

BY GUESS OR BY WHAT?

Information without design in the NHS

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Foreword

In a recent volume, *Framework and Design for Planning* (1), the essays in which complement those presented here, a plea was made for the development of a specific strategy to train health services managers in numerate skills. With the present accent on planning and in a period when resources are unlikely to match the demand for services, this is part—as is that of computer policy (2)—of the even more important case for a comprehensive policy to take account of the fundamental problem of the selection, extraction and collection of information of different kinds, and their effective integration into the management process to make the most effective use of resources. This is a complex operation in a period of priority selection, since all the professions, including those directly concerned with the patient as well as those involved in management, regard their own distinctive requirements as essential tools for playing their several parts. The failure to develop a strategy for our times is because of the false presumption that the structure of and the mechanisms within the NHS are capable of bringing about the integration of the apparently disparate policies of the many authorities involved so that they can be universally understood and appreciated by all concerned, the clinicians, the administrators and the politicians.

This volume gives more solid basis to the general indictment that there is, alas, no overall policy to clear the confused picture which exists. Moreover, it adds to the impression that pointing to the faults in the system is unlikely by itself to lead to the

desirable reforms, since some of the more important failures to make use of the information which can be made available under present circumstances have been known for years as a result of research and observation. Indeed, the faults seem endemic to a system which clearly lacks the means for co-ordinating policies generally and also *pace Rothschild* (3), for directing and co-ordinating research relevant to the objective of making the best use of resources.

Thus, the bird's eye view given by Dr Fox's perceptive analysis of the present state of the NHS and the faults in management both indicates the co-ordinates and gives perspective to the elements of the twin problems of information availability and the capability for its use. His comments in the 'Information' section of his essay are damning of the present system, not least because they are rooted in impeccable examples of failures to follow up signs which are there. Indeed, one wonders too whether it will ever under present arrangements be possible for action to be taken which will reflect the issues which a well-conceived information analysis raises, such as those referred to in Dr Heasman's essay on the operational questions which are emerging from a study of the material which his Division is producing. These questions are not peculiar to Scotland. Yet is anyone in the UK paying any attention to them executively? Again, when reading Mr Nelson's discussion of the questions about the responsibilities of the various layers of authority in the health service, it is somewhat astonishing to realize that the fundamental issue of accountability and how and where it should apply (which is also a matter for special comment by Dr Fox) has not had the close attention it merits. It is no exaggeration to conclude that if we are to give more than lip-service to the democratic ideal, no amount of reorganization of structure can have reality, without providing for the means at each level to include the all integral elements of policy formation, and the power of executive action to implement policies. Otherwise, phrases such as 'maximum delegation downwards' and 'accountability upwards', which were so much part of the brave-new-world of management (4), forecast in the NHS Reorganization

Act 1973 are no more than words. Mr Shegog's position paper based on a long line of publications dealing with the major aspects of the issue of comprehensive policy and action, is an 'intelligence' report showing the relativity of many of these issues to the charge. It is also bound to raise feelings of *deja vu* to those who have studied the still relevant problems discussed in *Challenges for Change* (5), published as long ago as 1971, and which the reorganization does not appear to have touched, far less solved.

Thus, at a time when there is a Royal Commission on the NHS still in session, it might be appropriate to put the point that even reformed structures and operating mechanisms need purposeful direction and power drives if they are to be effective. Further, if the machinery and its housing are defective and the system is neither capable of integrating or of implementing essential policies, one has to ask what radical reforms are necessary, which are capable of putting buoyancy and more purpose into the system to improve it. Certainly the question has to be asked whether Parliament can be satisfied that the splendid idea of the NHS can be sustained and fulfilled under the present arrangements with which few are satisfied. No one seems to be asking the fundamental question whether the rot starts at the top and the failure on the part of the machinery of government may not be a result of a miscegenation between two quite different types of body, a Civil Service Department, and the NHS authorities with no apex to their service structure and therefore deprived of the intelligence for *operational* leadership. The important reform necessary would thus seem to entail giving the NHS such an apex and so making it a complete entity with maximum delegation for well-defined objectives. By concentrating on developing a well-integrated service structure one might then secure well-integrated comprehensive policies.

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**Managing health resources:
English style**

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Managing health resources: English style

Introduction

Two opposite views apparently prevail in the United States regarding the National Health Service in England. One is that the NHS is about to collapse and might do so with the next labour dispute. The other is that problems in the NHS reflect only insufficient funding rather than structural deficiencies. The former view is clearly wrong. The underlying concept of the NHS is accepted by the overwhelming majority of the English population, whatever their political leanings. It is a thriving system. Furthermore, as documented below, the performance of the NHS is impressive when measured by commonly accepted yardsticks. In my opinion the latter view—that any significant problems relate only to insufficient funding—is also erroneous.

Many in the US argue that instituting a more organized and controlled health system would induce more rational delivery of health services. Although established for humanitarian reasons, the NHS is structured to permit rational planning, which implies, *inter alia*, explicit decisions on total budget levels; the equitable allocation of health resources among geographic areas; the development of an appropriate service mix; and the assurance that services are accessible, of high quality, and delivered efficiently. At the same time, the NHS embodies a strong and essentially unchallenged tradition of professional and clinical independence among doctors, a principle that, depending on the situation, may be either congruent or at variance with that of rational planning. For example, even in the context of predetermined budgets, the consultant in the hospital has wide discretion with regard to his workload, which patients he treats, whether and for how long they are hospitalized, and which diagnostic procedures are followed. As a group, consultants have considerable

say on which specialties should be expanded and who receives what medical equipment, with little regard to any formal priority setting structure. This paper, then, analyses some of the difficulties that Britain faces in planning and administering a highly organized system, in the hope that it will be of value on both sides of the Atlantic.¹

My interest as an American in writing this essay is not that the US will adopt a system like that of England. No economically advanced country has ever adopted the radically different approach of another. Indeed, historically, national health insurance in all such countries, including England, evolved from the existing structure. However, motivated largely by rapidly increasing medical care expenditures and to a lesser extent by concern for performance, the US is clearly moving towards greater government intervention in the organization of medical care, as evidenced by a recent series of legislative measures at state and federal levels. These include the 1974 Health Planning and Resources Development Act, the Professional Standards Review Organization programme, federal and state legislation to promote prepaid group practices, state-level controls on hospital costs and revenues, and measures to influence the location and specialty choice of doctors. National health insurance in the US will further increase pressures for cost control and reform in the system of delivery, although the complexities embodied in the competing alternatives are such that enactment may not occur for several years (4). Thus England's experiences, both positive and negative, warrant careful review.

The following section discusses performance indicators. The three subsequent sections discuss the interrelated issues of accountability, planning, and information. Then, two case studies of important policy documents illustrating these issues are presented. The first is the Priorities Document, which is a statement of national priorities for health services; the second is the report of the Resource Allocation Working Party, which articulates national policy on the geographic distribution of the health budget. Finally, some implications of the English experience for the US are discussed.

1. Some critical articles have been published, but they are few and far between. See, for example, Maddox, McNerney, Mechanic (1, 2, 3).

The NHS: how well does it perform?

Whatever the critical comments in subsequent sections, the over-all performance of the English health system is impressive. Services are accessible, do not pose a financial threat to the individual or his family, and consume an explicitly determined and smaller share of national economic output than in most Western countries. These strengths are summarized because they are real and provide an important backdrop to the rest of the paper. Indices of performance are discussed with regard to access, cost, quality, and patient satisfaction.

ACCESS

Problems of financial access for most services have effectively been eliminated. Services are available without regard to income, and no resident need fear impoverishment as a result of high medical bills. Thus the most fundamental objective of national health insurance in the US was achieved in England almost thirty years ago. Some favour elimination of existing patient charges—especially for those few services, such as dental and optical, for which they are significant—and expanding the benefits. Others, including much of the medical profession, favour higher patient charges and have proposed modest charges for hospital services, principally to generate extra funds for the NHS rather than to reduce unnecessary hospitalization.

Perhaps even more impressive is that neither aggregate shortages nor problems in the distribution of resources are a significant deterrent to the receipt of most services. Access is discussed for doctor, hospital, and community services.

Hospital and community doctors numbered 29,300 in 1974, and general practitioners (GPs) another 21,500.¹ The doctor-population ratio is lower than that of many other Western countries: one doctor per 760 people in 1972, compared with, for example, one per 600 in the US and one per 630 in Canada. However, the number of people graduating each year from medical school has increased dramatically—from 1,800 in 1965 to 2,644 in 1975, with more than 3,600

1. 'Community physicians' are employed by the health authorities to serve public health, administrative, and planning functions; they do not care for individual patients.

planned for the early 1980s—and an increase in the supply of doctors will follow suit.¹

An analysis of unmet demand under a zero-price system is perhaps more instructive than an examination of doctor–population ratios. Can those who seek services receive them without delay? Perhaps the most impressive fact is that, even with a maximum list size of 3,500 patients, everyone can locate a GP who will accept him on his list. What is an appropriate patient load or list size is a matter of debate. Problems of geographic distribution exist, as evidenced by the number of designated (shortage) areas, i.e., those with average list sizes in excess of 2,500, although many GPs argue that a list of 2,500—even 3,500—does not constitute a particularly heavy workload. The policy of preventing GPs from establishing a practice in areas with average list sizes below 1,800 has been effective. However, attempts to attract doctors to the designated areas, largely through a system of financial bonuses, have been at best partially successful, whether because the bonuses are too small or the programme is poorly structured. Once the average list size falls below 2,500, an area loses its designated status, and GPs practising in such an area lose their bonus. This reduces the incentive for doctors to locate in designated areas and gives those already in the area an incentive to discourage entry of other GPs.²

With regard to hospitals, there are 8·7 beds per 1,000 population, of which 3·0 are classified as acute. A major public issue receiving both professional attention and widespread coverage in national newspapers relates to the uneven distribution of hospital and community resources, that is the 85 per cent of expenditure for which the budget is predetermined each year, as opposed to the independent practitioner services (GPs, drugs, etc.), for which the budget is not controlled directly. An example of disparity is the number of acute beds per 1,000 population, which varies across the 14 regions from 2·3 to 4·0. The problems of redeploying health resources, even in a highly controlled system, are interesting and complex, and a more detailed analysis is provided below.

1. Medical school enrolment has increased even faster in most other Western countries. For example, between 1965 and 1975 it nearly doubled in the US and has more than tripled in some European countries. Thus, the doctor–population ratio in England will remain lower than in many other countries.

2. For an evaluation of the designated area allowance programme see Butler (5).

One index of unmet demand and the adequacy of hospital provision is the waiting time for admission to the hospital. This waiting time has two components. The first is the time from GP referral to the patient's first visit with a hospital specialist as an out-patient. This component of waiting time does not attract widespread concern. Unfortunately, national data are not available on this aspect of waiting time, although they are now being collected. One survey found that 80 per cent of patients are seen within one month (6). However, there may be considerably longer waiting times for non-urgent orthopaedic, ENT, and ophthalmic cases.

The second is the wait from the time of the patient's first visit as an out-patient to his actual admission. It is this latter waiting time that has received public attention, including in the US where critics of the NHS commonly cite waits which exceed two years. The most recent statistics, for 1973, largely refute this negative picture (7). Some 45 per cent of patients are admitted immediately. For those who do wait, the median time on the list is 6.8 weeks, with a range by region from 5.1 weeks in the North West London Region to 8.3 in Sheffield.

Several qualifications are offered. The reliability of waiting-list statistics has been questioned. Some GPs place patients on several waiting-lists at once; waiting-lists may not be corrected after a patient moves away, dies, or is admitted to a different hospital; consultants may seek to inflate lists for prestige purposes; and in some cases GPs may elect to have the patient forgo treatment rather than face a long wait (8). Also, the waiting times for identical services may vary enormously among nearby hospitals, and many patients could reduce their waits by travelling a few miles further away. Thus the waiting-lists reflect in part individuals' decisions to accept some delay in order to receive services at the hospital, or by the specialist, of their choice.

In addition, any simple measure of central tendency masks wide variations. Waiting times are highly variable by specialty. They are typically short for internal medicine but often rather long for some surgical procedures. For some specialties, such as orthopaedic surgery, waiting times reflect manpower shortages. For others they reflect more the professional judgement of the hospital doctors. Among the procedures with the longest waiting times are varicose veins (for which 14 per cent of all operations entailed waiting times in 1973 that exceeded one year), hernia (7 per cent), and utero-vaginal prolapse (10 per cent).

The basis for priority decisions among conditions leading to differential waiting times is not well understood. To a large extent, it reflects relative need for care. But it may also reflect two other phenomena. First, doctors may favour the medically interesting cases rather than the more mundane procedures, independent of medical need. Second, waiting-lists tend to be longest for those procedures (principally, surgical) for which private practice is common. Some surgeons may artificially create long waiting-lists for the less urgent conditions to encourage patients to accept treatment privately, in which case the surgeon collects a fee. Which is the cause and which the effect is in question.

Lastly, waiting-lists have increased significantly since 1973. Data more recent than 1973 are available on the number of people on waiting-lists, but not on waiting times. They show that on 31 December 1975, 588,500 patients were awaiting admission in England compared with 508,600 two years before. The reasons for the increase, or how long-standing the increases are likely to be, are not well known. Labour disputes in 1975 and 1976 leading to industrial action among hospital doctors are undoubtedly a contributing factor.

A final area under the rubric of access is that of non-institutional community services. Because of their diffuse nature they are difficult to describe in statistical terms, let alone compare with the US. None the less, they seem far more extensive in England.

What can loosely be called community services, i.e., non-institutional services other than those by GPs and other independent practitioners, are provided by both the NHS and local government. Community nursing is the principal such service delivered by the NHS. Community nurses number over 18,000, an increase of over 20 per cent in four years. Although they assist a wide variety of patients, their most important client groups are children and the elderly. Every newborn child is visited in the home. The baby is examined and the mother offered instruction on feeding, bathing, and so forth. Follow-up visits are made when necessary. In addition, school doctors examine every child at the age of 5, and in many places periodically thereafter. If necessary the child is referred to a GP, and children with severe developmental problems may be referred to an institution. In contrast, the English GP provides less well-baby care than the paediatrician in the US.

Local authority services include meals in the home or at day centres, care of the aged and mentally ill in day centres, assistance in

house cleaning and laundry, and physical adaptations of the home. In a typical week, 12 per cent of the total elderly (65 years or over) non-institutionalized population receives one or more meals, and 8 per cent receive home help assistance at some point during the year (9, 10).

The problems are many. With regard to policymaking, collaboration between the NHS and local authorities is uneven, despite a formalized process for joint planning and the availability of a modest, although increasing,¹ amount of money for the initial development costs of local authority projects of interest to the NHS. At the level of the individual, patients can fall between two stools. In some cases, particularly where long-term institutionalization or alternative supporting services are necessary, situations arise where each side wants the other to serve the patient; this can be particularly problematic for the mentally ill. Professional rivalry arises between nurses, who are employed by the NHS, and social workers, employed by the local authority. Frequently the GP, who commonly initiates the delivery of service, is confused about whom to call first. None the less, the services are extensive and impressive by American standards.

COST

Because health expenditures account for a lower percentage of gross national product in England than in the US—5.6 per cent and 8.6 per cent respectively—it is often argued that costs in England are both relatively low and reflect high value for money. Without denying the underlying legitimacy of the comparison, two important qualifications are offered. First, the figure for the US is more embracing, encompassing as it does all health expenditures, whereas the figure for England or for Great Britain as a whole includes NHS spending only, thereby omitting such items as long-term residential care (which is a function of the local authorities), private practice outside the NHS, medical education, and medical research. These could easily add half a percentage point.

The second qualification is more subtle but no less real. As the *per capita* income of the country rises, so does the percentage of the gross national product (GNP) devoted to health. *Per capita* income in Great Britain is roughly half that of the US. Newhouse has compared *per capita* GNP and the percentages of GNP devoted to

1. Joint funding will amount to an estimated £21 million in 1977-8 and is projected to rise to £40 million in 1980-1.

health for eleven countries (11). The correlation is very high ($R^2 = 0.93$), and both England and the US fall very close to the trend line. England might spend as much as the US or other Western countries were its *per capita* income as high. On the other hand, one could make the case that the health sector in England may represent better value for money and provide a higher level of service than other sectors of the economy, public or private. Certainly, the English system has structural characteristics consistent with this theme: restraints on unnecessary hospitalization, predetermined budgets for hospital services established through a political bargaining and allocation process, constraints on the introduction of new technologies, constraints on physician incomes, and so forth. However, whether there are meaningful incentives for efficiency is debatable. These comments are made simply to interject a note of caution in making comparisons and not to resolve the issue.

QUALITY

Given the state of the art in quality assessment, particularly not being a medical doctor, I can only assess certain structural characteristics. The English doctor who is not in a training grade is in many ways more independent than his American counterpart. The consultant receives, in effect, a lifetime appointment and cannot be disciplined or removed except for major transgressions. The GP has independent contractor status, but unlike most contractors his performance is not reviewed periodically, again except for major transgressions, more often entailing breaches of contract rather than medical shortcomings (12).

The hospital-based structure has four noteworthy characteristics. First, the system has safeguards against potentially unnecessary hospitalization. A patient normally has access to hospital services only upon GP referral; the hospital-based specialist has no financial incentive to hospitalize and he has the right to decide that hospitalization is not necessary. Thus, patients who should be handled by the GP are generally prevented from entering an expensive secondary and tertiary care system. The GP has the incentive to refer fairly readily since in doing so he relieves his workload without decreasing his remuneration, thereby reducing the chance of patients being denied admission inappropriately. Secondly, hospital-based doctors at the senior registrar and consultant level, in most hospitals, undergo a competitive selection process. There are an average of 5.1

applicants for each open senior registrar post and 5.4 for each consultant post, although the numbers vary by specialty and hospital location. Thirdly, the hospital firm, as it is known, is a team, with the consultant typically having one or two junior doctors attached to him, thereby creating an informal but important peer review system.¹ The English hospital-based doctor has less opportunity for professional isolation than his American counterpart. Fourthly, all hospitals, including those not associated with medical schools, have doctors below the consultant level; thus every hospital functions as a training institution.

At the risk of venturing where angels fear to tread, I am more greatly concerned about the quality of care given by the GP.² He can practise in considerable isolation. Although 82 per cent are in groups of two or more, the partnership can mean little more than a common secretarial pool and a mechanism for sharing evening and weekend coverage. The GP, with rare exceptions, has no contact with hospitalized patients, and thus the hospital is not a locus of professional interchange other than for short postgraduate courses.

Office consultation times tend to be much shorter in England than in the US. Several studies reveal typical visit times of around six minutes in England compared with more than ten in the US (13, 14). It is quite possible, however, that the English doctor's style of practice is to see the patient more frequently for shorter periods of time than his American counterpart and to do less during a single encounter.³ Also, the English doctor may know his patients better, thereby reducing the time required for any single contact.

The amount of physical examinations, history-taking, and laboratory services, is less than in the US (15, 3, 6). This, of course, by itself simply shows that primary care doctors are more intensive in the US than in England, not that quality measured by patient outcome is better. Indeed, many English doctors expressed amazement at both the impact of malpractice suits on defensive medicine and the

1. One aspect of the team composition that many criticize is the dependence on foreign trained doctors in the junior grades. In 1975, 28 per cent of senior registrars, 57 per cent of registrars, and 60 per cent of senior house officers were foreign born, and most of these were trained outside the British Isles, compared with only 14 per cent of consultants.

2. One of the best critiques of general practice in England is in Gordon Forsyth's book *Doctors and State Medicine* (6). Forsyth very legitimately cites studies that would raise the same kinds of concerns for the US and Canada.

3. Data on doctor visit rates are not comparable between the two countries.

financial incentive for the American doctor to order tests because he can bill the patients at rates considerably in excess of the price that the laboratory charges the doctor. None the less, the thoroughness of the British GP appears to be a legitimate concern.

Finally, GP arrangements for after-hours coverage can be criticized. In some instances, the GP is unavailable and simply refers patients to hospital emergency rooms or out-patient departments, although legally he is responsible for such care. Fortunately, such abrogation of responsibility is rare. More commonly, he contracts with an outside service, which itself may be of questionable quality.

PATIENT SATISFACTION

Indices of patient satisfaction must be approached with caution. Satisfaction largely reflects the degree to which people's expectations are met without regard to the reasonableness of the expectations. In addition, one must distinguish among different measures of satisfaction, which may not be well correlated with one another. For example, levels of satisfaction may vary depending on whether the respondent is focusing on the medical system as a whole, a particular provider he actually uses, or a specific encounter.

None the less, by all accounts one must accord a high level of satisfaction to the NHS. Ann Cartwright's study based on household interviews—unfortunately over ten years old, although it is now being replicated—reports, for example, that 93 per cent of respondents felt their doctor listened to what they had to say, 88 per cent that he took his time and did not hurry them, and 75 per cent that he explained things to them fully (16). When asked whether they liked having to be referred by a GP to get specialist care, 79 per cent said that they did compared with only 18 per cent who would prefer being able to go directly to a specialist; 3 per cent were undecided. More recent national public opinion polls, although less detailed in their questioning, also demonstrate a high degree of satisfaction with the medical system. In addition, studies of patients discharged from the hospital report high levels (typically exceeding 90 per cent) of satisfaction regarding food, visiting arrangements, privacy, and so forth (17). Finally, although there is the normal range of controversy that characterizes any major public programme, neither of the two major political parties and no more than a small minority of the population support fundamental changes in the method of financing or delivering care.

The growth of private insurance has been interpreted as a reflection of increased dissatisfaction with the NHS. In 1974, 2.3 million persons in the United Kingdom as a whole had private coverage compared with only 1.3 million in 1964 (18). However, many other causes can be suggested, including rising incomes and favourable tax treatment (changed in 1976) of employer-based private coverage. I do not accept that these statistics reveal increased dissatisfaction.

Accountability

Whatever the accomplishments of the NHS, there are in my view a number of problems with regard to policy setting and management that are significant in magnitude and not correctable without major changes. This section discusses problems of accountability, and the next two sections those of the planning process and information.

'Accountability' can refer both to individuals, particularly those directly responsible for patient care, and to corporate bodies responsible for policymaking such as health authorities or teams of officers. It implies existence of a reward and penalty structure that is congruent with public objectives and a method for measuring performance. As such, accountability looks to the past and the present, and planning to the future.

Producers of goods and services can be subjected to two kinds of accountability. First, there is accountability through governmental review processes and public bodies, usually composed of, or ultimately reporting to, elected officials. Second, there is accountability in the market place through the expression of individual consumer preference. Public goods and services are usually subject to governmental review, although market tests are sometimes feasible, particularly where the benefits are mostly private. For example, if parents can select among several government funded schools for their children and generally avoid using a particular school, then the performance of that school may warrant scrutiny. Accountability in the market place is more likely to characterize privately and competitively produced goods and services, although government regulation, of price collusion or advertising, may overlay private markets. The NHS has the potential for a mixture of both forms of accountability. The central thesis of this section is that neither operates effectively.

Of all health services, those of GPs offer perhaps the greatest opportunity for accountability through consumer choice. The patient selects his GP and can change at any time. Furthermore, the doctor has financial incentives to compete for patients because of capitation payments. Yet the evidence is that patients are not well informed of the doctor's medical qualifications or his style of practice, nor do they switch when they are dissatisfied. Using data from a national household survey, Cartwright reports that 'Most people either go to the nearest one (doctor) or accept the doctor who moves into a practice when their doctor retires or dies' (16). In addition, patients are very reluctant to change GP. Fewer than 3 per cent of persons interviewed had changed GPs in the previous five years because they were dissatisfied. Klein reports that only 0.4 per cent of the population change GP in any given year (12). Hence, one can deduce from Klein's and Cartwright's studies that the average time between changes as a result of dissatisfaction is roughly once every 200 years—hardly a market place movement that would make GPs responsive to consumers.

Two phenomena other than a natural reluctance to switch may reduce consumers' willingness to use their purchasing power as a lever. First, the GP has the unchallengeable right to remove a patient from his list. In practice, this threat is rarely exercised; for example, Klein reports that, in fiscal year 1970-1 in London, 7,059 patients out of a total population of 3,358,000 were removed from a list at the GP's request (12). However, the threat may put the patient in an unequal bargaining position. Secondly, most GPs would prefer the list size they have or a smaller one. Few would prefer larger list sizes (16). To some extent this reflects GPs' perception of the maximum workload they can accept before quality of care suffers. However, doctors' perceptions of quality are related to the reimbursement structure and level, and the capitation amount is not sufficient to make additional patients economically desirable. This could presumably be changed by increasing the capitation amount, possibly offset by reductions in fixed-sum allowances such as the basic practice allowance.

Nor is there effective government accountability. The GP is an independent contractor with the NHS, but unlike most independent contractors the contract is for a lifetime and is not subject to routine periodic review. The only exception is that GPs who prescribe 25 per cent or more above the regional average may be contacted by

the regional medical officer or his designee. In any given year, 6–7 per cent of GPs are thus contacted, although, typically, no further measures are taken, even if the GP persists in his prescribing pattern. Data are not collected on such matters as visit rates, hours of availability, referral patterns, or laboratory use. Although the patient's medical record follows the patient throughout his lifetime and physically moves when he changes GP, only minimal identifying information about the patient, gathered when he first registers, need be recorded. Indeed, the physical space on the government-prescribed form permits little detail to be recorded even if that were the doctor's inclination.

A complaints machinery has been established, which operates through the Family Practitioner Committees, and before the 1974 reorganization through the Executive Councils. Rudolf Klein, who describes general practice as 'an autonomous enclave within the NHS', has documented the functioning of the complaints mechanism in detail. Whereas throughout England some 4,000 patients per million change GPs because of dissatisfaction, only 9 formal complaints per million patients are investigated each year. Klein describes the mechanism as fundamentally defective because it is heavily weighted against the complainant. Furthermore, a successful complaint rarely results in more than a reprimand for the GP or a small financial penalty (usually less than £100), and the patient is never compensated.

The patient, as in most Western countries, may file a malpractice suit, but this is rare, and awards are low. The Medical Defence Union sells insurance to any practitioner for £40 a year, which includes the legal defence costs (19). Suing the doctor, mercifully, is not part of British culture.

The lack of accountability is reflected in both the variation in services provided and the changes over time. One of the best descriptions of general practice in Britain (13) summarizes a series of fourteen independent studies of individual practices and finds the average annual consultation rate ranging between 2.8 and 6.5 visits per patient. The report concludes that 'The existence of these differences should serve as a challenge to analyse the reasons for them and to determine whether some are too high and others too low in terms of quality or whether these differences are inevitable'. Other studies comparing patterns of services rendered also consistently find wide variation among GPs. For example, Morrell's synopsis of several

studies finds GP referral rates to specialty services varying in excess of a ratio of 10:1 (20). For 1973-4, Buxton found a 4:1 variation in the number of claims per GP for night visiting (a service that qualifies for separate fee-for-service payments) across the old 113 Executive Council areas (21). The variation by individual GP would be even greater.

Even more striking is the apparent change over time in patterns of practice. The Royal College of General Practitioners reports that between 1949 and 1971, GPs reduced the home visiting rate per patient by 60 per cent and the office visiting rate by 15 per cent, a reduction in total mean visits of 27.5 per cent in the practices from which the data were collected, despite the decrease in average list size from approximately 2,500 patients to 2,350 (13). The important point is not whether patient care has suffered; some GPs say that over time they have educated their patients about when to seek care, and thus they now see fewer trivial cases. Rather, it is the large decrease in physician workload that has evidently occurred in the absence of any public debate. Certainly, a relative increase in remuneration that approached 30 per cent would be inconceivable without such a debate. The profession itself reports that the average GP works just under 40 hours per week, hardly a figure that would generate a national policy to reduce working hours.

The above statistics can be challenged. The content of visits may have changed, and thus numbers of visits may not be a valid proxy for workload. Also, the practices used to derive the estimates may be atypical, since they were those practices willing to be studied rather than a random sample (22). However, one of two conclusions must be drawn, i.e., either the over-all pattern emerging from the data is believable or essentially nothing significant is known about the use of services. Either conclusion is consistent with the central argument of lack of accountability. In fairness, I would point out that the profession itself displays a willingness to engage in self-appraisal, and many of the above statistics are provided by the Royal College of General Practitioners.

The situation of hospital-based doctors is different, although some of the same characteristics exist. As previously mentioned, consultants undergo a competitive selection process before being appointed. Once appointed they work within a team structure, which may encourage good performance. Junior doctors are accountable to a consultant, who is at all times responsible for the patients.

One potential incentive is the distinction award, which at the highest of the four levels can double remuneration. Awards are granted to roughly one-third of all consultants at any one time, and some 60 per cent receive awards before retirement. Once granted, they are a permanent addition to salary. The awards are made secretly upon the advice of a body composed of consultants (except for a lay Vice Chairman). The criteria are not well-defined, although the general criterion is clinical excellence, with research and administrative activities as subsidiary criteria. The awards are intended to reward 'originality, drive, and conscientiousness' (23); however, their impact on clinical performance would be difficult to measure. One source of controversy is that the awards are disproportionately held by consultants from certain parts of England and by those in the acute specialties; more than 70 per cent of thoracic surgeons and cardiologists have awards compared with less than 30 per cent of psychiatrists, anaesthiologists, and geriatricians (24, 25, 26).

The consultant, like the GP, has a life contract. He does not report to anyone in either a legal or an actual sense and is subject to discipline only in the case of a major medical or moral transgression. His clinical autonomy is nearly complete. He is free to set his own workload with regard to number and type of patients taken and treatment administered. He has absolute freedom to order drugs, X-rays, laboratory tests, and the like. Formalized peer review is stoutly resisted by most of the medical profession, although greater opportunity exists for informal peer pressure among consultants than among GPs.¹ The one major exception to the absence of a mechanism for reviewing clinical performance is a national system of detailed inquiry in the case of maternal deaths (28).

As for GP services, there is a patient complaints mechanism. The patient first contacts the area health authority and then, if still dissatisfied, the Health Service Commissioner or Ombudsman, as he is known. The Health Service Commissioner and his staff have access to medical records. Typical complaints investigated include discourteous treatment by staff, failure to provide the patient with information he might reasonably expect, poor administration, and treatment by a doctor who is not qualified to render the service in question. However, complaints based on clinicians' medical

1. For a particularly interesting discussion of a quality review system implemented voluntarily at one hospital, see McColl (27).

judgement may not be investigated. Klein reports that investigations to date have been painstakingly performed, but in 1975 there were only 146 such investigations (29).

Another review mechanism is the Health Advisory Service (HAS), which was established to assess hospital services for the chronically ill. HAS was formed in 1969 as a result of exposés of poor conditions in mental institutions. It is independent of the Department of Health and Social Security (DHSS), although funded by it. HAS arranges for visits of multidisciplinary teams, comprising doctors, nurses, social workers, and so forth, to institutions that care for psychiatric, geriatric, and long-stay child patients. A separate but similar programme arranges for visits to hospitals for the mentally retarded. The teams examine the living conditions and care of patients, including co-ordination between institutional and community services. However, they are precluded from reviewing clinical decisions. The aim of the HAS is to assist the institution and the local health district and area appraise their own activities, and thus the reports are confidential, although they are sent to the Secretary of State for his personal perusal only.

Priority setting and over-all management of the system are potential subjects for government review. Though documents leading to and implementing the 1974 reorganization emphasized monitoring and accountability (30, 31), neither has taken meaningful form.

The regional and area health authorities (RHAs and AHAs) are intended as the policy making and monitoring bodies. The authority members serve on a voluntary, part-time basis, although the chairman is paid a modest amount and typically spends three days a week on health services work. Generally, the members meet only once a month, and their knowledge is usually limited. In addition, the chain of accountability downward is from the DHSS to the full membership of the RHA and in turn to the full AHA. Members of the full-time regional team of officers do not have a line relation with their counterparts at the area level. Similarly, the area officers have no line relation with district officers, who report instead to the full AHA, with whom they rarely meet. Hence, there is a remoteness between levels. Furthermore, many authorities eschew controversy, and the prevailing ethic is that difficult decisions resulting from disagreements among full-time officers constitute a breakdown in consensus management and reflect badly on all concerned. Finally, the top area and regional

staff occupy tenured positions and are not subject to job reassignment as in most civil service-type personnel systems.¹

The District Management Team (DMT) has two types of membership. The first are the permanent, tenured members appointed by the AHA: the administrator, head nurse, treasurer, and district community physician. The second are the two elected representatives of the GPs and the hospital consultants, plus in teaching districts, the medical school dean or his designee.

The reorganization intended broad *management* latitude for the district, but district performance was to be monitored. DMT meetings are closed to outsiders, and neither full-time area officers nor members of the authority receive sufficient information, formally or informally, to permit monitoring. In some, admittedly unusual, cases requests for information are simply ignored, with no adverse consequences. Importantly, in addition to available information not always being transmitted, much basic information on efficiency or effectiveness is lacking, thereby severely limiting the ability of higher levels to assess activities. The problem of lack of information is amplified later in this essay.

Even policy decisions over a broad range are not subject to higher level review, provided the budget is not overrun. In practice, they are made at the district level or through a series of medical committees at the area and region with little review of their congruence with area and regional priorities. Priorities reflect an aggregation of small decisions. Staffing decisions, with the exception of medical specialist appointments, are made entirely at the district level. Whether a new nursing position is filled by someone engaged in family planning, well-baby care, care of the elderly in the home, or acute services on a hospital ward is very much a priority decision. Decisions about new medical equipment evolve largely through a bargaining process among consultants. For small items the DMT simply sets a total budget each year, and the consultants make allocations among themselves. Requests for larger items are processed through area and regional level medical committees, as described in the section on planning.

The extent of district autonomy varies. Personalities are important as in all organizations, and in many instances the relationship is

1. Although the NHS is not formally part of the government personnel structure, it has many of the same characteristics such as open advertising for positions, merit promotion, and tenure.

cooperative. The willingness of area officers to play an active role in setting policy varies as does the zeal with which district officers try to fend them off. The character of the area also varies. Officers in areas with five or six districts tend to intervene less than those with only two or three. Teaching districts tend to seek autonomy more aggressively than non-teaching ones. In general, however, district autonomy can be very great indeed, provided the district meets its budget.

The levels above the districts do have both mechanisms for intervention and important policymaking functions. With regard to mechanisms for intervention, DHSS and the region can dismiss the authority members they have appointed. However, such draconian sanction is rarely a credible threat.¹ Each level can potentially direct its own officers to assume the functions of the officer team of the level below, an almost equally draconian measure. It can also order the level below to take specific measures, something it can realistically do only infrequently. Finally, the higher level can operate through persuasion. This is in most circumstances a weak tool though it can be effective when the layer below wants help or when there is disagreement among parties at the lower level and persuasion from above serves to tip the balance.

With regard to policymaking and managerial functions, the area reviews capital expenditure and all new or vacant registrar, senior registrar, and consultant positions. Both of these functions are important, although to date they have reflected mostly a veto power rather than a lever to induce the areas and districts to adopt policy thrusts they would rather avoid. The area runs the ambulance service (except for London, where a city-wide system is in operation), the small health centres programme, and certain aspects of child health. It is also responsible for co-ordination with local government regarding policies for personal social services and residential care for the elderly, the mentally ill, and the mentally retarded. In theory, it can direct the district to take specific measures, but in practice it has little control over the smaller decisions described above, little ability to exert positive pressure to engage the districts in activities they would rather avoid, and little ability to monitor the efficiency or effectiveness of a district's performance.

The area, like the region, has one other role, which appears to permit detailed control—discretion on the allocation of total funding. However, withholding of funds is more likely to have an adverse

1. For a further elaboration of this hypothesis, see Klein (32).

effect on patients than on offending staff members. The process of allocating funds is discussed in the last section, suffice it to say here that it has not been an effective lever on the districts and is likely to become even less so as the judgemental approach to distribution is changed to a formula.

Similarly, the region has significant functions. It plans for the regional specialties, such as neurosurgery, renal treatment, and cardiac surgery, which need to be organized on a larger scale than the district or area. It is responsible for capital allocation and has veto power over capital investments. In addition, it can direct that hospital or wards be closed or their functions altered. Such positive actions are likely to be taken only when the area exceeds its budget or grossly deviates from established norms. Perhaps most important in the long run, it controls the establishment of new medical specialist posts (registrar, senior registrar, and consultant) and reviews presentment to existing posts. Medical manpower planning is discussed in more detail in the next section.

At the time of reorganization the planning process was intended to be the principal tool for establishing policy objectives and monitoring progress towards them. Guidelines are issued annually to the respective level below by the DHSS, regions, and areas, and the resulting plans by the districts, areas, and regions are to be reviewed to ensure conformity with these guidelines. Thus, the planning process was to play a central role in making all three tiers accountable. Over time it may begin to do so, although as discussed in the next two sections the potential is limited.

Some problems with the planning process

The 1974 reorganization instituted a detailed planning process, and the first full cycle was completed during the fiscal year ending March 1977, although experience had been acquired previously on a trial basis. Since the process is in its early stages, and the basic documents have yet to be fully digested, only a preliminary assessment is possible. A smoothly running planning system is a long term rather than a short-term objective of the DHSS, as indicated by the following quote from the principal document implementing the planning process:

Any planning system must essentially be of an evolutionary nature. A start must be made somewhere with a framework within which planning

proposals can be developed and processed. The system described below cannot be right (the) first time and it will be revised in the light of experience. The planning processes it describes are inevitably ambitious and it is expected that the pace of implementation will vary between Regions, Areas and Districts. Some will want, and be able, to implement planning fast; some will only be able to proceed modestly (33).

Thus it is fully intended that alterations be made over time, particularly in the light of experiences during the 1976-7 cycle.

The process distinguishes between strategic and operational planning, although of necessity there is overlap. Strategic plans are to be prepared once every four years but reviewed annually to assure that they are still applicable. They are the vehicle for articulating within anticipated budget constraints long-range objectives and the allocation of resources required to meet these objectives. A ten-year period is specified, although accurate quantification is recognized to be less feasible the longer the time horizon. The DHSS is to provide written guidance on priorities to the regions, and the regions to the areas. The areas prepare strategic plans and submit them to the regions, and in turn the regions prepare plans. Since districts in theory have responsibility for implementation but not priority setting, they prepare operational plans only.

Operational plans are prepared annually to implement the strategic plans over the following three years. The DHSS provides guidance to the regions, the regions to the areas, and the areas to the districts. At the district level, from six to nine planning teams, mostly client-group oriented (for example, the elderly, the mentally ill, primary care services, hospital acute services) prepare submissions to the DMT, which prepares its own plan. The area prepares a plan based on the district plans, and the region based on area plans.

At each step, for both strategic and operational planning, consumer groups, the professions, the trade unions, and other interested parties are to be consulted. The plans are intended to present baseline data describing the present state of services, the deployment of resources, and need; to identify problems and objectives; to present the steps necessary to achieve objectives; and to be the vehicle for monitoring consistency with guidelines and determining whether objectives are being achieved.

The process can be viewed as marking 'a transition from "muddling through" to the alternative of "rational planning" whereby objectives are established and the best means of achieving them identified'

(34). The planning system has stimulated the collection of baseline data on the population to be served and has led to analyses of how a particular geographic unit compares with other units in terms of selected inputs, typically through comparisons of ratios of beds or staff to population. Thus, for the first time, the mechanism exists for analysing comprehensively the needs of the population and the relative availability of services. In addition a process is established for multidisciplinary professional teams to meet (no small accomplishment) and plan for the delivery of integrated services to selected groups, such as children or the mentally ill. Yet, whatever its contributions, a gap exists between planning as set forth in the documentation and its operation in practice, and some of the problems may be difficult to remedy simply by the accumulation of experience.

It is important to distinguish between the formal planning process and the actual decision-making structure, which may generate careful planning in the absence of a formalized process. The 1974 reorganization itself brought about a fundamental change. Making officer teams responsible for a comprehensive array of services within their respective regions, areas, and districts has forced them to think in terms of a total population to be served rather than in terms of a particular hospital or set of hospitals as before. Recent stringent budgets have themselves generated responses entailing planning. For example, some small hospitals, many of which have long been regarded as inefficient, are being closed. Comments are made about the complex decision and consultation process, but hospital or ward closures are the quickest method available to most districts to come within budgets. In addition, whereas in the past a retiring consultant position was filled with at most a cursory review of whether the post was still needed, under current budget constraints vacant positions are likely to be carefully scrutinized.

The planning process is closely linked to the decision-making structure created by the 1974 reorganization. Although officially described as a three-tier structure, it can perhaps more accurately be characterized as having four tiers, the fourth being the DHSS, which is responsible for over-all policy, and more than four considering that the DHSS has many layers and districts have substructures. For decisions that are not made near the level of implementation, decision-making is ponderous. Furthermore, the layering and team decision-making approach may leave the individual clinician

frustrated because he has difficulty determining who made a decision affecting him or why. Confusion of roles is prevalent at all levels. In areas with only two districts, some argue that the work of three teams of officers could in many cases be performed by just one. In this situation, the district is particularly likely to feel that the area intervenes excessively and erratically. In contrast, officers of the largest areas, and some exceed a million people, may be in continual conflict with the region, because they believe they can realize virtually all the economies of scale embodied in regional decision-making and thus do not perceive the region as having significant functions that they could not perform themselves. The planning process is intended to help establish distinct functions at each level, but whether it can overcome role conflicts and ambiguities is highly questionable.

Many of the planning documents within the NHS lack substance. It is not easy for the DHSS, the region, and the area successively to provide meaningful and increasingly specific guidelines to the lower level. Thus, the guidance downwards may simply reiterate the statements of the higher level. Furthermore, detailed plans cannot be prepared in the time available. Communication within the echelon system entails not only the technical aspects of plan preparation but also time-consuming group decision-making and outside consultation. Thus the planning requirements strain both available time and technical capacity.

The few good guidelines and plans prepared during the 1976-7 cycle contrast with those which are merely *pro forma*. Commonly, the plans comprise a statement of objectives and problems and a list of desired capital projects. Rarely do they propose cutbacks or significant reorientation in existing activities, other than those where agreement has been reached prior to the start of the planning process, such as the closure of small hospitals. Thus the plans often record past decisions rather than generate new ones.

At each level, staff are unsure how seriously the guidance from above should be taken, particularly as it is often very general; information on policies and performance at lower levels is lacking; and there is a reluctance to reshape priorities proposed by lower levels unless they deviate grossly from established norms. Staff throughout the NHS express concern about the need for good relations with the level below (at the district level there is a strong desire not to antagonize medical and other staff). The plans are

intended as a major instrument for monitoring operational policies and ensuring that guidelines are followed. However, the information provided falls considerably short of that required for even rudimentary monitoring.

The planning process suffers from other defects as well. The formal process may contribute more in the planning of new services than in restructuring or reducing existing services. The implicit notion of 'property rights' is very strong. For example, once a consultant is assigned a complement of beds, he views them as 'his' beds, and administrators and other consultants are loath to reduce the complement. In addition, many teams of officers are reluctant to plan overtly for the reorientation of existing services before they receive their budget allocation, which occurs just before the fiscal year and after the plans are completed. If planning for retrenchment is difficult, it is even more so when based on hypothetical budgets.

Many decisions are made outside the formal planning process. For example, very little planning is possible for GP services, and the DHSS has not sought to change the structure of these services.

Decisions on equipment purchases, staffing other than for hospital doctors, renovation, and so forth are often made with little regard to the plans. Decisions on medical equipment are typically made through a bargaining process among consultants with little recognition of guidelines or plans. Decisions on expenditures below a certain level (around £5,000 depending on regional policy) are made by the district. Above that level, they may be subject to review by a complex structure of medical committees at the region comprising elected representatives of the consultants. Although these committees are technically advisory, they are rarely overruled unless they exceed their assigned budgets. As a result, specialists may be able to obtain equipment that district or area officers might consider low priority. Furthermore, since the acute specialties tend to dominate the committees, the interests of the long-stay specialties may fare poorly whatever the priorities reflected in the formal guidelines and plans.

Manpower planning (assuming it entails more than a listing of desired staffing) is still in its infancy but may in the long run be the most consequential aspect of planning. Some argue that the allocation of consultants by specialty largely determines priorities, since the consultant in effect commands many of the resources within the hospital. This is certainly the case for the acute specialties, although it is less so for long term and community care, where nursing staff

predominate. Although integrated manpower and health services planning is only beginning to occur, significant improvement in the next few years seems likely.

However, several factors to some extent reduce the effectiveness of such planning. First, requests for new specialists usually originate from among the consultants themselves. Consultants are typically eager for assistance from junior doctors, especially registrars and senior registrars, to lighten their workloads, but such requests are often rejected to avoid exacerbating the lack of opportunities for promotion to the consultant level. In contrast, they are often less enthusiastic about enlarging the complement of consultants. Additional consultants may entail sharing resources, such as beds, junior doctors, nurses, medically interesting cases, and in some specialties private patients. Hence, the request, however desirable, may never originate. Second, reviews take place through two interconnected mechanisms. The first is the set of medical advisory committees representing the doctors at each level. The second is the management structure at each level and the area and regional authorities. They are responsible for planning and priority setting but to date have generally been loath to overrule the recommendations of the medical committees, which are heavily dominated by surgeons and specialists in general medicine, although they may be prepared to influence priorities to some extent, and their willingness to intervene could increase as they acquire more experience with plan preparation and implementation.

Some view the shortage of both positions and trained personnel for management and planning as the overriding problem. At the time of the reorganization, several key decisions may have reflected the desire to make career opportunities available to senior officials rather than health service needs. More districts were created than many people felt was necessary, thereby increasing the number of administrative positions. Also, the decision to duplicate at area and region the senior management structure of the district, comprising an administrator, a nurse, a treasurer, and a full-time medical officer, reflects the desire for greater career opportunities beyond the district level and is particularly questionable given the fundamental difference in function, i.e., line management at the district level and staff at the area and regional levels.

Some of the problems with the planning process were anticipated in the formal documentation, particularly with regard to the limited

time available to consult interested parties and to develop an adequate information base. The wide variations in planning ability and orientation that exist were also recognized. The most important benefits of a formal planning process may not be discernible through a reading of the formal documentation. They result from interested parties from different disciplines confronting issues and sharing ideas. The process is intended to change attitudes and provide a mechanism for allocating resources and reviewing performance that is open, participative, and objectively based rather than stemming largely from special pleading. In addition, a massive system has been imposed at a time when the NHS is under stress from many sources. The first full cycle represents a major learning experience and begins to establish the knowledge base for future plan formulation. In recognition of this, the DHSS is considering a second round of strategic planning after two years rather than after four as originally intended. Thus the next cycle would run from March 1978 to January 1979. This should allow the different levels to build upon the guidelines and plans from the 1976-7 cycle and to develop further their information base.

Over time, the guidelines are likely to be made more specific and consequently will be harder to ignore than vague ones. Senior staff will acquire experience in the mechanisms for priority setting. In particular, they may begin to challenge the recommendations of the medical advisory committees when these deviate significantly from enunciated priorities. The historical concentration on capital planning is likely to be superseded by more sophisticated services planning, with capital planning simply being one lever, albeit an important one.

All too often, governmental reorganizations cause dislocations that are underestimated before implementation, and the resulting benefits are overlooked afterwards. To some extent the problems are simply characteristics of government programmes, which for bureaucratic and political reasons tend to be overly complex for the task at hand. To a larger extent, they may work themselves out. I would suggest, however, that whatever the positive contributions of the planning process, time alone will not cure the problems of unclear incentives, a multilayered structure with reporting and role relationships that are ambiguous, unrealistic time constraints, decision-makers' reluctance to expose their plans on paper, and the shortage of professional staff capable of planning a highly complex service.

An assessment after the next cycle of strategic planning should shed light on the extent of evolution.

Information

An adequate data base is essential for monitoring, planning, and establishing accountability. The lack of information regarding GP services is discussed above. Although it is not a comprehensive review of all data systems, this section seeks to illustrate some of the shortcomings in the provision of financial and patient information with regard to hospital and community services.

Financial accounting systems serve three purposes. First, they help ensure that funds are spent as intended. This function is adequately fulfilled by most public accounting systems in England and the US and is not discussed further. Second, they are essential for monitoring efficiency. Third, they generate data for planning.

Total budgets are established annually for each district, area, and region, and actual expenditures are reported monthly. Strong pressures exist to keep within budget limits, and substantial overspending is rare. Thus aggregate spending is tightly controlled. However, little is known about performance.

Accounting data are collected for each institution in two ways. The first is by type of expenditure, for example, salaries, drugs purchases, and linen. The second is by function, such as clinical services, nursing services, and laboratory services. Separate accounts are kept for in-patient, out-patient, and accident and emergency services. Data are aggregated by type of institution, of which there are roughly twenty categories, such as acute, partly acute, long stay (primarily geriatric), psychiatric, and maternity. In addition, selected workload statistics are derived, allowing the calculation of some unit costs. Thus costs can be calculated per patient day, per case, per pound of laundry, per meal served, per prescription filled, per laboratory test performed, and so forth. These unit costs potentially permit the relative efficiency of hospitals to be assessed.

The approach has several deficiencies related principally to the problems of making comparisons. The allocation by function may be of questionable reliability. For example, some hospitals allocate doctors' time between in-patient and out-patient services by asking them to estimate how they distributed their time the previous year, an inherently unreliable method.

A second deficiency is the inability to compare the costs of treating similar patients.¹ The cost per patient day or per case for a total institution can be calculated, but these numbers cannot be adjusted to reflect differences in case mix, nor can costs by specialty, diagnosis or ward be calculated. Hence, a hospital with high daily or per case cost can plead that it is treating sicker than average patients, thereby questioning the basis for comparison.

Because costs are not allocated to the patient or ward, the doctor is not accountable for the laboratory tests, X-rays, or drugs he orders and is unlikely even to know how his use of resources compares with that of other doctors treating similar patients. His ability to order what he wants without oversight or peer review is staunchly defended in the name of clinical freedom. Ironically, to the extent that one doctor's clinical freedom allows him to order excessively, other doctors' freedom is reduced because less money is available for additional equipment, support staff, and so forth.

Conversely, although the manager responsible for individual cost centres (referred to as 'budget holders') may be able to have an impact on unit costs, he cannot affect quantity. For example, the pathology department can influence the cost per test, but it will not normally question the number or type of tests ordered. Indeed, the departmental budget may be so subject to influence by forces outside of the control of the responsible manager and thus so subject to adjustment that the manager views it largely as fictional. Well-established financial management techniques, sometimes known as 'flexible budgets', exist for relating cost to volume so that a manager's performance can be assessed legitimately in situations where he can influence unit costs but not volume.² The NHS, however, has not adopted these techniques.

As a result, the areas or regions do not attempt to control the efficiency of the districts; by and large, they lack the information to do so. The data potentially permit comparison and intervention when the costs of certain non-clinical support services, such as meals and housekeeping, are significantly above the average.

1. The DHSS is sponsoring some research on disease specific costing. In addition experiments have been performed, with encouraging results, entailing so-called clinically accountable teams, which are given a budget that reflects total per case costs, including those of diagnostic and pharmaceutical services. Teams that achieve savings may reallocate them to the purchase of medical equipment, improvements on the wards, or other patient-related service (35).

2. See, for example, Horngren (36).

However, at least in the acute sector, these services account for only a small proportion of total expenditures, and in the past, even wide variations in these indices have been tolerated, although this may be changing.

The suitability of available financial information for planning is more difficult to assess. For many purposes, approximations are sufficient, and a higher degree of inaccuracy may be acceptable for planning than for monitoring efficiency. However, better information would clearly be helpful. For example, specialty mix planning would improve if information were available on treatment costs. One could better plan the mix between in-patient and out-patient care if there were information on costs by type of treatment, particularly in light of national policy to reduce length of stay for acute patients and to care for the chronically ill outside of institutions where possible. Community care is often assumed to be more economical than institutional care, but this may not be universally true.

With regard to information on patients, extensive and potentially very useful data are collected on in-patient services, but they mostly lie fallow.¹ Under a system initiated in 1965 called Hospital Activity Analysis (HAA), hospitals are required to produce data summaries about each acute patient. These summaries are prepared from the medical records upon discharge and include the identification of the patient, place of residence, age, sex, consultant responsible, medical specialty, diagnosis, waiting-list time, length of stay, and major operations conducted. The data are computerized, and any cross-classification desired can be obtained. HAA was established principally to assist management at the local (hospital or district) level and to provide feedback on a confidential basis to individual consultants. In addition, a 10 per cent sample of the data is drawn annually, and national and regional statistical profiles are produced from it. For each region, diagnostic-specific means and medians are calculated for waiting times, length of stay, and so forth.

Variations in treatment practice, which are as large in Great Britain as in other countries for apparently similar patients, can be analysed and questions raised. For example, Ashley reports that the region with the highest admission rate for appendicitis is 50 per cent above the lowest (38). Heasman found the following variations among consultants in Scotland (39):

1. For good reviews of the availability and usefulness of in-patient statistics, see Morris and Ashley *et al.* (37, 38).

The average length of stay for patients with peptic ulcers varied from 8 to 23 days;

The average postoperative stay for hernia patients varied between 2 and 12 days; and

The percentage of patients discharged by surgeons who had one or more operations during their stay varied between 50 and 86 per cent.

The identification of variations of this magnitude can at a minimum highlight potential problem areas. In addition, aggregate workload and its composition could be monitored for individual consultants.

At the district level, the extent and causes of long waiting-lists, the rate at which services are delivered to specified populations, and the distribution between emergency and non-emergency care can all be analysed. In addition, the data might be valuable in performing outcome studies. Although a routine, comprehensive system of outcome measurement is beyond the current state of the art, abnormally high death or hospital readmission rates for selected diagnoses could be monitored for individual consultants or hospitals. In Scotland, but not in England, each consultant periodically receives data that allow him to compare his performance with the national average for such items as number of cases treated, days of hospitalization prior to operation, total duration of stay, and number of deaths. The impact of making such data available to individual consultants on a confidential basis in a non-monitoring environment has not been evaluated (39).

Existing data can also be valuable for planning. Analyses of the relationship between where people live and where they are treated have been particularly helpful in planning the location of new facilities and the closure of existing ones (40). Consultants have also used the data to demonstrate a heavy workload in order to justify requests for additional staff. However, lack of analytical skills and of familiarity with the data apparently deter more widespread application.

Some technical problems do exist, though they do not reduce the basic value of the data. Timing can pose problems. In some regions data are analysed quarterly, in others only annually, and there is wide variation in the delay from the end of the period in question to the time of data preparation. This delay is more of a problem for individual consultant feedback than for planning purposes. In most regions, patient identifiers are assigned independently by the individual

hospital or group of hospitals, making it difficult to analyse certain aspects of patient flow for persons admitted to more than one hospital. In addition, consultants tend to question the reliability of HAA, and no comprehensive evaluation of reliability has been carried out. Errors can arise in both the medical record and in data transcription. The quality of the medical record has not been evaluated and in many cases is suspect; the medical record is not standardized and the quality of medical notes is highly variable. In contrast, transcription problems are apparently not severe (41, 42). For example, for a representative sample of twenty-nine hospitals in Nottinghamshire, Martini reports error rates of 2 per cent in primary diagnosis; the most problematic item apparently is the coding of place of residence to small geographical areas, for which an 8 per cent error rate is reported. Finally certain potentially valuable in-patient data are not collected, for example related to X-rays, laboratory tests, or drugs. Hence, neither the aggregate intensity of services rendered nor the pattern of use of specific procedures can be calculated.

Data is poorer for hospital out-patient services, and nearly non-existent for GP services.¹ One experiment now underway entails extending the HAA in-patient data system to encompass hospital out-patient services, but nothing has been done nationally. Using a different data collection instrument, statistics are calculated on the number of out-patient visits or day cases by specialty for each institution, but service use rates cannot be derived for individual consultants, for the referring GP, by place of residence, etc.

Better data are valuable only if they change people's actions, particularly as large-scale data systems are expensive. Producing better cost information to allow the monitoring of efficiency is pointless unless those in authority are willing to examine the data and act accordingly. Similarly, better data for planning are of value only if there are planners and decision-makers who are willing and qualified to use it. Finally, data systems may be weak because there are vested interests in keeping them so. Doctors may not *want* to know their pattern of resource use, and they certainly have little incentive to know under the existing structure. Administrators may not *want* higher levels to know whether or not they run an efficient operation. Data can change power relations and roles, and few people actively enjoy being planned for or monitored.

1. Regions may voluntarily collect data through HAA on day cases.

The Priorities Document: case-study I

Some of the strengths and weaknesses in the planning and resource allocation process can be illustrated by examining two important and pioneering DHSS documents. The first, discussed in this section, is *Priorities for Health and Personal Social Services in England: A Consultative Document*, commonly referred to as the 'Priorities Document' (43). It was published in March 1976 and sets forth projected budgets through fiscal year 1979–80 and spending priorities within those budgets. The second, discussed in the next section, is the report of the Resource Allocation Working Party. It was published in September 1976 and sets forth a new approach for apportioning the total NHS budget among the regions.

The initial reference point of the Priorities Document is the public expenditure White Paper released annually, which forecasts the UK economy five years ahead, sets budget targets for government expenditures, and allocates the budget by major function. Projections are in constant price terms and thus are intended to show changes in levels of service, with the effect of price changes removed. Any change before the end of the five-year period is considered to reflect a policy shift, although it may also result from revised estimates. The development of national five-year targets by function brings into focus anticipated shifts in priorities and allows individual government departments to plan their programmes while recognizing the possibility of changed allocations over time. Thus, these departments are expected to use the White Paper estimates for planning purposes.

The 1976 public expenditure White Paper displays expenditures for each of the ten years ending 1979–80, i.e., five years back, the current year, and four years forward (44). In the four years ending 1975–6, health expenditures grew from £3,783 million to £4,331 million at 1975 prices, an increase of 14 per cent in constant price terms.¹ For the four years ending 1979–80, they are projected to grow to £4,586 million, an increase of 6.9 per cent. The ageing of the population alone is expected to increase demand by about 1 per cent over the next decade. Expenditures for personal social services are

1. The numbers in the public expenditure White Paper are for the United Kingdom, i.e., England, Scotland, and Wales, whereas the Priorities Document and the data below refer to England only.

projected to increase from £833 million to £846 million, an increase of only 1.5 per cent over the four-year period.

The public expenditure White Paper also displays operating (referred to in Britain as 'revenue') and capital expenditures separately.¹ Using the above figures as a starting point, the White Paper and the Priorities Document call for significant reductions in capital spending. Already, capital spending had been reduced from £394 million in 1973-4 to £317 million in 1975-6. The Priorities Document forecasts reductions to £235 million in 1979-80. This reduction in capital spending allows within the total budget a 2 per cent annual growth in operating costs for the next four years.

Long-stay patients are selected as the major priority group. Expenditures are projected to increase by 3.2 per cent annually for the elderly, 1.8 per cent for the mentally ill, and 2.8 per cent for the mentally retarded. These increases are made possible by limiting expenditures for acute and general hospital services to annual increases of 1.2 per cent and reducing hospital maternity services by 1.8 per cent. Stated in annual terms, these changes appear undramatic, but over several years they would represent significant shifts in emphasis.

The increase in expenditure on the elderly is based on the increased proportion of elderly in the population and the judgement that expanded services, particularly for chronic conditions, for the elderly are desirable. Expanded services to the mentally ill and mentally handicapped reflect a statement of political priorities generated by newspaper stories and the findings of government inquiries into poor living conditions and lack of treatment capacity in some institutions (45). The reduction in hospital maternity services is justified principally by a decline in the birth-rate. Between 1970 and 1973, in-patient maternity cases fell at an annual rate of 1.6 per cent, and the length of stay decreased from 7.3 days to 6.9 days. In 1974, the average occupancy rate on maternity wards was 64 per cent, and many small hospitals devoted exclusively to maternity services have occupancy rates well below 50 per cent.

In addition to the above shifts, nursing services in the home are projected to increase by 6 per cent annually, and family practitioner services by 3.8 per cent.

1. I apologize to the British reader for the use of American terminology. The term 'operating' has the intended meaning in both countries, whereas 'revenue' in the US refers to sources of funding rather than to expenditures and thus would to an American be highly confusing in this discussion.

The Priorities Document has generally been well received. Most in policymaking positions within the NHS—at the region, area, and district levels—accept the priorities as reasonable, as do most consumer-oriented groups. Members of the acute hospital-based medical specialties have reacted the most negatively, and they are politically very powerful. Reflecting their views, the *British Medical Journal* in two separate editorials stated that the document reflects a 'policy of despair' and argues that the low rates of increase in the acute sector stem from the NHS as a whole being underfinanced, that NHS hospitals are among the worst and most neglected of public buildings, and that the benefits of acute hospital services are underestimated (46, 47). In essence, they argue for a larger pie without explicit addressing the sharing of the pie.

Another objection is that the document is politically motivated and technically deficient (48). This charge, although superficially appealing, appears misplaced. The epidemiologist or health services researcher is ill-equipped to compare benefits from increases in spending for chronically disabled, elderly, or mentally ill or handicapped patients with those resulting from increases for the acute hospital sector. Hence, the trade-offs necessarily and legitimately reflect period values and political judgements.

The document as a statement of national policy has many strong points. The process of budgeting in real terms prevents inflation from masking cuts in services or exaggerating rates of increase. At the departmental level, the document represents for the first time a clear over-all statement of priorities and policies. Since the government controls all but a very small proportion of health care expenditures, it can potentially establish priorities in a way that is not feasible in a country with mixed financing where expenditures are the summation of individual decisions based on a combination of market and non-market forces. Furthermore, the balance among services would appear to be based on an explicit decision-making process, with national priorities related to reasonable budgetary expectations. The demographic assumptions, such as the ageing of the population, and their effect on demand for services are clearly articulated. Health and personal social services are treated together, which is particularly important in dealing with the priority groups: the elderly, the mentally ill, and the mentally handicapped.

Political processes at times deplore explicitness, particularly when budget reductions are contemplated several years ahead. Yet the

document directly challenges the acute services, hardly a disorganized sector or one that lacks vocal or articulate spokesmen. Furthermore, it shows the way (whether or not one agrees with the specific priorities presented) towards living within a growth margin for health services that is considerably below that predicted for other Western countries. Finally, although alternative strategies, such as greater spending on capital or on acute services, are not spelled out explicitly the construction of the document and the tables within it readily allow the reader to formulate other strategies and to argue their merits.

On the other hand, the document and the process of which it is a part can be criticized on several grounds. The document was published a year later than originally scheduled. This may appear a trivial matter and one that can particularly be excused as the first full run of a highly complex cycle. However, whatever the reasons for the delay, it may be symptomatic of a process that requires greater planning outputs than are feasible technically, politically, or in terms of the availability of trained staff.¹ Even as a mature process, the requirement that the DHSS, regions, and areas each issue guidelines, and the districts, areas, and regions prepare plans, all sequentially within the one-year cycle, is a recipe for uneven quality, missed deadlines, and at times paper (lots of it) compliance.

In some respects, the DHSS made the politically easy decisions, leaving harder choices to lower levels. The document presents a national picture, and the rates of change projected were not intended to be applied uniformly. Some localities legitimately argue that their rate of expenditures on the priority services are above the national average and thus they should not be expected to increase them further. Others, of course, are below the national average. For the national average to be achieved within the time anticipated, they would have to reduce the provision of acute services. Such a reduction at the local level looks very different from the 1.2 per cent national increase contemplated and may be difficult to obtain, particularly in light of public pressure on individual districts and areas against reducing employment in NHS facilities.

The severe cutbacks in capital spending are defended as putting

1. Some point out that the delay was caused not by the DHSS but by the Treasury being late in issuing the public expenditure White Paper because of economic uncertainties. This argument misses the point that delays are likely whatever the cause.

'people before buildings', 'people' presumably referring to patients.¹ However, this statement begs the issue of the reduction of capital expenditure to protect funds for operating costs. Although buildings are valuable only in terms of the services they allow to be provided and are not ends in themselves, the same can be said about any other input. The document lacks analysis to support the cuts, such as the age of the stock or the rate at which the proposed allocations would support renovation or replacement.

In fact, a DHSS survey conducted in 1972 found that 53 per cent of hospital floor area was constructed before 1918, and 37 per cent before 1900. At current prices, an estimated £10.5 billion would be required to replace the existing stock. Of the £235 million projected for 1979-80, roughly £187 million is for hospital construction; the remainder is for health centre construction, furniture, and movable equipment. Thus, at the expenditure rate projected for 1979-80, it would take 45 years to replace the existing capital stock. The projected reductions in capital spending may be justified. On the other hand, the decision can be interpreted as seeking to limit dislocations in the short run at the potential expense of future generations, who are likely to inherit an even more antiquated stock.

The easy route was also taken on family practitioner services. The projected annual increase of 3.8 per cent is described as necessary 'to meet increased demand, particularly the extension of family planning and primary care for the elderly, and to cover the rising cost of the pharmaceutical bill'. However, budgets for these services are not directly controllable; they are simply the sum of reimbursements to the independent practitioners. Rising expenditures will reflect primarily the increased numbers of GPs claiming costs and basic practice allowances to which they are entitled when they set up practice, the trend towards greater drug prescribing, and so forth, rather than increased demand. For 1975-6, prescription drugs are budgeted at £312 million, compared with only £233 million for services of GPs. Thus almost 50 per cent more is spent on drugs prescribed by GPs than on their services.² Drug prescribing is

1. The specific quote is, 'The first essential is to maintain the standard of services: to put people before buildings'. An alternative interpretation is that 'people' refers to staff rather than patients. If so, this reflects a willingness to protect employment rights at the potential expense of the long-term delivery of services.

2. Other independent practitioners, such as dentists, may also prescribe; however, the amount of money is an insignificant proportion of the total.

projected to increase by 5 per cent annually. The document does not justify the increase as desirable and offers only vague rhetoric about patient and doctor education as a solution. Furthermore, it is generally accepted that GPs are in short supply only in certain places, yet improvements are not suggested in the designated area allowance programme, the primary vehicle for increasing GP supply in shortage areas. Other than cosmetic support of the small health centre programme, whose impact has not been evaluated, solutions to acknowledged problems of distribution are not proposed. Tackling the issues of rising pharmaceutical costs and GP maldistribution would probably require increased controls on the profession in the former instance and additional controls or expenditures in the latter—both evidently politically unpalatable.

Nor are any structural changes proposed in the financial reward system for consultants. In theory, a uniform payment structure exists across all specialties and geographic areas. However, consultants in surgery and general medicine receive distinction awards at twice the rate of those in psychiatry and geriatrics. Furthermore, surgeons have the greatest opportunity to develop a private practice. Although promotion through the junior doctor ranks of the long-stay specialties is faster than for the more popular acute specialties, in the long run the long-stay specialties are less lucrative.

The crux of the statement of priorities is a budget table showing expenditure allocation by patient care groups, such as the elderly and the mentally ill. The budget allocation is appropriately described 'not as a complex technical tool but a crude method of costing policies based on past experience'. As an approximation to the existing pattern of expenditure, it is quite adequate. However, it is not a good management or monitoring mechanism. For example, since cost accounting is by institution rather than by service, the cost of care in maternity, geriatric, or psychiatric wards of general hospitals is not known. The estimates in the document were derived by applying the average *per diem* or per case costs for the specialty hospitals to the corresponding wards of general hospitals. But the costs structures are probably different—no-one knows for sure. Thus, as occupancy in one type of specialty hospital changes, the resulting cost changes will be attributed to the general hospital, where occupancy may have remained constant—the budget is not sufficiently sensitive as a tool for tracking small percentage changes, even on a national level. Hence, it is doubtful whether it would ever be known

if the pattern of expenditure intended in fact occurred. In addition, most regions have not developed programme budgets similar to the national one, although some are doing so. However, even if they did, the cost of measurement problems would make it difficult for central government to know the extent to which the individual regions were following national priorities. In summary, little is known about how moneys are spent programmatically, and the data systems allow the DHSS to monitor only flagrant violations of national priorities.

The reaction to the document within the NHS is also instructive. The document has been widely read throughout the NHS and clearly contributes to the national debate on priorities. Many in a position to make policy decisions accept the priorities as valid, and for advocates of the services singled out for growth, it legitimizes their claim for increased funding. That it has been an influential document is beyond doubt. However, ambiguities abound.

It is labelled a 'consultative document', but, along with subsequent DHSS issuances, it also provides substantial guidance for the 1976-7 planning cycle. How binding, then, is it meant to be? Is it simply advisory, or does it imply that the DHSS would take sanctions against regions that disregarded the priorities? The rates of change are national averages and are not meant to apply uniformly. Some regions, for example, are already above selected 1980 targets in services singled out for high growth. Others are well below. How fast should they reorient their programme so that national objectives can be achieved?

Areas and districts may challenge the priorities on several grounds. In some cases, the level of provision of the favoured services is above the national average; hence they can argue, and the DHSS would generally accept, that the document is inapplicable. Most areas and districts with standstill budgets are simply unprepared to cut the acute sector to favour long-term services, and the higher levels can do little to intervene. The hospital consultants in acute specialties are powerful, and although some hospitals have been closed, the *modus operandi* of the NHS is to protect existing services. It seems likely that the burden of achieving the priorities expressed in the document will fall mostly on districts whose budget growth is above the national average because of relative underfunding in the past and which are currently below the national average for the priority services. If indeed much of the power resides at the district, as argued above, then the process of guideline issuance through three successive layers may

have meaning primarily through a process of persuasion rather than direction.

The interpretation of the growth-rates proposed for social services is even more unclear, since these are financed by local government, although mechanisms for co-ordinated planning of health and social services are being introduced, and a modest amount of time-limited funding is available to local governments to initiate projects that relate to NHS concerns. Local government in England is structurally a creation of central government and is subject to more oversight than in the US. For example, all major local capital schemes require central government approval. None the less, local governments are largely autonomous, and, as might be expected, the variations across the country are large.

The Priorities Document and the RAWP report (see last section) have a potential for working at cross-purposes. First, as moneys are apportioned by formula, thereby removing central discretion, the ability of the DHSS, particularly below the political levels, to intervene in priority setting could be further reduced. Second, it is difficult to ask regions, areas, and districts that face reduced funding under the formula allocation, to reorient their priorities as well. Thus, the DHSS may have to modify the targets in one or both of the documents.

Like the formal planning process, the Priorities Document is a product of the reorganization and is a new venture. Whatever its flaws, it challenges the inertia in the system; sharpens the debate on priorities in a world of infinite wants and finite resources; and has a significant, if difficult to measure, impact. Over time, DHSS guidance can be refined and improved. Targets are likely to be adjusted to reflect what NHS officers and authority members feel can be achieved. If one or two regions deviate significantly, they may be called to task, although the DHSS would do so reluctantly. The document's consultative nature stems in part from its being the first step in the first planning cycle. However, the document does illustrate some of the many ambiguities in the central government's role in establishing and monitoring policies, ambiguities that are almost inherent in the English health system as currently structured.

Resource Allocation Working Party Report: case-study II

The second case-study, published in September 1976, is the report of the Resource Allocation Working Party (RAWP), entitled *Sharing Resources for Health in England*, which proposes a new formula for distributing funds among regions (49). In December 1976, the Secretary of State accepted the formula for fiscal year 1977-8, with the poorest regions receiving 3 per cent growth in resources annually, and the wealthiest $\frac{1}{4}$ per cent, figures that are consistent with the anticipated over-all growth in real resources of $1\frac{1}{2}$ per cent. However, the individual regions are given considerable discretion regarding the extent and manner of redistribution to areas and districts.

An analysis of the report and its background is of interest from at least three perspectives. First, as with the Priorities Document, it illuminates some of the themes of this essay, particularly those of data availability and accountability. Second, issues of geographic equity have attracted widespread attention in the US where the problems are far worse, and the difficulties encountered in England in reducing such inequity are instructive. Third, it illustrates some issues that arise in a delivery system with geographically determined limitations on expenditures (area-wide budgets), which many view as the only effective approach to restraining the rapid rise in health care expenditures in the US.

The original 1946 Act establishing the NHS combined two distinct systems of hospital provision, the voluntary and the municipal hospitals. As a result, the NHS inherited a distribution that 'reflected the unequal distribution of income and charity that existed prior to 1948' (50). According to Buxton, geographic equity became an important issue in the 1960s. Until then, funds were allocated on a judgemental basis, with each region receiving the same allocation as in the prior year plus a negotiated share of the growth margin, which was as likely to go to the more articulate well-off regions as to the poorer regions. Public policy evolved to apply the growth margin to benefit differentially the poorer parts of the country. However, even with a real annual NHS growth-rate of 4.7 per cent between 1957 and 1970, the wealthy regions competed successfully for new funds, and the inequalities remained. Thus for hospital as well as for ambulatory services, the geographic distribution of resources had not changed

significantly since the introduction of the NHS, although it is supposed to be a tightly controlled system.

Largely as a result of this experience, in 1970 the DHSS introduced a formula, to be phased in over several years, for distributing funds. The formula allocated 50 per cent of the moneys in proportion to the region's population, 25 per cent in proportion to its bed stock, and 25 per cent in proportion to the number of in-patient admissions. However, the last two factors reflect the then-existing resource distribution; resource-rich areas invariably have more beds and more in-patient admissions. Thus, the components of the formula worked at cross-purposes, and equity remained elusive. For 1972-3, *per capita* expenditures for general hospital services across the 90 health areas were estimated to vary by roughly four to one—from between £43.99 in Liverpool to £10.72 in Leicestershire (51). By region, the variation from highest to lowest is about 33 per cent.

The RAWP report in essence reflects the third stage in the effort to correct geographical imbalances. Separate formulas govern the allocation of operating (revenue) and capital funds. In addition, some £72 million (1975 prices) in operating costs are set aside to supplement the normal allocation to teaching hospitals to reflect the additional costs in health services associated with their teaching functions.¹ Only the allocation of the operating budget is discussed here.

The allocation process can be thought of as entailing two sequential steps. First, the budget is distributed to regions, assuming each region serves only its own residents. Second, funds are transferred among regions to reflect the extent to which patients who reside in one region obtain services in another.

To calculate the initial distribution, the operating budget is divided into seven categories of service, with each service having a separate although similar formula. The weighting by category corresponds to the current national pattern of expenditure. The services and their respective percentages of the total are shown in Table 1. The percentages are simply a way of deriving a total allocation, and there is no implication that these percentages should influence how regions allocate their funds among service categories. Rather, guidance on service priorities is provided through the Priorities Document, as described in the previous section.

1. Medical education *per se* is funded separately from the education, rather than the health, budget.

Table 1. *Allocating the operating budget: services categories and percentage weights*

<i>Service</i>	<i>Weight %</i>
1. Non-psychiatric in-patient	55.9
2. Day and out-patient	13.4
3. Community	8.8
4. Ambulance	3.5
5. Mental illness in-patient	12.2
6. Mental handicapped in-patient	5.7
7. Family Practitioner Committee administration	0.5
	100.0

Regional population is the basic allocation variable for all seven categories, and the differences among them lie in adjustments made to the crude population numbers to reflect need more accurately than would a simple *per capita* allocation. The variables in the formula are summarized in Table 2. For non-psychiatric in-patient services, for example, which accounts for 56 per cent of the total, three additional variables are introduced. The regional population is distributed into age and sex groupings or cells, and the population in each cell is weighted based on national hospital use patterns. This adjustment recognizes, for example, that the elderly use more hospital services

Table 2. *Allocating the operating budget: variables in the formula and transfer pricing by category of service*

<i>Service</i>	<i>Variables in formula</i>	<i>Transfer pricing</i>
1. Non-psychiatric in-patient	Population adjusted for age, sex, SMR	Estimated average case cost by specialty
2. Day and out-patient	Population adjusted for age, sex, SMR	None
3. Community	Population adjusted for age	None
4. Ambulance	Population	None
5. Mental illness in-patient	Population adjusted for age, sex, marital status	Average <i>per diem</i> cost in institutions for the mentally ill
6. Mental handicapped in-patient	Population adjusted for age and sex	Average <i>per diem</i> cost in institutions for the mentally handicapped
7. FPC administration	Population	None

than younger age-groups, and women of certain ages use more services than men. Then, the population numbers are adjusted to reflect their relative age- and sex-specific mortality ratio, referred to as the standardized mortality ratio (SMR). The SMR is introduced as a surrogate for morbidity and, hence, need. Thus, the region with a SMR that is 10 per cent above the national average would receive 10 per cent more funding, and conversely. Across the fourteen regions, the SMR ranges from 0.88 of the national average to 1.13 for males, and from 0.91 to 1.10 for females.

The formula would result in funding being redistributed from the Oxford region and the four London regions to the rest of the country. As might be expected, people in the regions that stand to gain are enthusiastic. In the losing regions, some are actively antagonistic, whereas others accept the formula in principle, even if they do not like its consequences. Many who are antagonistic reject the concept of a formula, preferring instead the pre-1970 judgemental allocation process. Their argument is that formulas are inherently unable to reflect the subtleties of need determination. Those who represent the teaching hospitals, which stand to be among the biggest losers, contend that the perceived overfunding of their institutions may be more apparent than real. They argue that these imbalances have allowed the teaching hospitals to become 'centres of excellence', recognized nationally and internationally, which perform important training functions for doctors wherever they settle and which set the pace for standards of care for the rest of the country (52). However, the failure during the 1960s, even during a period of real annual growth that exceeded 4 per cent, to achieve redistribution through subjective allocations and political bargaining would appear to discredit administrative approaches to redistribution.

Other criticisms are more technical in nature. First, SMRs may be an incomplete proxy for need. Of particular note are needs resulting from crowding and urban poverty. Second, many medical conditions that generate use of health services do not result in death, and their prevalence may not be closely correlated with mortality rates. Third, the assumption that need varies in the same proportion as SMRs is open to challenge. Does it necessarily imply that a region whose mortality rate is 10 per cent above the average will place a 10 per cent greater burden on the health services? Fourth, the formula does not have an adequate proxy for cost of living variations among regions, reflecting the lack of data. This omission adversely affects the London

regions, where the cost of living exceeds the national average. Fifth, the formula assumes that the average cost of a day of care is the same for an elderly as for a younger person, and for a male as a female. Finally, the formula does not reflect the uneven distribution of the independent practitioner—particularly GP—services, which can lighten the load on the hospital services.

The second step in allocating funding is the adjustment to reflect the flow of patients across regional boundaries. In discussing this reallocation, I will use the economist's and accountant's term, 'transfer pricing', which in this context means the amount transferred from the region in which the patient resides to the one that provides the services. That amount is in effect the price that one region charges another under the formula, although there is no formal billing mechanism. The concept of a price that one region charges another is new in the NHS since, before the 1974 reorganization, hospitals, other than some long-stay ones, did not serve a geographically defined population. Furthermore, the issue received surprisingly little attention while I was in England, although in my view it is critically important. Therefore, it is discussed in some detail. Although the RAWP report allows the region discretion on the method of allocation to areas and districts, the intention is that the principles of funds distribution to regions be applied at these levels as well. Hence, the remainder of this discussion is in terms of the transfer pricing decision at the district level, where the issue is most acute.

The transfer pricing formula differs among the seven categories of service. Table 2 displays the variables in the formula and the transfer pricing method for each of the seven categories. Because of its magnitude, accounting as it does for 56 per cent of all operating costs, non-psychiatric in-patient services are the most important. Since some categories of patients are more expensive to treat than others, adopting a national *per diem* or per case transfer price for these services would have been inappropriate. However, as detailed previously *per diem* and per case cost estimates are not available for individual patients or wards. Rather, the only useable cost data are for the total cost of in-patient services in individual hospitals. In addition, data are collected on the number of admissions to each hospital by specialty (for example, general medicine, general surgery, cardiac surgery).

Combining the two sets of data, the cost per case by specialty was estimated using the statistical technique of regression analysis, and

the estimated cost is the transfer price. In technical terms, the total hospital budget was regressed on the number of cases of each specialty treated in each institution, and the resulting regression coefficients are the estimated average cost of treating a patient within a given specialty. Estimated per case costs vary from £57 for ENT to £391 for care of a younger disabled person. Thus, for example, if an ENT patient residing in District A elects to be hospitalized in District B, the formula would automatically deduct £57 from the budget of District A and add it to the budget of District B.

The approach assumes that, within individual specialties, patients who seek care outside their district of residence require on average the same level of service as those that do not. However, one can reasonably hypothesize that this may not be the case. For example, within the specialty of general surgery, if highly complicated cases are more likely to be referred to teaching hospitals than the more routine ones, as seems quite possible, the formula systematically discriminates against the teaching districts by crediting it only with the average cost of the specialty.

If the transfer price is insufficient or excessive, inequities in the distribution of resources result. In addition, incentives are introduced that distort decisions on who to treat and which health services to consider high priority. Specifically, districts may begin to discriminate against certain high-cost out-of-area patients. Technically, any patient can be referred to a hospital anywhere in the country. However, some districts, faced with limited resources, have already started to favour their own residents, often by keeping non-residents on the waiting-list longer. This practice may not be public knowledge, or even explicit policy. Rather, the hospital doctor is made to understand that he has a moral obligation to serve district residents first. The next step is for districts to favour low-cost over high-cost non-residents.

Decisions on services development may also be distorted. If a district develops a service whose transfer price is below the cost, it is penalized (taxed, if you will). On the other hand, if the transfer price is above the cost, it in effect makes a profit. Thus, in making decisions on services development, the district management team must examine the total costs to the district, taking into account financial gains or losses resulting from cross-boundary flow, and not just the actual cost of the service in question.

The district whose residents elect to be hospitalized elsewhere is in

a peculiar position. By law, it cannot prevent its residents from receiving services elsewhere, and its budget is reduced by the amount of the transfer price every time a resident does so. Thus it may lose funding to other districts for services that it has consciously sought to de-emphasize or can provide at a lower cost. The district, then, is in the anomalous position of being able to set priorities only for its residents who are hospitalized locally but not for those who elect to go elsewhere. It can, however, deemphasize some high-cost but necessary services and encourage users of these services to go elsewhere. A district administrator could reasonably hold that his responsibility is to see that residents have access to services, not necessarily that these services be within the district.

Some of these possibilities may seem far fetched to many observers of the British scene. This kind of behaviour simply has not happened to date because, until the 1974 reorganization, hospitals did not have defined geographical areas they were expected to serve. Even now, the relation between the cost of providing treatment and the transfer price does not enter into decisions on whether to treat out-of-district patients. However, the management teams are becoming more aware of the intricacies of the transfer pricing mechanisms, and one can already see signs of these incentives influencing decision-making.

The transfer price for mental illness patients is the average national *per diem* cost for mental hospitals. The same principle holds for the mentally handicapped. As in many countries, the mentally ill and mentally handicapped have historically been geographically isolated in large institutions in sparsely populated locations, although national policy now emphasizes community care, both in-patient and out-patient. For some institutions, the average national *per diem* cost will be above the cost of providing care. Two adverse consequences potentially result. First, the district with the large mental hospital has the financial incentive to keep patients in the institution. Hence the incentive is contrary to national policy. Second, the district of residence continues to pay the bill—that is, have revenues deducted—for patients who obtain care elsewhere and does not have any ability to prevent patients from doing so. It is important to note that the relevant cost to the hospital is not the *average* cost but instead the added cost of treating an extra patient, that is, the *marginal* cost in the terminology of economics. If the institution has empty beds, the added cost may be very low, and the district may make large financial gains from retaining non-local patients. Again,

although the hospital-based consultant decides who to treat, with nearly complete freedom from supervision, in the long run he cannot be completely oblivious to the impact of his decisions on the institution.

The transfer price for the remaining four services is set at zero. This policy is reasonable for three of these services—community services, such as nurse visiting; ambulance services; and Family Practitioner Committee administration—since they are organized on a strict geographic basis and thus are available only to local residents. However, for day- and out-patient services, which account for 13 per cent of the total operating budget, the problem is enormous. Many patients referred to specialty care never enter the hospital, particularly in such specialties as dermatology and psychiatry. Furthermore, most patients who are hospitalized are seen, before or after entering the hospital, as out-patients. The hospital receives no compensation for out-of-district patients. A stronger deterrent to developing day surgery or day psychiatric programmes would be hard to devise. The reason for the formula not reflecting cross-boundary flow for day- and out-patient services is simple: residence is not routinely recorded and analysed.

If there is to be an allocation formula, and patients are allowed to cross boundaries to obtain treatment, then a transfer pricing scheme is essential. But the scheme that has evolved is largely a product, or more nearly a prisoner, of available data. Cost data are derived only by institution. Thus the only alternatives were a flat *per diem* or per case transfer price or one adjusted for specialty mix based on regression analysis. Patient origin data are not available nationally for day- or out-patient services, hence no transfer pricing scheme has been proposed. Cost of living data are not available below the national level, hence the formula could not reflect cost of living differentials.

The transfer pricing mechanism raises the fundamental question of who is responsible for the patient. Should a district have some control over its residents who seek care elsewhere? One negative aspect of control is that freedom of choice for the patient would be reduced, an inherent dilemma of strict geographically based budgeting. Alternatively, should a district be permitted to de-emphasize certain services for which the transfer price is below the cost of provision because they want their residents to receive the service elsewhere?

This discussion assumes that the fundamental objective of the team of officers is to maximize within its available budget the medical services provided for its residents. As such, it is not acting either irrationally or immorally by responding to the financial incentives embodied in the RAWP report. However, this may be an incomplete characterization of the objectives of the typical team of officers. But if so, what are its objectives, its incentives, and to whom and how is it accountable? The objectives of non-profit, including governmental, organizations are less well understood than those of profit-making companies. I would, none the less, note the prevailing theory that non-profit organizations generally seek to maximize their size, and thus when faced with tight budgets will search for new sources of revenue before reducing costs. Manipulating the transfer pricing mechanism to work in favour of the district is one of the few vehicles within its control for doing so.

The formula for the allocation of capital has a more complex measure of need in that it reflects, appropriately, the valuation of the existing stock in addition to the population variables used to allocate operating (revenue) funds. The objective over time is to equalize the value of the stock in relation to population adjusted for age, sex, SMR, and other relevant variables. The allocation of capital is a complex matter that is not discussed further, except to mention that no provision is made for cross-boundary flow, i.e., there is no transfer pricing. The formula does not reflect cross-boundary flow on the grounds that having capital funding follow patient flow would perpetuate that flow and make it more difficult for the exporting regions to develop the service capacity required to keep patients within the region. However, the same argument can be advanced for operating costs. Additional staffing or minor capital improvements (such as fresh coats of paint) can have the same effect.

Finally, one must ask whether the magnitude of cross-boundary flow is sufficient to warrant viewing transfer pricing as an important, and not just an academically interesting but otherwise inconsequential issue. Obviously, the extent of cross-boundary flow increases as geographical size decreases. At the regional level, for admissions other than psychiatric and maternity, the percentage of 'imports', i.e., patients treated from outside the region, varies between 1.5 per cent of the total to 14.7 per cent. Even with numbers of this magnitude, one could argue that errors in transfer pricing are not sufficiently great to affect appreciably the decision-making process,

particularly for the nine out of fourteen regions that have import rates below 7 per cent (four regions cluster between 6.0 and 6.7 per cent). However, the regions with the high import rates are also those with a heavy concentration of medical schools that would lose the most under the formula in any event, thereby aggravating the adjustment process. A much larger problem arises at the district and area level. Data are not available nationally on patient flows across district and area boundaries. However, for some, particularly those with major teaching functions, patients from outside the district can account for 50 per cent or more of the patient load. At the district and area level, transfer pricing is an enormous problem.

Implications in comparisons: England and the US

Any attempt to derive specific implications for policy in the US is replete with pitfalls for rather obvious reasons, including differences in culture, history, system of government, and professional attitudes. The organization and funding structure of health services in England differs sufficiently from that of the US that some believe that one country can usefully learn very little from the experience of the other. Finally, I have on occasion been sceptical of those who draw on foreign experiences to justify policy recommendations, often because I suspected that the observer had only superficial knowledge of the workings of one or the other system or unconsciously sought to confirm his prior conceptions. I hope that the former reservation is not true in my case. As for the latter, it is harder for me to pass judgement, although some guilt must be presumed. Thus the remarks in this section are tentative and speculative.

The problems addressed in this paper are complex, and most of them are more severe in the US than in England. The reader is invited to make his own comparisons and draw his own conclusions. The following illustrate the questions that should be asked:

1. How accountable are the various elements of the delivery system in the US? To what extent should they be accountable and through what mechanisms? At what point do such mechanisms become overly costly, stifling, and generally counterproductive? How should the mechanisms change as a function of the incentive structures as they affect doctors, institutions, governmental bodies, and so forth?

2. To what extent is a formal planning system desired, and how should it be structured? Under what conditions is planning a meaningful activity rather than merely a generator of paper and jobs for planners? What are the technical, human, and political/bureaucratic limitations of planning? How should the planning system vary as a function of the manner in which medical care is organized? How do the imperfections of alternative planning systems compare with each other and with the imperfections of unplanned systems?

3. What information is needed for planning and monitoring and at what cost? How do different information systems affect behaviour? Under what circumstances and for what purposes does the information meet acceptable standards of reliability, validity, and usefulness?

It is perhaps more important that the reader reflect upon these highly complex and in some instances value-laden issues, hopefully finding stimulation from this paper in so doing, rather than pursuing the remainder of this section. None the less, some comments are offered under the headings of delivery system reform, the planning process, information needs, boundary designation, financial incentives, and labour relations.

DELIVERY SYSTEM REFORM

Advocates and opponents alike of the reform of the delivery system through increased government intervention can find much to confirm their positions. At the end of the Second World War, many hospitals in England were weak financially, and many doctors sought more non-charity patients. The formation of the NHS in 1948 was facilitated by the desire of providers for additional funds. It principally resulted in a broadening of benefits and was not accompanied by significant reforms in the delivery system. The one significant exception was the transfer of hospital ownership from local government and private charitable organizations to the NHS.

The formation of the NHS did, however, create a structure that potentially permits direct intervention in the delivery system. As such, it enabled high technology services to be rationalized and geographically concentrated in the interests of economy and effectiveness. One quarter of all general hospitals have been built since the Second World War, and their scale, function, and location could be explicitly planned. The justification for maintaining certain

small hospitals with low occupancy rates was questioned at an early stage, although in many instances actual closure had to await the more recent over-all budgetary pressures. The objective of increasing the availability of primary care has to some extent been realized by making careers in general practice financially and professionally more attractive than before, although the number of hospital-based doctors continues to grow at a more rapid rate than the number of GPs. Attention was drawn at an earlier stage than in the US to the needs of the long-stay sector, and personal social services that complement health services are better developed, although co-ordination is uneven. Many of the advantages claimed for a planned system has in fact been realized and are not, at least conceptually, limited to the systems of remuneration of doctors or ownership of facilities that exist in England. Although changes have been slow in coming, they have occurred inexorably, and cumulatively are highly significant.

On the other hand, some changes have been so gradual that they are almost imperceptible. The geographic imbalances in the provision of services that existed before the NHS was formed have scarcely been altered, although redressing these imbalances has been an objective for nearly twenty years. Within the hospital service, the financial incentives for doctors to enter the acute sector remains strong, although stated public policy favours the non-acute specialties. Surgeons are twice as likely to receive distinction awards as geriatricians and psychiatrists, and those with teaching hospital appointments in London and other areas with concentrated wealth have many more opportunities for a lucrative private practice. Many who oppose government intervention in the delivery system contend that it reduces innovation and natural experimentation; they can find much in England to justify their positions.

Finally, there has historically been great reluctance to question the value or efficiency of ongoing activities. Doing so is politically and administratively difficult in a growth period, and most years between 1954 and 1974 witnessed increases in real resources that exceeded 4 per cent. Under the current more constrained environment, attitudes are changing among administrators and clinicians alike. The extent to which new attitudes will result in more careful scrutiny of ongoing activities remains to be seen.

THE PLANNING PROCESS

Government-prescribed planning processes do not guarantee that effective planning will occur, nor is it necessarily a prerequisite for effective planning. The extent to which these processes should be specified, or instead be allowed to flow naturally from the incentives inherent in the system, is a critical issue with no easy answer in either country.

Certain lessons do emerge from the English experience, however preliminary, from the planning process emanating from the 1974 reorganization, largely the same lessons that emerge from the US experience in both health planning and government planning in general. First, the time and expense of planning and the limitations of planners, in both numbers and quality, should be recognized. Second, the planning process must be integrated with the resource allocation and decision-making process. This is an obvious principle, except that it is so often disregarded. The production of paper cannot be equated with technical merit or practical value. Finally, the bureaucratic and political realities that impinge on planning need to be recognized. For example, required planning processes, particularly where the planners feel the need to retain good relations with staff responsible for delivering services, may be far more successful in influencing how funds for new services are spent than in stimulating a searching examination of the ongoing provision of services. In addition, politicians typically have a shorter time horizon than the long-term planner and may be reluctant to expose the consequences of difficult decisions.

Many American doctors fear that planning and government involvement will restrict their clinical autonomy, and patients may fear that their personalized relations with doctors could be impaired. Such could be the case. However, as described previously, the NHS doctor in many respects has greater independence than his counterpart in the US, although considerable informal review occurs in the hospital structure. Indeed, the absence of detailed billing mechanisms as the primary generator of funds may ironically allow the British doctor a greater measure of independence than will in the long run be possible in the US under a fee-for-service system, which requires very detailed controls to contain rising costs. And the peer review system now being implemented in the US to assess the quality of care provided by beneficiaries of government programmes might have a more favourable impact embedded in the

English than in the American system because it could largely be divorced from issues of reimbursement and doctor remuneration.

Finally, a very important issue, far from fully resolved in England, is the appropriate mix between what I will label 'mechanistic' versus 'judgemental' planning and a lack of clarity regarding the application of norms. The term 'norm' has a well-defined dictionary meaning as a standard. However, in practice it can also mean an ideal, an average, an average plus an arbitrarily determined growth margin, a professional judgement, and so forth. The danger exists that norms are formulated in a relative vacuum without regard to resource constraints or without recognizing that achieving one objective may reduce the ability of the health service to achieve other objectives. Norms can also provide a false aura of scientific rigour, be overly mechanistic, and be a tool of special interest groups.

At the same time, mechanistic approaches to planning—however negative the verbal connotation—have important advantages. They facilitate the achievement of national objectives and may represent, as indeed may planning in general, a counterweight to special interest pleading. Finally, they may reduce the need for skilled planners at the local level, and the shortage of such planners should not be underestimated.

Commonly, attempts are made in England to achieve the best of both worlds by promulgating norms and then stating that they are to be modified to reflect local circumstances. Rarely, however, are the criteria specified for the circumstances that justify altering or violating the norms, thereby creating ambiguity regarding the extent to which the norms are binding.

INFORMATION NEEDS

Some in the US who seek a system without health insurance companies argue that large economies could be realized by reducing the cost of marketing, claims processing, and provider billing. At the same time, many engaged in planning in Britain express envy at the availability of data generated by the American payment mechanism, and on several occasions I found myself explaining the deficiencies of these data for planning purposes.

One notable lesson from the British experience is the need for data on cost; on treatment patterns; and, selectively, on outcome for purposes of planning, monitoring, and ongoing management. There is also the need for population as well as user data to assess

service needs. As the US seeks to plan services and control expenditures in a more forceful way, it will find it essential to make further investments in data collection and analysis. If appropriate data are not available, decisions are more likely to reflect political pressures and special pleading than true needs. Indeed, pressures may be exerted not to have data collected because of their potential utility in questioning ongoing, often well-financed, activities. Furthermore, one should accept that data collection and analysis are expensive and be willing to bear the cost.¹

In most instances data are better under the Medicare programme in the US, a centrally funded and administered programme for the aged and totally disabled, than under the NHS. However, the US data for the population as a whole is generally not as good.² For example, although Medicare has detailed files on the amount it pays each provider, little is known about doctors' incomes, the cost of office practice, or average payments for individual items of service taking into account bad debts and other forms of reduced payments. Both countries have certain large data voids, for example, with regard to the cost and use of laboratory services.

Some in the US advocate area-wide (geographical) limitations on expenditures as the only effective way of controlling health care costs. Those who do should consider the data needs of this approach. Data are lacking in the US on money flows below the national level and would be a prerequisite to area-wide budgeting. Nor are good cost of living data available below the national level or data on the current value of capital facilities.

BOUNDARY DESIGNATION

The jargon of planning is replete with statements about the need to plan for service areas that reflect medical markets or natural patient flows. However valid may be these statements conceptually, experiences in both England and the US demonstrate that in practice problems abound when planners, medical power groups, and politicians confront each other and come face-to-face with an actual map.

1. This is not intended as a plea for thoughtless data collection. The problems of information systems design are beyond the scope of this paper, suffice it to mention the dangers of systems that are too expensive, burdensome, unreliable, inflexible, or of little value to users.

2. There are exceptions to this. For example, the US has much better national data on doctor visit rates.

Populations do not necessarily collect in neat, well-defined communities. Different diseases have different service patterns based on the prevalence of the disease, the economics and level of specialization of treatment, and historical decisions on the location of facilities. Even if one could identify natural health service areas, these areas are unlikely to match the boundaries of local government or of agencies responsible for related services (housing, transportation, social services, and so forth) that are also planned or managed regionally. Finally, boundary designations can affect both the extent of centralization of decision-making and the flow of power to institutions and individuals.

Representatives of particular specialties or services usually seek arrangements that meet their own requirements. However, the sum of what is ideal for the individual specialties may create a patchwork of boundaries that make management and comprehensive planning impossible. What is comprehensive planning at one level may be fragmentation and excruciating complexity at another. Over-all, the experiences of both countries in my view argue for coterminous boundaries, sacrificing what may be ideal for a particular service—or even for health services in general—in favour of more comprehensive planning and delivery.

FINANCIAL INCENTIVES

Many in the US favour placing the onus of cost control on the provider rather than the consumer, since the provider largely determines the services that the patient receives. The British system does just that, and generally with good results, as discussed above. None the less, the functioning of the system raises questions. Are there incentives for efficiency or effectiveness and, if so, what are they and how do they operate? Do doctors concern themselves only with patient need in allocating resources (including their own time), or instead do they have more complex objectives, which include seeking out interesting cases or minimizing workload? The same kinds of questions can be raised, for example, for prepaid group practices in the US. To what extent do they really have financial incentives to keep patients well, as their advocates so often contend? The notion that providers facing fixed budgets will maximize the delivery of needed services warrants considerably more scrutiny than it has received to date.

Much of the health service literature and conceptual thinking is

phrased in 'either/or' terms—capitation versus fee-for-service; provider versus patient incentives for cost control; planned versus competitive systems. One cannot always have one's cake and eat it too. I would suggest, however, that increased consideration be given to mixed incentives. Patient and provider incentives can operate simultaneously and, indeed, may be most effective if they complement each other; administrative measures may not be enforceable if they lack congruence with the underlying incentive structure; financial incentives and planning are not necessarily mutually exclusive although, admittedly, one may limit the other; and matching multifaceted objectives with a mixed reimbursement and control system may be highly appropriate.

Financial incentives are obviously important in the payment of doctors. The direction of incentives, if not the magnitude, of various payment mechanisms (fee-for-service, case reimbursement, capitation) is well known and need not be repeated here. Doctor payment is potentially an important area for incorporating a mix of mechanisms, and GP reimbursement in England is an interesting example of such a system, that is, fixed payments independent of cost or volume, cost reimbursement, capitation, and fee-for-service. The mix and weighting can be set, and periodically adjusted, to achieve the goals of efficiency and the appropriate level of services delivery.

LABOUR RELATIONS

Although this paper has not specifically addressed problems of labour relations, the consequences of government intervention in the health sector are so far-reaching that they should at least be recognized. These consequences result regardless of whether the government is the actual employer—as can be seen, for example, in New York and Toronto—although the precise effects may be different.

Employee unrest and militancy in the NHS have increased sharply in the last five years (53, 54). The NHS is very dependent on employee co-operation in a structure where a strike among the kitchen staff can virtually bring a hospital to a standstill. Organizations representing technicians and unskilled workers have in some instances sought to influence broad public policy matters in addition to their usual concerns with terms and conditions of employment. For example, such organizations, along with the nursing staff, were largely responsible for the government's decision to phase out beds

for private patients in NHS hospitals. Because of concerns about job opportunities, they have at times opposed change, such as hospital closures and attempts to redistribute funds. Doctors, too, have become more militant and can put pressure on the government simply by doing less work, since there is no control over workload.

Government intervention can have several effects. First, it frequently places labour negotiations in a political arena. This can result in certain groups being 'bought off' at the expense of others, as occurred in England in 1976 when the government awarded junior hospital doctors large increases in remuneration under the guise of overtime payments so that they would take a less active role in disputes between the government and the hospital consultants. Government-imposed constraints allow employers to shift, at least partially, the burden of negotiations on to the government agency, and health workers are an important source of votes in general elections.

Second, it can lead to the employer having to consider more carefully the impact of decisions on employees. To some extent, the effect may be desirable. Certainly, job security can facilitate change if employees believe that they will not be harmed as a result. However, it may lead to concern with the job creation and maintenance function of health services at the expense of the quality or availability of services. Further, the job creation function is not necessarily limited to unskilled employees. It has been suggested that at least two decisions related to the 1974 reorganization in England reflected the desire of senior staff to maximize career opportunities. The first is the mirroring at the area and regional level of the senior job categories at the district in order to improve vertical mobility. The second is the fragmentation of districts when the boundaries were drawn in order to create more high-level administrative positions. In short, the NHS has to some extent assumed a welfare function for its employees.

Third, it inevitably results in the health services employment structure having much in common with civil service structures, including open competition for jobs, merit promotion in which seniority is important, and due process on dismissals. Depending on the vocabulary adopted, some of these phenomena can be cast in either a positive or a negative light. Who, for example, can oppose 'due process' conceptually, except that in practice it can reduce managerial discretion (perhaps appropriately so) and accountability and be very time-consuming.

These comments are not meant to deny that employers have ethical obligations to their employees independent of the goods or services they produce. The point is simply that the inevitable and pervasive impact of government intervention should be recognized.

Concluding comments

Several factors have recently put the NHS under considerable stress, resulting at times in unfair publicity in the US. The slowdown in the general economy combined with wage controls have created dislocations and malaise, particularly among professionals where the controls are the most severe, and have often resulted in significantly reduced take-home pay when corrected for the impact of inflation.

The rate of resource growth has shifted in the last two years from over 4 per cent to $1\frac{1}{2}$ per cent. This shift is more dramatic than might appear at first glance. What is labelled a budget with a small growth rate may in fact be a standstill budget or worse if inflation is under-estimated, as seems possible. Even if inflation estimates are accurate, the shift represents a dramatic decrease in funds for new services. As a result, medical and other staff are increasingly in tougher competition with each other for resources. Whether this competition will ultimately affect the concept of clinical autonomy is a question of critical importance, and whether redistribution of resources can be achieved with a reduced growth margin is not known.

The impact of reorganization is still being felt. Many health workers remain bewildered by the new structure. The planning process is still being implemented, and the results of the 1976-7 cycle are generally recognized as uneven. The concept and practice of consensus management is still debated. Members of the teams of officers are still adjusting to new roles.¹

As discussed briefly in the previous section, tension among employees has increased markedly. In addition, doctors' pay disputes have become particularly troublesome and reflect strain among the doctors themselves.² The increase in remuneration for junior doctors through payment for work in excess of forty hours a week has brought the whole pay structure into question. The notion of a forty-hour week plus payments for overtime may be at variance

1. For good discussions of role ambiguities of administrators and community physicians after reorganization, see Sunderland (55) and Towell (56)

2. For a more elaborate discussion, see Elston (57).

with the concept of professionalism. More concretely, the payments result in some senior registrars earning more than some consultants and having to face pay cuts when they are initially promoted to the consultant grade. As a result, consultants increasingly question the structure of their remuneration as well as the level, not so much because they dislike the current structure but because they hope a different one would increase aggregate remuneration. The 1976 junior doctors' settlement has also heightened the unease between the NHS and the medical schools, who pay faculty salaries out of the education budget and who are often unable to increase salaries of clinical teaching staff commensurate with those in the NHS.

There is also much discussion in England of the problems of morale, a concept that is very real, albeit hard to define or measure. The reasons for uneven morale are unclear, although unease within English society as a whole, and the tensions within the NHS, are major contributing factors. Problems of low morale are apparently greater in some parts of England, particularly in the large cities, than in others.

One can legitimately argue that the issues that are the focus of this paper are less important than how well the system works over-all in terms of access, cost, quality, and satisfaction, and as discussed above on balance one must give it high marks. Indeed, ill-conceived changes in incentives or management processes can easily do harm. On the other hand, the lost opportunities in terms of patient care may be enormous if poor information, lack of accountability, ineffective or misdirected planning, and unclear incentives cause resources to be used less effectively or efficiently, distributed less equitably, or expended on a service mix that is less than optimal.

Some of the problems discussed are a product of the 1974 re-organization and may work themselves out. Others are long-standing, including the lack of information, the virtual absence of controls on GP services, and the problems of reallocating resources geographically and by patient group. More importantly, the issues raised are complex and generic to all western medical care systems, although they may assume varying forms in different countries.

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**The administrative burden:
national or local policy?**

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The administrative burden: national or local policy?

INTRODUCTION

The NHS has been reorganized since 1974 as an integrated hierarchy capped by the DHSS and the Secretary of State for Social Services. Although the Secretary of State is the titular head and is personally accountable to Parliament for its performance, the NHS is a corporate body comprising members who specialize functionally and professionally—many of whom enjoy discretion in their work. Ultimately, therefore, the standards of health care actually delivered to those who need it are the outcome of an integrated set of organizational and management processes involving health authorities, administrative officers, and the health professions, who must be judged collectively. The burden of the integrating role, however, rests upon the administration. Those of them who take decisions must have regard, so far as their perspective of the organization of health care permits, not only for bureaucratic efficiency but also for the effect that their decisions will have on the services to be delivered.

The NHS is on the threshold of new models of organization—structural changes have been achieved but new management processes, attitudes and behaviour patterns have yet to be established. It is intended that the developing organization should be democratic and participative, yet firmly under central control, with management, from positions in the middle levels, looking both upwards and downwards for leadership. This is not likely to be regarded as a happy situation except by those inclined to schizophrenia, yet it seems unavoidable.

At one level the health system is submitted to political judgement through the Secretary of State—accountable to HM Government and Parliament. At its lower reaches the NHS has been opened up to

political influences through the compulsory membership of local authority nominees on its statutory bodies: the regional and area health authorities and the community health councils. Operationally, the NHS is open to judgement by individual patients and by the community health councils, as well as by those professions engaged in the delivery of care and who rely on the support of the administration in order to attain high standards.

Thus, separate judgements are being made at both ends of the organizational hierarchy, stimulating different groups of participants who have differing functions and differing interests to formulate their objectives and priorities. In consequence, two organizational roles are activated. The first is a directing one with authority and constraint working downwards and is required to satisfy the Secretary of State that 'organizational objectives' of a welfare/political/economic nature will be pursued efficiently by NHS authorities and their officers. The second is a facilitating one, required to ensure that those engaged in the delivery of care are supported and assisted from the top rather than constrained, and also to assure that the care obtained for patients is not determined arbitrarily.

Both roles are given practical expression through those officers who form the administrative middle-ground through which communication upwards and downwards is filtered. Consequently, the responsibility they can assume is not restricted to merely impersonal bureaucratic efficiency. As well, within the limits of the relations established with their respective health authorities, they can assume the responsibility for accommodating central policies to some degree of local variation. They can determine the balance that is achieved between national and local policies that may be party-politically motivated or aligned with pressure groups or professional group interests. In some respects, therefore, the responsibilities of the administration may be extended to include assuring the effectiveness of the NHS as judged against differing sets of values. Thus, the administration is presented as a middle-ground filter, parallel with the authority structure, between the Secretary of State in Parliament and the professions and their clients in the community, where evolving patterns of need and demand draw upon the available services in accordance with grass-roots value systems (Fig. 1). The fact that the role of officers *vis-à-vis* health authorities is, ostensibly, advisory only, does not in practice lessen their influence on the management process.

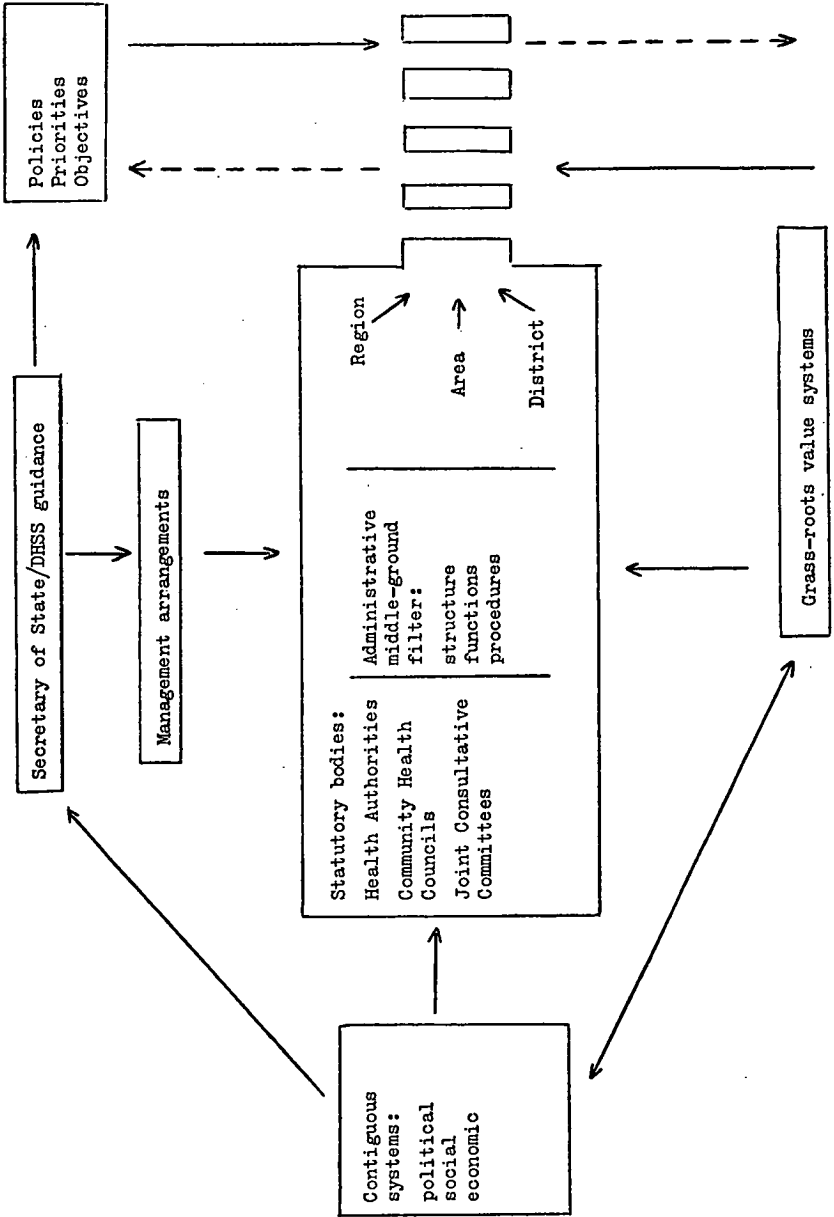


Figure 1. A concept of the health system

THE PROBLEM OF MANAGEMENT CONTROL

Responsibility implies choice, and the choices that arise do so when there is inconsonance amongst sets of values. In theory, the objectives and priorities of the Secretary of State are not intended to frustrate the attainment of high standards of care by the professions, nor would those whose main concern is with standards of care deny the validity of economic constraints nor the influence of changing social and political expectations. Yet, the recently announced central policies (1) to shift the emphasis of fresh NHS expenditure from acute care in hospitals to types of care having a wider social relevance in communities—the care of the mentally ill, the infirm, and children—might seem to some like a curtailment of the standards of acute care to be provided in the future. It might indeed work out like that; on the other hand, it might depend on how doctors respond. The words of the Minister of State for Health are apposite here:

Clinical freedom is often cited as one reason for not considering economic consequences. Doctors claim that the doctor/patient relationship only allows a doctor to decide what is best for that particular patient: some doctors believe it is for others, in particular the politicians, to make economic decisions. Yet many doctors have been able to reduce costs without harming their patients, and it is worth looking at the results (2).

Evidently, or so it might be inferred, some differing objectives and priorities can be reconciled with reference to a common rationale, in which case logic might supersede choices made by administrators. But to what extent can they look forward to being relieved of such responsibility?

The issue around which the need for decision-making generally develops is, of course, the level of financing for health care and the deployment of limited resources. The caring professions as well as administrators will accept that care is open-ended, that it would be impractical to submit all patients to the full treatment and that selective decision-making is necessary. If rational criteria for decision-making could be derived from generally agreed objectives and if procedural constraints could be established over the standards of care to be provided then the administrative dilemmas about resource management would be considerably eased. The problem lies in finding a suitably objective yardstick which combines, in a definable relationship, standards of care and levels of financing, and which serves to measure the attainment of central objectives as well as those standards of care. But, as Rudolf Klein (3), points out: 'so far, the

NHS has dodged the issue of whether the quality of care can be monitored . . .'. He describes the shift of resources from acute cases to care as humanizing the NHS, but is of the opinion that: 'given the institutional conservatism of an organism like the NHS and the professional biases of the doctors providing the service—only a far more rigorous managerial discipline can bring about humanisation.' So the question now is, how can the NHS be disciplined, or, to put it another way, how can management control be established?

Management control is the process by which managers assure that resources are obtained and used efficiently and effectively, in the accomplishment of the organization's objectives (4). But what are the 'organization's objectives'? They can be regarded as being pluralistic, being the entire set of those attributable to the differing interests and perspectives of the constituent professions, officer levels, and political participants. In that event one would expect to meet with inconsonance amongst them (when the attainment of one of several desirable objectives detracts from the attainment of others) and incongruence (when there would not be agreement concerning the desirability of objectives being pursued). Or, the 'organization's' objectives can be regarded as being only those legitimated by the titular head—the Secretary of State. The arguments that can arise from the exposure of these issues can run deeper than questions of the mechanics of control, they concern the rights of participants in the organization and might manifest themselves as challenges to the exercise of authority and to the right of the titular head to specify organizational objectives.

If objective measurements of health can be established to provide common yardsticks of attainment for the range of relevant objectives then differences of opinion might become subject to rational dialogue and negotiation; if not, each party tends to resort to its own rationale which, to others, appears irrational and offers no hope of reconciliation.

STANDARDS OF CARE

Having used the term, 'standards of care', it is incumbent upon us to attempt a definition. Yet at the very outset there is a feeling that the phrase might contain a contradiction in terms. Care is a highly subjective and an emotional issue; is it appropriate to talk of 'standards' of care?

At any one time many people will be suffering from the common

cold. Some struggle on with the ailment, buying medicines from chemists and at least giving the appearance of working and going about as usual. Others seek assistance from GPs, are given a sickness certificate and told to spend some time in bed. Some of these take their doctor's advice, some don't. Some go for a second consultation, or ask for a house call, some don't. What then, is a standard of care for someone suffering from a cold? Perhaps it would be as well to note again the Minister of State's statement: 'Doctors claim that the doctor/patient relationship only allows a doctor to decide what is best for the particular patient' (2).

It might also be worth noting the DHSS Consultative Document, *Prevention and Health: Everybody's Business* (5), which concentrates on morbidity, mortality, and prevention of ill health. These measurable facets of public health lend themselves to a managerialism which, ideally, requires quantitative statements of priorities, objectives, costs, and benefits in order that superordinate bodies and officers might specify and monitor the performance of subordinates. Only passing reference is made to standards of care for those who are unavoidably ill, which is when most of us get personally interested: 'If prevention programmes can avoid or postpone costs . . . then they can contribute mightily to a higher standard of care for those who are unavoidably ill.' The implication is that standards of care related to treatment are not a subject for top management policymaking!

Clearly, those standards are notional, there is none that can be accepted without extensive qualification. The amount of care depends in the first instance on the thresholds of discomfort and suffering of those who seek care, and on circumstances, both of which will, of course, affect the tolerance of individuals towards the symptoms of ill health. Sometimes, however, the thresholds are obscured by what, for some patients, has become routinized behaviour in response to any ailment. In the second instance, the doctor will use his professional judgement, which is not confined only to clinical factors: 'His diagnoses will be composed in physical, psychological and social terms. He will intervene educationally, preventively and therapeutically to promote his patient's health' (6).

Three levels of medical care common to all modern health systems have been described (7). First-contact care with a doctor, for example GP services; general specialist services such as the out-patient services of a general hospital; and ultra-specialties, for example,

cardiac surgery, radiotherapy. We have seen that within the first there can be considerable variation in the level of care sought and also in that considered suitable for provision. Variations might be expected at the other levels too. The process that has become established is that standards of care emerge from patient-doctor interactions—one seeking and the other providing according to the nature of the complaint and their individual feelings about it, if it permits such discretion. Generally, it might be felt that a large number of illnesses requiring surgery leave little scope for discretion. But where the decision to operate or not is plagued by attendant risks due to complicating factors such as age or the expected quality and length of life subsequently these things must be taken into account and determine the care provided in any particular case.

This process of patient-doctor interaction with reference to each unique situation has become overlaid with some routinization of both patient and doctor behaviour—routinized recourse to the health services by some patients; routinized use of drugs and treatments by doctors in connection with some ailments. Such routinization can result in some patients receiving more treatment than they seek and some less. One hopes that routinization is only tolerable when the risk of unnecessary suffering is minimal. Not all patients are so passive that they would submit themselves to a standard of any other kind. Nor are all doctors so detached from the welfare of their individual patients that they would be content to practise by other standards.

It is probably impossible for central authorities to express policies about standards of care based on treatment in anything but vacuous terms, and it would always be possible to mount credible or specious arguments against them. A politically alert Secretary of State is unlikely to fall into such a trap. On the other hand, policies based on public health indices have the potential for lending themselves to impersonal, bureaucratic implementation independent of particular cases of suffering. But human values demand that the corporate responsibilities of the NHS should not be so limited!

OTHER MEASUREMENTS OF HEALTH

The main requirements for the development of measures of health care have been stated as (a) the definition of what is meant by 'improvement in health', (b) the classification of diseased people in terms of sickness which relate to the definition; (c) the derivation of

a scale which allows the relative importance of these sickness states to be weighted (8). Two approaches have been described. First the indicator case model; this involves taking an unambiguously defined disease category or episode of care category (for example the authors mention diabetes, hernia, strokes, ante-natal care), defining the possible outcomes for the patient, and then describing the success of the health system in terms of these outcomes. It has its disadvantages when used in health care systems which handle large numbers of conditions. At present, say the authors, relatively few conditions are available and the requirement for clear definitions of the disease category will continue to restrict a number of eligible conditions: 'An indicator condition based management control system would at present only cover a fraction of a hospital's activity. If management control were to be exerted using such an information system, distortions in clinical practice would almost certainly occur.' The second approach is described as a 'global' model that develops a general, more abstract classification of morbidities which is applicable to most if not all diseases rather than to specified ones. But, 'global models may require data which is not available for many conditions, especially with regard to prognosis, so that in practice a theoretically attractive model may be applicable to only a limited range of conditions'. The methodology involves the development of and use of a classification of morbidity states and the development of scaling techniques to apply to them. Having chosen what to them appeared to be the best current methodology they nevertheless anticipated 'that extensive reevaluation of this and other methods will be necessary and this may in turn involve modifications of the classification of morbidity'. Clearly the measurement of health care is embryonic in theory, not only in practice.

In another paper on output measures the author (9) puts the economist's viewpoint that 'the methods used for planning health services have a decidedly empirical character'. That is to say health planning depends on experience and experiments, which is evidently a situation not quite approved by the author who is of the opinion that 'to deal with this situation rationally requires the establishment of means by which the alternative uses of resources can be put in order of priority, so that some are implemented and others are not'. He goes on to suggest a conceptual structure which might suggest itself as an approach to the problem of priorities:

1. A set of health care activities, such as treatment of various kinds;
2. A set of resources, financial or real, in terms of which the cost of the activities can be measured;
3. A set of medical outcomes, in terms of which the effectiveness of the activities can be measured;
4. A set of value judgements, capable of indicating which of a set of outcomes is to be preferred.

This is what is required if the health service is to be directed rationally by planning, programming, and budget resources. But after reviewing the situation, it is concluded 'clearly we have hardly begun to fulfil this need'. Existing targets 'tend to be based on professional judgement, and relate to the provisions of facilities rather to the benefits produced. This is probably the best that can be done at present.' One might wonder if it is the best that can ever be done in the arena of health care, because the implications underlying these statements are that the benefits of maintaining the infirm, and kidney sufferers on machines, and people destroyed in motor-car accidents, and children with severe health problems at birth, should be expressed in relation to cost of services provided for them. I doubt if many of us could discount our emotions so easily!

The development of cost-benefit analysis and cost-effectiveness studies in the health service has been reviewed by another economist (10). In his closing paragraphs he poses the question, 'is this type of study useful, i.e. does it facilitate choice of health service projects?' After reviewing the difficulty of applying the cost benefit method, he says,

this is not to say that the benefits of health programmes cannot be expressed in monetary terms. Expressing them in such a form is simply the way of stating their importance relative to other human objectives. There appears, however, to be no satisfactory procedure at the moment for deriving valuations of health service outputs objectively from the consequence of market interactions. Other procedures, such as surveys, are untried, while court awards simply shift the problem of evaluation from the subjective preferences of a public decision-maker to those of the judge—a spurious objectivity at best.

He concludes,

The problems of defining and measuring benefits and, even more, of valuing benefits, mean that for the time being the analyst may have to confine his attention to making the consequence of choice as clear as he can.

Although it might be possible for economists to devise ways of arriving at a cost figure and even expressing benefits quantitatively, these things are so heavily qualified by moral, ethical, and emotional stances that it is unlikely that we should ever resolve differences of opinion. Indeed it may not be desirable that we should do so, perhaps it would be better to keep the argument alive and the situations fluid.

If the economist has problems in discussing questions of standards of health care, then so does the consultant (11). Pains have been taken to point out that health is a variable and subjective issue, for example, 'An African skin fungus may be a disease in regions where it occurs infrequently, but regarded as part of normal health where it is common. It is essential to realise that this is both logical and consistent.' Another example, 'the blind, musically talented, working physiotherapist, mother of three, who travels unassisted round London, quite rightly feels insulted if it is suggested that she is unhealthy. She is not unhealthy, she does not seek medical help and the health system has nothing to offer her; she is rightly scored as normal.' 'There is wide agreement that a health status indicator should score the patient and not his pathological progress, his perceived need, and not his physical signs and biochemical abnormalities.' Thus it is said that health is properly measured by a person's own perception of it, rather than by any objective measure. So from where do we derive standards of health against which we will measure performance for the purpose of management control?

MANAGEMENT ARRANGEMENTS

It seems that the measurement of health care is fraught with conceptual as well as technical difficulties for economists and the medical profession alike, and the manager is left to cope with them, and with any conflicts that might arise between those who apply a facilitating model to the organization and those who apply a directing one. The management arrangements for the new NHS (12) concede the limitations of the central authority in defining comprehensive objectives and standards of care for purposes of management control. The first of the principles on which the arrangements are based is that the health care professions should be integrally involved in planning and management at all levels—this would theoretically assure that the value systems of the professions are part of the frame of reference when organizational objectives and priorities are

formulated. As a further safeguard it is stated that this involvement must be achieved 'without infringing the clinical autonomy of medical and dental consultants and general practitioners and without interfering in the professional standards of health care professions or inhibiting the exercise of professional judgement by members of those professions'.

The planning cycle briefly described in the management arrangements, and later in much more detail, in the *Guide to Planning in the NHS* (1975), intends planning proposals to be initiated by the district team of officers and their health care planning teams. They will then be reviewed by the area, region, and DHSS. This, in itself, may be an admission that the Secretary of State will not, in the foreseeable future, be in a position to plan on any rationale that could be generally accepted. Later, in the text of the management arrangements, the concept of monitoring and control is described: 'the first requirement for effective monitoring will be the existence of a plan to which each management level is committed. The plan will provide a yardstick by which to measure performance and will contain targets as incentives.' The other requirements mentioned are: (a) the existence of adequate information about the service standards and efficiencies of each management unit; (b) the effective use of this information to monitor these standards against plans; (c) the application of more specific controls over the use of resources such as finance and manpower. If outcome measurements are not available as yardsticks to assess the attainment of objectives and targets, and to provide incentives for the professions, the Secretary of State is in no position to control the provision of health care and may only have recourse, by manipulating resource allocations, to making it more or less difficult in certain respects for those who can control it.

The last three of the five principles underlying the management arrangements are concerned with (a) accountability upwards, (b) the need for higher levels of management to agree objectives with lower levels, and (c) the principle of maximum decentralization and delegation downwards. They should be read in connection with the definition and allocation of responsibilities to RHAs, AHAs, and officers (the second principle). The ordinary use of the term 'officer' would exclude those nurses, doctors, and others who are engaged primarily in their professional capacity rather than an administrative one. Those professionals who are most concerned with actual standards of care may be admitted to the system by membership of

health care planning teams, but they are not 'officers' in the ordinary sense of that word and are not managerially accountable as is the district management team whom they advise. This is the point in the organization where the value systems might be expected to overlap least, to differ, and to create conflicts.

At this point one should ask what provision exists to resolve any conflicts that do develop or to use them as impetus for change? Planning proposals, from which the awkward management decisions would arise, are to be initiated by the health care planning teams, passed to the district management team, by the DMT to the AHA, to the RHA to the Secretary of State. At each point they are to be reviewed but if they are not approved they are not to be sent back to the proposer for reconsideration—the timetable does not permit it! Finally, an expenditure plan will be approved, but this does not require a rejection of proposals, simply a selection of those that meet Department priorities. Those not selected can remain in the three- and two-year projections and the grounds for not acting on them may take some time to be elicited. The process of establishing conflict could be so lengthy that there can be a reasonable hope that passion will wither and die before it becomes a force for either good or bad!

If the procedures and mechanisms for control that are developed in the management arrangements are likely to leave scope for interpretation of central policy and assessment of grass-roots initiatives, which way is the administration intended to lean, what is the intended purpose of the management arrangements?

MINISTERIAL INTENTIONS

No minister is bound by the policies or intentions of his predecessor, yet the reorganization of the NHS followed a debate, extending over several years and three separate terms of political office, designed to achieve a reconciliation of varying interests and at the same time to reflect some social trends and values; finally the main political parties did not differ greatly in their views and it might have been thought unlikely that any minister would openly reverse the present policy, for some time anyway.

In the first Green Paper (13) Kenneth Robinson said,

the paramount requirement is that all the different kinds of care and treatment that an individual may need at different times, whether separately or in combination, should be readily available to him. This requires the closest collaboration between doctors, nurses and other workers who

give him their help. It also requires close collaboration between those who provide and administer the various services to which all these workers belong.

The implication here is that kinds of treatment, the mode of delivery, and the administrative support, are to be determined by human interaction rather than by instructions issued from the centre, and the administration should therefore be sensitive to and receptive of grass-roots initiatives.

In the second Green Paper (14) Richard Crossman was more concerned with the doctrines of local participation; his main point seemed to be that the maximum authority consistent with his own responsibility and accountability to Parliament will be concentrated at the area level where 'through the inclusion of elected local councillors and members of the health professions in the area authorities, representatives of the local community will be able to play a full part in the running of the National Health Service'. This sounds as if the Department's role will be a supporting one, but Crossman's qualification that local participation must be consistent with his own responsibility and accountability placed him precariously astride the two stools. Democratization must not endanger central control—his stance was ambiguous and it is not clear as to how the NHS would have developed under his stewardship.

The Green Paper published by Crossman contains interesting comment on standards of care—the services should be national in the sense that the same high quality of service, but not a standardized service, should be provided in every part of the country—'further levelling up of resources, particularly of training staff, is needed—especially in the Midlands and the North—to provide the same high quality of service all over England'. It seems in the light of subsequent events, that the standards of service that the Secretary of State had in mind were to do with equality in the distribution of health service resources and not with standards of care. Standards of care delivered would be impossible for him to specify or monitor. Indeed, the main case for reorganization, in chapter 2 of this Green Paper, does not dwell upon standards of care either, but upon the machinery for the provision of them.

These two Green Papers contain ideas that may well benefit from more debate—democratization, subordinate to central control?: a national service, but not a standardized one?

The White Paper (15) that preceded the Reorganization Act was

published with a foreword by Sir Keith Joseph who was then Secretary of State, and the ambiguity about reorganization was removed. 'It is about administration, not about treatment and care'—or was it?—'But the purpose behind the changes proposed is a better, more sensitive service to the public.' Later—'The plans must therefore be effective in providing what patients need: primarily, treatment and care . . . '.

So, ministerial intention remains clouded, but it is possible to interpret the ambiguity as an openness on the part of the Secretaries of State to pressures for the development of both the directing role of organization and the facilitating role. They tend to confirm the burden of the administration.

SUMMARY AND CONCLUSION

Much has been said about the managing systems of the NHS being designed to assure efficient implementation of central policy whilst at the same time accommodating local variation, i.e. achieving a balance in the control of the management process. Conceptually, they lend themselves to the attainment and maintenance of a balance. The question is, will they in practice?

The NHS has been structured in part on the model of a hierarchical, integrated form of organization. The structure implies collective responsibility in pursuit of common goals under the control of the Secretary of State. Ultimately, those who take part in the health services must be judged collectively by the standards of care that are provided for patients who need it.

Paradoxically, although health care is the ultimate goal, it does not lend itself to objective statements of the kind that permit simple control mechanisms to be employed effectively. Students of the NHS will perceive a movement towards a sophisticated form of management control: Management by Objectives linked with Output Budgeting. The Secretary of State is to set national priorities and objectives, whilst those at the operational end, through their planning proposals, are encouraged to set local targets derived from those objectives. Resource deployment will be based on the more acceptable local proposals and targets. In essence, this is Planning-Programming-Budgeting, of which there has been much more experience in the USA than in the UK. There it has been developed as a comprehensive planning and control system involving the identification and examination of goals and objectives, analysis of the

output of a given programme in terms of its objectives, measurement of total programme costs, formulation of objectives and programmes with an extended time-horizon, and systematic analysis of alternatives to find the most effective means of achieving programme objectives. Programme structures would be based, say, on categories of patients in need such as geriatrics, children, and the handicapped, and would be intended to raise for choice an array of ends featuring a variety of benefits. For the purpose of budgeting, an array of means by which to achieve those ends would be established by systematic analysis of the organization. However, in the American experience 'no one conceives of PPB as a system that makes decisions. Rather, it is a means of helping responsible officials make decisions. It is not a mechanical substitute for good judgement, political wisdom, and the leadership of those officials. The question at issue is not how PPB can supplant the political process but whether and how it can fit into that process' (16).

This view of PPB offers no indication that in the foreseeable future the burden of the administration will be lifted or that health care will be provided only in accordance with central authority directions arrived at through some purely rational process of analysis and benefit maximization. Nevertheless, because the management arrangements appear to permit it, the Secretary of State will be faced with a strong temptation to emphasize his directing role for the attainment of limited, departmental objectives, at the possible expense of others. On this point, ministerial intentions, so far as they can be determined from the official public debate leading up to reorganization, are ambiguous—which might be an indication of open-mindedness. The administration through its own committee systems can take an active part in reinforcing national objectives and assuring uniform responses to them, or in legitimizing local deviations. Or the administration can become merely the postman between the Secretary of State and the district management teams. There is no doubt that the directing role of organization will flourish with the power of the Secretary of State and the DHSS supporting it. There is reason to doubt, however, whether it can produce suitable health care in the absence of a complementary, facilitating model with the Secretary of State and the DHSS offering support for initiatives taken at the grass roots of the organization. Because the central authority cannot establish objective controls over health care and finds itself in a dependency relationship with the grass roots of the organization,

it should not be assumed that that situation is the antithesis of control. Indeed, such a balance might be beneficial to the over-all control of the organization's behaviour in its environment and the formal arrangements that give expression to it might be studied from that point of view (17).

Since laying down the foundations for this paper we have seen the publication of the Report of the Resource Allocation Working Party (18). It represents one rationale that will almost certainly be applied to one area of decision-making. The Working Party interpreted its objective 'as being to secure, through resource allocation, that there would eventually be equal opportunity of access to health care for people at equal risk' (p. 7). Resource allocation is defined as being 'concerned with the distribution of financial resources which are used for the provision of real resources. In this sense it is concerned with means rather than the end' (p. 8). The definition is qualified by an assertion that the Working Party was not concerned with how financial resources were deployed. 'People at risk' is said to represent a need-based approach rather than one based on considerations of supply and demand, and their relative numbers are estimated from population figures weighted by local age/sex/marital-status distributions and by mortality and fertility rates. It is acknowledged that the pace of progress towards revenue targets based on the Working Party's formula will vary (p. 38). So long as the trend is in the right direction it is said that authorities 'should be free to adopt those routes towards the common goal which best suit local circumstances'. The pace will depend upon the rate at which financial and real resources can be deployed and redeployed, given different local staffing and recruitment situations and different potential for opening, closing, or changing the use of current buildings and equipment. Priorities and strategies for service development will also influence choices about where deprivation should be relieved first.

The Working Party is conscious of some current data deficiencies in connection with its own formula and that 'any allocation method based on the data available may be open to challenge on grounds which will be difficult either to substantiate or refute' (p. 11). Nor, it is acknowledged, is enough known about the determinants of health needs and the impact of programmes other than purely health programmes, for example, those of the Local Government Authorities, like housing, and social services.

The objective adopted by the Working Party embraces a broader

remit than the subsequent definition of 'resource allocation'. By distinguishing financial resources from real resources and allocation from deployment it has managed to exclude from its remit most of the problems concerning decisions about NHS resources. Yet still it cannot be rid of them completely and has been forced to acknowledge that they will affect both the current validity of the formula and future progress towards revenue targets derived from it. By dwelling upon equitable allocations of financial resources the questions about the specific nature of services in different localities, and their quality, have been left open, with the expressed view that they are matters for administering authorities and are essentially part of their policy-making, planning, and decision-making functions. In some sense it might be thought that the Report reflects the same kind of approach to central responsibility that inspired the view expressed in the Crossman Green Paper that the NHS should be 'national in the sense that the same high quality of service, but not a standardized service, should be provided in every part of the country'.

The Report seems not to contain any implied change for the role of the central authority as it was originally described in the *Management Arrangements for the Reorganized NHS*. The need to assure that responsibility for deployment of resources is assumed at lower levels and a commensurate authority delegated is reaffirmed. What the Report does imply, by the narrowness of the field of decision-making for which it has devised a rationale, is the greater burden carried by those whose main responsibility it is to deploy resources.

The future character of the NHS—as a decentralized or centralized organization, as one committed to national uniformity or to local needs or to some balance of the two—seems likely to be strongly influenced by the concepts of NHS organization subscribed to by administrative officers and by the roles generally adopted by them. Recent studies, for example, those conducted at Humberside (19) during the first year of reorganization, have shown that implementing the arrangements is an uncertain task and that there may be deviations from the orthodox managerial model. The principle of delegation downwards and accountability upwards upon which it is founded, may in practice be qualified by a more complex set of accountabilities. Such studies should prove to be useful feedback to those who have to carry the burden of making the NHS work in practice. At this stage, however, it would be wrong to be unsympathetically critical of their efforts. Realistically, it must be expected

that it would take some years for a reorganization of one of the world's largest managed organizations to settle down. In the process of learning how to manage it effectively it might also be expected that some alteration of the original concepts might evolve to cope with the practicalities of organizational life.

There are, indeed, signs of such evolution taking place: a questioning of district boundaries, reservations about health care planning teams, proposals for joint care planning teams. On a grander scale of questioning, attention is being turned on the arrangement of NHS authorities and on the financing of the NHS. The first of the Green Papers raised the question of an independently financed organization on the lines, say, of Water Authorities, but the possibility was never seriously debated. Recently, some of the medical colleges and, reportedly, McKinsey's, the DHSS consultants, have tried to reopen that issue as a means of taking health organization out of the political arena. Their real hope of relieving themselves of government control of 6 per cent of the GNP is probably miniscule, and the present accountability to the Secretary of State is likely to continue. McKinsey's are also reported to be publicly expressing doubts about the feasibility of the present arrangement of health authorities in a managerial relationship, and there is a good deal written on the social psychology of organization that would support such doubts. The argument will revolve around whether there should be so many Authorities, or whether the orthodox managerial model is the most suitable for structuring the relations between them. If these problems prove to be intractable, then we might look forward to some further and distracting argument about participation, democratization, and worker control in the health organization.

It would probably be wrong, and certainly not helpful, to interpret all pressures for change and adaptation as a failure of NHS organization. Self-criticism and the flexibility to act upon it should be seen as a strength, particularly in times of general change, and one hopes, would tend to limit the necessity for more extreme and traumatic reorganization. In the circumstances, a key role can be played in the administrative middle-ground. The concepts of organization that are popularized there, the initiatives taken for improvement, and the adaptation of managing systems to reconcile national and local interests, are of fundamental importance. Higher management education for the role is crucial and is currently being considered by the National Training Council.

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**Problems of the
National Health Service
in Scotland today**

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INTRODUCTION

This paper presents a health statistician's view of the problems of the National Health Service in Scotland. It is essentially a personal view which is inevitably affected by the approach taken. This concentrates initially upon Scotland's position in relation to England and, where relevant, to data from other countries. It then moves on to consider some problems which appear to the author to be of particular local significance.

The approach taken is largely disease-oriented. This is because it is the author's view that the objectives of health care systems should, wherever possible, be stated in relation to specific diseases, for example, to reduce incidence or to lower mortality from a specific cause. This seems to make more sense than to state objectives in resource or organizational terms, for example, a need for more doctors, less obstetricians or more co-ordination. These are secondary objectives which can only be properly determined after it has been decided what are the primary objectives and how these might be attained.

MORTALITY

Reliable data on absolute morbidity are not available, and it is regrettable but true that the best evidence of the health status of population is still that obtainable from mortality statistics. Even with the latter, international differences in diagnostic practices and standards make the interpretation of temporal and spatial comparisons by cause somewhat speculative. The same is not true, however, for 'all cause' comparisons where, provided there is complete registration of death, one country's experience can be readily compared with that of others.

Table 1. *Mortality rates per 1,000 population for various countries, 1973.*

	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65-74	75+
Scotland	0.8	0.3	0.7	0.9	2.4	7.3	18.1	42.1	116.6
England and Wales	0.7	0.3	0.7	0.8	1.9	5.8	15.1	37.4	112.1
N. Ireland	1.0	0.4	1.4	1.5	2.5	6.8	17.2	41.6	128.9
Canada	0.8	0.4	1.2	1.1	2.3	5.6	13.9	31.1	97.1
Mexico	7.2	1.3	2.1	3.5	5.4	9.0	17.0	37.2	101.0
Japan	1.0	0.4	0.8	1.1	2.1	4.4	11.3	32.0	105.8
Czechoslovakia	0.8	0.4	0.9	1.2	2.6	6.4	17.4	43.0	123.8
Finland	0.6	0.4	1.0	1.3	2.8	6.7	16.0	38.3	110.9
Denmark	0.6	0.4	0.8	0.8	2.2	5.3	12.9	32.0	99.3
Iceland	0.8	0.4	0.7	1.9	2.3	4.7	11.2	27.9	86.4
Norway	0.7	0.3	0.7	0.8	1.7	4.6	11.2	29.6	100.7
Sweden	0.4	0.3	0.7	0.9	1.8	4.4	10.8	29.2	100.4
Yugoslavia	1.7	0.5	0.9	1.4	2.6	5.6	15.4	38.9	123.6

Source: World Health Statistics Annual 1973-76, vol. i.

Table 1 shows the Scottish mortality experience by age compared with other selected countries, with a bias towards the inclusion of those with lower mortality rates. This table shows that up to the age of 44 there is nothing particularly remarkable about the Scottish mortality experience. At the ages of 5-24 Scotland is among the countries with the lowest death-rates. From the age of 45, however, there is a radical change. At 45-54 only Mexico has a higher death-rate, at 55-64 Scotland has the highest death-rate, and at 65-74 Scotland's mortality experience is only exceeded by that of Finland. At every age-group above 35 Scottish death-rates are appreciably higher than those of England and Wales and are also higher than individual English regions except at age 75 and over (Central Statistical Office, 1976).

The reason for a large part of Scottish excess mortality is seen in Tables 2 and 3 where age-specific mortality rates are shown for diseases of the circulatory system and carcinoma of bronchus respectively. In these tables, for the rather smaller number of countries shown, Scotland has the unenviable position of having the highest mortality for all age-groups and both groups of diseases, with the exception of Northern Ireland at ages 65 and over for circulatory diseases.

Explanation for the high cardiovascular disease death-rate is to some extent facilitated by evidence (McDonnell, personal communication)

Table 2. Age-specific mortality rates per 1,000 population from diseases of the circulatory system (A80-A88)* various countries, 1973.

	45-54	55-64	65-74	75+
Scotland	3.3	9.2	23.8	74.4
England and Wales	2.5	7.0	19.6	66.0
Northern Ireland	3.1	8.7	24.1	80.5
Finland	3.2	8.5	22.0	69.2
Denmark	1.6	5.1	16.0	62.7
Norway	1.7	5.2	16.2	58.3
Sweden	1.4	4.8	15.9	63.5

Source: World Health Statistics Annual 1973-76, vol. i.

* ICD, 8th Revision, 'A' list.

Table 3. Age-specific mortality rates per 1,000 population from carcinoma of trachea, lung, and bronchus (A51)* various countries, 1973.

	45-54	55-64	65-74	75+
Scotland	0.6	1.8	3.3	2.9
England and Wales	0.5	1.6	3.0	2.6
Northern Ireland	0.5	1.2	2.1	1.8
Finland	0.3	1.2	2.2	1.9
Denmark	0.3	1.0	2.0	1.9
Norway	0.2	0.5	0.9	0.7
Sweden	0.2	0.5	1.0	1.3

Source: World Health Statistics Annual 1973-76, vol. i.

* ICD, 8th Revision, 'A' list.

that the mortality of migrant Scots tends towards that of their host country while migrant English, who have moved to Scotland, tend to have death-rates midway between the native-born Scottish and English residents. Although the interpretation of these findings is difficult, they are not inconsistent with the association known to exist between soft water and the incidence of ischaemic heart disease. Other factors such as diet, exercise, and smoking play their part, but do not seem to fit these facts on migration so well. Treatment of frank coronary thrombosis can never do more than scratch the surface of the problem. Any noticeable decrease can only be brought about by either primary or secondary prevention. Should we be ready soon to interfere with, and artificially harden, some of our

drinking water supply or are there other methods of achieving the same ends?

The remedy for the high death-rate from carcinoma of the lung is in theory much more simple; in practice it is more difficult. Treatment for the disease is still relatively ineffective and the only immediate hope for reduction is for prevention via health education. One can only hope that efforts to discourage smoking are prosecuted with particular vigour in Scotland. Questions of methods of health education, its vehicle, and level of investment are all matters which need to be considered. Recent evidence on age and sex specific death-rates from this cause does give some hope that they may be beginning to fall at the younger ages.

In comparison with other parts of the United Kingdom other diseases for which Scottish mortality experience is relatively unfavourable include malignant neoplasm of the oesophagus and bladder, diabetes (although this may be the result of certification practices), cerebrovascular disease, peptic ulcer, cirrhosis of liver, and nephritis. Scottish mortality from accidents is higher than for England but rather lower than that for Northern Ireland. Suicide is now more frequent in Scotland than in other parts of the United Kingdom. On the other hand, Scottish mortality is notably lower than other parts of the United Kingdom for pneumonia, intestinal obstruction and hernia, and 'other' forms of heart disease. Care must be exercised in simplistic interpretations of these differences. Death certification practice may account for some of them but complications of alcoholism (referred to later in this paper) provide an unwelcome but likely explanation for the higher mortality from cirrhosis and from carcinoma of the oesophagus.

Mortality in different parts of Scotland is variable, as might be expected. In terms of health board areas the highest mortality is to be found in Greater Glasgow with a Standardized Mortality Ratio (SMR) of 109 in 1975 (All Scotland = 100). The lowest is in the Grampian region with an SMR of 90. In terms of health districts, the Eastern district of Glasgow has an SMR of 119 with the highest mortality in the country from carcinoma of the lung (143) and bronchitis (186). Wide variations in the mortality rates from different conditions and in different parts of the country provide a fertile field for investigation as to cause and, in some instances, suggest where preventive activity could most productively be concentrated.

Table 4 shows death-rates by social class and age for the age-

Table 4. *Death-rates per 1,000 population at ages 35-64 in England and Wales and Scotland by social class. Males, 1959-63.*

		35-44	45-54	55-64
Social Class I	England and Wales	1.7	5.4	17.0
	Scotland	2.1	7.6	21.1
Social Class II	England and Wales	1.8	5.5	18.2
	Scotland	2.5	7.8	21.9
Social Class III	England and Wales	2.3	7.1	22.2
	Scotland	2.7	8.4	25.1
Social Class IV	England and Wales	2.5	7.3	22.0
	Scotland	3.2	8.9	24.8
Social Class V	England and Wales	4.4	11.2	29.1
	Scotland	5.9	13.4	34.1

Source: Decennial Supplements of Registrars General. Occupational Mortality.

groups between 35 and 64 for males. The consistently worse experience of the Scottish people lends support to the hypothesis that the cause of the high mortality in Scotland must be sought elsewhere than in purely social and economic explanations. More recent data of this type are eagerly awaited.

INFANT MORTALITY

Infant mortality rates have for long been regarded as one of the more sensitive indexes of social well-being. Table 5 shows the infant mortality rates for Scotland and a selection of other countries. It is noticeable that Scotland appears well down the international league. Fig. 1 shows that although Scottish infant mortality has decreased markedly over the past two decades, the fall in the rate is tending to parallel that of, for example, Sweden. On the other hand, Japan, from a very much worse position, has managed to improve her performance to one of the best in the world.

Table 5. *Infant mortality rates per 1,000 live births for various countries, 1973.*

Scotland	19.0	Finland	10.0
England and Wales	16.9	Denmark	11.5
Northern Ireland	21.0	Iceland	9.6
Canada	15.5	Ireland	18.0
Mexico	51.9	Norway	11.9
Japan	11.3	Sweden	9.9
Belgium	17.0	Yugoslavia	44.0
Czechoslovakia	21.2		

Source: World Health Statistics Annual 1973-76, vol. i.

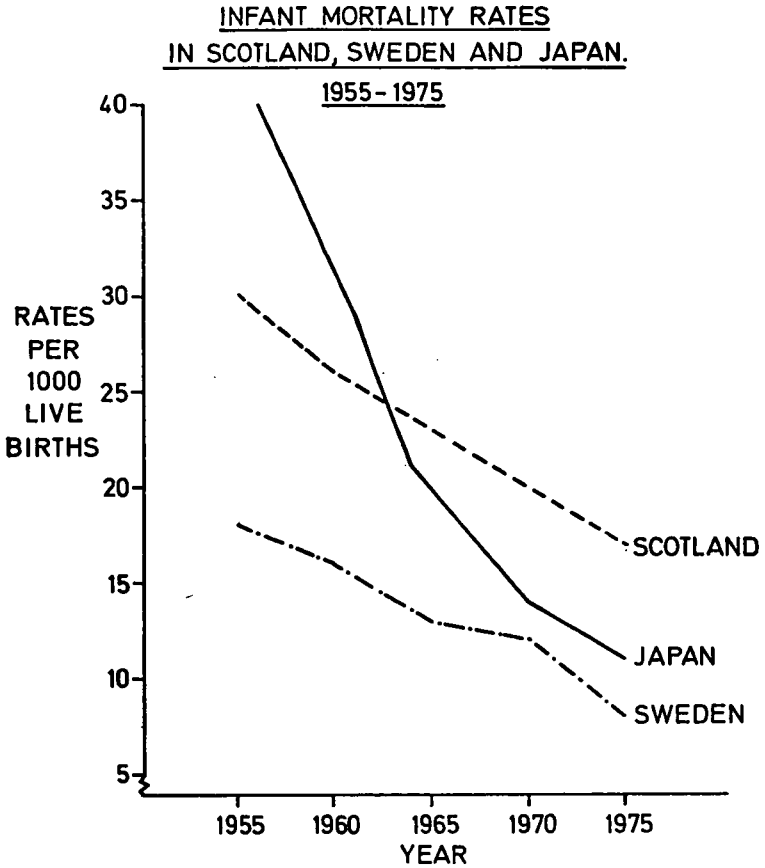


Figure. 1

Work by Richards (1971) (5) has suggested that the well-known social class gradients that exist in many aspects of infant mortality might be partially explained by the poorer sections of the community making less use of both medical and social services than do the better-off. He has also suggested that a significant correlation between area birth-rates and post-neonatal mortality points to the importance of family planning as one of the available means of reducing the infant mortality rate in Scotland. However, recent reductions in the birth-rate are not being accompanied by an accelerating fall in the infant mortality rate.

The infant mortality rate is not constant throughout the country. The lowest rates are found in the Grampian Health Board area with a rate of 10.9 per 1,000 live births in 1975, and in Shetland, Orkney, and the Borders (where numbers are very small and liable to chance fluctuation). The highest rates in 1975 were in the area of Argyll and Clyde Health Board with a rate of 21.4 per 1,000 and higher rates are generally to be found in the Western and Central parts of Scotland. Thus, in the best areas Scotland is equal to the best in the world in relation to infant mortality rates. In other areas much still remains to be done.

GENERAL MORBIDITY IN SCOTLAND

Scotland's unfavourable mortality experience, particularly at the older ages, has already been commented upon. As there are no routine national data on morbidity as seen in general practice one is forced to turn to two other sources of data for information on the national morbidity experience: social security data on sickness absence, and data from the General Household Survey. The latter is obtained by questioning individuals in a sample of households on, among other things, recent sickness experience of themselves and their families. It is also impossible to extrapolate from hospital to general morbidity, for the larger number of hospital beds in Scotland than in England and Wales could account for the increased usage in the former country.

Table 6. *Sickness and invalidity benefit: days of certified incapacity in period for men expressed as rate per man at risk.*

	1973/4
Scotland	20.2
Wales	32.8
Northern Ireland	25.9
England	15.7
North	26.2
Yorkshire and Humberside	22.1
East Midlands	16.8
East Anglia	10.4
South East	10.2
South West	17.5
West Midlands	15.2
North West	21.3

Source: Central Statistical Office, *Regional Statistics*, no. 12 (1976) (1).

Table 7. *Persons reporting restricted activity in a two-week period by sex and region, 1974—rate per 1,000 population.*

	Total	Rate per 1,000	
		Males	Females
Scotland	90·8	92·1	89·6
England and Wales	96·2	92·1	100·1
Regions of England:			
Northern	85·1	90·5	80·2
York and Humberside	86·8	83·1	90·2
North-West	110·5	101·6	118·8
East Midlands	82·9	69·3	96·5
West Midlands	107·0	106·9	107·0
East Anglia	87·9	69·4	105·3
GLC	99·5	95·1	103·6
Outer Metropolitan	86·3	93·2	79·8
Other South-East	85·3	91·3	79·7
South-West	100·1	83·6	115·3
England	95·0	91·3	98·5
Wales	115·6	105·3	124·7

Source: General Household Survey (1974) (4).

Table 8. *Persons reporting longstanding illness by sex and region, 1974—rate per 1,000 population.*

	Total	Rate per 1,000	
		Males	Females
Scotland	190·1	185·0	194·7
England and Wales	219·4	209·1	228·9
Regions of England:			
Northern	209·7	206·5	212·6
York and Humberside	236·3	218·8	252·6
North-West	233·0	228·6	237·1
East Midlands	226·2	225·4	226·9
West Midlands	223·5	213·8	232·7
East Anglia	221·5	231·2	212·3
GLC	227·6	202·2	250·6
Outer Metropolitan	182·7	171·4	193·3
Other South-East	207·7	201·5	213·5
South-West	197·3	185·3	208·4
England	217·6	207·4	227·1
Wales	248·8	237·3	258·8

Source: General Household Survey (1974) (4).

Table 6 shows data for sickness and invalidity benefit per man at risk for English regions and for other parts of the United Kingdom. Scotland's experience comes midway between that of England and Northern Ireland but is considerably lower than that for Wales. As far as English regions are concerned there are also wide variations approximately increasing with distance from the south-east corner of England; Scotland has a lower rate than the northern regions of England. The situation is reasonably consistent over recent years' experience.

Making inferences from sickness benefit statistics to the level of general morbidity is difficult because the reasons which cause a person to be off work from sickness are obviously confounded by social, cultural, and occupational factors. Nevertheless, the general conclusions drawn from sickness absence data are to some extent confirmed by material from the General Household Survey shown in Tables 7 and 8. This survey, fully described in the *General Household Survey Introductory Report* (4), involves extensive interviews with a sample of household members and covers a number of subjects of which health is but one.

Table 7 shows rates per 1,000 population for individuals reporting restricted activity in the preceding two weeks. Scotland has the lowest rate among the three countries in Great Britain. The poor position of Wales and some regions of England is clearly shown, but on this evidence Scotland's morbidity experience would appear to be relatively favourable. The same favourable picture again emerges from Table 8 which shows rates of persons reporting long-standing illness. Here, Scotland is not only the lowest of those British countries but only the outer metropolitan area of England has a more favourable rate among the English regions.

The data shown in Tables 7 and 8 is probably the nearest measurement to 'true morbidity' available today on a national basis in Great Britain, but even here it is not difficult to see how cultural and social factors might affect reporting rates. On the other hand there is considerable consistency between Tables 6, 7, and 8.

Table 9 shows the rate of persons consulting a GP and also the consultation rate. In contrast to the lower morbidity seen in the last three tables, Scotland displays for both indices a rate which is higher than all the English regions (with one exception) but is lower than Wales. Relating these facts to the data on reporting of illness does little to clarify the issue of the level of true morbidity. Scotland has

Table 9. Persons consulting a GP (NHS) in a two-week period (a) and number of consultations by sex (b) and region 1974—rate per 1,000 population.

	(a)			(b)		
	Total	Males	Females	Total	Males	Females
Scotland	126.5	109.5	141.5	159.7	139.1	178.0
England and Wales	112.5	98.1	126.0	138.2	122.1	153.3
Regions of England:						
Northern	107.2	106.2	108.1	137.8	147.5	128.8
York and Humberside	113.7	97.9	128.4	137.3	118.0	155.4
North-West	122.0	109.0	134.3	148.2	135.4	160.3
East Midlands	109.7	90.0	129.4	137.6	115.8	159.1
West Midlands	111.4	104.8	117.7	136.6	130.0	143.0
East Anglia	117.8	94.4	139.7	143.9	115.6	170.6
GLC	108.5	86.7	128.4	131.5	105.0	155.6
Outer Metropolitan	101.2	90.0	111.7	122.7	109.7	135.0
Other South-East	102.7	85.7	118.7	125.5	107.3	142.6
South-West	119.0	97.7	138.6	146.5	117.8	173.0
England	111.2	96.6	124.9	136.3	120.2	151.3
Wales	133.7	124.0	142.4	170.0	154.7	183.5

Source: General Household Survey (1974) (4).

relatively low apparent morbidity yet a high consultation rate—and more GPs per head of population. It would be exceedingly unwise to interpret these facts as though there were causal relationships between them.

Nevertheless, there is evidence to suggest that Scotland's morbidity is relatively low and exhibits a more favourable experience than for mortality. There has been a tendency to use mortality as a proxy for morbidity, for example, in the report of the Resource Allocation Working Party (2). Does this evidence suggest that this might be a partly false relationship? Do the Scots suffer more from diseases which cause a relatively quick death, that is ischaemic heart disease, and lung cancer, yet at the same time have an unremarkable general morbidity? Are the greater numbers of GPs in Scotland more effective in the treatment of their patients? Or is the level of reported sickness explained more by differences in cultural and social factors? These questions remain unanswered and, indeed, may be unanswerable, but they are important nevertheless.

Attendance at a hospital out-patient department is another indicator of morbidity but probably less directly related to it. It will also have some relationship to the customs of general practice. Out-patient consultation rates are shown in Table 10. Scotland's position

Table 10. *Persons attending an out-patient department in a three-month period by sex and region, 1974—rate per 1,000 population.*

	<i>Total</i>	<i>Males</i>	<i>Females</i>
Scotland	96·74	95·51	97·85
England and Wales	100·49	104·50	96·70
Regions of England:			
Northern	86·51	78·71	93·84
York and Humberside	96·12	102·78	89·77
North-West	96·64	99·84	93·59
East Midlands	102·12	101·48	102·75
West Midlands	94·35	100·00	88·93
East Anglia	73·24	71·86	74·57
GLC	126·64	127·75	125·63
Outer Metropolitan	112·02	119·41	104·96
Other South-East	86·20	97·13	75·76
South-West	84·84	88·17	81·71
England	99·58	102·83	96·49
Wales	113·62	128·13	100·38

Source: General Household Survey (1974) (4).

here is in the middle of the range of English regions and Wales. More remarkable perhaps, although outside the main subject of this paper, is the high out-patient consultation rate in the area of the Greater London Council. Scotland is known to have more in-patient acute beds than other parts of Great Britain, but this is not apparently reflected in out-patient attendances. Why is this? Unfortunately evidence on reasons for out-patient attendance on a national basis is almost entirely lacking.

ACUTE NON-PSYCHIATRIC HOSPITAL MORBIDITY

Scotland had in 1974 rather more in-patient beds in the acute specialties (3.8 per 1,000) than did England (3.0) or Wales (3.4), and this excess is shared by both the surgical and medical specialties, and also obstetric and maternity. Much of this excess is a result of historical circumstance but its effect is seen in higher discharge rates, a longer duration of stay and, as a result, more beds used in Scotland than south of the border.

Some comparative data for Scotland and England and Wales are shown in Table 11. For all the conditions selected, with the exception of duration of stay for fractured neck of femur, the greater use of beds in Scotland is apparent.

Table 11. *Discharge rate per 10,000 population, mean duration of stay and bed usage rate at all ages for certain diseases. England and Wales and Scotland, 1973.*

	Mean stay (days)		Discharges per 10,000		Beds used per million	
	S	E & W	S	E & W	S	E & W
All malignant neoplasms (A45-58)*	20	18	64.9	55.3	356	274
Diabetes mellitus (A64)	26	25	9.7	9.5	70	64
Cataract (A76)	13	11	7.5	7.3	27	23
Hypertrophy of tonsils and adenoids (A94)	5	4	33.4	21.1	43	23
Bronchitis and emphysema (A93a)	27	23	14.0	11.1	102	71
Hernia (A101a)	10	8	20.2	22.7	55	50
Fractured neck of femur (AN140a)	39	43	8.7	6.8	93	80

*Sources: Scottish Hospital In-patient Statistics, 1973. Hospital In-patient Enquiry, 1973. * ICD, 8th Revision, 'A' list.*

It is tempting to suggest that this greater use occurs simply because the 'beds are there' but no serious exploration of these differences has taken place. Studies have shown (for example, reference 3) that there are wide variations in practice concerning length of stay and there are reports of clinical trials which show for conditions studied that, in general, the shorter length of stay has no deleterious effect. It is a matter of concern that the progress towards shorter lengths of stay is so slow.

One particular condition which is notable for a very large difference between the two countries is hypertrophy of tonsils and adenoids. Table 11 shows that almost twice as many beds are used for this condition in Scotland. Although the mean duration of stay is longer there the bulk of this excess bed use is taken up by a greater frequency of admissions. The tonsillectomy and adenoidectomy rate is falling quite rapidly in both countries but there would still seem to be a place for an explanation of the higher Scottish rate, particularly when the benefit from this operation is believed to be marginal in many cases.

Table 12 shows other conditions for which there are notable differences in hospital utilization between England and Wales and Scotland. The higher discharge rate and longer duration of stay is shown throughout but some of the differences between English and Scottish practice are very large indeed. Some of these may be due to different recording practices. At the older ages, however, a partial explanation may be a different approach to geriatric care in Scotland with more concentration on hospitalization. This is dealt with in more detail in the next section of this paper.

In Scotland alone, admissions to hospital continue to increase for causes such as carcinoma of lung and ischaemic heart disease. This no doubt reflects the general mortality experience. The increase in admissions to hospital after poisoning, on the other hand, is one of the more worrying signs of social malaise. In 1965 there were 4,409 admissions from this cause, of which 2,548 were females. By 1973 this had increased to 11,433, of which 6,829 were females. Most of these cases are believed to be the result of deliberate self-poisoning even though most were probably not meant to be regarded as serious suicidal attempts.

Table 12. Discharge rate per 10,000 population and mean duration of stay (MDS) at certain ages. Discharge rate and bed usage rate at all ages for certain diseases. England and Wales and Scotland, 1973.

		FEMALES										Discharge rate all ages	Beds used per million population		
		MALES					FEMALES								
		45-64	65-74	75+	45-64	65-74	75+	45-64	65-74	75+					
Heart disease (A80-84)*	E & W	128.9	15	227.3	18	310.2	28	54.9	16	119.7	24	239.3	54	43.9	194
	S	175.9	16	286.5	19	362.1	38	85.5	22	171.2	28	283.2	74	68.6	522
Cerebrovascular disease (A85)	E & W	24.4	26	81.2	46	181.8	68	16.7	65	62.6	70	173.9	111	22.3	276
	S	34.8	38	117.9	53	253.2	76	25.0	40	90.7	91	227.7	125	27.1	566
Respiratory disease (A89-96)	E & W	72.1	13	173.9	19	357.2	26	39.3	13	72.5	19	163.9	31	73.0	116
	S	92.0	23	217.5	34	379.1	71	51.1	27	82.5	57	165.6	127	103.2	635
Digestive disease (A97-104)	E & W	152.4	10	184.4	12	211.4	15	89.4	12	123.1	14	163.9	20	87.9	131
	S	169.1	12	229.6	14	255.4	18	108.2	13	151.1	16	201.7	22	111.7	351

Source: Scottish Hospital In-patient Statistics, 1973. Hospital In-patient Enquiry, 1973. Registrar-General's Statistical Review, England and Wales, 1973.

* ICD, 8th Revision, 'A' list.

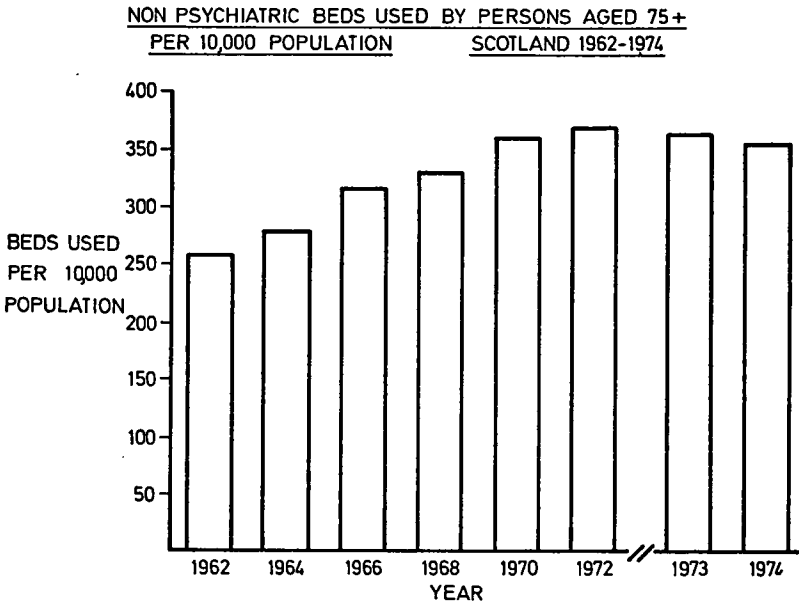


Figure 2

GERIATRIC HOSPITAL USE

The previous section has explored some of the greater uses of hospital beds for acute care in Scotland. This section is concerned with the care of the elderly. It should be noted that these two groups are not mutually exclusive for many elderly people are treated in 'acute' beds.

As far as geriatric beds alone are concerned Scotland has 13.4 beds per 1,000 population aged 65 and over compared with 8.6 in England and 9.1 in Wales. It will be noted that this difference is proportionately much greater than that for the acute specialties.

Increased non-psychiatric bed-use by the elderly over the past two decades has been taking place throughout Great Britain. In Scotland there has been a fairly steady increase since recording started in 1961, and although there was a slight downward trend in 1973 and 1974 it is too early yet to say whether this is a real phenomenon or whether it resulted from the closure of some beds as a result of industrial action in these two years. The trends in the bed-use rates at 75 and over are shown in Fig. 2. There has been no corresponding increase in use of mental illness beds. There has been some increase in use of mental handicap beds, presumably the result of the longer survival of these patients.

Table 13. *Projected non-psychiatric bed use, Scotland, 1991, adjusted for change in population structure only.*

AGE-GROUP	BEDS USED	
	1971	1991
	<i>Actual</i>	<i>Adjusted for projected population</i>
0-64	13,213	12,904
65-74	5,253	5,251
75+	7,107	9,576
Total	25,573	27,731

Source: Registrar-General's Population Projections, 1973.

In addition to the increase in bed-use rate by the elderly, the increased population of the elderly means that the actual number of beds used has increased more steeply than is shown in Fig. 2.

Projections for the elderly section of the population are almost certain to be borne out in practice, and Table 13 shows the effect of population change alone on bed use if beds are used at the same age/sex rates as in 1971. This table shows clearly the effect of the projected increased population of those aged 75 and over on bed requirements.

It is possible to combine the effect of population increase together with a projection of the recent increase in the rate of bed use by the elderly into the future. If this is done on a straight-line basis it reveals a projected increase of nearly 9,000 beds required for those aged 75 and over in 1991 in Scotland. However, this projection is less likely to be borne out in the event. It assumes that beds would be made available as demand occurs and it also assumes that the increase of the past two decades will continue unabated. It is obviously impossible to predict what the future bed use by the elderly will be. Population increase alone suggests a considerably increased requirement; past trends suggest that the actual requirement may be rather larger than on grounds of population increase alone but it is impossible to provide a forecast. Any such assumption depends upon hospital beds continuing to be used in the same way as now. Obviously many old people can only be treated in hospital but where alternative means of care exist these should surely be explored, although it is important that both social and economic costs and benefits of the various alternatives be fully taken into account.

Table 14 shows the use of beds by the elderly for selected diagnoses

Table 14. *Beds used per 100,000 population for selected causes by age and sex, Scotland, 1961, 1968, and 1974.*

	MALES		FEMALES		MALES		FEMALES		
	65-74		65-74		75+		75+		
	1961	1968	1961	1968	1961	1968	1961	1968	
All tuberculosis (010-019)	102	34	22	11	5	62	43	25	18
Malignant neoplasms (140-209)	147	184	178	114	100	184	242	257	149
Diabetes mellitus (250)	19	15	18	39	25	23	40	34	43
Diseases of blood (280-289)	*	11	8	18	17	*	30	34	*
Diseases of CNS (320-349)	*	63	61	73	79	*	112	117	*
Cataract (373)	11	13	11	16	13	23	28	31	24
Hypertensive disease (400-404)	54	13	8	16	13	80	20	22	119
Acute myocardial and other ischaemic heart disease (410-414)	92	98	99	77	67	168	201	211	149
Cerebrovascular disease (430-438)†	102	178	154	170	213	291	504	482	367
Pneumonia (480-486)	41	62	79	63	68	92	289	400	83
Bronchitis and emphysema (490-492)	94	71	69	26	15	88	168	121	54
Peptic ulcer (531-534)	30	28	20	10	7	31	36	30	11
Hernia of abdominal cavity (540-543)	25	28	22	12	13	27	48	28	17
Gall bladder disease (574-576)	8	13	14	21	24	14	17	18	19
Hyperplasia of prostate (600)	41	41	38	—	—	90	82	78	—
Uterovaginal prolapse (623-624)	—	—	—	23	19	16	—	—	9
Disease of skin (680-709)	*	14	12	19	15	*	26	21	*
Rheumatoid arthritis (712)	9	9	12	40	46	7	12	14	52
Osteoarthritis (713)	18	22	16	22	23	21	41	28	44
Symptoms and ill-defined conditions (780-796)	68	71	82	55	67	235	290	215	244
Fractured neck of femur (820)	*	9	14	*	31	*	64	60	*

Source: *Scottish Hospital In-patient Statistics, 1974.*

* Data for 1961 not available.

† ICD, 8th Revision.

over the period 1961-74. The very large increase in the 75+ age-group, particularly for women, for cerebrovascular disease, heart disease, osteoarthritis, and particularly pneumonia, can be contrasted with the relative stability in the bed use for the more acute conditions. The recording of diagnoses for hospital in-patient care in the elderly is always difficult. Terminal events such as pneumonia may be recorded and thus the whole stay attributed to this condition; multiple pathology tends either not to be recorded or, even if it is, only one condition can be counted in single condition statistics. Nevertheless, the position is fairly clear; most of the increase in bed-usage by the elderly has resulted from increased hospital care for the chronic conditions of old age.

As there has been effectively no change in the number of beds available for the treatment of patients of all ages, the increased use by the elderly has been accompanied by a compensating decrease in use by the younger age-groups. Which of these factors is cause and which is effect is not clear; probably both have played their part in causation. Certainly, duration of stay for many conditions has decreased, and there has been consequently greater 'productivity' in the acute sector. Nevertheless, continued increase of beds used by the elderly should probably be regarded as an eventual threat to the proper treatment of the young.

THE USE OF MENTAL HOSPITALS

Scotland has never accepted the English policy for a large reduction in the number of mental hospital beds. In some English regions the availability of mental hospital beds is eventually to be reduced to as low as 0.5 beds per 1,000 population. In 1974 Scotland had 3.7 mental illness beds available per 1,000 population compared with 2.2 per 1,000 in England and Wales.

The throughput (cases treated per available bed) was also lower in Scotland with 1.4 cases per year compared with 1.8 in Wales and 1.7 in England. The rate of decrease in the use of beds in England and Wales has been much slower than was originally forecast by Tooth and Brooke (6) but it is nevertheless much faster than in Scotland. This is shown in Table 15. In the period 1961-74 the rate of daily occupied beds has fallen by 37 per cent in England and Wales and only 13 per cent in Scotland. Both in England and Scotland there has been an increase in the number of discharges over the same period accompanied by a reduction in the length of stay.

Table 15. *Use of hospital beds for the mentally ill, Scotland and England and Wales, 1961-71. Average daily occupied beds per 1,000 population.*

		1961	1965	1969	1971	1974
Scotland	Rate	3.8	3.7	3.6	3.4	3.3
	Index	100	98	94	90	87
England and Wales	Rate	3.0	2.7	2.4	2.3	1.9
	Index	100	90	80	77	63

Sources: Scottish Health Statistics. In-patient Statistics for the Mental Health Enquiry for England and Wales.

Part of the justification for the Scottish policy has rested on the relative paucity of community mental health services compared with England and Wales. The coming into force of the Social Work Services Act has not helped resolution of this problem because of the split of responsibility between the National Health Service and the Regional Authority for the care of mentally ill and mentally handicapped. The level of community services is considered later, but regardless of this there is obviously a need to evaluate the effects of the policy in the two countries. It is possible that such a comparison might be carried out using existing mental health registers. It would also be desirable to take into account not only the condition of the mentally ill themselves, but also the effect of their presence or absence upon their immediate relations and friends.

One particular health problem of Scotland in the field of mental health is that of alcoholism. Largely a social problem, convictions for drunkenness are 1.4 times as high in Scotland as in England and

Table 16. *Alcoholic admissions as a percentage of all admissions to mental illness hospitals and units.*

	<i>England and Wales</i>	<i>Scotland</i>
1964	3.0	12.8
1969	3.5	13.5
1970	3.5	14.2
1971	3.8	14.9
1972	4.2	16.4
1973	4.8	18.9
1974	5.4	20.4

Source: Scottish Health Statistics. In-patient Statistics for the Mental Health Enquiry for England and Wales.

Wales. The effect of drunkenness is seen in a standardized death-rate 1.5 times as high as in England and Wales from hepatic cirrhosis and in admissions for mental illness.

In Scotland 1974 20.4 per cent of all admissions to mental hospitals were attributed to alcoholism compared with only 5.4 per cent in England and Wales. Table 16 shows the growth of this proportion since 1964, although it cannot be inferred that this reflects a parallel increase in morbidity. There is little doubt that there is a higher incidence of alcoholism in Scotland but whether the difference is as great as is shown in this table is not clear. Differences in diagnostic fashion or in treatment policy between the two countries, and in the trends over time, may be partially responsible.

COMMUNITY SERVICES

Earlier tables and discussion in this paper have underlined the greater provision of hospital services in Scotland than in England and Wales. This position is reflected in greater hospital manpower. Earlier discussion has also indicated that Scotland has a higher mortality but morbidity is *prima facie* of the same order as in England.

Partial justification for the higher hospital provision has been stated to be a lower provision of community services in Scotland.

Table 17. *Rates of provision of community care per 100,000 population, Scotland and England, 1973.*

<i>Staff</i>	<i>England</i>	<i>Scotland</i>	<i>Index (England=100)</i>
General medical practitioners	46	55	120
Local authority nurses (WTE)	66	64	97
Staff of local authority residential homes	100	80	80
LOCAL AUTHORITY SERVICES			
(a) Health services			
Health visitors: total cases	904	1,120	124
Home nurses: total cases	447	384	86
(b) Personal social service			
Home helps: total cases	11	8	73
Meals on Wheels service	391	328	84
RESIDENTIAL CARE			
Residents in local authority, voluntary and private homes	320	265	83

Sources: England: Health and Personal Social Service Statistics, 1974. Scotland: Scottish Health Statistics, 1973. Scottish Social Work Statistics, 1974.

This is borne out generally in Table 17. It will be noted that this table relates to data collected prior to health service and local government reorganization, but the position is not thought to have changed significantly since then.

The table tends to confirm the general impression of a higher level of provision of community services in England than in Scotland, although there are some specific exceptions. It also underlines the difficulty in deciding which of the two countries is following the better policy, particularly when the services are under divided responsibility.

CONCLUSION

This paper does little more than delineate some of the peculiarly Scottish problems which would appear to call for further study. It is both a personal and very incomplete list. A different approach might have produced a different set of problems although many would be common to almost any list. Many of the topics discussed require further study of existing data before even the research questions themselves become clear. It is hoped, however, that it gives some indication as to some areas of concern both as regards current health service planning and needs for further research.

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'Measureless to man'

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‘Measureless to man’

The other essays in this book, taken in conjunction with those in *Framework and Design for Planning: Uses of Information in the NHS*, indicate the requirements for successful planning at grass roots and the inherent obstacles to its achievement.

My purpose is to add to these a forward-looking statement on the prospects for a better use of NHS information sources, which is derived, in part, from a recent investigation of its management (1); in part, from ongoing analysis of the development of the NHS, and occasional reference to the previous papers.

THE MANAGERS

One observation which might be made by anyone with experience of management in large institutions, is needed by way of preface. NHS managers are neither subject to a hierarchical structure nor often conscious of the natural local allegiances which local government staff experience; they therefore often lack, particularly since re-organization weakened local links between hospital and community, the sense of unified purpose—of *esprit de corps*, if you wish—which encourages self-confidence and innovation. The gap might be filled by lasting political or professional leadership; but such a possibility seems remote and this accentuates the need for a prestigious system of management education as well as a clear idea of function.

In fact at the later stages of a senior manager's progress, the recent investigation finds a lack of provision for higher and continuing education. As a result the present managers, though often individually dedicated and talented, do not impress the observer as a professional corps ready to advise policymakers on sensitive issues such as allocating resources and controlling manpower. Although it should

be no surprise that a structure as young and politically sensitive as the NHS has not yet settled into an effective pattern of working relationships, the recurrent criticism of NHS management and managers, however strongly they resist and resent it, is proof that the managers' image is not yet such as to persuade doctors and public of their value to the health system.

THE SELECTION AND TRAINING OF 'MANAGERS'

The preceding paragraphs on general obstacles to successful management are essentially complementary to the following discussion of the conditions under which managers might use information more effectively.

The need for specific training of managers in information processing was foreseen before the reorganization (2); and since then the need for information systems as the essential base for the maintenance of quality in medical care has again been stressed (3). When invited in 1975 to be Secretary of the King's Fund Working Party, which was given the task of studying the education of senior managers in the NHS, it was a welcome opportunity to probe further into the objectives of management and the possible causes of deficiency. By its terms of reference the Working Party was restricted from questioning the merits of the 1974 reorganization or the desirability of the existing management teams procedures. In any case, the mixed group of academics and executives of varied professional background which formed the Working Party would have found it difficult to agree upon proposals for revising the managerial roles which had so recently been newly defined after a long-drawn-out series of bargains and compromises. We concentrated upon a study of the nature of management in general and specifically in the NHS, and upon the responses made to the challenge of managing this complex organization, believing that whatever the structure, the principles of selection and education once established would remain valid.

Of the three types of skill necessary to the manager—human, technical, and conceptual—the second and third are to an important degree in the NHS dependent on an education in the arts of numeracy. The streams of professional training sometimes touch upon these skills but their full development is very difficult without undergoing academic instruction. Because, however, candidates of special quality might be lost if they were excluded on the score of having studied a 'less relevant' discipline, it is not a part of our administrative tradi-

tion in Britain to prescribe academic schedules for specific vocations; for instance, to give preference in selecting candidates for administrative posts to those trained in specific disciplines. It must be accepted that for the select few training in a particular discipline is of less importance than innate excellence. However one result of this tradition is that, as stated in the general criticism of the training of administrators and nurses included in the Working Party Report, 'individuals reach senior positions with inadequate preparation in numeracy'. Further, for nurses, professional training provides no base in this discipline and, for administrators, it is only at 'threshold level'. Theoretically 'managers' with an epidemiological training are numerate, but doubts remain as to over-all standards and in addition the Report named as a major weakness 'the attraction of the right calibre of entrant into the specialty'. If these findings are true, the educational gap is one reason for lack of progress in using the vast information assets available to any national health system.

To look forward to a means of advance, it is important to visualize the over-all position in respect of management education for the NHS which is described in detail in the Working Party Report. There has been only a slow acceptance in the UK that health services management is a very demanding task for which a high level of professional attainment is needed; and there has not been since the engulfment of the first National Staff Committees by the DHSS in 1974, a successful focus for policy development. These are obstacles to progress which have to be surmounted before any advance is likely. When it is possible, it will be necessary to follow a variety of courses which are described in detail in the Report. The qualifications of managers could then be gradually raised so as normally to include an honours or postgraduate degree which should, subject only to special exemption, include a statistical component. It is surely significant that the work which is reported upon by King in this book had been assisted by a postgraduate in numerical science who obtained his award in the Department of Applied Mathematics at Exeter under Professor Ashford.

UNCERTAIN PROFESSIONAL OBJECTIVES

These gaps in the educational system are not by any means the whole story. Lack of clarity about professional roles which the Working Party established but refrained from probing, blunts the initiative of professional groups and the universities in responding to what is

needed. Doubt about professional objectives also holds back the individual from maximum personal achievement. The Working Party noted indeed that the professional group with the greatest clarity of role and purpose—the treasurers—had also the most determined will to improve themselves.

To attempt a thorough analysis of lack of progress in the use of information, one must therefore pick a way into the sensitive area of professional ambition.

For the professions enrolled in the 'management teams', it is at the least necessary to pose certain questions to which, if positive answers have already been found, they have remained well-kept secrets from professional colleagues and the public, as well as the Working Party. Are nurses as a body satisfied that the highest and best rewarded career grades should be divorced from clinical care? Are specialists in community medicine united in their views of responsibilities for administration, public health, and epidemiology? Are administrators happy with the present lack of any system of 'higher education'? It was neither in the commission nor in the grasp of those assembled by the King's Fund to attempt the answers. Without long-term study (such as that being undertaken at Birmingham University in the field of environmental health) satisfying answers are unlikely to be carved out. All that can be done in an essay such as this is to point ahead to zones of inquiry. Of the 'management' professions, community medicine and administration are selected for special consideration as being most obviously concerned with manipulating information.

The observer may remark a feature which was familiar to the student of the establishment of the NHS in 1948, a diffusion of executive responsibility. It was said at the time that the Ministry of Health purposely left in ambiguity the seniority between the medical and non-medical administrator, in the hope that the problem would work itself out in practice (4). During early discussions upon the shape of the 1974 reorganization, some thought was given to the appointment of a 'chief executive' to the health authorities: but in the event executive responsibility was placed upon 'teams', a device which the sceptic will view as a means to avoid a difficult decision, adopted in the renewed hope that 'the problem will work itself out in practice'. Official publications and actions although they do nothing formally to resolve doubts as to responsibility are sometimes suggestive by what they omit to say and do. One can deduce from these that community medicine has much to do with the 'determi-

nation' of needs (5), that is, with a missionary view of what ought to be; and that lay administration is preoccupied with planning on the basis of demand (6). Even if one can read into the phrasing an unspoken bias in favour of a certain division of labour which cannot be admitted in public and is often studiously avoided (7), Delphic utterance is an uncertain guide to those who have to run a bureaucracy.

Although from loyalty to each other and the NHS, team members hesitate to bring into the open the difficulties inherent in present arrangements, there is evidence, quite apart from what they acknowledge in private, that it is not working (8). Infirmity of purpose springing from an unsettled line of responsibility is enough, even without educational gaps, to halt progress in the hard task of extracting and using information; one reason indeed for the lack of 'General Staff Organization' (9). There is a case for consideration and questions to be asked whether the NHS cannot do better than it has done so far, in determining the discrete responsibilities of its managerial staffs.

SERVING THE PATIENT: THE TOUCHSTONE OF BUREAUCRACY

However much we dislike its image, bureaucracy is necessary in any large organization to the achievement of common aims, and throughout the world health systems are not immune from its influence. In health services all staff with a function to support rather than provide a service to patients have a bureaucratic function. This is an honourable role and not a fair target for attack unless bureaucratic formalism takes on the character of a ritual and its actions no longer serve its original purpose (10).

ANALYSIS OF THE MEDICAL PROCESS

The question therefore to be considered is how far the bureaucratic processes in the NHS help consultation and treatment within the medical framework. That there is plenty of room for confusion was demonstrated some years ago by an analysis of a taxonomy of social need in which Bradshaw (11) dissected the spectrum which stretched from need postulated by pundit or expert to demand presented by the individual. Ashford has in *Framework and Design for Planning* both advanced and simplified the analysis by a division into three parts: need, unmet demand, and demand.

Need is an emotive term which is far from self-explanatory. The

surest ground from which to form hypotheses about the kind of bureaucratic support required by doctors and patients is the basic process of consultation and treatment. It begins, except in prescriptive screening (12), before the doctor is on the scene, and before any demand is made.

In the first stage, individual awareness of a problem, whether suddenly forced on the attention, or growing more gradually, is shaped by experience, advice from friends, or information in the media. Such awareness includes consideration of the cost, both in cash where there is no free service (and often when there is) and always in social consequences. Few individuals can weigh the pros and cons of seeking medical advice with the sophistication of Lord Platt (13) who says 'on no account must he (the layman) tell anyone about his symptoms without giving thought to the consequences': nevertheless most potential patients are very well aware that quite apart from financial cost there are other severe costs—*anxiety to self and others, lost time, cross-infection in the waiting-room, and so on*—which flow from medical consultation. In this situation disadvantages have to be balanced against benefits and a sensible decision upon whether or not to see a doctor is dependent upon the individual's accumulated knowledge of health affairs. After the decision is taken, there should also—at least ideally—exist some appreciation of the relative importance of this particular episode alongside the multitude of other people's episodes being simultaneously presented, since this is important not only to the acceptance of a rationed service but to the ability to judge for one's self whether the service received is of adequate standard. The information a person requires at this first stage apart from what personal experience has taught will often reach each individual through the media but becomes rapidly out of date and possibly injurious without the basic work of the epidemiologist in analysing and communicating the prognosis and outcome of all the common categories of medical care (14). Communication to the individual of this kind of information is normally termed 'health education', a misnomer for a process which mostly concerns disease.

Once the patient places himself in the care of the doctor, a successful outcome of diagnosis and therapy is dependent on two distinct factors, the performance of the doctor and the structural support provided to him by way of staff, drugs, equipment, and buildings (15). A doctor's performance in turn depends both on his personal

characteristics and having up-to-date medical knowledge as a result of continual monitoring of the outcome of patient care (16). Experience suggests it is a very persuasive hypothesis that the doctor cannot monitor the outcome of treatment and develop experience on which to base future medical care without statistical support and cannot compare methods and performance with that of colleagues in the same or other specialties without epidemiological aid.

The quality of the structural support again is related to several principal factors, stretching from the efficiency of providing 'hotel services' (17) to good 'intelligence' in correctly gauging demand and distinguished generalship in the deployment of capital and labour at national, regional, and local levels (18).

This description of the medical process began with the individual's awareness of a problem which might call for medical advice. The total process is only completed by the inclusion of 'health maintenance' through sensible attention to behaviour and the environment, and the whole is then conveniently looked on as a circle into which the inquirer can break at any point which interests but where each part can only be understood after consideration of the total process. Biologically, as more fully described by Stone in *Framework and Design for Planning* (26), good health precedes the genesis of a condition which may require medical attention. Psychologically, the individual is more alert to the concept of good health after illness; and epidemiologically the major discoveries in regard to behaviour and the environment spring from a study of morbidity and mortality.

DOMINANCE OF THE MEDICAL PROCESS

A belief in the interdependence of the parts in this circular process of medical care is according to our hypothesis essential to an effective structure and strategy for health services. Recently a Minister of State, whilst defending the separation of private practice from the NHS placed on record that the fundamental freedoms, clinical and professional freedom, are not under challenge (19). If that means what it says, structure and strategy must aim to support clinical demands, always providing these are the result of joint decisions by doctor and patient. In his Nuffield Lecture of 1973, Sir Richard Doll (20) referred to the need to monitor along with medical outcome and economic efficiency 'social acceptability' in which he included a 'medical equivalent of market research' so as to avoid the risk of a service good at preventing and curing 'but which fails to care for it to

the satisfaction of the public'. Fox is an impressive and objective witness to the indecisiveness engendered by failure to acknowledge fully the imperatives of demand to which he refers in several passages, most tellingly when he says 'the various levels often expressed concern with the need for good relations with the level below, hence a rationale for treading lightly and not imposing priorities'. These are good authorities for our hypothesis of the dominance of patient and doctor demands, the importance of which is explained, if it can be shown that failure to accept it is the origin of present confusions in the NHS planning system, of indecision concerning bureaucratic functions, and feeble exploitation of information sources.

THE MANAGER RELEASED FROM INDECISION

The official guide to the NHS Planning System (7) is for the most part a technical pamphlet but from the viewpoint expressed in this essay is remarkable for its concentration upon 'team' responsibility for a technical process, as well as for its lack of any reference to the dominating importance of the demands of doctor and patient.

As for responsibility, substantial advantages will accrue to the NHS from a better definition of the roles of 'manager' and epidemiologist which have so far stifled the development of advantages which were expected to spring from integration. The articles in this and the preceding volume are a sufficiently clear demonstration of how far the art of planning can be carried when it is based solely upon demand (Ashford *et al.*) and of the skills of the epidemiologist in the assessment of outcome and the communication of the results as guidance to political and individual decisions (Stone and Heasman).

Indecision about the roles, as already said, blunts initiative and reactive speed; but it has a second and equally damaging effect. The King's Fund Working Party analysed the present position in regard to the recruitment and education of health service managers and amongst its findings particularly stressed the gaps in the educational system for 'managers' in the numerate skills and the lack of criteria for the selection of senior managers; it also recorded the grave shortages of recruits in the specialties of public health and epidemiology, as confirmed elsewhere (21). It is likely that a part of this lack of enthusiasm for the latter specialty springs from a lack of clarity about its role, and from the consequent failure to create an attractive system of vocational education.

The Working Party Report set out in considerable depth the

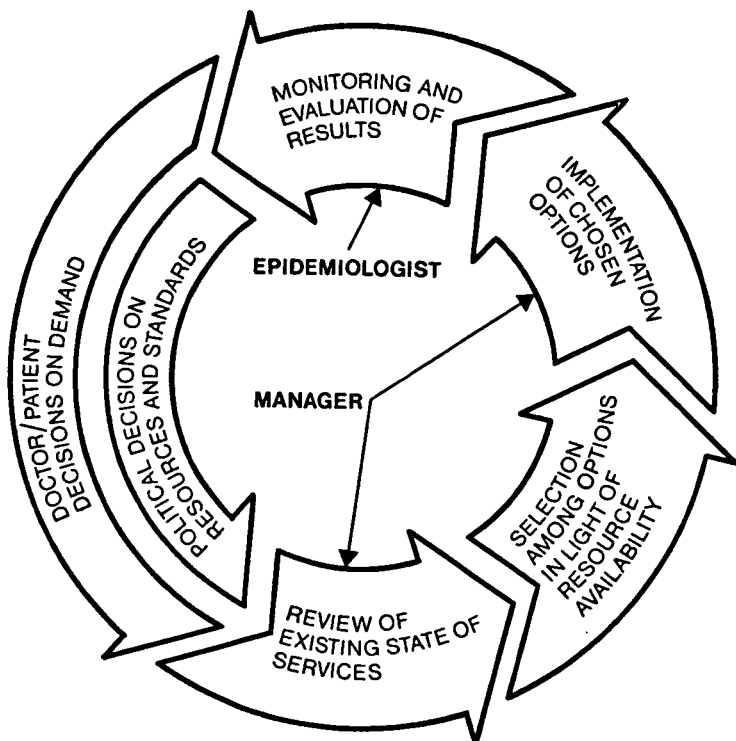
concepts and the immediate measures which could be considered for the improvement of the quality of health service management. The articles in this volume are a further confirmation that the numerate arts in this field are well advanced and courses are there to be selected once managers' objectives have been defined with understanding and precision.

TOWARDS BETTER ROLE DEFINITION

A study of the process of consultation between patient and doctor suggests two very distinct support requirements, the *epidemiological* in providing through varied channels the facts on which decisions can be taken to make demands and the *managerial* which assesses demand and within the resources available provides services to meet it. The obstacles to an acceptance of distinct and separate functions for the community medicine specialist and manager despite distinguished advocacy may lie in the lingering tradition of the administrative medical superintendent derived from simpler times (unfortunately too recently resurrected by the DHSS) (22) and also in the remaining reluctance of the clinician to accept the epidemiologist as his essential partner in the work of continuing education and self-assessment.

The implications for the planning system of this separation of functions are, first, a clarification of bureaucratic responsibilities as a means to channel energies to a better use of existing information services: secondly—and of strategic significance—the acknowledgement of the real point of balance in policymaking between the centre and the periphery. Whilst admiration is owed to the 'Priorities' Consultative Document as an exercise in open government, the danger of using it as a model for centralized planning was ruthlessly exposed in *The Lancet* of 28 August 1976 (pp. 454–5) where it was shown that the transfer of funds from acute to geriatric care would imperil the very group supposed to benefit, the elderly patients. Such a miscalculation would be unlikely to occur in locally conceived programmes. To avoid such unintended effects 'Figure 4' in the NHS Planning System (23) should be redrafted as a mirror image of the original with assessment of plans *beginning at the District* and with submissions to the centre at the second stage when decisions are required on options between competing services, on standards and on the allocation of resources. A redrawing of 'Figure 3' (24) is shown here and serves to make clearer that in practice the whole

NHS planning is a learning process . . .



'Figure' 3. Recast from the figure appearing in *The NHS Planning System* (DHSS, 1976)

system is continuous and circular. It is also consistent with the hypotheses already outlined that in the health care process the function of the epidemiologist is to serve doctor and patient with facts on which to decide demand and to serve the politician with facts on which to decide resources and standards; the function of the manager is to serve doctor and patient by providing a service tailored to demand.

In his article in this volume, Nelson has portrayed the present awkwardness of the stance of the health service administration, pig-in-the-middle between political decisions and patient demands. The scenario which is being outlined here shows how it may be possible by accepting the proposition that the 'manager' is primarily responsible for planning and providing services to meet demand, to refine

the functions of the health service 'managers' without hamstringing them by the imposition of commands and demands stretching in opposite directions.

The role of the epidemiologist would involve him in the assessment of outcome and of need and the communication of a scientific analysis of the findings to the politician, doctor, and to the individual as a base upon which decisions can be made about resources, standards and demands. Heasman's essay is a persuasive example of the work of the epidemiologist. It carries clear-cut implications for policy towards health education, water supplies, and residential accommodation, and provides the evidence and argument on which politicians and public can base decisions. It is only a source of confusion if the epidemiologist exceeds the limits of his function or short cuts the system by an improper influence upon the planning of services which should be firmly based upon demand, that is, the aggregation of a multitude of individual decisions taken by doctor and patients in consultation. To cut out the doctor and patient in this process is to substitute professional or egocentric value judgements for grass roots decisions. It is an instinctive understanding of the scenario which is being outlined that is at the base of the so frequently reiterated cry from doctors for clinical independence of politician and bureaucrat in the service of the patient.

To develop this theme and so release the energies of epidemiologists and managers to enable an effective use of available information, a set of beliefs about the NHS is required such as could only be substantiated at another time and in greater length. Here it is possible only to summarize them. First, to achieve efficient and effective use of resources, a Health Service should offer its clients a specified catalogue of facilities at a level of quality with which both provider and consumer is content. It is wrong policy, in an endeavour to satisfy all demands with limited funds, to spread resources so thin that nothing can be done well. Second, it is no part of the bureaucrat's nor of the politician's function to force upon the consumer unwanted services, but rather to plan and deliver on the basis of market research into demand. Thirdly, and in consequence, the organizational needs are good 'intelligence' from the epidemiologist, policies from the politician on the allocation of resources and on standards where these are in question, decisions from the doctor and the patient on demand, and action from the manager on services to meet demand.

'WEAVING THE CIRCLE' (25)

Ashford (26) and Heasman (27) in presenting models of information use have implicitly raised the question why they are not in common use within the NHS; Fox, Nelson, (27) King, and Stone (26) in their descriptions of organization problems have been more explicit. The hypotheses defined in this essay by way of answer are in no way new though insufficiently exposed in public. Frequently in private meetings demands are voiced: for the community medicine specialist to cease attempting too many tasks, and take up the major challenges; for the administrator who in practice has to answer in public for any defect in organization, to be openly accorded the role of manager; and for a power of decision to be delegated in practice to where theoretically as so often acknowledged it rests, with local communities of doctors and patients.

Nobody pretends that these claims are self-evident. They require a programme of objective examination, and forceful leadership to launch and steer it. The ultimate goal is hardly just a pipe dream; men of vision have formed it out of their long experience. Better service to the patient is the reward to be won for creating a policy for management research and education and out of these a means to use the abundant information assets of the NHS.

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