowed to use much judgment. They must specify the product or service and buy from the lowest bidder who meets the specifications. This is meant to prevent bribery or favouritism. Exceptions are often allowed, but the burden is on the official who would make the exception to prove it is justified.That can be difficult to do when qualitative issues are involved. Buying from the low bidder may not be the best way to buy meals if one cares about the quality of life of the patients. A private sector purchaser can say 'In my opinion the food doesn't taste good and if you don't fix it fast we will switch to another supplier at the end of this contract'. The threat will be understood. The purchaser can make good on it. But the taste of the meals is a matter of opinion that may be hard to prove in court. Suitable procedures can doubtless be developed. But it takes time, trial, and error, and development of expertise.

In my judgment, it would have made far more sense to begin with a dozen pilot Districts whose managements were enthusiastic about the idea, develop and test the methods, with plenty of expert advice from private sector hospital groups such as Nuffield Nursing Homes Trust, BUPA, and AMI, from airlines and hotels that have much relevant experience, then push tendering to the maximum, display the benefits for all to see, then write the manuals and sample contracts, and develop the short training courses. The *Practical Guide and Handbook* was commissioned by the Nuffield Provincial Hospitals Trust after the DHSS

Circular requiring tendering was issued. It should have been commissioned by DHSS a year or two before. The way DHSS has gone about it forces many Districts to 're-invent the wheel' at considerable cost and probably make mistakes that will be politically costly, especially in such a politicized environment.

Another reason for a more deliberate approach is the need for development of competent suppliers. One wants to find ways of attracting high quality suppliers, not special purpose 'fly by night' operators who will seek to make a quick profit by beating the rules. Pilot Districts should be chosen in areas where competent potential suppliers exist.

NHS purchasing of acute care services from the private sector now appears to be a matter of 'targets of opportunity': suppliers with excess capacity willing to sell at marginal cost, and buyers with waiting lines to reduce. One of the inhibiting factors is that the NHS does not know its own costs and so management is not able to prove that what appears to be a good deal really is one, especially in the face of hostile criticism. The NHS ought to develop cost analysis systems that would enable management to cost out groups or types of patients with sufficient accuracy to support decisions regarding contracting out. I gather such work is under way. It surely is a worthwhile investment to pay several public accounting firms to compete to develop the best cost accounting system. Our experience in the United States suggests that there can be quite wide variations in cost per case for apparently similar cases. Private hospitals using effective management methods and efficient surgeons might prove to be low cost suppliers of open heart operations, hip replacements, and other procedures. Expanded use of such contracting could be a way to attract private capital. And it could be an effective way to attack waiting lists.

The existence of a private sector in medical care seems to be an embarassment to many English people. And there is intense ideological opposition to it in some quarters. But in a free country it is unlikely to be outlawed. The private sector does help to support some of the best doctors in the NHS. It gives them added incentive to remain proficient and to develop advanced skills. The private sector helps to earn foreign exchange. Its success in attracting patients from the Continent as well as the Middle East is a measure of the esteem in which British doctors are held. The private sector seems likely to continue its gradual growth as resource pressures on the NHS increase. The numbers of British patients

who choose the private sector for some of their care is a kind of performance indicator for the NHS.

The private sector is not large and does not seem likely to become so soon. While four million people are insured by the Provident Associations, apparently they get most of their primary and tertiary care from NHS. The private coverage is to pay for cold surgery. The NHS does not systematically buy much acute care from the private sector, though it does buy much long term geriatric care.

In the US, medical practice has been inefficient in part because the system of payment puts no economic pressure on providers to be efficient. This system is now gradually yielding to HMOs and Preferred Provider Insurance as cost pressures mount. Under Preferred Provider Insurance, the insurer negotiates selectively with providers (doctors and hospitals) for better prices and utilization controls, and then offers the insureds financial incentives to obtain their care from contracting providers. It is a way of rewarding insured patients for getting their care from cost-effective providers.

While BUPA offers care at participating hospitals, the length of the list does not suggest much selectivity or hard bargaining. Thus, present BUPA coverages look pretty much like 'free choice of provider' insurance plans. As the cost of private insurance in the UK increases, it would be logical to expect the Provident Associations to compete for business by offering selectively negotiated limited-provider insurance plans or Preferred Provider Insurance as an alternative to the free choice plans. In turn, it would be logical for hospital organizations like AMI and Humana to offer contracts to employment groups for health care services based on the use of their hospitals. Both of these companies are now doing this in the United States. Employers may well come to prefer such schemes as more economical, yet offering a close approximation to free choice of provider insurance from the patient's point of view. This development would make the private sector more cost-effective, possibly a stronger competitor for the NHS. A key part of this would be selective negotiation with consultants over fees and use of services.

Because the private sector caters to a market segment that requires a higher standard of amenity, it is not obvious that the private sector would always be an effective competitor to serve NHS patients on the basis of price. But the private sector does have important advantages such as greater access to capital, greater freedom from restrictive work practices,

and freedom from complex bureaucratic procedures that create delay and add to cost. NHS Districts ought to be willing to buy services from the private sector when they can get them at a good price. The principle that the government will make comprehensive health services freely available to all does not mean that the government must produce them itself. The NHS could become more of a discerning purchaser of services from competing private suppliers and thereby realize for its patients more of the benefits of efficiency and innovation that competition in the private sector offers.

7

Pilot and demonstration projects

Bureaucratic forces in the NHS today drive for uniformity. Variation is equated with inequality and injustice. The idea of Districts trying something distinctly new and different, other than in response to orders from DHSS, is perceived as a threat to the Minister. He might have to answer for it in Parliament. I was surprised at the degree of risk aversion and by the timidity and narrowness of scope of so-called experiments such as those in clinical budgeting. The NHS could benefit greatly by the infusion of a spirit of experimentation, an appreciation of the value of variety. In order to develop and test the innovations in management and organization that will enable the NHS to do a better job, I suggest the NHS would benefit from making much greater use of demonstration projects. In the US, we have learned a great deal from research and demonstration projects. The Office of Research and Demonstrations of our Health Care Financing Administration directs more than 300 research, evaluation, and demonstration projects related to management, organization, and finance of Medicare and Medicaid, our health care financing programs for the aged and poor (12). And other agencies such as the National Center for Health Services Research sponsor and conduct many more. Faculty members from leading research universities and institutes participate in the research designs, and generally a high standard of research design is achieved.

Here are a few examples.

1. Medicare and HMOs

Until recently, care for Medicare beneficiaries (aged and disabled on Social Security) was paid for on the basis of fee-for-service and cost-reimbursement, even if the beneficiary got his care from an HMO. There were proposals to pay HMOs on a per capita basis. The Health Care Financing Administration contracted with four HMOs to test a proposed

new law. The test was a success (13). Many fears were shown to be unfounded. The new law was enacted to implement the results of the experiment. An experiment like this usually takes about five years.

2. RAND health insurance experiment

Does the requirement that the patient pay 25 per cent of his medical bills reduce the use of services? Does it harm patients' health? These issues were hotly debated in the United States for years. The RAND Corporation conducted a long-term large scale randomized controlled trial and found, for example, that 25 per cent co-insurance (up to an annual limit on patient out-of-pocket payments) reduces spending about 19 per cent, and with a few small exceptions has no discernable effect on health (14). They also compared fee-for-service with a prepaid group practice HMO and found the latter cut total resource use 28 per cent, hospital use 40 per cent (15).

3. Primary care physician gatekeeper

Can a primary care physician, acting as 'gatekeeper' and general manager of his or her patients' care reduce cost? We have HMOs built on the premise that they can. In one experiment, randomly selected patients were freed from the constraint that they get all their care through their GP and allowed to self-refer to specialists. It had no significant effect on their total per capita cost (16). Other 'gatekeeper' HMOs have modified their structures based on this experience.

4. Can poor people participate in a multiple choice of health plan scheme?

Is it feasible for poor people to participate in a multiple-choice of health care plan scheme? Multnomah County, Oregon, decided to try it. They contracted with several HMOs to serve their indigent population. Problems were encountered and lessons learned. We will know how to do it better next time.

Such concepts as tendering for services, General Managers, or intensified ante-natal care as recommended in the Black Report can be debated endlessly (17). But their merits cannot be settled in the abstract. One must try them in the field, not only to see *whether* they work, but to determine exactly *how* to make them work.

A list of such projects might include the following, some of which have had investigations in Britain:

1. Griffiths-style General Managers.
2. Tendering for services.
3. The 'internal market model' (to be described below).
4. A multi-specialty group practice created by letting a hospital hire GPs and enroll patients for primary care.
5. Incentives for GPs to prescribe drugs economically. Test a system in which GPs who prescribe economically get to share in the savings.
6. Linked medical records.
7. Black Report initiatives such as:
   a. Child accident prevention programmes;
   b. Intensified ante-natal care programmes;
   c. Revitalized school health care;
   d. Measures to reduce cigarette smoking.

The 'clinical budgeting' experiments were described to me. They sounded pretty timid, not something that might actually change things significantly. I was told that in these experiments the consultant has no authority over nursing staff, laboratory tests are not in the clinical budget, there is no tangible reward for the consultant, so 'clinical budgeting' is actually a matter of 'fiddling with supplies'. I mention this to make the point that my suggestion of experiments refers to experiences in which substantial changes are actually tried, and not mere cosmetic exercises. Moreover, the experiments should include rigorous research designs and systematic involvement of some of the best academic experts.

There are limits to what can be accomplished with experiments. You can't create an HMO on an experimental basis. People won't make the sacrifices needed to create an effective organization if they know that it will evaporate at the end of three years. One needs to be able to assure the demonstrators that if they do a good job during the test period, they will be able to go on doing it afterwards.

8
Medical leadership

Regional Medical Officers and District Medical Officers are drawn from community medicine. From the point of view of intellectual formation, this may be better preparation for the DMO role than would be specialty training in medicine or surgery. But training in community medicine is not the same thing as training in management. Apparently DMOs are not trained for management. And their background is not the best for persons expected to give leadership to the consultants. For better or for worse, prestige in medicine goes with possession of skills to apply advanced technology. And DMOs do not have it. Consultants can discount the views of DMOs on the grounds that they haven't directly experienced the problems of being a consultant. This is, of course, a phenomenon that is not unique to medicine. It is present in many occupations. As a consequence, RMOs and DMOs appear to have little authority over consultants. Medical leadership might be strengthened by recruitment of leaders from more powerful medical posts and formal training in management.

A frequent theme that I heard was the insensitivity of consultants to the needs of patients and of the NHS for improved service and greater efficiency in practice patterns. Apparently management has little leverage over consultants. In the name of 'clinical freedom' consultants can choose the kinds of cases they want to see, accept or refuse referrals, arrange their operating schedules, pursue their intellectual interests independently of patient needs, and keep patients waiting for months.

A good example of this is the use of a waiting list for NHS surgical patients instead of a diary system. I am told most consultants tell their patients 'you need the operation; it will take place sometime in the next year or so, and we'll call you a week in advance to tell you when to come into hospital'. The alternative would be to say 'Here is my operating schedule for the next year; pick a vacant place that suits you'. There are many good reasons why a patient might want to pick one date rather than

another: vacation time, child care considerations, availability of help, etc. But perhaps the most important issue is simply the patient's sense of control over his or her own life as opposed to being a victim, a person under the control of others. I suppose this practice reinforces the authority status of the consultant, and it certainly can enhance his private practice. I heard several excuses for this practice: there are emergencies, or the waiting list helps to screen out unnecessary operations. Frankly none of these excuses were very persuasive. Our HMOs have to face emergencies also, and they seek to minimize unnecessary surgery, but they would find it a significant competitive disadvantage if they were to treat the patients in this manner.

I doubt that this kind of insensitivity can be changed much without some powerful change in incentives. Earlier I mentioned management use of merit pay awards to reward better performance, and five-year employment contracts. In conjunction with such measures one thing that might help would be an upgrading and strengthening of medical-managerial leadership. A prestigeous consultant with knowledge of and instincts for management might be able to accomplish more with the consultants than someone who wasn't accepted as a member of that fraternity.

In the United States we are now developing a new breed of doctor-leaders. These are board-certified specialists who take degrees in management, and who plan careers as practicing doctors in leadership positions. The jobs they aspire to include Chiefs of Staff of hospitals, Physicians-in-Chief or Medical Directors of HMOs and/or group practices. As the complexity of medical management grows, and doctors recognize that such leadership could be crucial to their economic survival, the prestige of this line of work is growing.

At Stanford, we have three management programs that include MDs as students: our MBA, which takes two years, with a typical entering student of about age 26; our Master of Science in Management program which serves mid-career people for nine months; and our eight-week Stanford Executive Program for people already in management jobs.

The physicians in the MBA and Master of Science in Management Programs take the standard management courses which I will list here with a very brief indication of their relevance to medical management.

1. **Microeconomics:** the theory of efficient resource allocation; marginal cost and marginal utility; the difference between average and marginal

cost. This is important to have a correct concept of the costs and benefits relevant for decision-making.

2. **Finance:** this includes capital budgeting and investment decisions. Should we buy our own CT scanner or contract to use someone else's?

3. **Accounting:** financial information systems, and a critical understanding of the information they produce. An important step under way in the United States is the relating of clinical and financial information. For example, Medicare's new Prospective Payment System pays hospitals a fixed global payment per inpatient case for cases in each of 468 Diagnosis Related Groups. The system is rather crude and will need considerable refinement. Among the people best qualified to lead in the development of improved systems will be people who understand both medical and financial information systems.

4. **Marketing:** measuring patient preferences, patient compliance with prescribed medications, doctor/patient communication, and health education can all be seen as applying marketing techniques.

5. **Organizational behaviour:** applied group psychology, how to motivate people, create a productive corporate culture, etc.

6. **Decision sciences:** data analysis, computer modelling, computer information systems, decision-making under uncertainty including Bayes Theorem and decision-trees, etc.

In addition, our medical management students take my two elective courses: the Political Economy of Health Care in the United States, and Evaluation of Costs, Risks, and Benefits of Medical Care. In the latter, we look at theories of valuing life and limb, randomized clinical trials, and actual applications of cost-benefit analysis to medical decisions.

Perhaps more important than the details of the coursework is the experience of being immersed in a management and efficiency-oriented culture, just as an important part of the medical student's experience is absorbing the medical culture in hospital residence.

This is not something I would recommend for *every* doctor. It is something for comparatively few leaders, perhaps 200 to 400 in the UK. I believe it would be much more effective to apply the resources available for management education to the development of a small number of leaders than to spread the same resources thinly over many doctors.

Of course, more than education is needed. Not many of the leading consultants will take management posts if they have to accept a large reduction in income to do so. And education won't do much good unless

these people are allowed to manage, that is to adjust specialty mix to the needs of their population, to replace consultants, to buy services outside to clear waiting lists, to establish medical review (medical audit) and quality assurance programs, and to take corrective action when quality is deficient.

In the leading cost-effective organized systems of care in the United States, systematic involvement of doctors in questions of resource use is considered absolutely essential to economy in medical care. Physicians make the key cost-generating decisions. They set the tone for the rest of the organization. They cannot be told to do something they don't believe in. They need to lead in the development of efficient care.

9

Resource allocation in the NHS: A comment on the Resource Allocation Working Party (RAWP)

At its inception in 1948, the NHS took over health care facilities and personnel that were distributed unevenly, on the basis of previous ability and willingness to pay. Aneurin Bevan's idea was '... to achieve as nearly as possible a uniform standard of service for all' (18). But the unexpectedly large increase in spending when services were made free for everyone soon forced the government to constrain the budget of the NHS. And previous dreams of bringing the least well-off Districts up to the level of the best-off Districts had to be abandoned as too expensive. Achieving equality by cutting back the best financed Districts also became too difficult because it would have meant closing facilities and reducing personnel already perceived as being in short supply.

Large inequalities in per capita spending from one District to another persisted into the 1970s and lesser ones to this day. These inequalities have attracted a great deal of comment.

In May 1975, the Resource Allocation Working Party (RAWP) was appointed by the government 'To review the arrangements for distributing NHS capital and revenue ... with a view to establishing a method of securing ... a pattern of distribution responsive objectively, equitably and efficiently ... to relative need ...' RAWP reported in September 1976 (19).

RAWP recommended that total revenues be distributed in proportion to the weighted population of each Region, with weights, based on age and sex, mortality, fertility, and other indicators of relative use of services. Regions would be free to use the revenues as they thought best, not constrained by the relative distribution among services on which the formula was based.

Briefly, a RAWP formula was developed for each of seven broad categories of service such as Non-psychiatric Inpatient Services or Mental Handicap Hospital Inpatient Services. For example spending on Non-Psychiatric Inpatient Services is to be distributed on the basis of population, adjusted for age and sex, for standardized mortality ratios (SMR) for some conditions and for standardized fertility ratios for maternity. (The SMR is the ratio of actual deaths to those that would be expected based on a Region's age and sex composition.) Mortality was used as a proxy for morbidity because mortality data were available, morbidity data were not and there was some evidence that the former was a good proxy for the latter.

Regions import and export patients. Cross boundary flows for inpatients were taken into account as follows. A Region's exports and imports of inpatient cases are recorded by specialty group. The national average cost per case in each specialty group is multiplied by the numbers of patients, to obtain a net import or export. This amount is converted into a population equivalent by dividing it by the average inpatient cost per capita. And this amount is added or subtracted from the Region's weighted population base for inpatient care.

Similar considerations led to similar formulas for other services. A 'Service Increment for Teaching (SIFT)' compensates for the extra service cost per medical student.

The existing capital stock was valued using numerous heroic and simplifying assumptions. The goal in allocating new capital is to bring into equality the weighted per capita amount of capital.

The speed of movement to these targets depends on national growth rates. If the national growth rate is one per cent or more, RAWP recommended that above-target Regions not be cut by more than one per cent per year. Below-target Regions should not get increases of more than five per cent. In an era of slow economic growth plus increasing need based on an aging population, progress to equality, especially at the sub-Regional level, will be very slow.

However there has been progress. In 1979/80, the poorest Region was nine per cent below its RAWP target allocation, the richest 13 per cent above. For 1984/85, the range will be from five per cent below to nine per cent above. However, within-Region disparities by District are much wider, e.g. minus 19·4 per cent to plus 25 per cent in North East Thames. (In evaluating such within-Region disparities, the RAWP did point out

that few Districts are entirely self-sufficient, and that patients and services move across District boundaries.)

Thus, RAWP has left many inequalities of access and spending. Some are because of geographic propinquity, some because of social class, some because it has been politically impossible to move to equality at the sub-Regional level: resistance to closing facilities combined with lack of capital to build new ones.

As noted earlier, the specific way in which the formula has been applied has created some perverse incentives. Suppose one Region decided to create a 'centre of excellence' in hip replacement, or it decided to shorten its waiting lists by efficiency-improving changes. It would find itself rewarded by more work without a corresponding increase in resources. In theory, RAWP compensates for cross-border flows. But the compensation is based on national average cost per patient in a given specialty. This is likely to be below the costs of patients who are willing to travel for specialty services, i.e., patients with more complex problems. Moreover, an increase in patient flow this year won't be reflected in an increase in RAWP target until two years from now at the earliest, and actual revenue and capital flows taken even longer to catch up with targets if indeed they ever do. So there is a disincentive to create such attractive centres of excellence. The RAWP formula rewards 'exporters' of patients and gives Districts no incentive to shop for the most efficient supplier.

In writing what follows, I appreciate there is a great difference in cultural attitudes between Californians and the British. In California, we think little of driving 30 miles to the home of a friend for dinner, or 200 miles for a weekend. To most British that would seem extraordinary. Still the following line of thought bears some careful reflection.

While District self-sufficiency was not a goal of RAWP, RAWP was interpreted in a way that implicitly equates *spending in a District* with *spending for services for the people in a District.* Therefore, the only way to equalize the latter is to attempt to equalize the former. But that is hard to do because of all the difficulties in shutting down hospitals.

Would it not be worth considering breaking that identity by dropping the implicit assumption that people must get all their services in their own District, an assumption that is not in fact true anyway? One could then equalize the need adjusted per capita spending on the people in each District by appropriating funds to each DHA and letting the DHA buy

the services its people need from the hospital offering the best combination of cost, quality and convenience even if outside the District. In our experience, about 13 per cent of inpatients account for 50 per cent of inpatient costs. That is, relatively few patients account for a high proportion of hospital costs. So only a relatively few patients would have to travel to referral centres outside their Districts to achieve equality in per capita spending.

In this model, which I will develop below, each District Health Authority (DHA) would be given responsibility for comprehensive care for its people and a budget, based on RAWP, to provide or buy care. It would not have to accept patients (other than in emergencies) from other Districts without compensation at negotiated prices. Such an approach would permit achievement of three objectives. First, it would permit a prompt move to equality of need-adjusted per capita spending among Districts. Second, it might make it unnecessary to close or shrink some fine hospitals. It would let the London Teaching Hospitals compete for referral business from other Districts rather than face being ground down by the relentless application of the RAWP formula. And third, it would correct some of the disincentives I described earlier. A 'centre of excellence' would be rewarded. Patients it attracted would bring revenue with them. Each District management might no longer feel it was attempting to satisfy limitless demand, a feeling that must be quite discouraging.

10

An internal market model for the NHS

Today some Districts buy and sell services from others. But the conceptual basis for such transactions is not clear. As I understand it, in principle any NHS hospital is supposed to accept referrals from anywhere in the UK, provided the consultants have the capacity and appropriate medical expertise, and to provide the care free. But at the same time, some managers say they are paid or intend to ask to be paid by the patient's District of origin for accepting outside referrals. Why should anyone pay for it if they can get it free? Apparently, the decision to accept referrals is up to the consultants. But their decision-making is not systematically tied into receipt of payments. This means that developing a capacity to do a job does not bring the resources to do it. And doing a poor job that fails to attract referrals is not penalized by a loss of resources.

One could imagine making such payments a regular part of the internal operation of the NHS, creating an internal market system. Such a scheme would still meet all the social objectives of the NHS, in particular free comprehensive care for all UK residents. It would not include powerful incentives for management to make efficiency-improving changes, but it would remove some of the disincentives I have described.

A. The need

Districts are now subject to many controls that are intended to satisfy the needs of central government, the Region, the medical profession, national unions, etc. but that are not focussed on efficient service at the point of delivery. For example:

1. Medical manpower is controlled in London and by Regions;
2. Capital spending over thresholds such as £100,000 is controlled by Regions;

3. Revenue savings carry-overs are limited;
4. There are personnel ceilings;
5. Property cannot be sold without Regional approval; and
6. DHSS controls of operational detail such as instructing Health Authorities on how to advertise for posts, which professional journals can be used, etc. Conversely, Regions provide Districts with equipment, buildings, and land 'free'.

At the same time, various politicians and other commentators call for decentralization, devolution, efficiency, responsiveness to local needs, and greater tolerance of diversity (20). And, as noted earlier, the present financial model contains numerous perverse incentives, some of which might be corrected.

One way to respond would be to restructure the NHS along the following lines.

B. Description

1. Each District would receive a RAWP-based per capita revenue and capital allowance. Each DHA would continue to be responsible to provide and pay for comprehensive care for its own resident population, but not for other people without current compensation. It would be paid for emergency services to outsiders at a standard cost. It would be paid for non-emergency services to outsiders at negotiated prices. It would control referrals to providers outside the District and it would pay for them at negotiated prices. In effect, each DHA would be like a Health Maintenance Organization. (See Appendix for a discussion of HMOs.)

2. Wages and working conditions would be negotiated locally. (This would be a desirable, though not an essential part of the model.)

3. Consultants would contract with Districts, and Districts would be free to enter into all sorts of contractual arrangements including short-term contracts and contracts with incentive payments for increased productivity. Family practitioners would also contract with Districts. Districts could require them to refer to contracting sources of care. And Districts could experiment with such ideas as contracts with incentives to improve the economy of prescribing practices.

4. Each District would have a balance sheet and an income statement. It would be free to borrow at government long-term interest rates up to

some prudent limit on debt. A District owning valuable property could sell it, keep the proceeds and add the interest receipts to its revenues.

5. Each District could buy and/or sell services and assets from other Districts or the private sector. In America we would call this 'an industrial fund'. A District would resemble a nationalized company. In itself, this change would not be 'privatization'. It would be more a kind of 'market socialism'.

In these circumstances, formerly poorer Districts would be able to buy services for their residents from outside the District. They might eventually provide most services themselves. But alternatively, they might find they can do better buying services from other Districts.

6. In such a model, Districts would have much more freedom to manage as their Authorities think best. They would try innovations in management technique either on their own initiative or in collaboration with DHSS. Successful innovations would spread as DHAs became persuaded that they were advantageous.

C. Advantages

The theory behind such a scheme is that the managers would then be able to use resources most efficiently. They could buy services from producers who offered good value. They could use the possibility of buying outside as bargaining leverage to get better performance from their own providers. They could sell off assets such as valuable land in order to redeploy their capital most effectively. Unlike the normal bureaucratic model, they would not get more money by doing a poor job with what they have. Managers would be assured they could retain all the savings they make, and use them on the highest priority needs in their Districts. The under-bedded areas could buy services from the over-bedded areas if, in their judgment, that was the way to get the best deal for their patients. The flow of services to people could be adjusted smoothly and rapidly without the need to wait for facilities to be built or closed.

An internal market model would force the development of proper costing systems and would, at the same time, create much more cost efficiency and cost sensitivity in those Authorities that were selling as well as buying services from neighbouring Authorities. Indeed, good cost information is not likely to be developed until managers need it to make the decisions they are required to make.

While such a change in the internal economic structure of the NHS would be quite fundamental, it would be almost invisible to most patients. Universal free care would remain. Thus, from a political point of view, this might not be an infeasibly radical change.

D. Prerequisites

For this model to work effectively, several things would be needed. The list includes:

1. Incentives to make cost-effective decisions;
2. Suitably trained managers who can analyze alternatives and make efficient choices;
3. A culture of buying and selling health care services, which I am told does not exist now;
4. Reasonably good cost information (though one should not overstate the need for precision);
5. A supply of information on how to improve efficiency;
6. Medical decision-making would need to be free of the conflict of interest that exists today. A District Administrator who wants to refer surgery outside the District in order to clear waiting lists would need the support of medical judgments not biased by the fact that clearing of waiting lists would mean a loss of private business for consultants in the District.

E. Incentives to serve patients well

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. In the competing HMO model, that I discuss in the Appendix to this paper, we rely on annual consumer choice to motivate efficient and responsive performance. There seems to be no

substitute for competition and consumer choice. Other models of governance don't seem to do this job. Our experience with HMOs that are consumer co-operatives, with boards elected by members, is not at all encouraging. It is their competitors, not their boards of directors, that make them perform well. Elected board members tend to be spokesmen for narrow interests, not proponents of the overall best interest of the organization and the population it serves. The elected local government model appears no more satisfactory for this kind of service in the UK than in the USA.

One might think that the central government could hold Districts accountable through 'performance indicators'. But valid, unambiguous, meaningful indicators are hard to come by. And they usually must be quite specific, and therefore difficult to aggregate to give an overall measure. For hip replacements, for example, one might think of failure and re-operation rates, ability to function, and mortality. But these must be evaluated in relation to the severity of a hospital's case mix, which is very hard to measure. And there is too much room for manipulation of such indicators. As I mentioned earlier, throughput can be increased by increasing admissions of people who do not really need hospitalization.

Conceptually, one could introduce some market forces and consumer choice by permitting people to join the NHS District of their choice. Some people near the borders might prefer to get their care from a neighbouring District. But I doubt that the incentives would be strong for one District to try to take enrolment from another. Doing so might seem like more work without much reward. However, such a step would move the NHS toward the competing HMO model. Its potential deserves further evaluation, perhaps an experiment.

I believe that the Internal Market Model offers substantial improvement over the present NHS structure. But I wouldn't promise the full benefits of the kind of competing HMO scheme we are developing in the United States. When all of the alternatives have been considered, it becomes apparent that there is nothing like a competitive market to motivate quality and economy of service.

APPENDIX

HMOs and the evolving consumer choice model in the USA

A. Concept explained

The dominant system of health care organization and finance in the US is still solo practice, fee-for-service payment to doctors, fee-for-service or retrospective cost-reimbursement for hospitals and insured patients with a cost-unconscious free choice of doctor. The cost-increasing incentives inherent in this system are reinforced by open-ended subsidies to health care and health insurance by the US Government. This system is the most important contributor to the rapid rate of spending increase on health services that has now reached crisis proportions. In the USA we now spend 11 per cent of GNP on health care, about twice the British percentage. The financial pressure this is putting on government and employers is finally causing both to make fundamental changes in the way they buy health care services.

The main alternatives to this system of organization and finance are Health Maintenance Organizations, whose enrolled membership reached nearly 17 million Americans by the end of 1984, up 22 per cent from a year earlier.

A Health Maintenance Organization (HMO) is an organized system (i.e., with internal management controls) that accepts responsibility for providing comprehensive health care services to a voluntarily enrolled population for a fixed periodic payment set in advance (i.e., a 'capitation payment' that is independent of the number of services actually used). Subscribers have an annual choice of health care plans and agree to get all insured services through the HMO of their choice. Ideally, this should be a cost-conscious choice: subscribers who choose an economical health care plan should be allowed to keep the savings for themselves.

Unfortunately, because employer-paid health insurance is tax-free without limit to the employee, and because of collective bargaining, many employers are committed to paying the full cost whichever choice the employee makes. In such circumstances, employees are likely to have little or no incentive to choose an economical health care plan and the HMO may not be under economic pressure to reduce its rate. Some of these organizations date back to the 1940s and beyond. So there is now long term and large scale experience upon which to base some generalizations.

Studies comparing patients served by HMOs with similar patients cared for under traditional insurance show that HMOs typically cut total cost roughly 25 per cent and hospital days per capita 40 per cent. In 1984, the RAND Corporation reported the results of such a comparison, based on a randomized controlled trial in Seattle (21).

There is considerable variation in systems and styles of care within the HMO concept (22). There are 'Prepaid Group Practices', some of which own their own hospitals, others of which do not. There are Individual Practice Associations based on solo practitioners in all specialties. There are Primary Care Networks based on primary care physicians. Some are non-profit community service corporations. A few are consumer co-operatives. An increasing number are for-profit, investor-owned companies. The industry leader is Kaiser-Permanente, which, at the end of 1984, served about 4·6 million people in 10 states.

HMOs are responsible for comprehensive medical care. They do not cover such services as long-term custodial geriatric care. Their main source of economy is reduced hospital use. Paying doctors less is not a key source of savings. They pay competitive salaries and now have no trouble recruiting doctors.

Successful HMOs succeed in cutting costs while maintaining or improving the quality of care by doing many things differently from the solo practice fee-for-service sector. There follows a partial list. Not all HMOs do all of these things.

1. Systematic quality assurance: the right diagnosis and the right procedure the first time is economical. Errors and complications are costly. Reviewing quality and taking corrective action where errors are found helps to reduce costs.

2. Appropriate physician incentives. Some HMO doctors are salaried. Others are paid on the basis of attenuated fee-for-service with utilization

controls. These organizations can 'empirically tune' the incentives to get the right balance.

3. Match resources used (including the mix of medical specialties) to the needs of the population served.

4. Regional concentration of specialized services. HMOs buy costly services such as open heart surgery from efficient high volume producers.

5. Curtail care of low or no marginal value in terms of health.

6. Use settings less costly than hospital inpatient care: home nursing, day surgery.

7. Careful evaluation of new technology; a more deliberate approach to the adoption of new technology.

8. Each patient has a comprehensive medical record shared by all providers. This helps to avoid duplicate tests and workups, and is an aid to quality control.

9. Industrial engineering applied to scheduling and work flow.

10. Purchasing support services on a competitive basis.

11. Efficient use of paramedical personnel such as nurse practitioners.

12. Use of management information systems to support better-informed decisions.

B. Some desirable features

When these organizations compete to serve cost-conscious subscribers, the resulting system has many desirable features.

1. There is an effective system to assure responsiveness. Subscribers who are not satisfied can switch to another plan at the next annual enrolment. Results of the annual enrolments are a key performance indicator. If an employer's health benefits officer detects a significant amount of dissatisfaction (this is the first place many employees complain), he or she can press for prompt corrective action. If necessary he can threaten not to renew the HMO's contract. Such action is rarely necessary.

2. Physicians have major responsibility for the quality and total cost of care. Strong effective peer review of quality and economy of care is in the physicians' interest. Such review is not common outside the HMO and other multi-specialty group practice settings.

3. Each HMO is under continuous pressure to improve quality of care and service (as perceived by the subscribers) while cutting cost.

4. Sophisticated market research techniques are used to measure consumer wants and satisfaction.

5. At least in those markets in which HMO subscribers are cost-conscious in their choices, HMO premiums and budgets are market-tested. HMOs spend what their subscribers want them to spend. If waiting lists for services get long enough that subscribers would prefer to spend more money for shorter waiting lists, the HMO has an incentive to make the adjustment lest it lose subscribers to a competitor.

C. Points of possible relevance for the NHS

My purpose in writing this is not to sell the competing HMO model to the British. It will be enough of an achievement to accomplish this in the USA, a task that now appears far from hopeless. But I think the HMOs are doing a number of things that might offer useful examples or lessons for the NHS, things that bear watching for possible emulation.

1. The NHS appears locked forever into a model with separation between GPs and hospital-based specialists. I was told they communicate with each other mostly by mail. In the United States, at least some observers, myself included, find there is much to recommend in the multi-specialty group practice in which primary care physicians are partners in regular contact with specialists, sharing the same offices, records, and equipment. The advantages include the following. The shared comprehensive medical record is economical and creates opportunities for quality-enhancing interactions. Consultation is easy, quick, and informal. There is a collegial atmosphere with both formal and informal continuing education. The primary care physician learns from the specialists about the medical problems of his or her patients. There is some built-in quality assurance through peer interaction. Primary care physicians and specialists are partners, with incentives to integrate smoothly a collaborative practice. My point here is not to convince British readers that it is better, only to suggest that the UK could benefit from a structure that had the flexibility to try such alternatives and to let them spread if experience shows that they are good.

2. Comprehensive longitudinal records are valuable for evaluation of outcomes and for research. We have not taken nearly full advantage of this opportunity in the US.

3. The competing HMO model shows that when it is in the doctors'

economic interest, they can do effective audit and control of quality and economy of care. Such economic interest can even motivate doctors to expel poor performers from their group. In competition, doctors impose on themselves controls they would never dream of accepting if the government tried to impose them.

4. The HMO must have a medical director, a doctor whose leadership is accepted by the other doctors, to organize and control the delivery of services. Such a person is needed to act as a bridge between medicine and management. This is not an easy role to fill, but it is vital to the success of the HMO. This is becoming a prestigeous and well-paid position. A promising recent trend is for some doctors to attend postgraduate courses in management and to plan careers combining medical practice and management.

D. Problem areas

Lest I leave the incorrect impression that the competition of HMOs and Preferred Provider Insurance schemes is solving all of our problems, I will outline some of the main problem areas that are being exacerbated or at least not helped by this competition.

1. The first is the need for rules to make the competition equitable and effective. Without rules to prevent it, some health care financing schemes might succeed by skilfully selecting healthy people to insure, while dumping sick people on other health plans. Today, the regulation of health plans in the United States is needlessly complex. It is divided between Federal and State governments and among different agencies at each level of government. HMOs are regulated by different agencies from those that regulate insurance companies. And some important aspects of the competition are regulated by contracts with employers. We have a great deal of work ahead of us to determine what the rules should be, who should make them and how should they be enforced.

2. We have a major problem of uninsured people. One recent study found that about 9 per cent of the under-65 population, or 19 million people, go all year with no health insurance, public or private; another 9·4 per cent goes part of the year without insurance. In the past, uninsured people who could not pay got their care from public providers, such as county hospitals, or as charity patients at private hospitals. The economic competition I have described makes it increasingly difficult for hospitals

to provide free care that isn't paid for. In the past, hospitals simply added these costs to their other costs and charged them to their cost-unconscious customers. Under competition to serve cost-conscious buyers, hospitals will not be able to do this.

Several States have adopted public utility regulation of hospitals to solve this problem. The controlled rates include allowances for what we call 'uncompensated care', given to people unable to pay, and all the third-party payers are obliged to pay them.

The alternative most compatible with market competition would be to make public subsidies for the purchase of health insurance available to all persons. Through the income tax system we subsidize the health insurance of employed people. What remains to be done is to make at least equally generous subsidies available to those who do not have employer-provided health insurance. This would need to be combined with state-supported agencies created to assure availability of health insurance to all people.

3. A third major problem concerns the role of university medical centers. We have 126 medical schools graduating over 16,000 students per year. They have major affiliations with 270 teaching hospitals and some affiliation with over 1000 community hospitals in which 60,000 interns and residents are in training. The research and teaching missions of these organizations make the patient care they do more costly than it otherwise would be. In the past, these extra costs were simply passed on to Medicare in the form of cost-reimbursement and to privately insured patients in the form of higher charges. With the advent of cost-conscious demand, university medical centers will no longer be able to do that. HMOs and Preferred Provider Insurance plans will only be willing to pay for patient care in efficient community hospitals. Only complex cases will be referred to universities.

Conceptually, it would seem easy enough to say that the extra costs of research and teaching should be separately identified and supported on their own merits, while the universities compete for patients. But as a practical matter, this will not be easy. The public sector is not in a position to absorb the extra costs. And university medical centers are far from being efficient producers of care. Their cultures and life styles are geared to research, not efficient patient care. Moreover, as HMOs refer increasing numbers of their patients to efficient community hospitals, only relatively more costly and complex cases will be referred to

universities, cases that will not present a representative mix of patients for teaching purposes. Teaching may have to be moved into the settings used by the HMOs.

4. Until recently, practically all HMOs were non-profit organizations. I believe that their non-profit status was helpful in the development of corporate cultures compatible with high quality care and service and socially responsible policies. But non-profit status has two important disadvantages. The non-profits have weaker incentives to expand than for-profit companies. The for-profits have access to equity capital at very low cost, so they are able to finance very rapid growth. What remains to be seen is whether the for-profits will develop corporate cultures compatible with high quality care and socially responsible policies. Will their public policy advocacy emphasize their right to make money or the right of all people to good care?

E. Radical change to a market system?

I have based the essay in the main body of this paper on the assumption that proposals for radical change in the NHS, such as conversion to an insurance scheme are wholly unrealistic. I do not sense any real demand for such a change. And with the economic constraints that now appear likely, it is hard to see how Britain could take seriously any scheme likely to raise health care spending to, say, 8 to 10 per cent of GNP.

However, if British policy-makers were to examine seriously a radically different scheme for health care, I would recommend the competing HMO model as the most promising candidate. I have not thought out the details of how Britain could get there from here. One path would be for large employers or trade unions to sponsor HMOs in a scheme in which each subscriber could designate that his actuarially-determined per capita cost to the NHS (considering age, sex, health status) would be paid to his HMO and he or she would agree to get all his or her care from the HMO. If the HMO cost more, the subscriber would pay the difference. In the case of poor people, the government could subsidize part or all of the difference. If this development went well, NHS Districts might be allowed or encouraged to become HMOs and to compete to keep their patients. Obviously, this would be a very long term proposition, this is not something that could happen quickly.

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